AASHTOWare BrDR 7.5.0

Feature Tutorial

General Preferences

General Preferences

Topics Covered

- General preference setting for Ignore shear.
- General preference setting for Impact Factor.
- Apply General Preference template for single/multiple bridges.
- Making General preference template as default.
- Applying General Preferences during analysis.

The General Preferences feature is a usability enhancement that allows the user to:

- Create, save and export/import agency-wide and user-specific preferences.
- Set preferences as system default.
- Apply preferences anytime to the bridge in the Bridge Workspace.
- Apply preferences to a bridge or group of bridges in the Bridge Explorer.
- Apply preferences during the analysis

## General preference setting for Ignore shear.

General Preferences allow a user to override specific settings or data for a bridge or group of bridges for an analysis without having to edit each specific data item for each bridge.

From the **Bridge Explorer**, select **Example 7 (BID 10)** and double click (or right click and select **Open**) to open it.
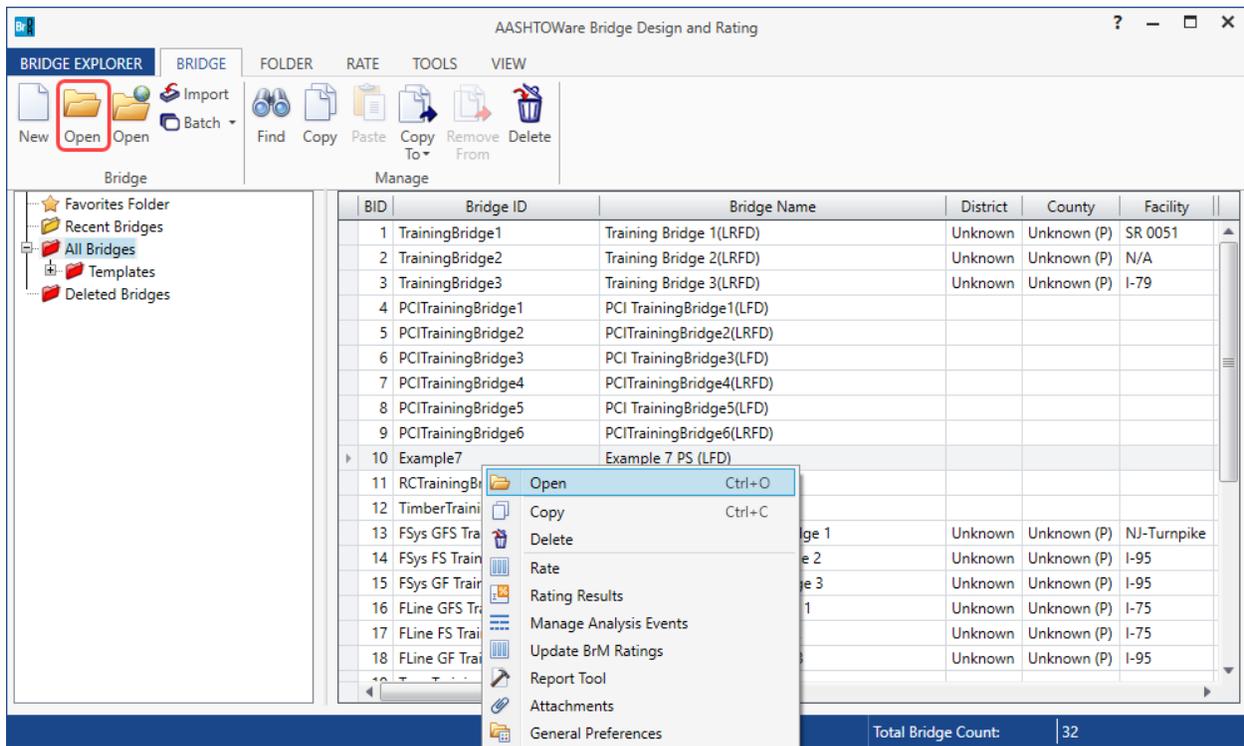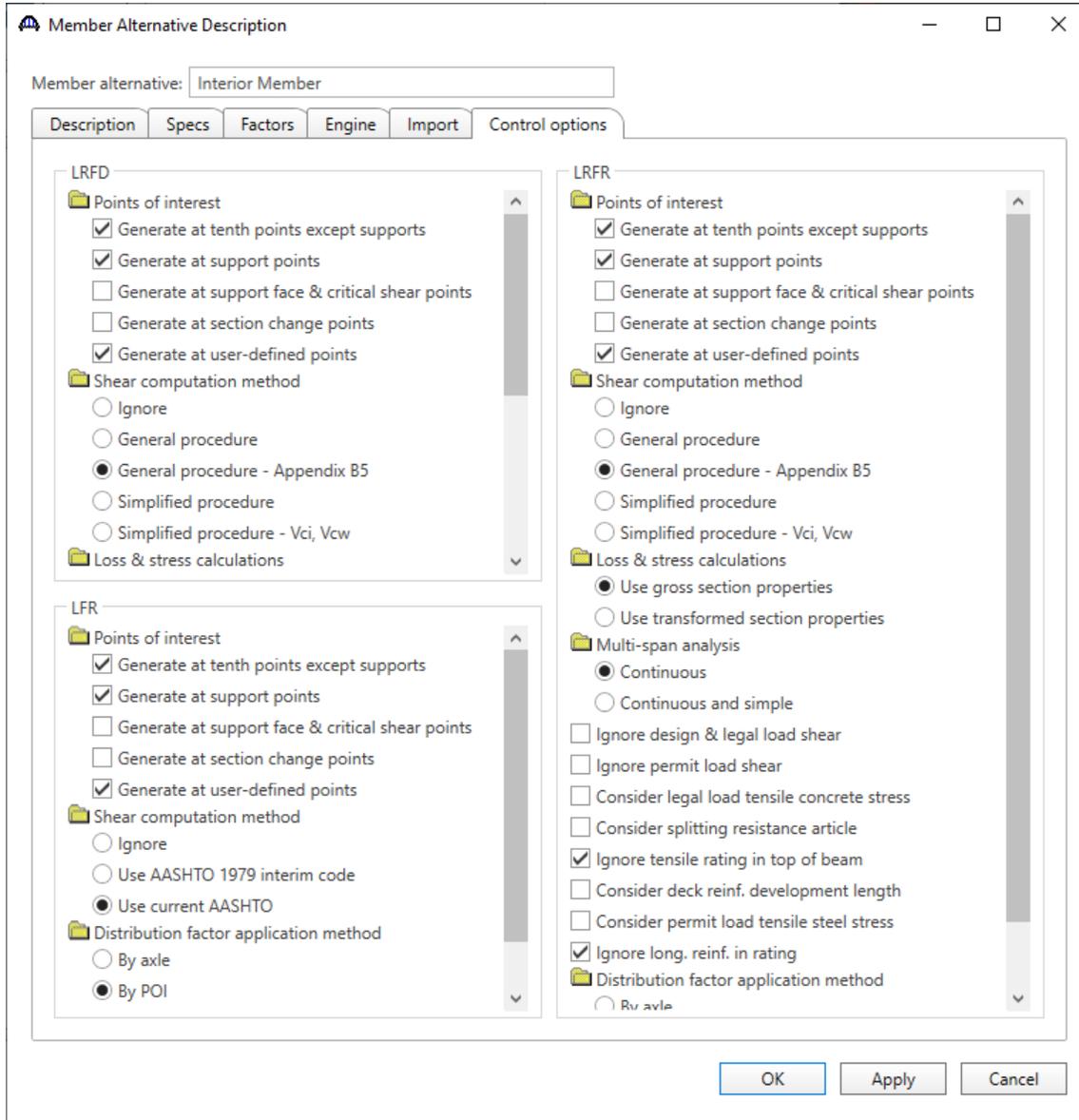
General Preferences

