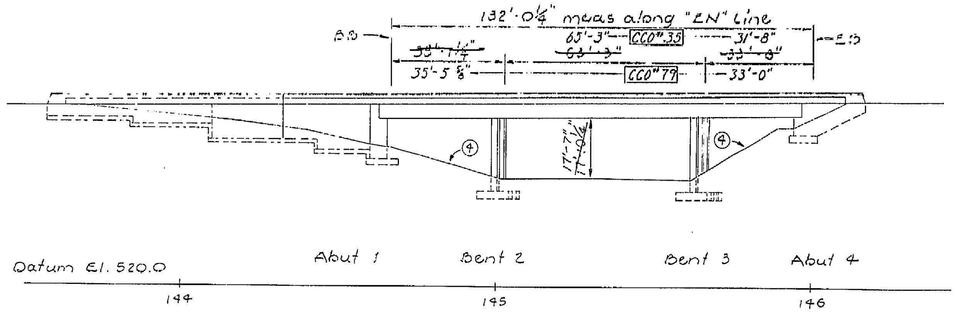
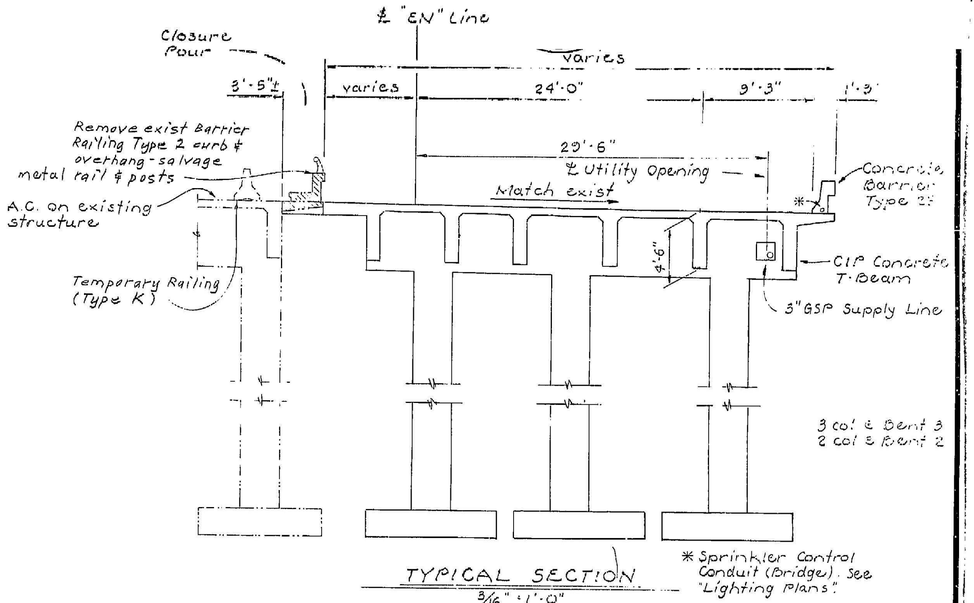
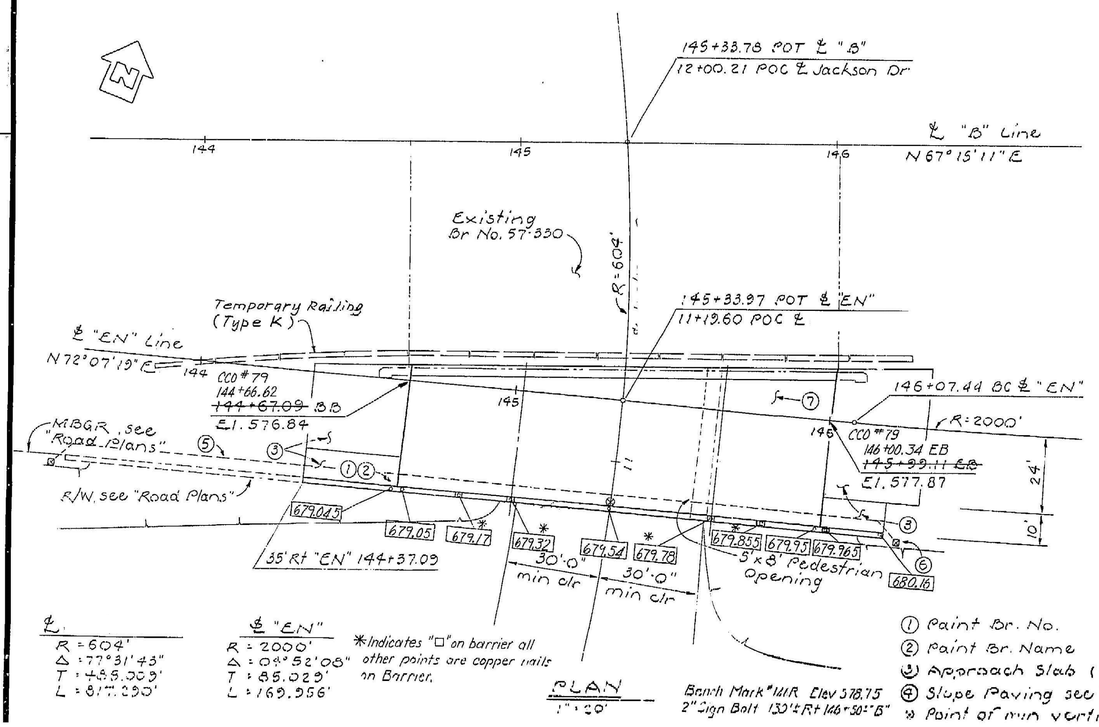


ELEVATION
1" = 20'



TYPICAL SECTION
3/16" = 1'-0"

Bent 3 shown, Bent 2 similar except as noted.



PLAN
1" = 20'

℄	℄ "EN"
R = 604'	R = 2000'
Δ = 77°31'45"	Δ = 09°52'08"
T = 485.009'	T = 85.029'
L = 817.290'	L = 169.956'

*Indicates "□" on barrier all other points are copper nails on Barrier.

Bench Mark "141R" Elev 578.75
2" Sign Bolt 130'± Rt 146+50 "B"

① Paint Br. No.
② Paint Br. Name
③ Approach Slab (type 2)
④ Slope Paving see "Road Plans"
⑤ Point of min vertical clearance

---- Denotes 3"GSP limits for bridge.
⊠ Indicates No.5 Pull Box at finished grade.
⑤ 3"GSP and location of No.5 Pull Box, see "Road Plans."
⑥ The 3"GSP to be capped in Pull Box.
⑦ For variable A.C. blanket see "Road Plans"

Note:

APPROXIMATE QUANTITIES

TEMPORARY RAILING (TYPE K)	460 LF
BRIDGE REMOVAL (PORTION)	LUMP SUM
3" SUPPLY LINE (BRIDGE)	193 LF
WATERSTOP	103 LF
JOINT SEAL (MR 1/2")	92 LF

FINAL PAY QUANTITIES

STRUCTURE EXCAVATION (BRIDGE)	625 CY
STRUCTURE BACKFILL (BRIDGE)	540 CY
STRUCTURAL CONCRETE, BRIDGE FOOTING	130 CY
STRUCTURAL CONCRETE, BRIDGE	450 CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE 2)	96 CY
BAR REINFORCING STEEL (BRIDGE)	120,000 LB
CONCRETE BARRIER (TYPE 25)	184 LF

INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN
2	FOUNDATION PLAN
3	ABUTMENT 1 DETAILS
4	RETAINING WALL LAYOUT
5	ABUTMENT 4 DETAILS
6	BENT 2
7	BENT 3
8	TYPICAL SECTION
9	GIRDER LAYOUT
10	GIRDER REINFORCEMENT
11 & 12	LOG OF TEST BORINGS 1 & 2

STANDARD PLANS DATED JULY 1984

A35-B	APPROACH SLAB
A62-C	EXCAVATION AND BACKFILL - BRIDGE
B0-1	BRIDGE DETAILS
B0-3	BRIDGE DETAILS
B0-5	BRIDGE DETAILS
B0-13	BRIDGE DETAILS
B3-1	RETAINING WALL - TYPE 1 H = 4'-30'
B3-8	RETAINING WALL DETAILS NO. 1
B6-1	T-BEAM DETAILS
B6-21	JOINT SEALS
B11-53	CONCRETE BARRIER TYPE 25
B11-30	TEMPORARY RAILING (TYPE K)
B6-10	UTILITY OPENINGS - T-BEAM
B14-3	SUPPLY LINE & COMMUNICATION & SPRINKLER CONTROL CONDUIT

Standard Plan Sheet No.
Detail No.