In the **Bridge Workspace** tree, expand **6- girder system** under **SUPERSTRUCTURE DEFINITIONS** by clicking on the ⊞ button . Then expand **MEMBERS**, **G2** and **Interior Member (E)(C)**. The partially expanded **Bridge Workspace** tree is shown below.
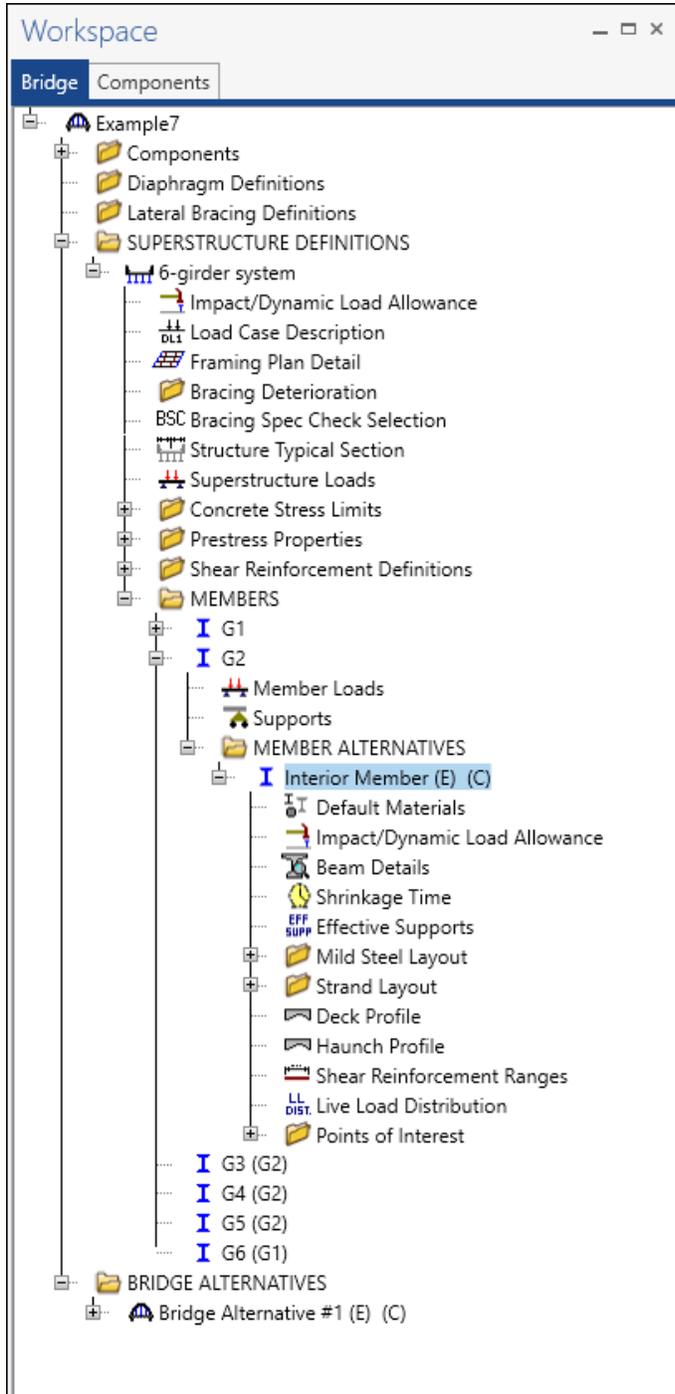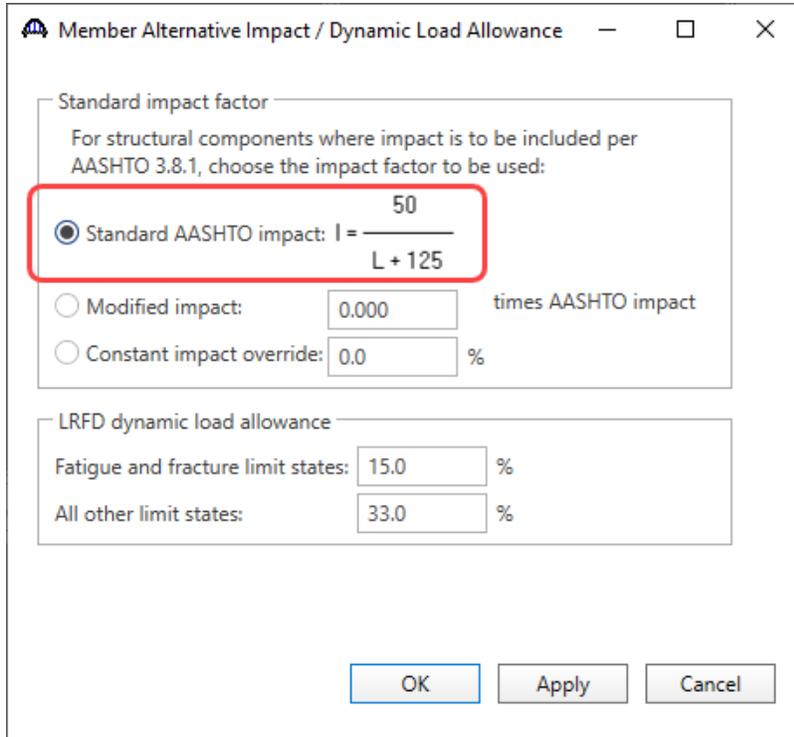
General Preferences

Double click on the **Interior Member (E) (C)** to open the **Member Alternative Description** window. In this window navigate to the **Control options** tab. On this tab under the **LRFD** settings, **General Procedure – Appendix B5** is selected as the **Shear computation method**. Now click on the **Cancel** button to close this window.
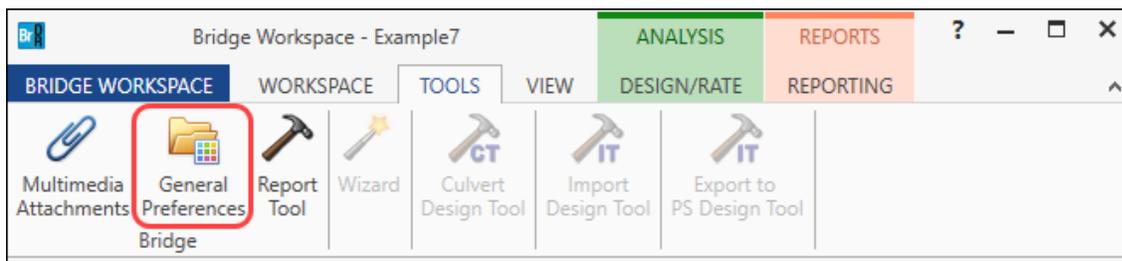
General Preferences

In the **Bridge Workspace** tree, double click on the **Impact/ Dynamic Load Allowance** node for **Interior Member (E) (C)** member alternative to open the **Member Alternative Impact/ Dynamic Load Allowance** window. In this window **Standard AASHTO impact** is to be used. Click on the **Cancel** button to close the window.
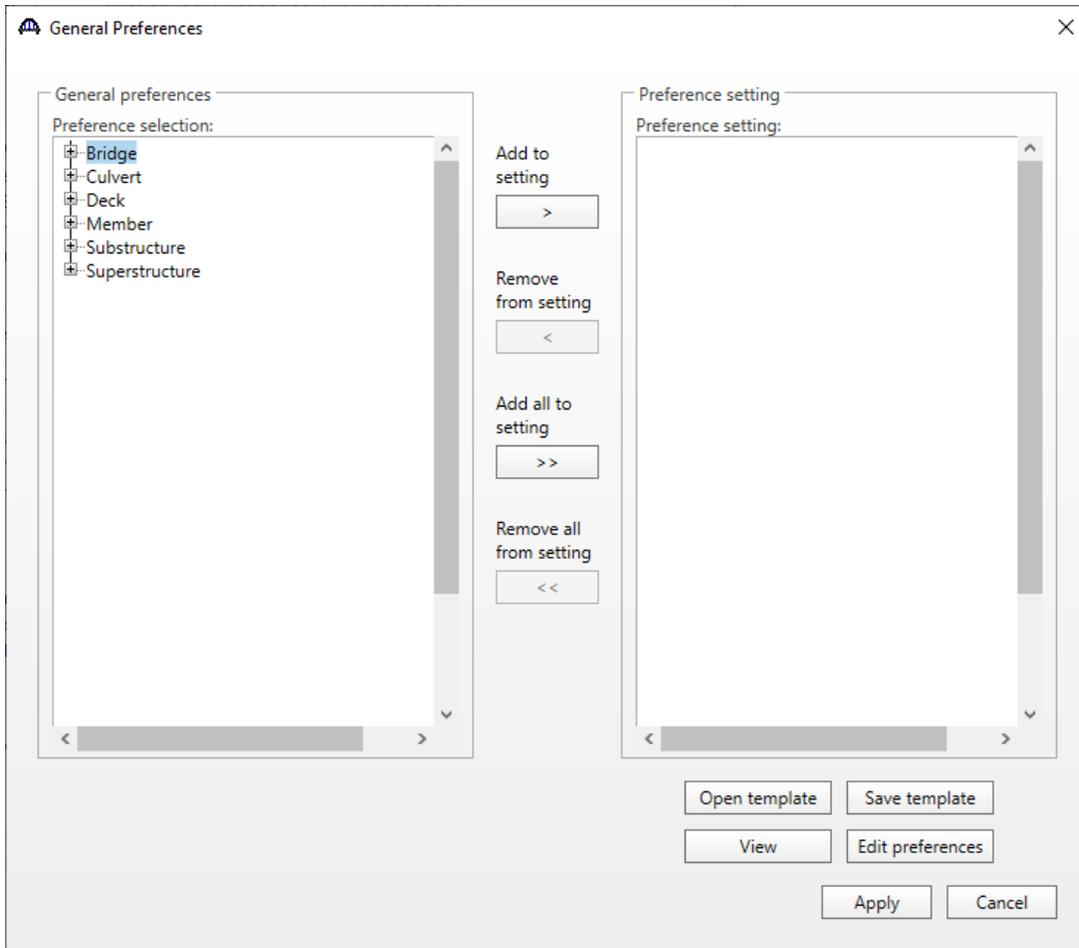
To open the **General Preferences** window, click on the **General Preferences** button from the **Bridge** group of the **TOOLS** ribbon as shown below.