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

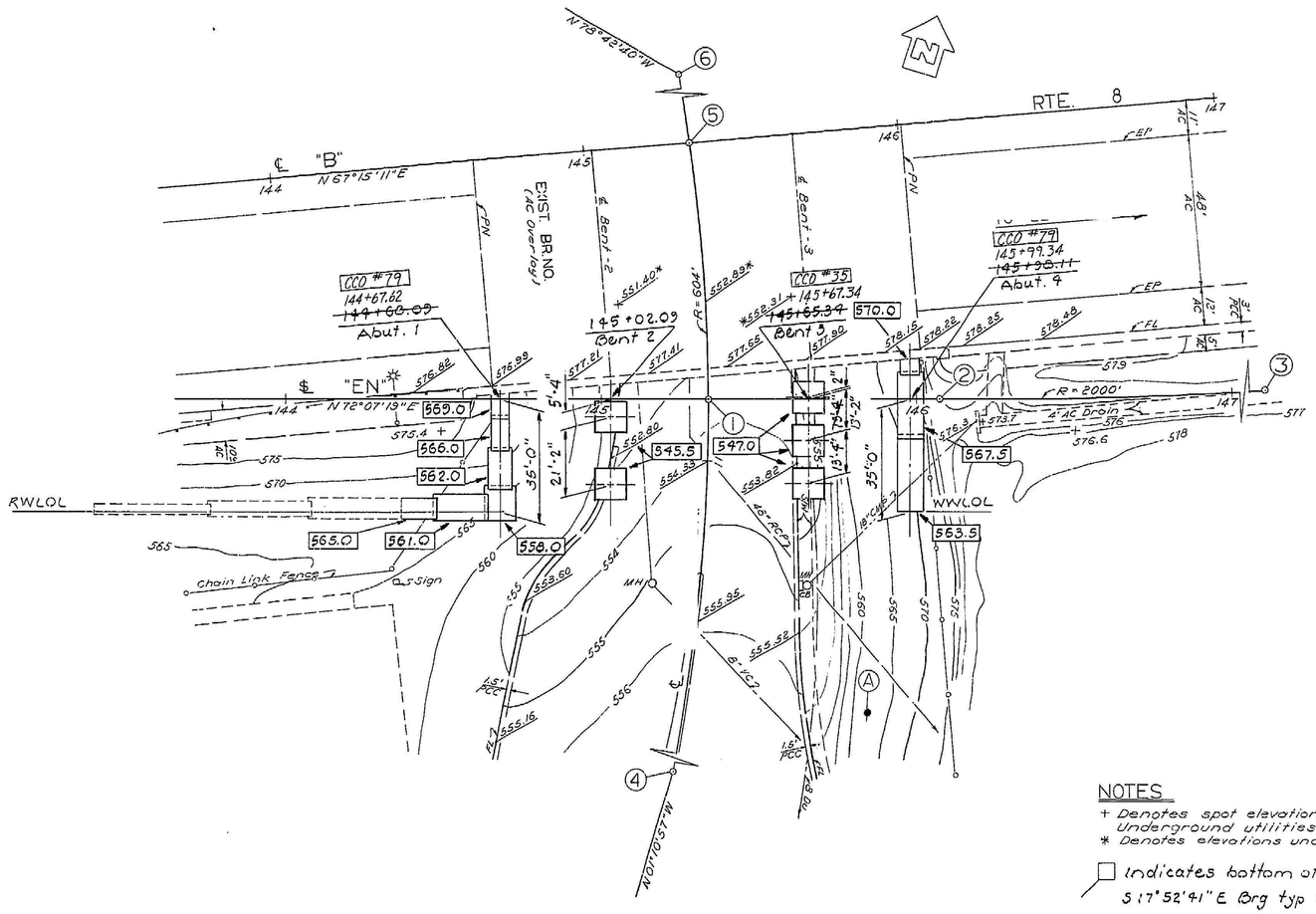
384

UTILITIES

(A) PP# 673922
2 wires S. of elev. 610'±
1 transformer " 600'±
3 wires S. " 590'±
2 cables into grd.
Underground warning sign

℄ "EN"
R = 2000'
Δ = 04°52'08"
T = 85.029'
L = 169.956'
N224,010.307
E1,765,842.536

℄
R = 604'
Δ = 77°31'43"
T = 485.005'
L = 817.290'
N221,854.543
E1,765,915.301



GENERAL NOTES
LOAD FACTOR DESIGN

DEAD LOAD: Includes 35 psf for future wearing surface.

LIVE LOADING: HS20-44 and alternative and permit design load.

REINFORCED CONCRETE: f_y = 60,000 psi
f'_c = 3,250 psi
n = 9

Transverse deck slabs (working Stress Design)
f_s = 20,000 psi
f_c = 1,200 psi
n = 10

FOOTING PRESSURE (TONS PER SF) (SL)	ALLOWABLE	DESIGN
Abut 1	2.5	2.0
Bent 2	4.0	4.0
Bent 3	4.0	4.0
Abut 4	2.5	2.0
Wingwalls (All)	2.0	Std Plans

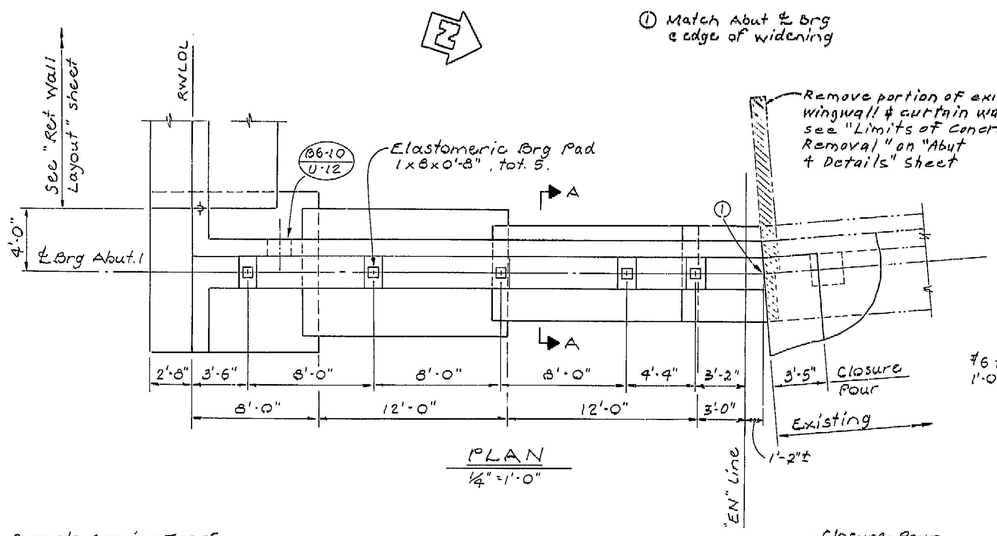
NOTES

+ Denotes spot elevation.
Underground utilities as shown are approximate.
* Denotes elevations under bridge.

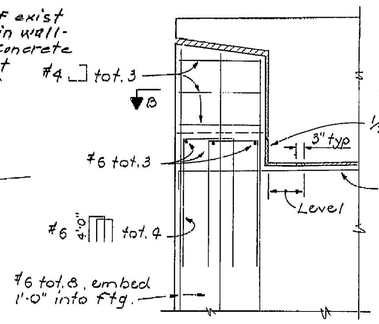
☐ Indicates bottom of ftg elev.
S 17°52'41" E Brg typ @ Abuts & Bents