General Preferences

In the General Preferences window following sample list of preferences are available:

Bridge

    Default

Culvert

    Analysis Module – ASD, LFR, LRFD and LRFR

    Control Options – Metal Box, Metal Pipe, RC Box

    Bottom Slab Exterior Exposure Factor

    Condition Factor Field Measured Section Properties

    Construction Type

    Default Rating Method

    Interior Surface Exposure Factor

    Live load modifier

    Top Slab Exterior Exposure Factor

    Vertical earth load modifier

General Preferences

Wall Exterior Exposure Factor

Deck

Analysis Module – ASD and LRFR

Condition Factor Field Measured Section Properties

Default Rating Method

System Factor Override

Member

Analysis Module – ASD, LFR, LRFD and LRFR

Control Options – Steel Floorbeam, Steel Girder, Steel Stringer and Timber

Beam Crack Control Parameter

Beam Exposure Factor

Condition Factor Field Measured Section Properties

Deck diff. shrinkage loads

Default Rating Method

Ignore positive moment at supports in ratings.

LRFD Dynamic Load Allowance

Standard Impact Factor

Sustained Modular Ratio (Concrete and Steel)

System Factor Override

Substructure

Substructure Design Parameters

Substructure Environmental Conditions (Wind, Temperature and Stream)

Substructure Model Settings (Default Parameters)

Substructure Load Combination Settings

Substructure Load Palette

Substructure Reports

Longitudinal Force Distribution

Stiffness Analysis Method

Trans Forces Load Distribution

Superstructure

Analysis

Control Options – MCB

3D Analysis Module – ASD, LFD, LRFD and LRFR

Average Humidity

Condition Factor Field Measured Section Properties

Consider Sub/Pier Skew in FE Sect. Prop.

Deck Crack Control Parameter

Deck diff. shrinkage loads

Deck Exposure Factor

DL Distribution Method

Include Elastic Gains

Line Girder Analysis Module – LFD, LRFD and LRFR

LRFD Dynamic Load Allowance

Post Tension Load Allowance

Prestress Loss Method

Standard Impact Factor

System Factor Override

Wearing Surface Thickness Field Measured

On the **General Preferences** window expand Member by clicking on the ⊞ button. Expand the node **Control Options – PS**, **LRFD** and select **Shear Computation Method**. Click on the **Add to setting** button to add it to the **Preference setting** view on the right side of this window.
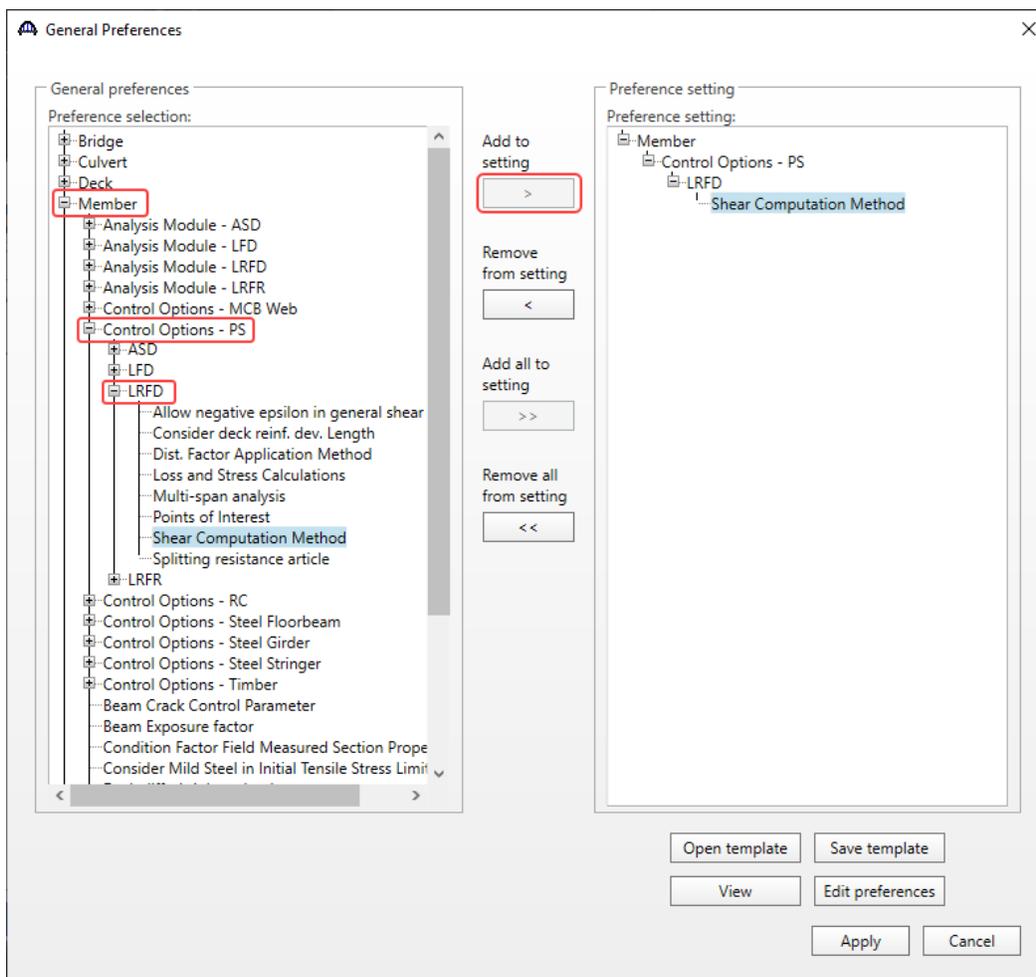
General Preferences

After the **Shear Computation Method** is added to the preference setting view, select **Shear Computation Method** and click on the **Edit Preferences** button to open the **Edit Preferences** window as shown below.

On this window, select the **Shear Computation Method** to view its options on the right side view. From the drop down options of the **Value** column, select the preferred method as **Ignore.**
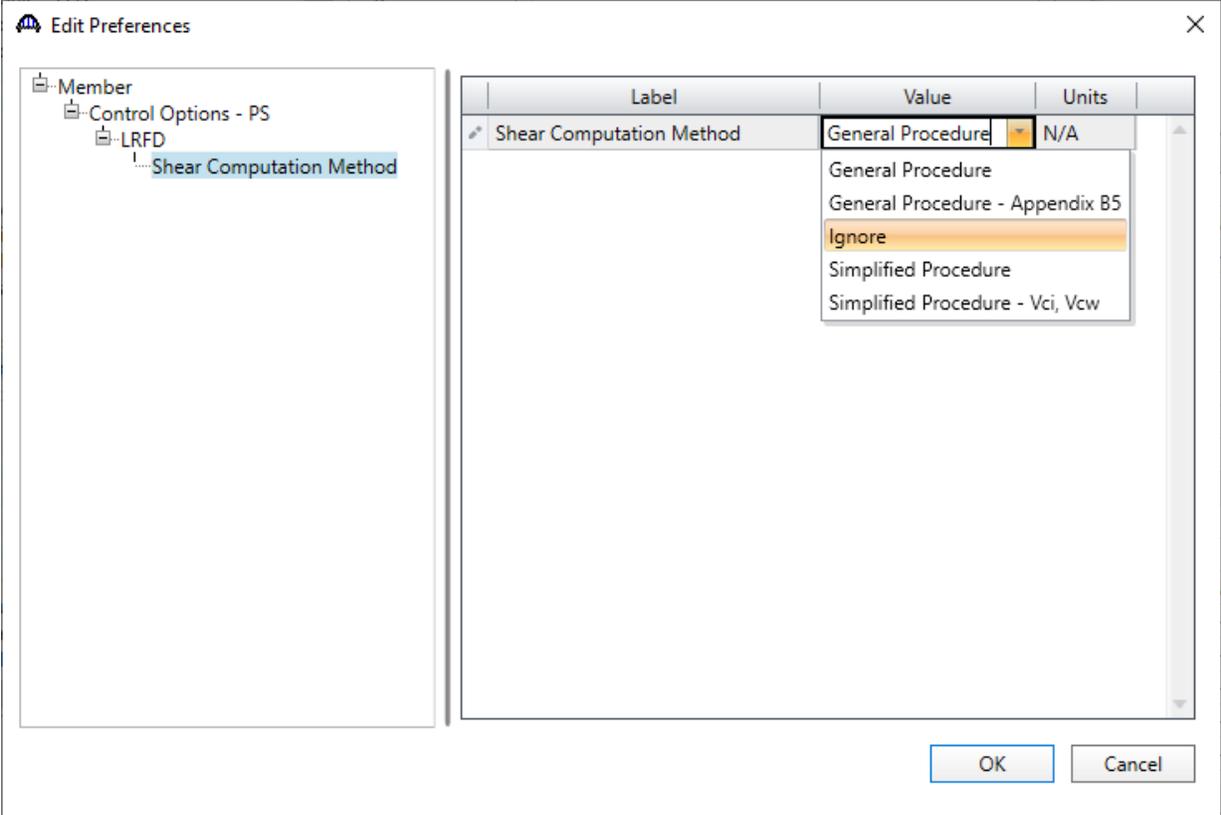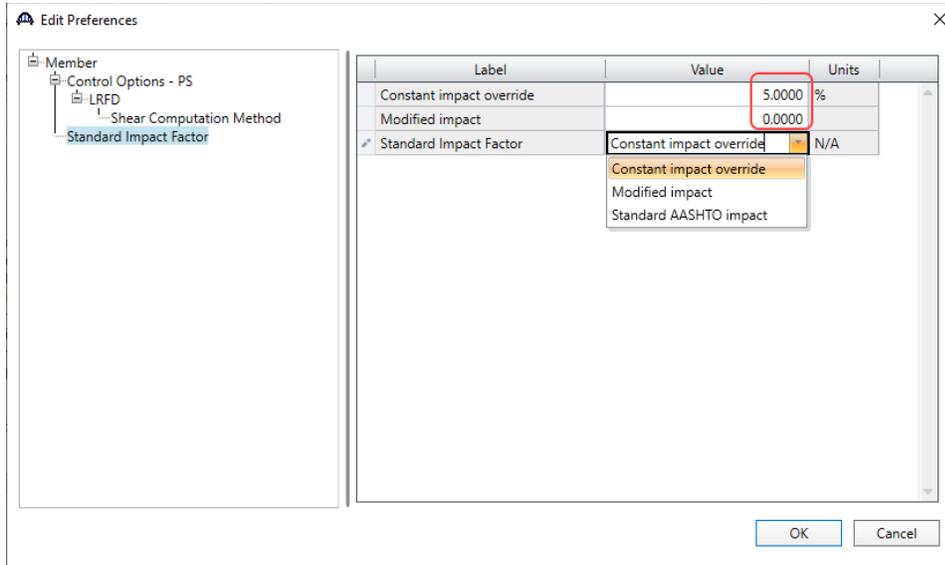

Click **OK** to apply the data and close this window.

General Preferences

General preference setting for Impact Factor.

Similarly, in **Preference selection**, under **Member** select **Standard Impact Factor** and click on the **Add to setting** button to add it to **Preference setting**. Click on the **Edit preferences** button. The **Edit preferences** window for **Standard Impact Factor** will be populated.
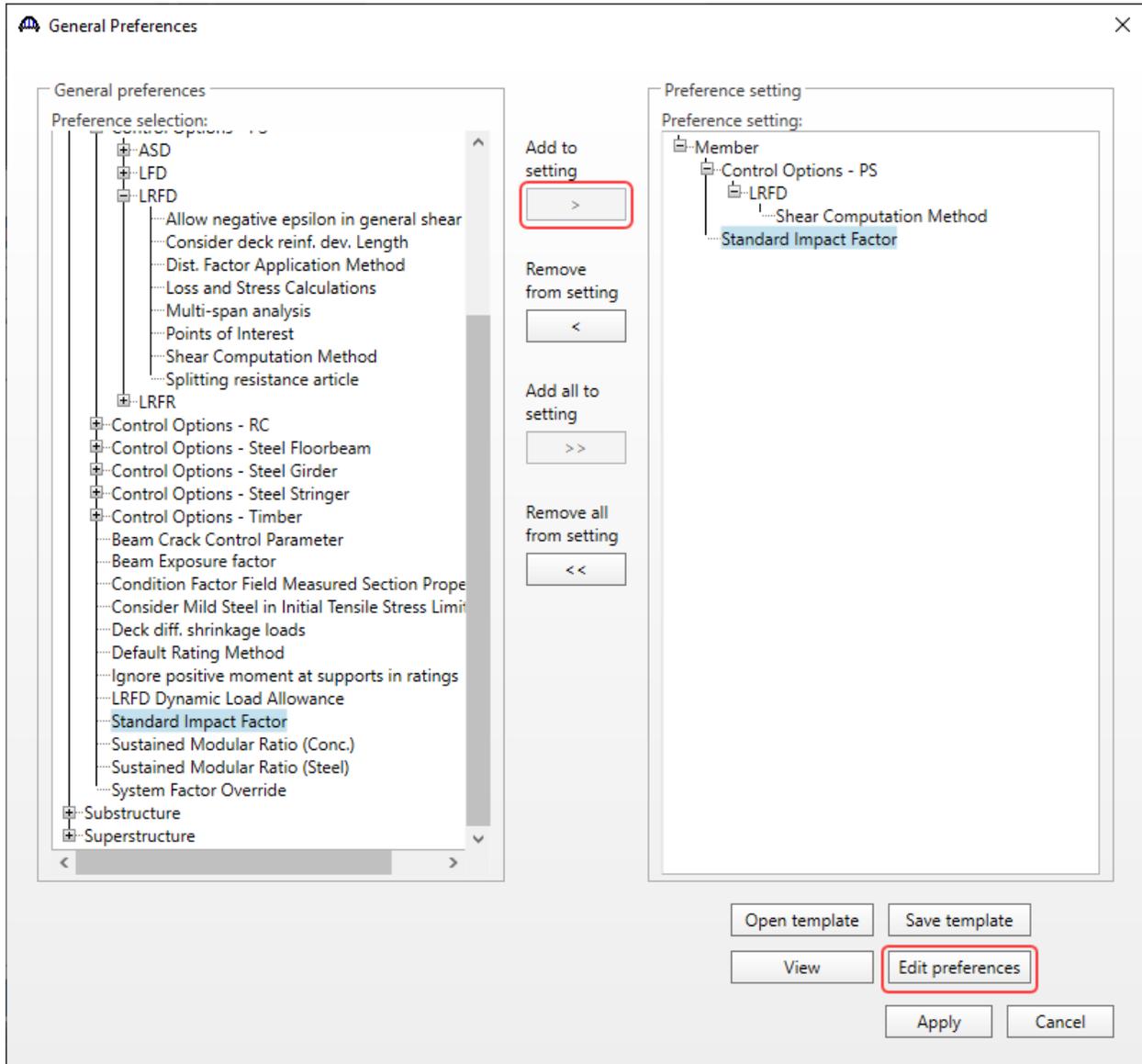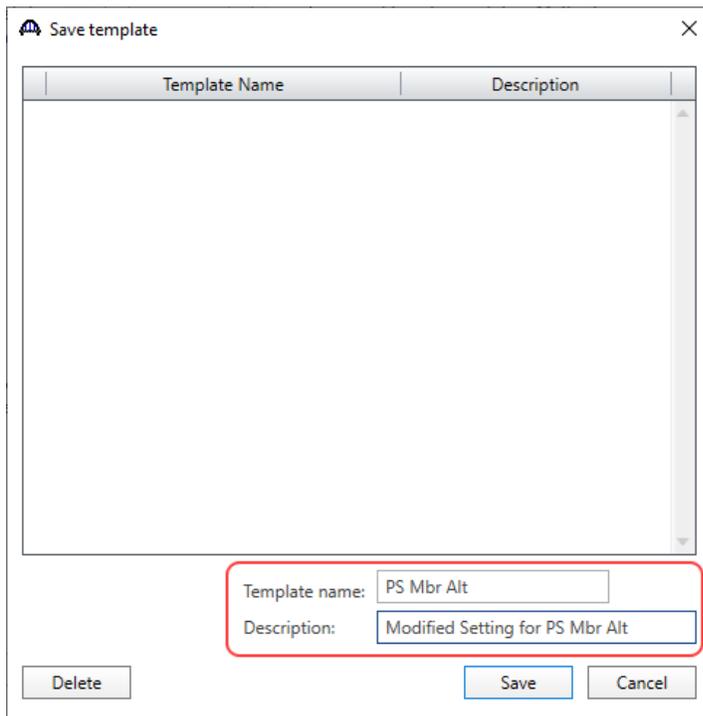
General Preferences

On the **Edit Preferences** window select the **Standard Impact Factor**. Now various options for **Standard Impact Factor** will be populated on the right side of this window. Under the **Value** column, change the **Constant impact override** to **5.0%,** enter 0.0 for **Modified impact** and select **Constant impact override** as the **Standard Impact Factor**.

Click the **OK** button to apply the data and close the window.

After closing the **Edit Preferences** window, in the **General Preferences** window click on the **Save Template** button to open the **Save Template** window. Enter the **Template Name** and **Description** as shown below.