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING

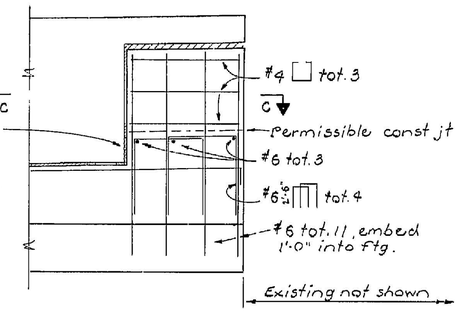
385



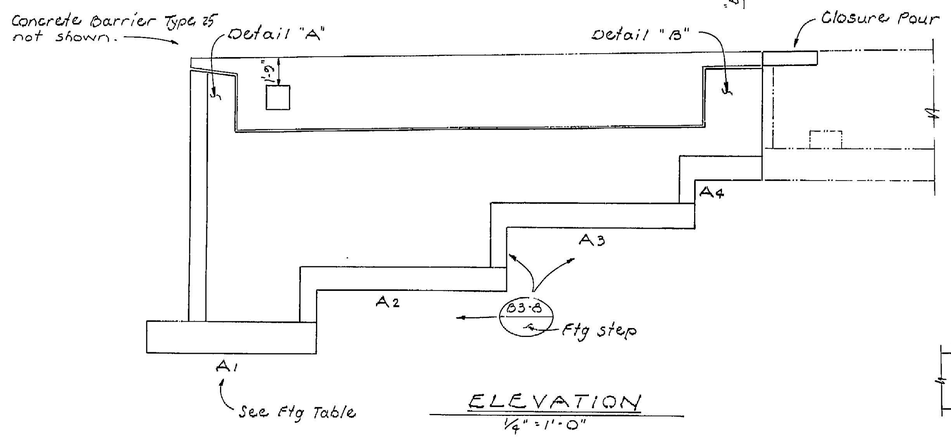
PLAN
1/4" = 1'-0"



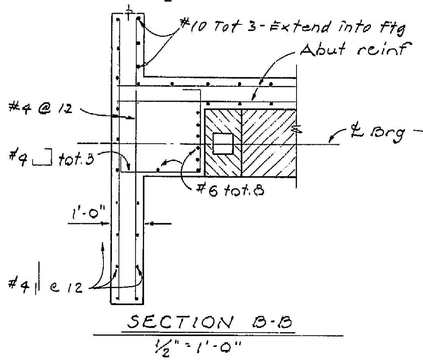
DETAIL "A"
½" = 1'-0"



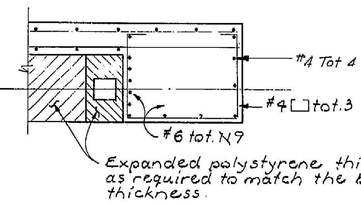
DETAIL "B"
½" = 1'-0"



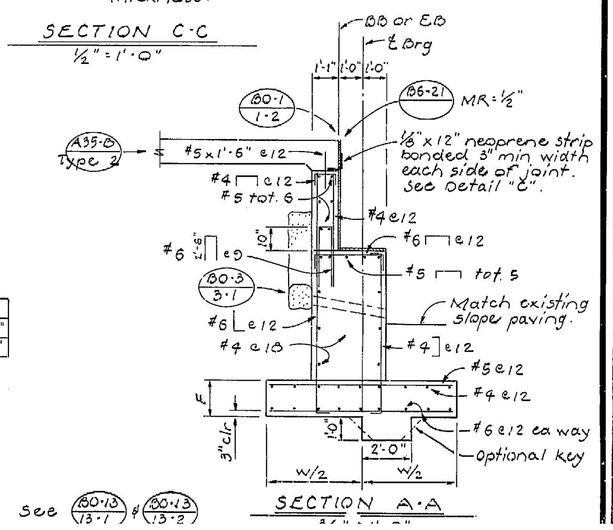
ELEVATION
1/4" = 1'-0"



SECTION B-B
½" = 1'-0"

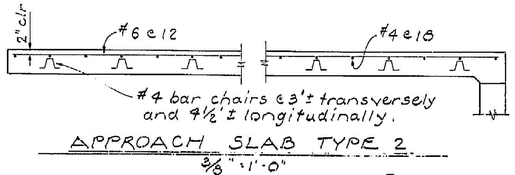


SECTION C-C
½" = 1'-0"



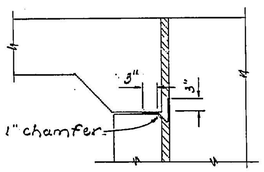
SECTION A-A

See B0-13 13-1 & B0-13 13-2



APPROACH SLAB TYPE 2
3/8" = 1'-0"

Note: Reinf shown is in addition to A35-B Type 2



DETAIL "C"
¾" = 1'-0"

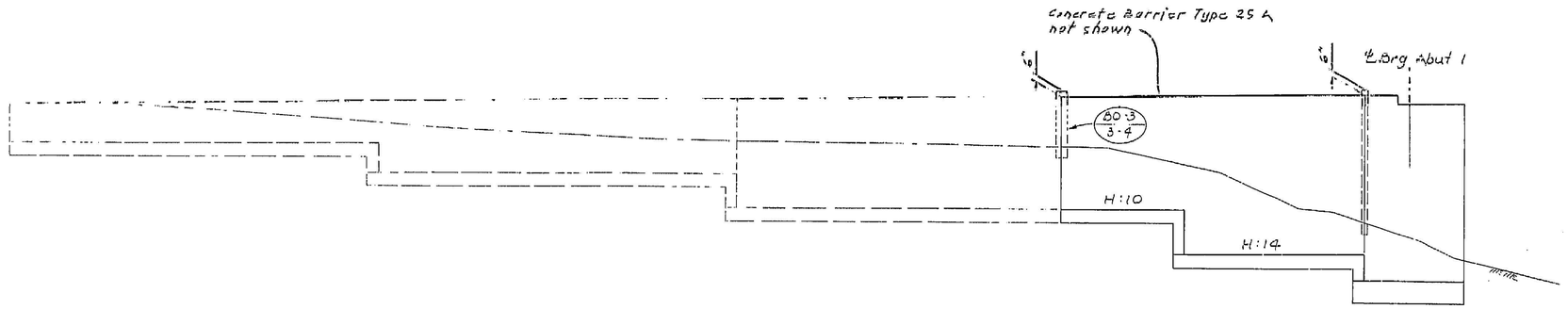
FTG TABLE

Abut. 1	A1	A2	A3	A4
W	10'-0"	8'-0"	6'-0"	6'-0"
F	1'-6"	1'-6"	1'-6"	1'-6"

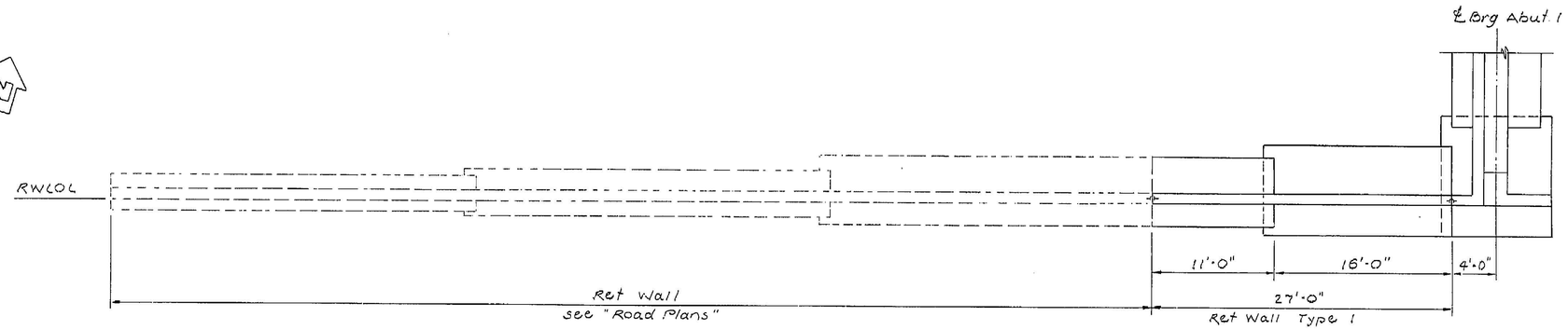
Abut. 4	A1	A2	A3
W	8'-0"	8'-0"	6'-0"
F	1'-6"	1'-6"	1'-6"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