Click the **Save** button to apply the data and close the window.
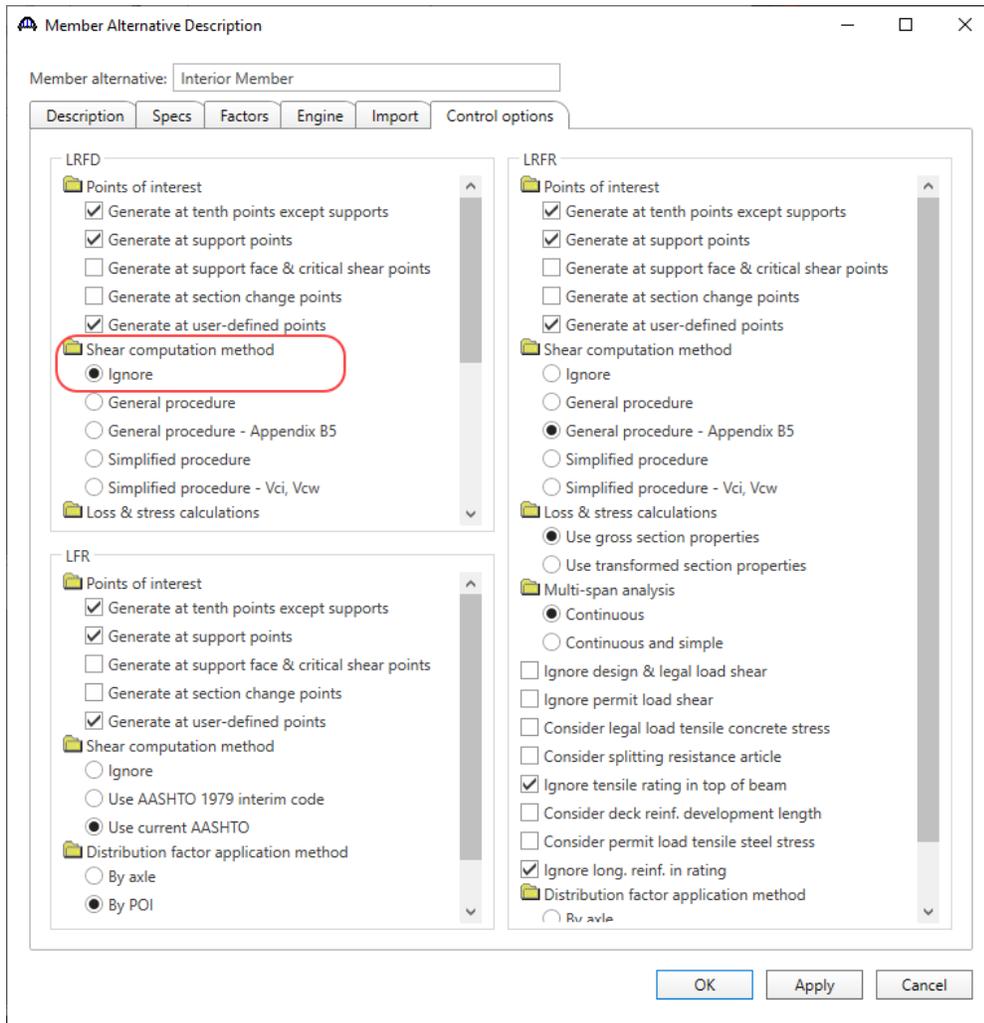
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On the **General Preferences** window click the **Apply** button to apply the preferred settings. A confirmation window will appear. Click on the **Yes** button to apply the modified settings to the bridge.
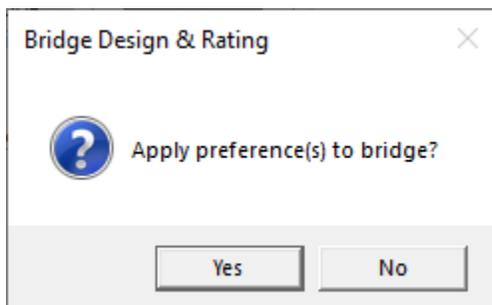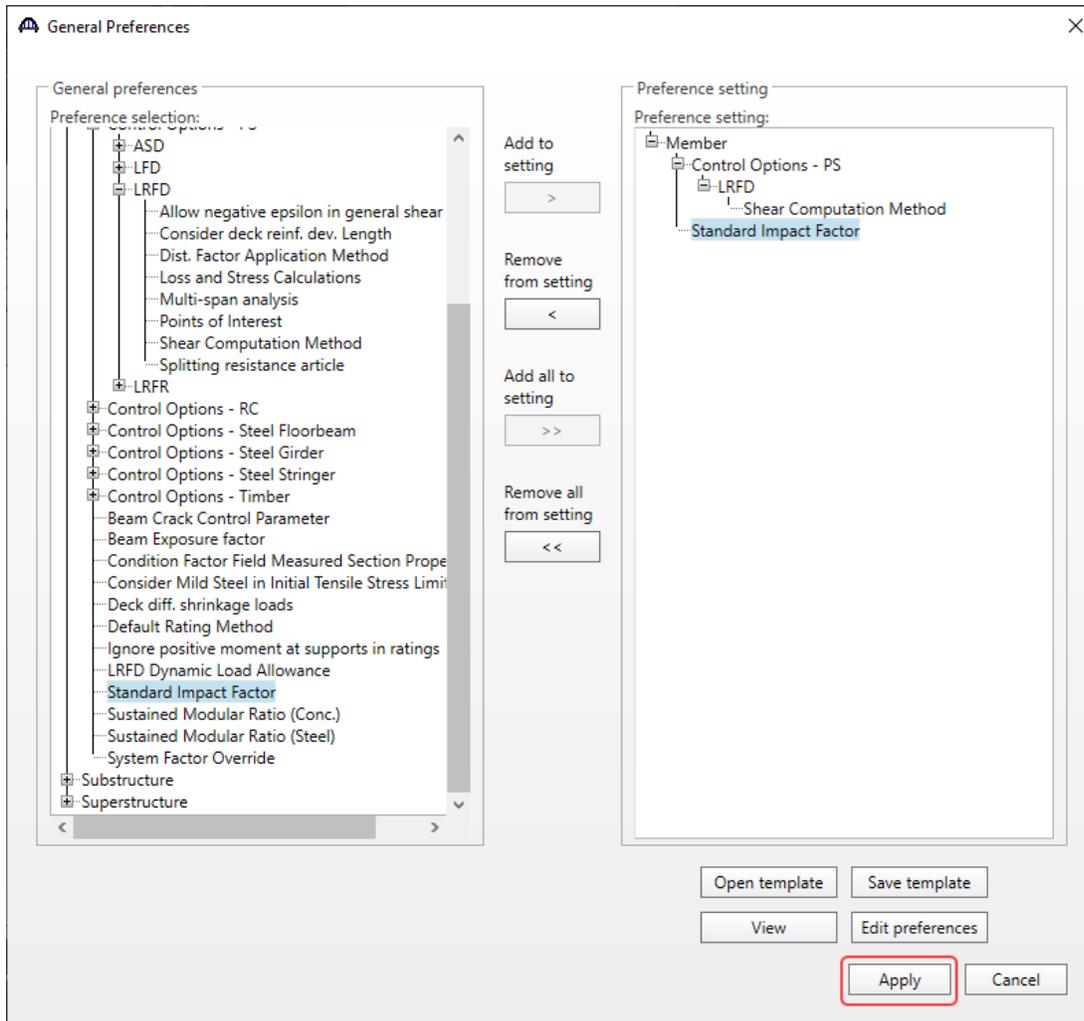
Navigate to the member **G2's** member alternative, **Interior Member (E) (C)** in the **Bridge Workspace** tree and double click on it to open the **Member Alternative Description** window. On this window go to the **Control Options**

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tab and under the **LRFD** settings, the **Shear computation method** has been changed to **Ignore**. Click on the **Cancel** button to close this window.

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Similarly, double click on the **Impact/ Dynamic Load allowance** under **Interior Member (E) (C)** in **Bridge Workspace** tree to open the **Member Alternative Impact/ Dynamic Load allowance** window. In this window the default impact factor has been changed to **Constant impact override** of **5.0 %** as selected in the **General Preferences** window. Click the **Cancel** button to close this window.
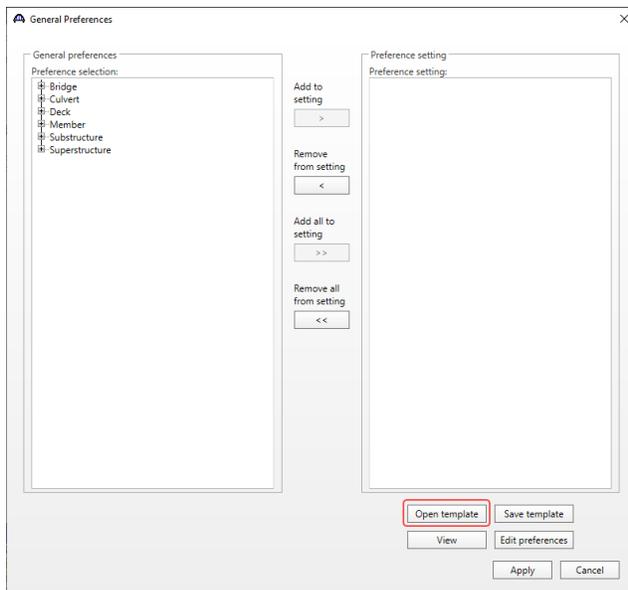
General Preferences

Apply General Preference template for single/multiple bridges.

These general preferences can be applied to multiple bridges at once. Select all the PS bridges in the Bridge Workspace and select the **General Preferences** button from the **Bridge** group of the **TOOLS** ribbon (or right click and select **General Preferences** from the drop down menu) as shown below to open the **General Preferences** window.
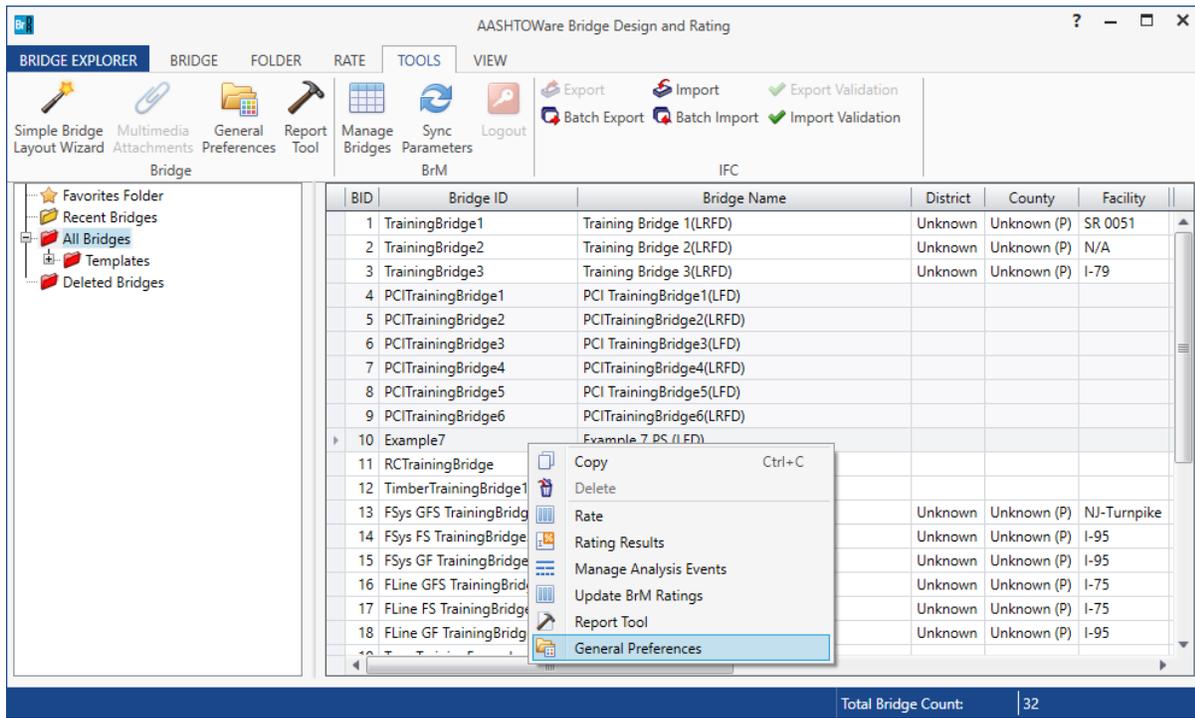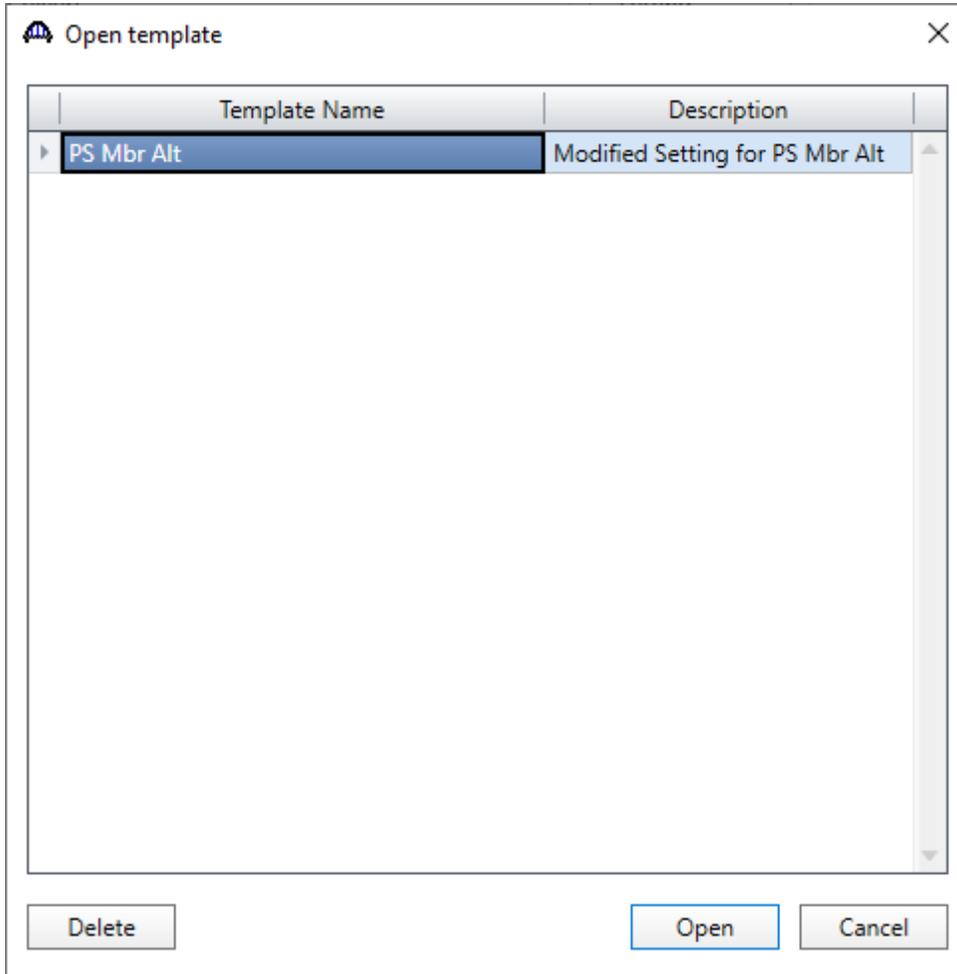

In the **General Preferences** window, click on the **Open template** button as shown below.
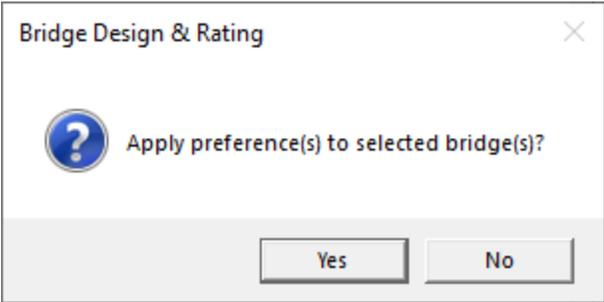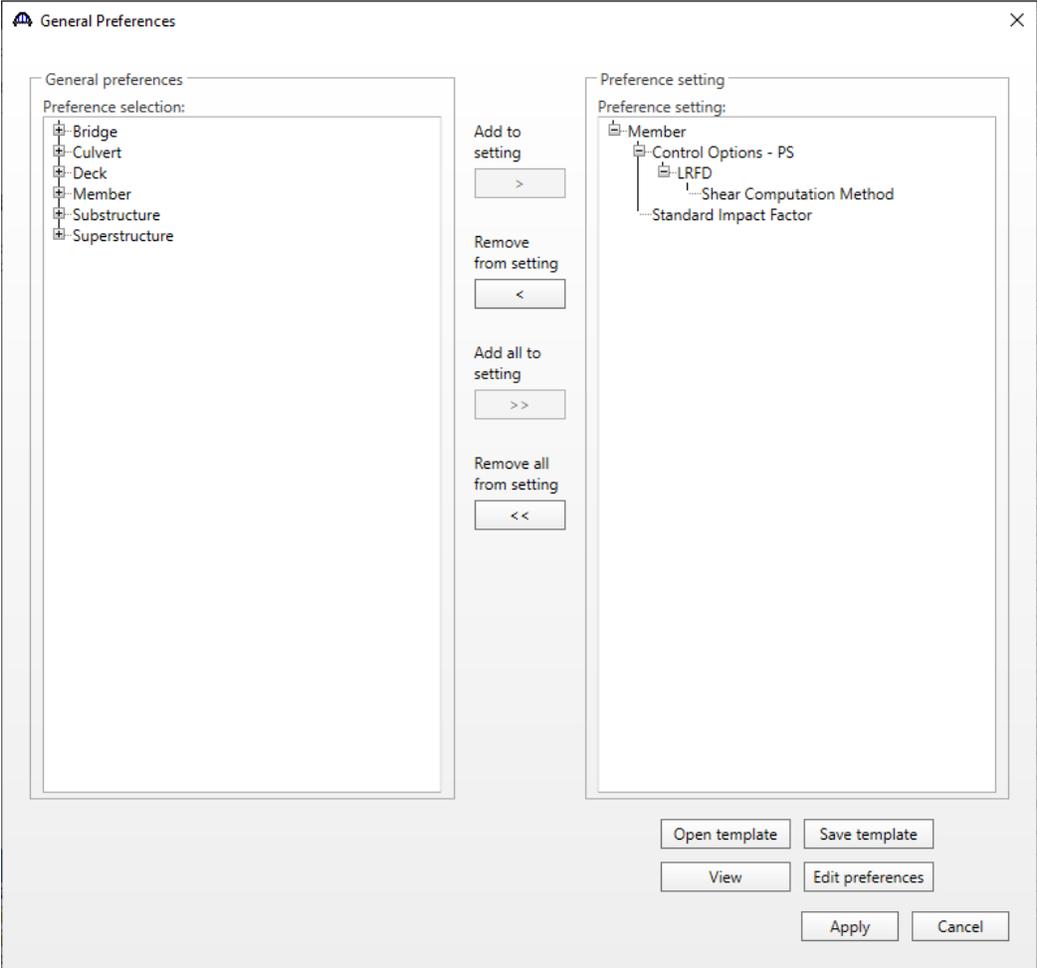
General Preferences