386



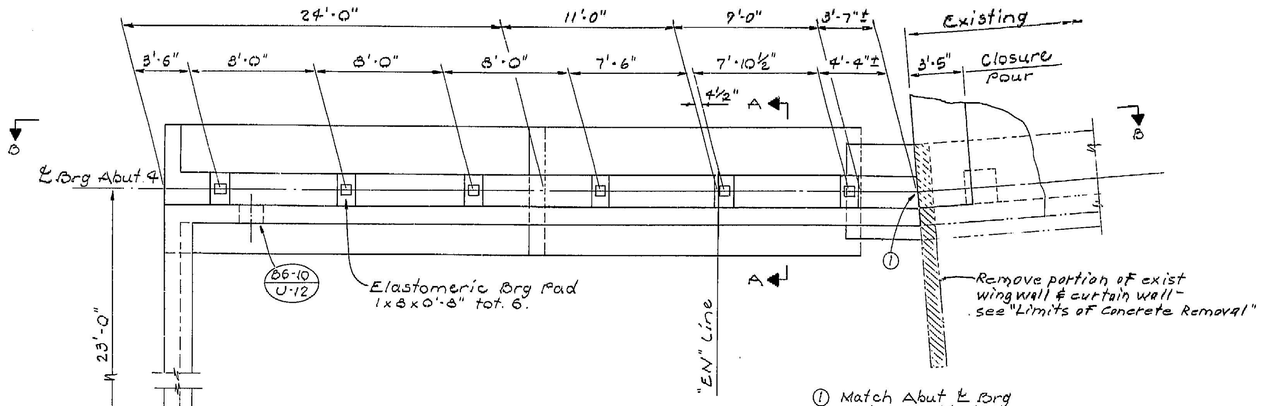
ELEVATION
3/16" = 1'-0"



PLAN 83:1 83:8
3/16" = 1'-0"

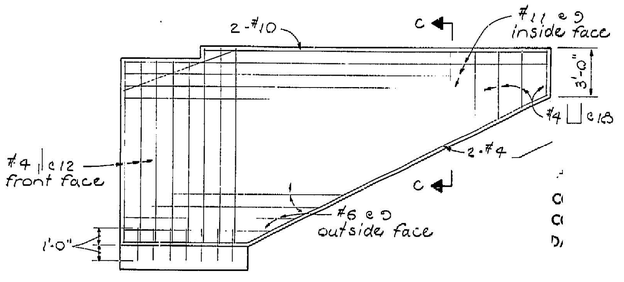
NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

387

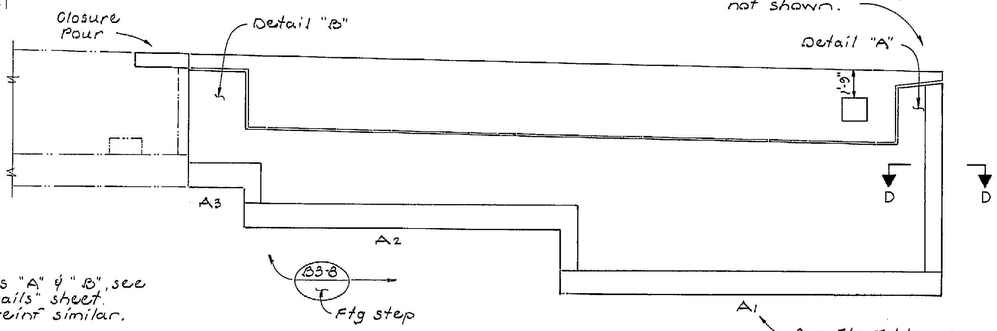


① Match Abut ℄ Brg & edge of widening.

PLAN
¼" = 1'-0"

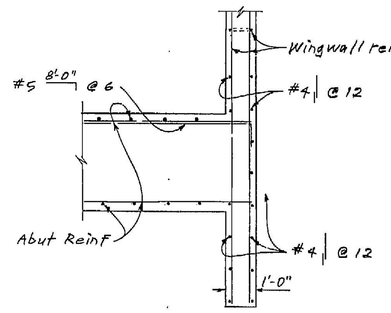


WINGWALL ELEV
¼" = 1'-0"

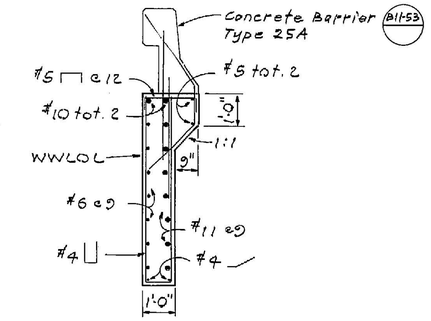


Note:
For Details "A" & "B", see "Abut 1 Details" sheet. Shear key reinf similar.

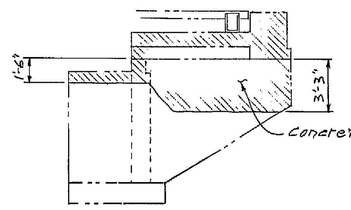
ELEVATION B-B
¼" = 1'-0"



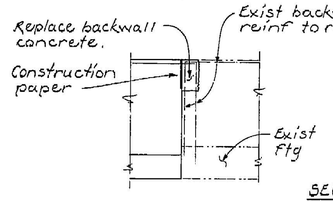
SECTION D-D
½" = 1'-0"



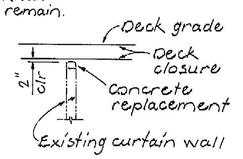
SECTION C-C
½" = 1'-0"



LIMITS OF CONCRETE REMOVAL
No Scale



ABUT BACKWALL ELEV



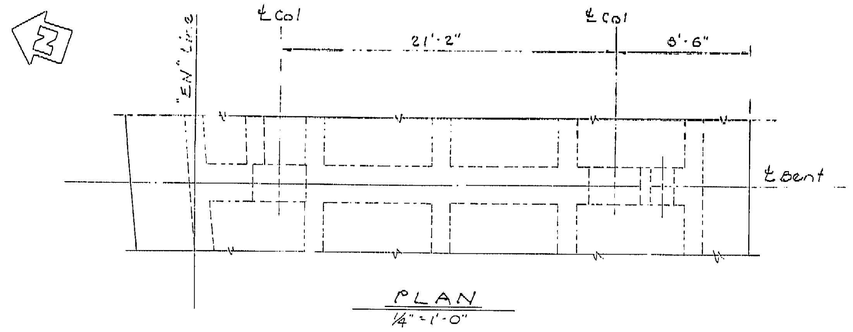
SECTION @ CURTAIN WALL

CONCRETE REPLACEMENT DETAILS
No Scale

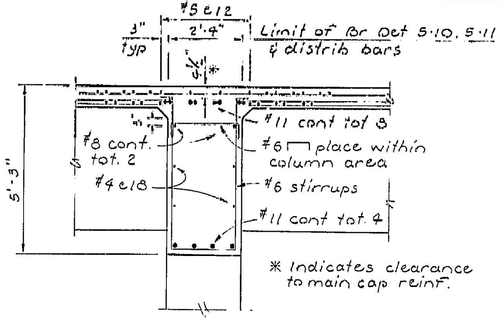
Note: For details not shown see "Abut. 1 Details" sheet.

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

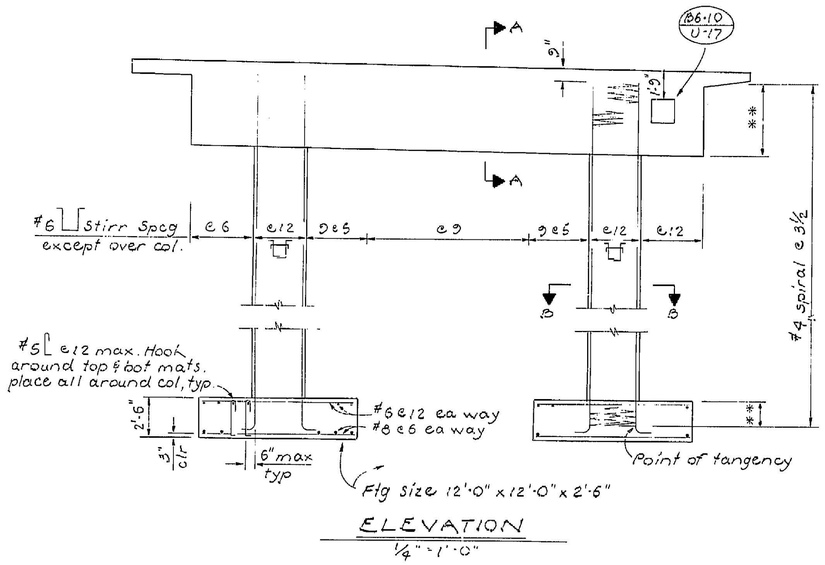
388



PLAN
1/4" = 1'-0"

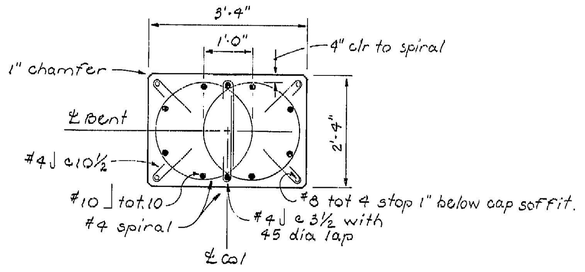


SECTION A-A
1/2" = 1'-0"