The **Open template** window lists the available templates. Select **PS Mbr Alt** template saved earlier and click the **Open** button to load the selected template in the **General Preferences** window.
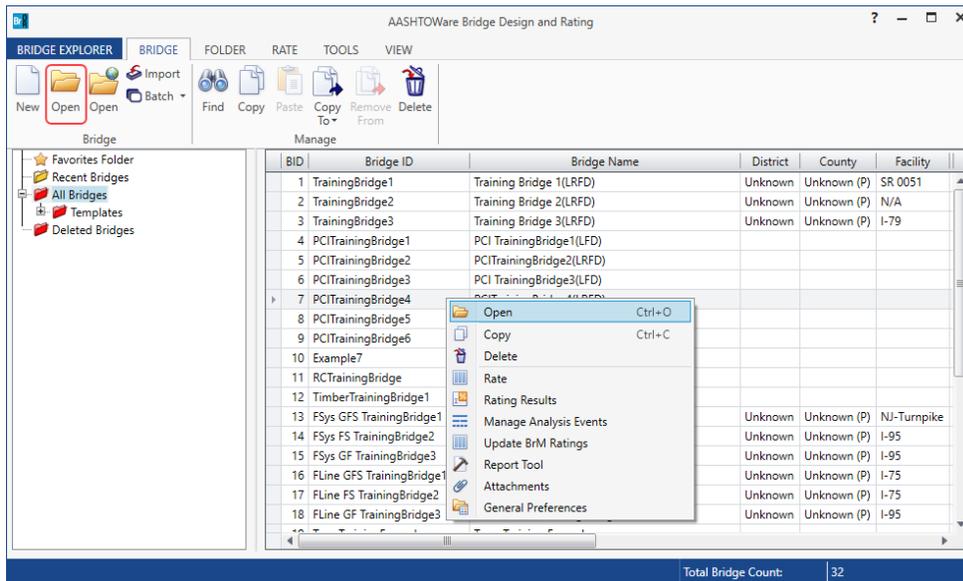
General Preferences

Now click the **Apply** button on the **General Preferences** window to apply the preference settings to the selected bridges. A confirmation window will appear. Click **Yes** to apply the preferences.
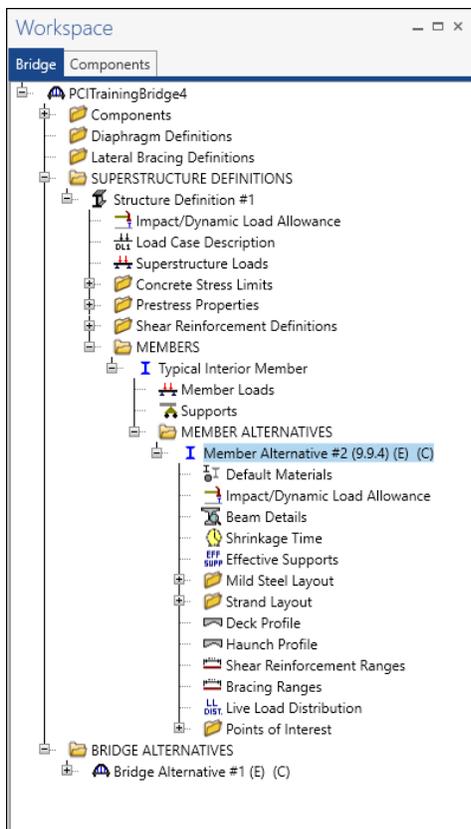
General Preferences

To verify if these preferences have been applied to all the selected bridges click and **Open PCITrainingBridge4 (BID 7)**.


In the **Bridge Workspace** tree, expand **Structure Definition #1**, member **Typical Interior Member**, and **Member Alternative #2(9.9.4)(E)(C)** member alternative. Expand **Member Alternative #2(9.9.4)(E)(C)** by clicking on the ⊞ button. The partially expanded **Bridge Workspace** tree is shown below.
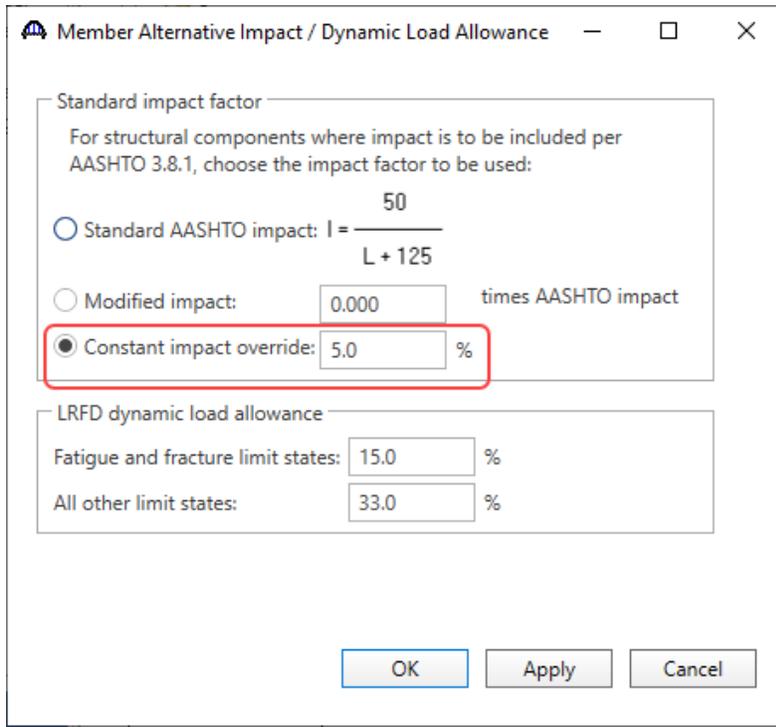
General Preferences