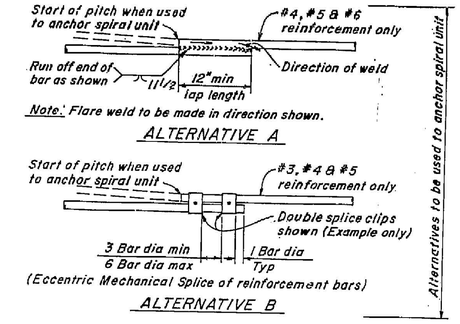


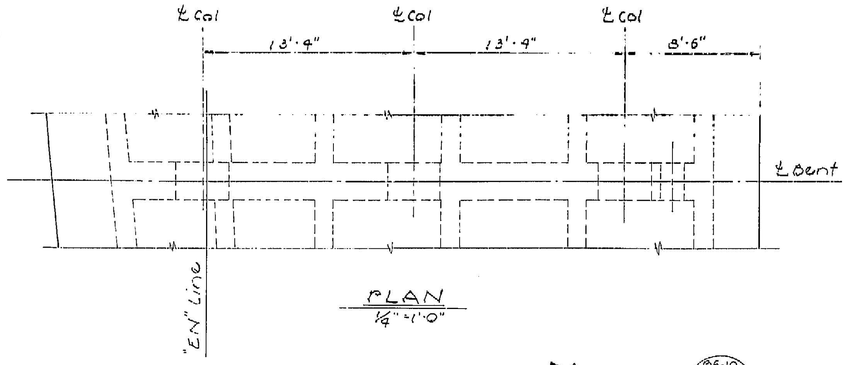
ELEVATION
1/4" = 1'-0"

** Extend column spiral into footing & bent cap at same pitch as in column. Spiral may be discontinuous at the bottom of bent cap reinf & top of ftg reinf.

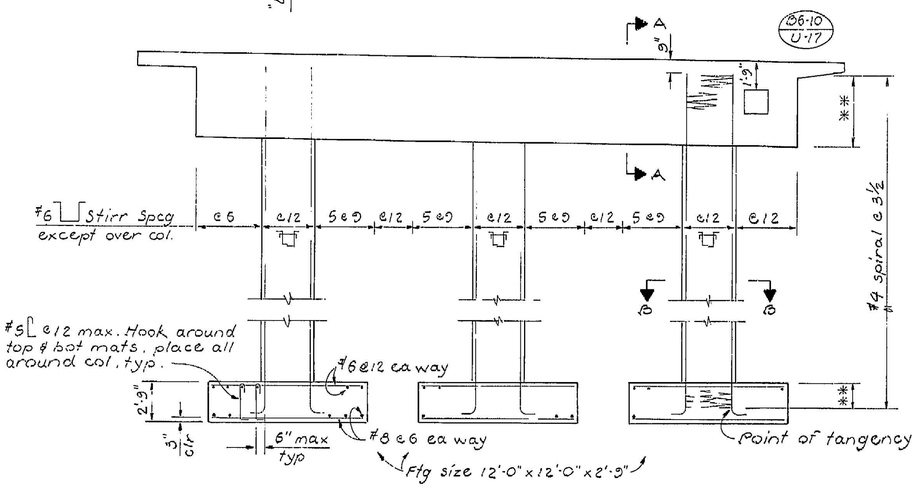


SECTION B-B
3/4" = 1'-0"



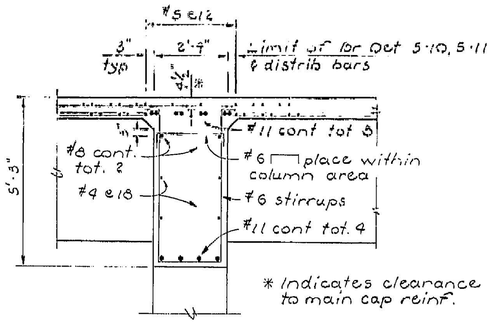


PLAN
1/4" = 1'-0"

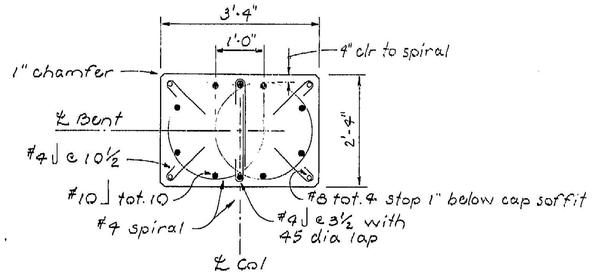


ELEVATION
1/4" = 1'-0"

** Extend column spiral into footing & bent cap at same pitch as in column. Spiral may be discontinuous at the bottom of bent cap reinf & top of Ftg reinf.



SECTION A-A
1/2" = 1'-0"

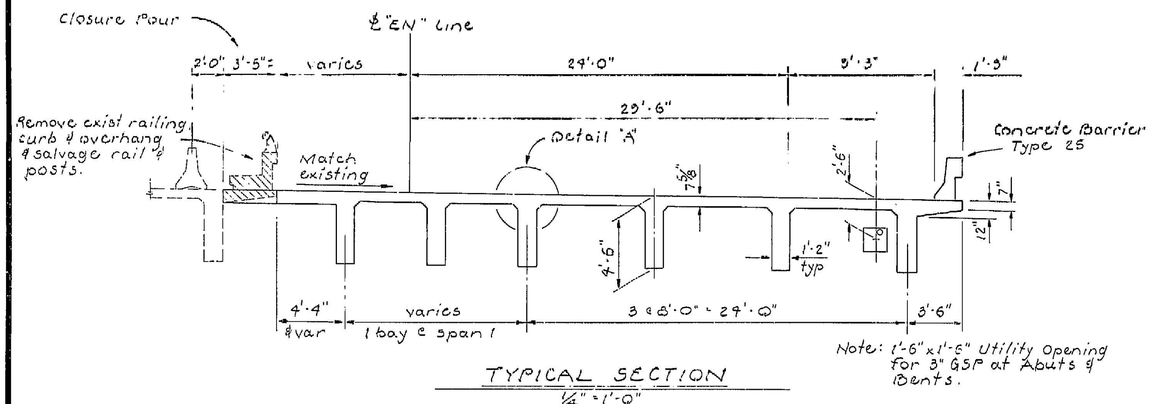


SECTION B-B
3/4" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

Note: For details not shown, see "Bent 2" sheet

390

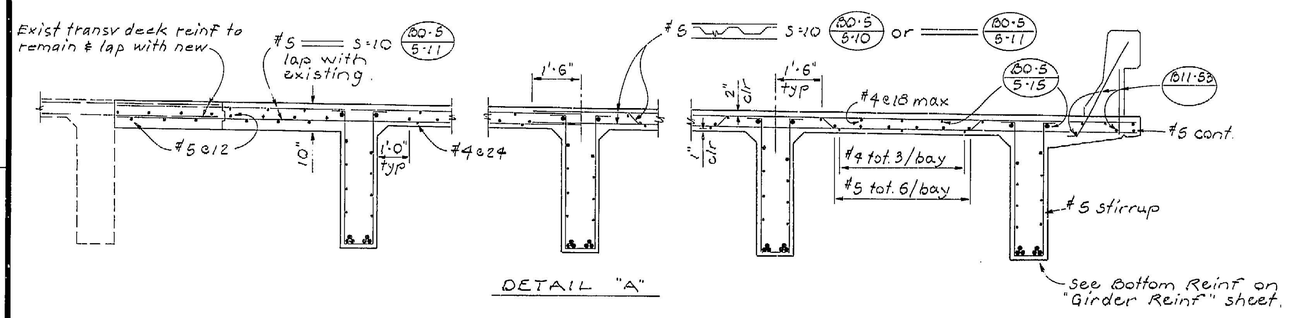


Note: 1'-6" x 1'-6" Utility Opening for 3" GSP at Abuts & Bents.

TYPICAL SECTION

1/4" = 1'-0"

Spans 2 & 3 shown, Span 1 similar except as noted.