Double-click on the member alternative **Member Alternative #2(9.9.4) (E)(C)** and navigate to the **Control options** tab. On this tab under **LRFD** settings, the **Shear computation method** has been changed to **Ignore**. Click the **Cancel** button to close the window.
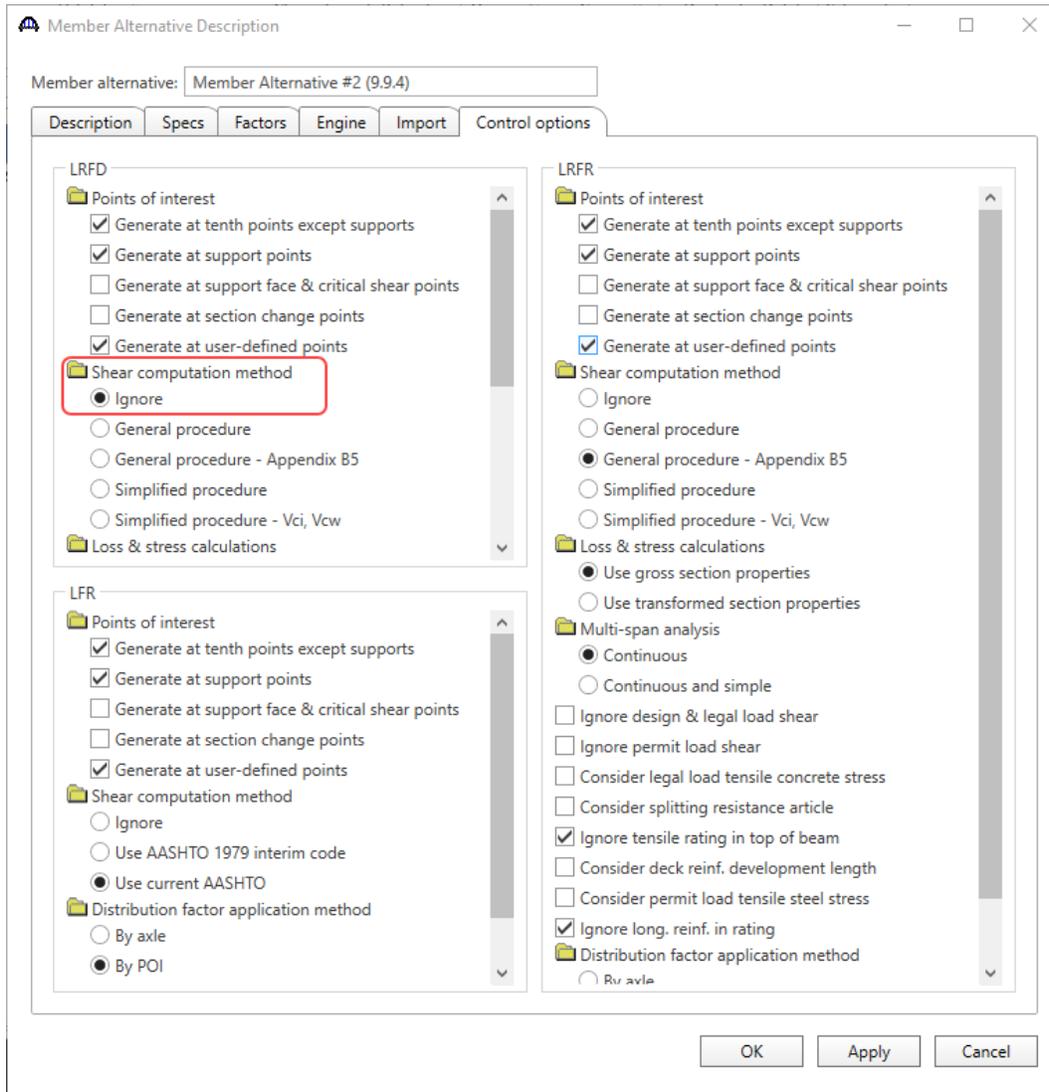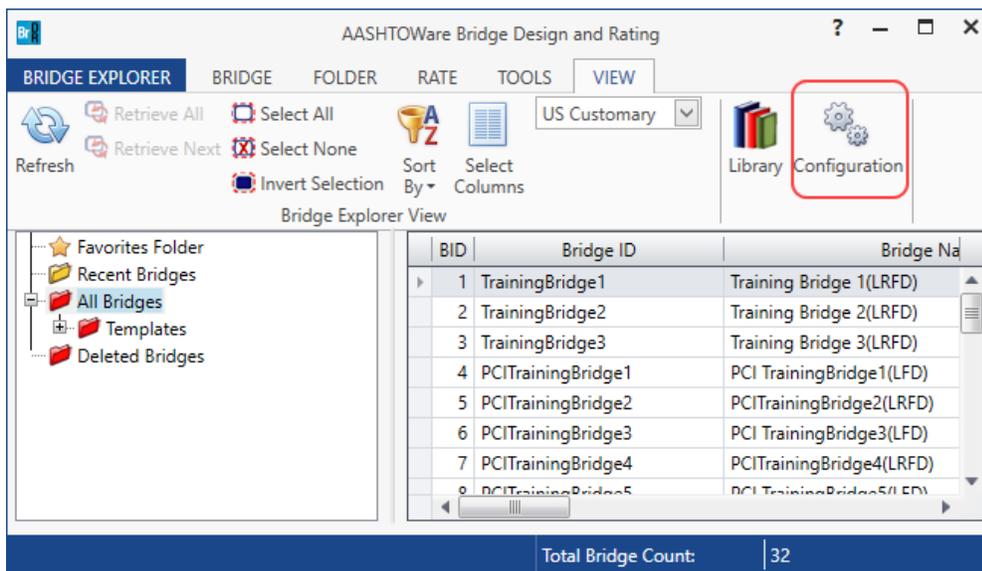
General Preferences

Similarly, double-click on the **Impact/ Dynamic Load allowance** node in the **Bridge Workspace** tree to open the **Member Alternative Impact/ Dynamic Load allowance** window. In this window, the default impact factor has been changed to **Constant impact override** of 5.0%. Click the **Cancel** button to close the window.


Making General preference template as default.

To avoid applying template every time a new bridge is created or imported, a specific template with selected preferences can be set as a default template. This can be performed in the **Configuration Browser**. To open this, click on the **Configuration Browser** from the **VIEW** ribbon in the **Bridge Explorer** as shown below.
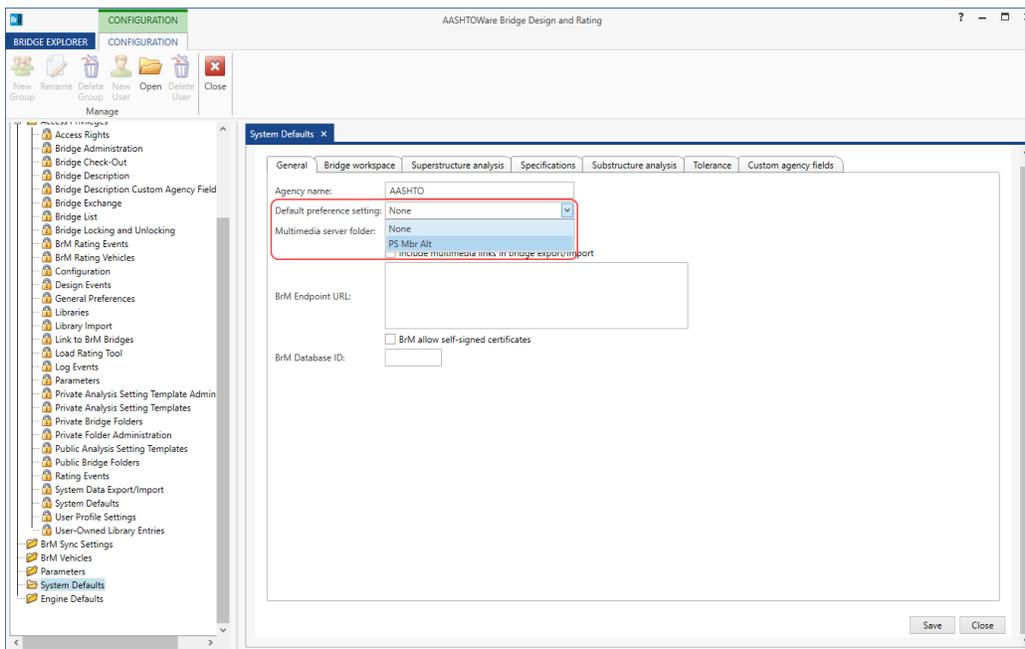
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Double-click on the **System Defaults** node in the **Configuration Browser** (or select **System Defaults** and click **Open** from the **Manage** group of the **CONFIGURATION** ribbon) to open the **System Defaults** window on the right side panel as shown below.
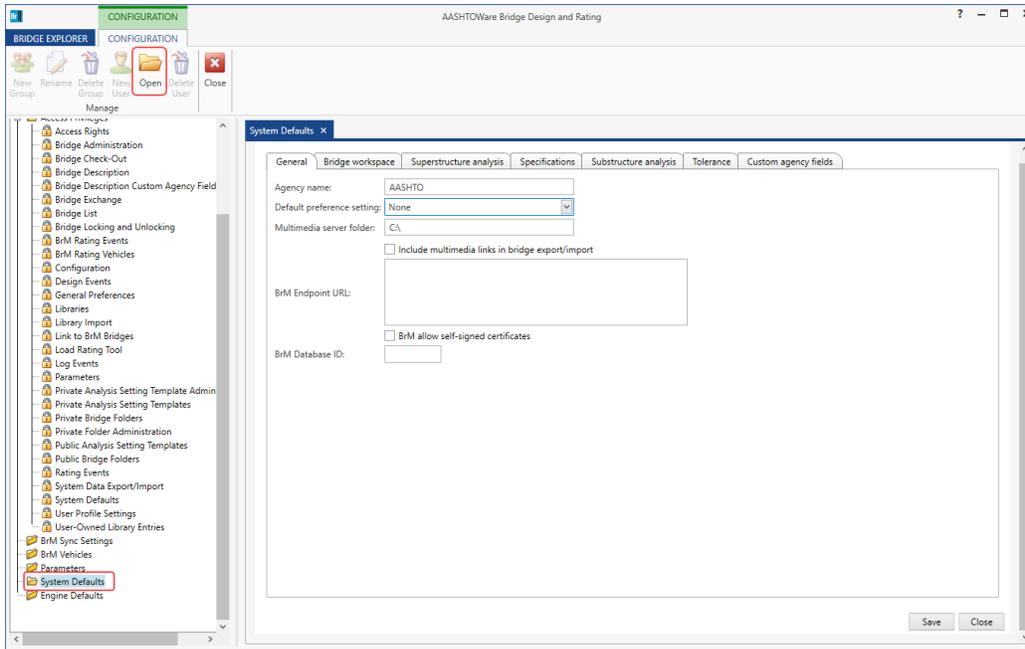
On the **System defaults** window – **General Tab**, select **PS Mbr Alt** template as the default preference setting as shown below.

Click on the **Save** button to apply the changes made in this window. This template will now be applied whenever a new bridge is created.

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Applying General Preferences during analysis.

Applying a **General Preference** template without changing the bridge data is also possible. While analyzing a bridge, on the **Analysis Settings** window there is option for selecting a preference template as shown below. Selecting the **General Preference** template in the **Analysis Settings** window will not change the bridge data, but preferred settings will be applied during the analysis.