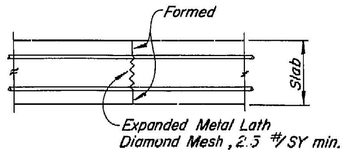
DETAIL "A"

PART TYPICAL SECTION (86-1)

1/2" = 1'-0"

FALSEWORK RELEASE

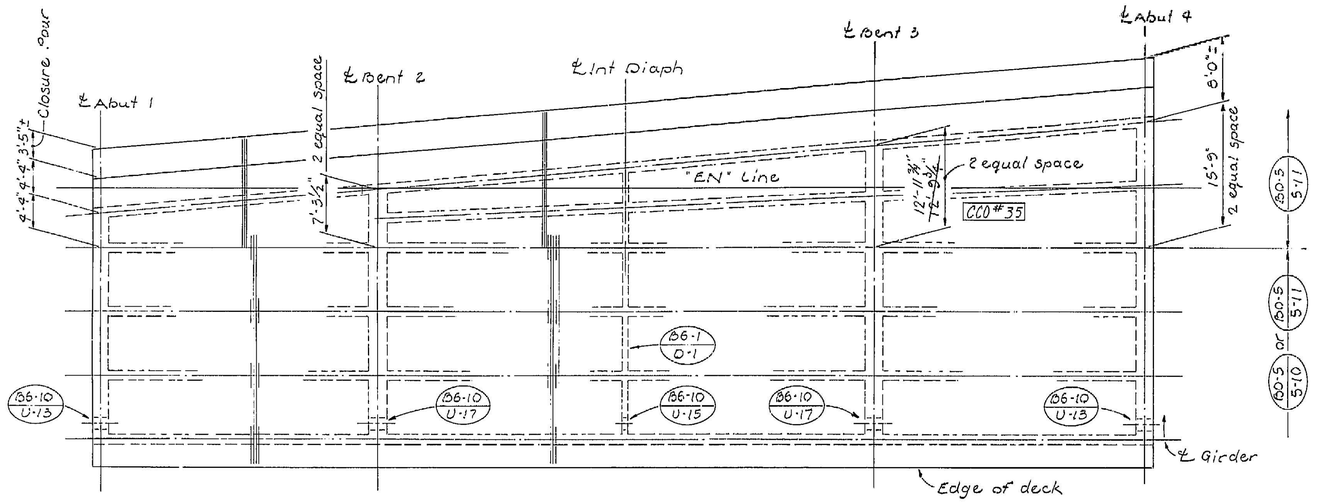
Falsework shall be released as soon as permitted by the specifications. Closure pour shall not be placed sooner than 60 days after the false-work has been released.



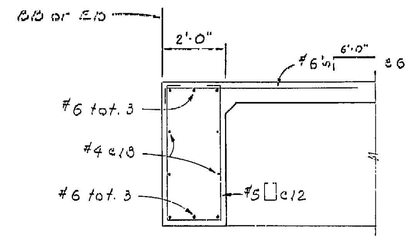
ALTERNATIVE DECK CONSTRUCTION JOINT TOP OR BOTTOM SLAB

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

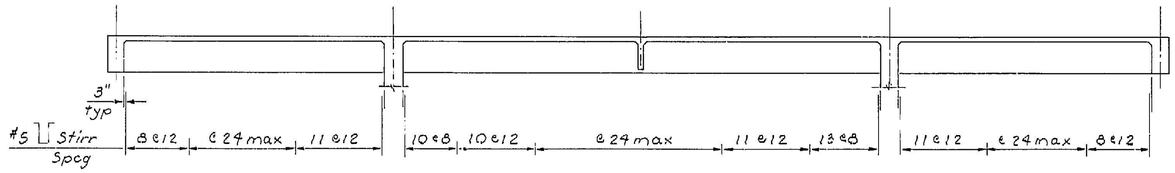
391



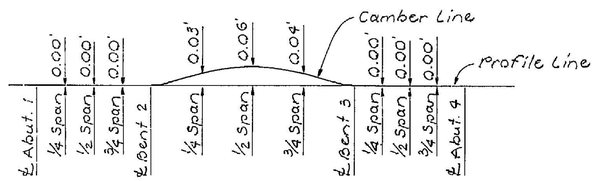
PLAN
1/8" = 1'-0"



END DIAPH
1/2" = 1'-0"



LONGITUDINAL SECTION
1/8" = 1'-0"



CAMBER DIAGRAM
No Scale

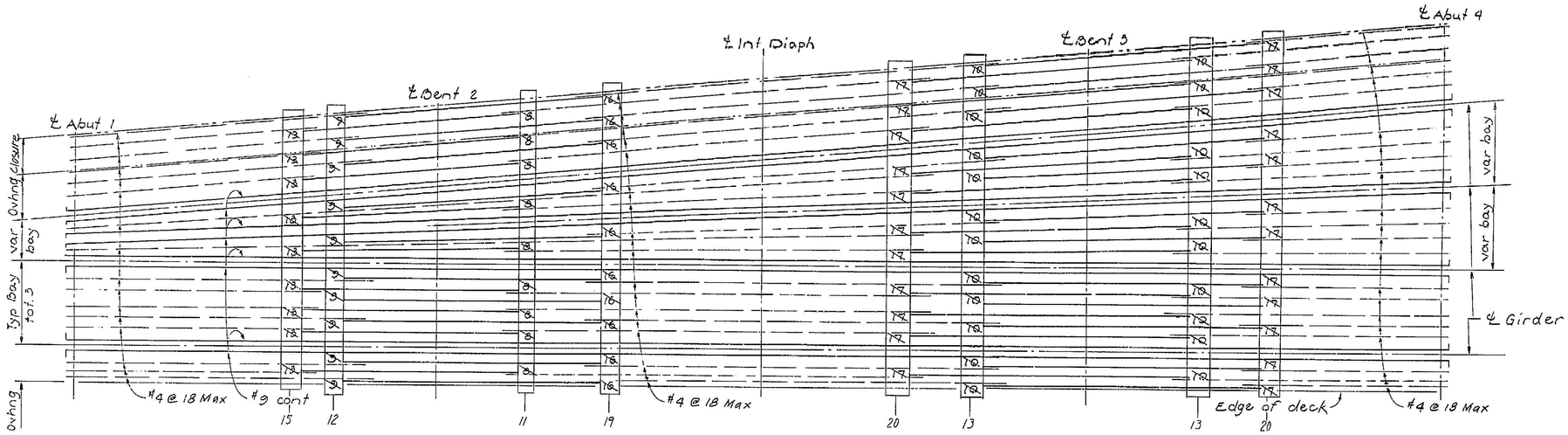
Does not include allowance for falsework settlement

CONCRETE TYPE LIMITS

Str Conc, Br
Str Conc, Br Ftg
Str Conc, Approach Slab

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

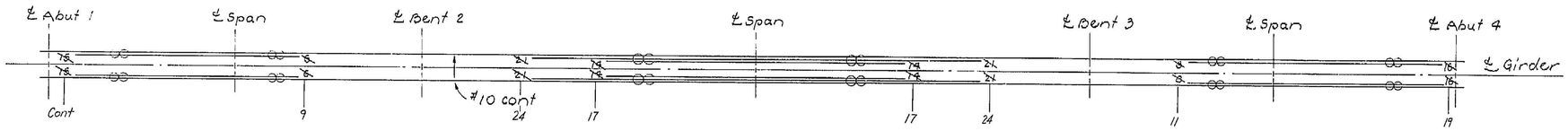
392



TOP REINF

No Scale

CCO #35



BOTTOM REINF

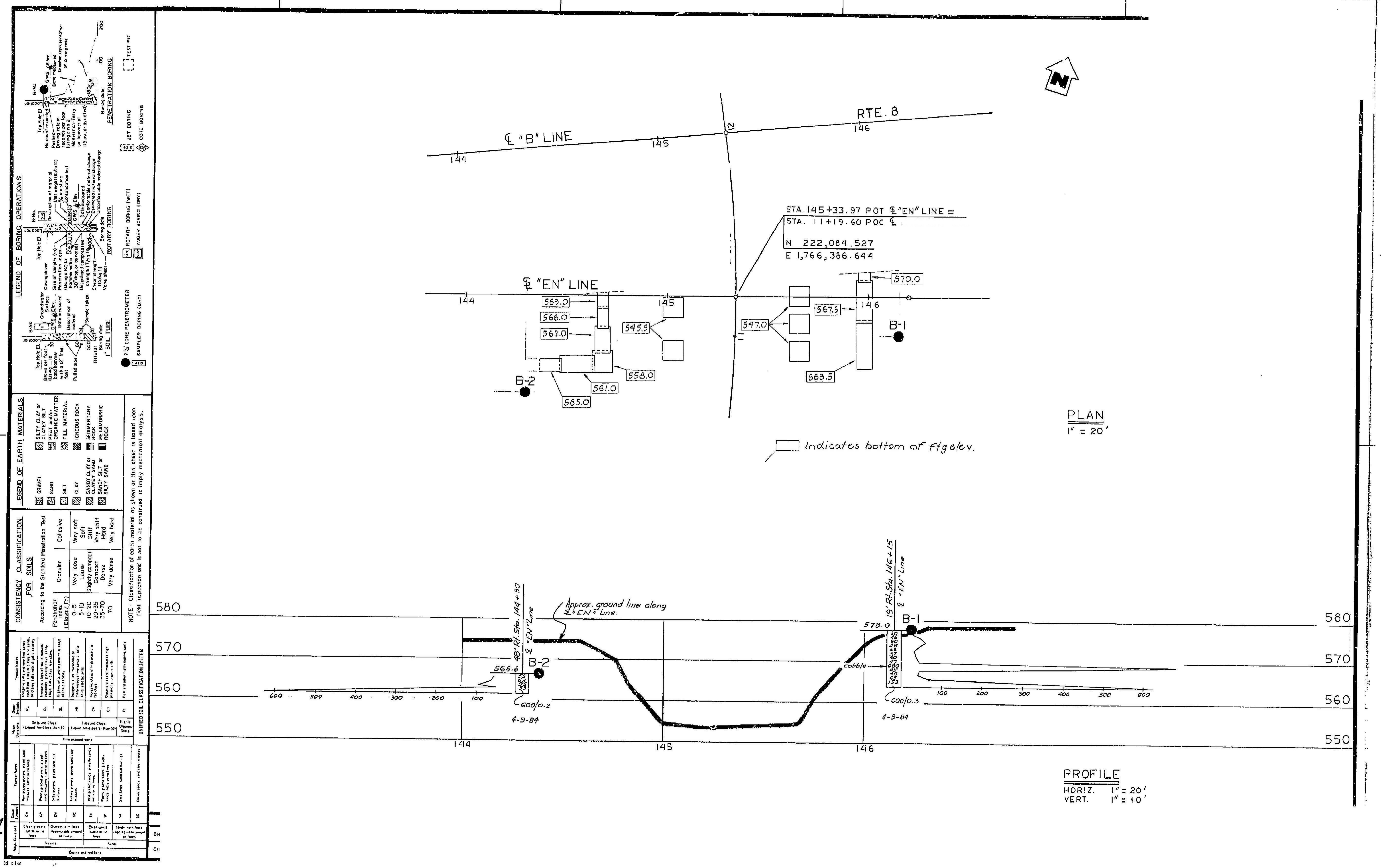
No Scale

CCO #35

Note:
All reinf #9 for top reinf & #10 for bottom reinf unless otherwise noted. Numbers at ends of bars indicate distance in feet from ℄ Bent for top reinf & ℄ Span for bottom reinf.

⊜ Indicates bundled bars.

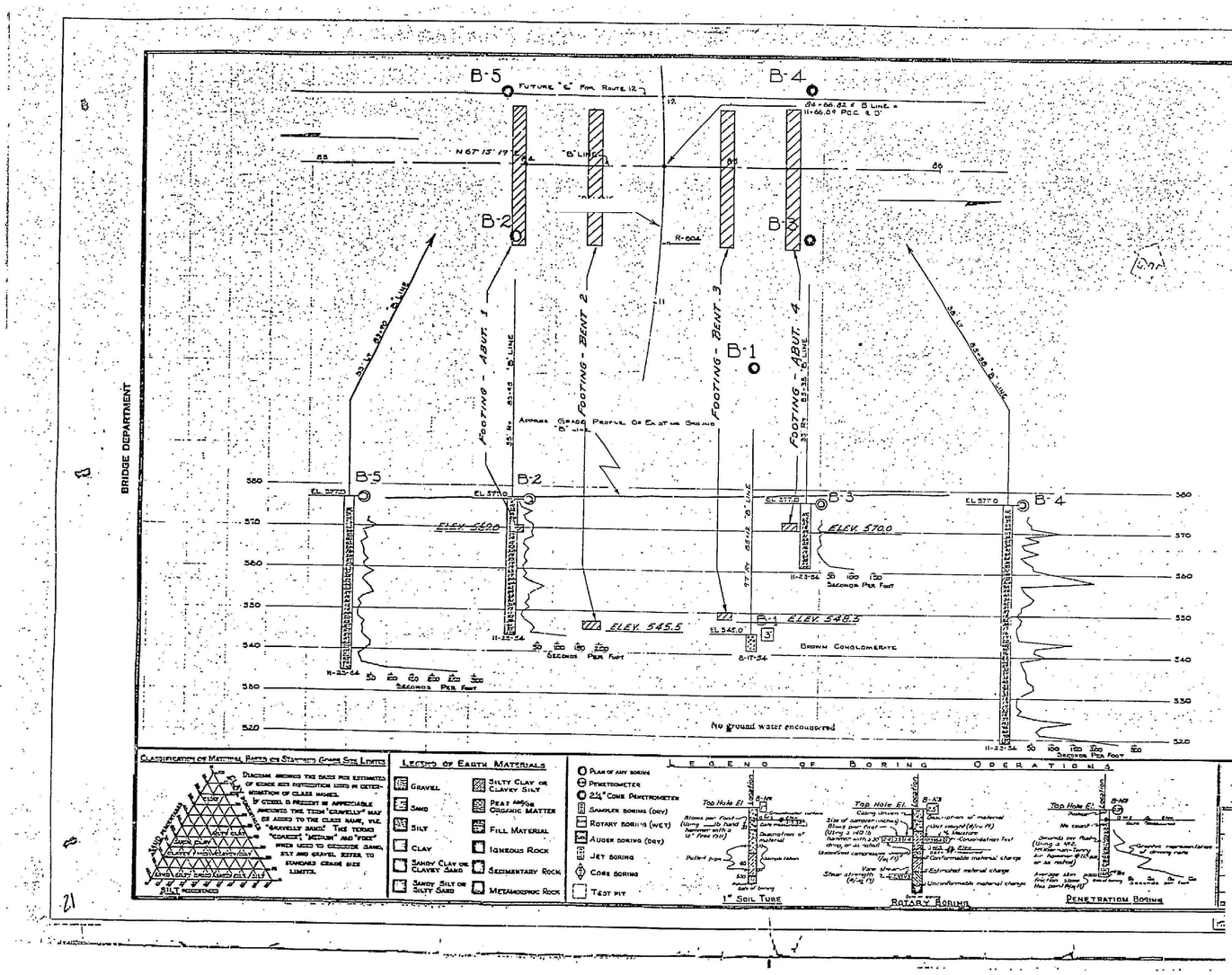
393



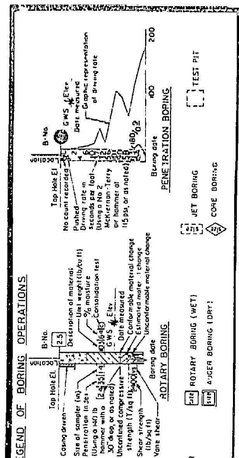
394

DS 0146

BRIDGE DEPARTMENT



LEGEND OF BORING OPERATIONS



LEGEND OF EARTH MATERIALS

- GRAVEL
- SAND
- SILT
- CLAY
- SANDY CLAY or CLAYEY SAND
- SANDY SILT or SILTY SAND
- SILTY CLAY or CLAYEY SILT
- PEAT and/or ORGANIC MATTER
- FILL MATERIAL
- IGNEOUS ROCK
- SEDIMENTARY ROCK
- METAMORPHIC ROCK

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

Penetration in feet (blows/ft.)	Granular	Cohesive
0 - 5	Very loose	Very soft
5 - 10	Loose	Soft
10 - 20	Slightly compact	Stiff
20 - 35	Compact	Very stiff
35 - 70	Dense	Hard
70	Very dense	Very hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRAIN SIZE LIMITS

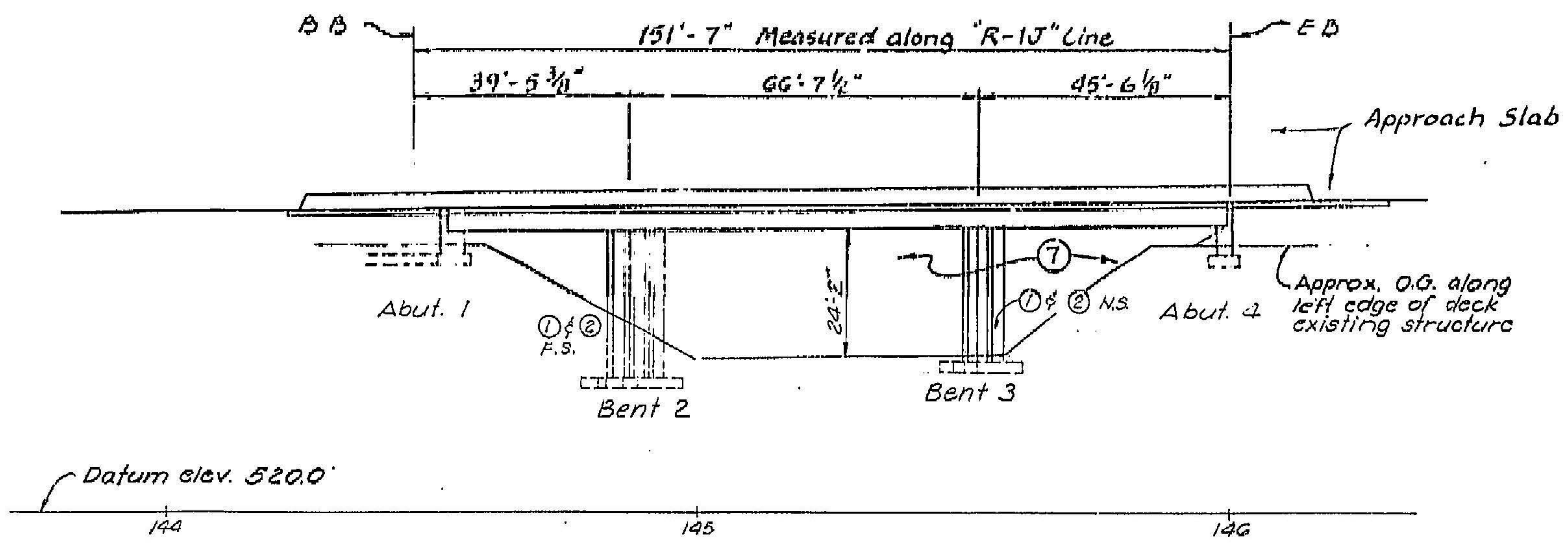
UNIFIED SOIL CLASSIFICATION SYSTEM

Major Divisions		Letter	Typical Names	Information required for describing soils	Laboratory Classification Criteria
Coarse-grained soils (More than half of material is larger than No. 200 sieve size)	Gravels (More than half of coarse fraction is larger than No. 4 sieve size but smaller than 3")	GW	Well-graded gravels, gravel-sand mixtures, little or no fines	Give typical name; indicate approximate percentages of sand and gravel; maximum size; angularity, surface condition, and hardness of the coarse grains; local or geologic name and other pertinent descriptive information; and symbol in parentheses	For undisturbed soils add information on stratification, degree of compactness, cementation, moisture conditions and drainage characteristics
		GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines		Not meeting all gradation requirements for GW
		GM	Silty gravels, poorly-graded gravel-sand-silt mixtures		Atterberg limits below "A" line or P.I. less than 4
		GC	Clayey gravels, poorly-graded gravel-sand-clay mixtures		Atterberg limits above "A" line with P.I. greater than 7
	Sands (50% or more of coarse fraction is smaller than No. 4 sieve size)	SW	Well-graded sands, gravelly sands, little or no fines		For undisturbed soils add information on stratification, degree of compactness, cementation, moisture conditions and drainage characteristics
		SP	Poorly-graded sands, gravelly sands, little or no fines		Not meeting all gradation requirements for SW
		SM	Silty sands, poorly-graded sand-silt mixtures		Atterberg limits below "A" line or P.I. less than 4
		SC	Clayey sands, poorly-graded sand-clay mixtures		Atterberg limits above "A" line with P.I. greater than 7
Fine-grained soils	Silts and Clays (Liquid limit less than 50)	ML	Inorganic silts, rock flour, silty or clayey fine sands or clayey silts with slight plasticity		
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays		
		OL	Organic silts and organic silty clays of low plasticity		
	Silts and Clays (Liquid limit greater than 50)	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts		
		CH	Inorganic clays of high plasticity, fat clays		
		OH	Organic clays of medium to high plasticity, organic silts		
Highly Organic Soils		Pt	Peat and other highly organic soils		

NOTES

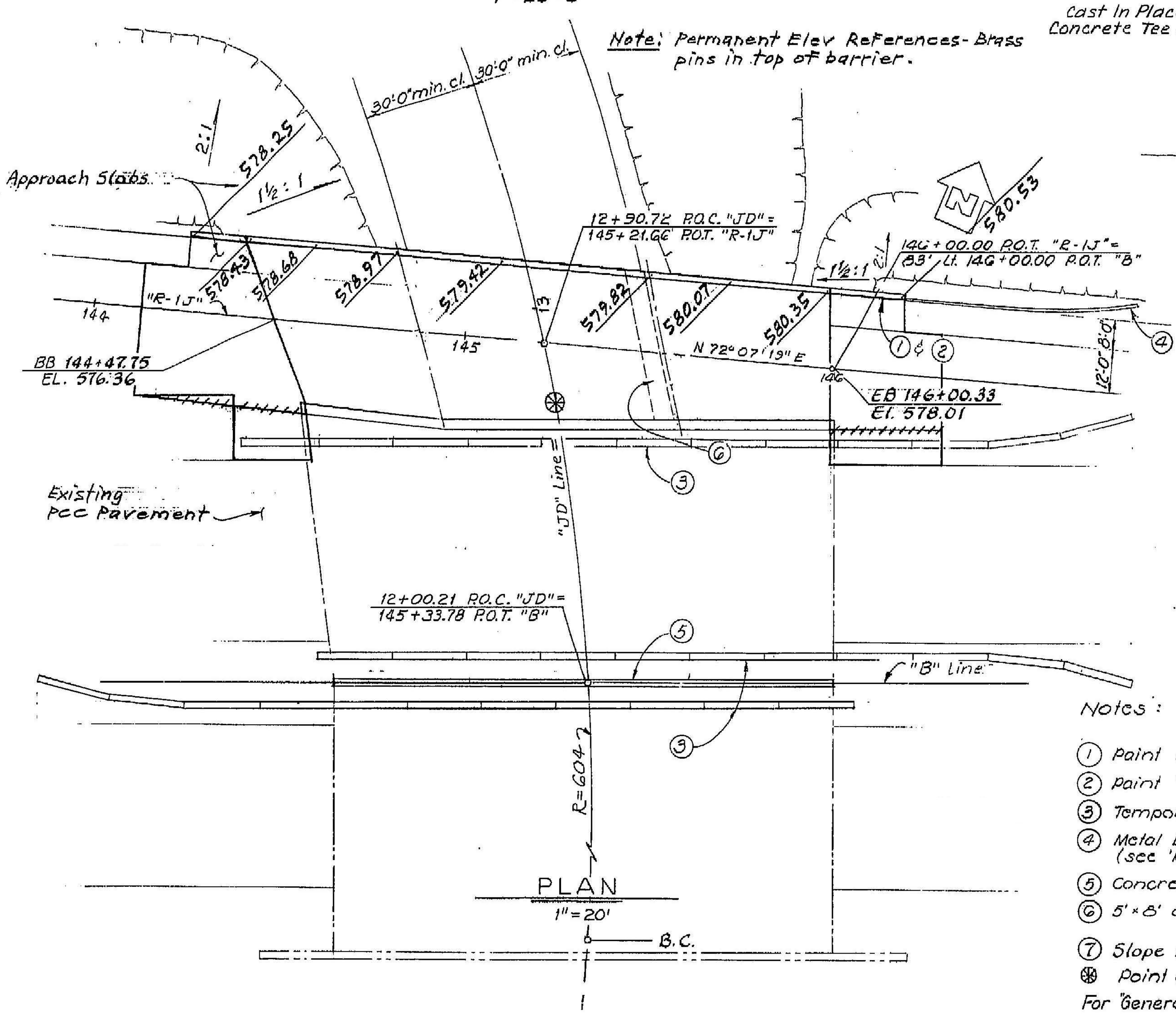
The contractor's attention is directed to Section 2, Article (c) of the Standard Specifications and to the Special Provisions accompanying this set of plans.
Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

395

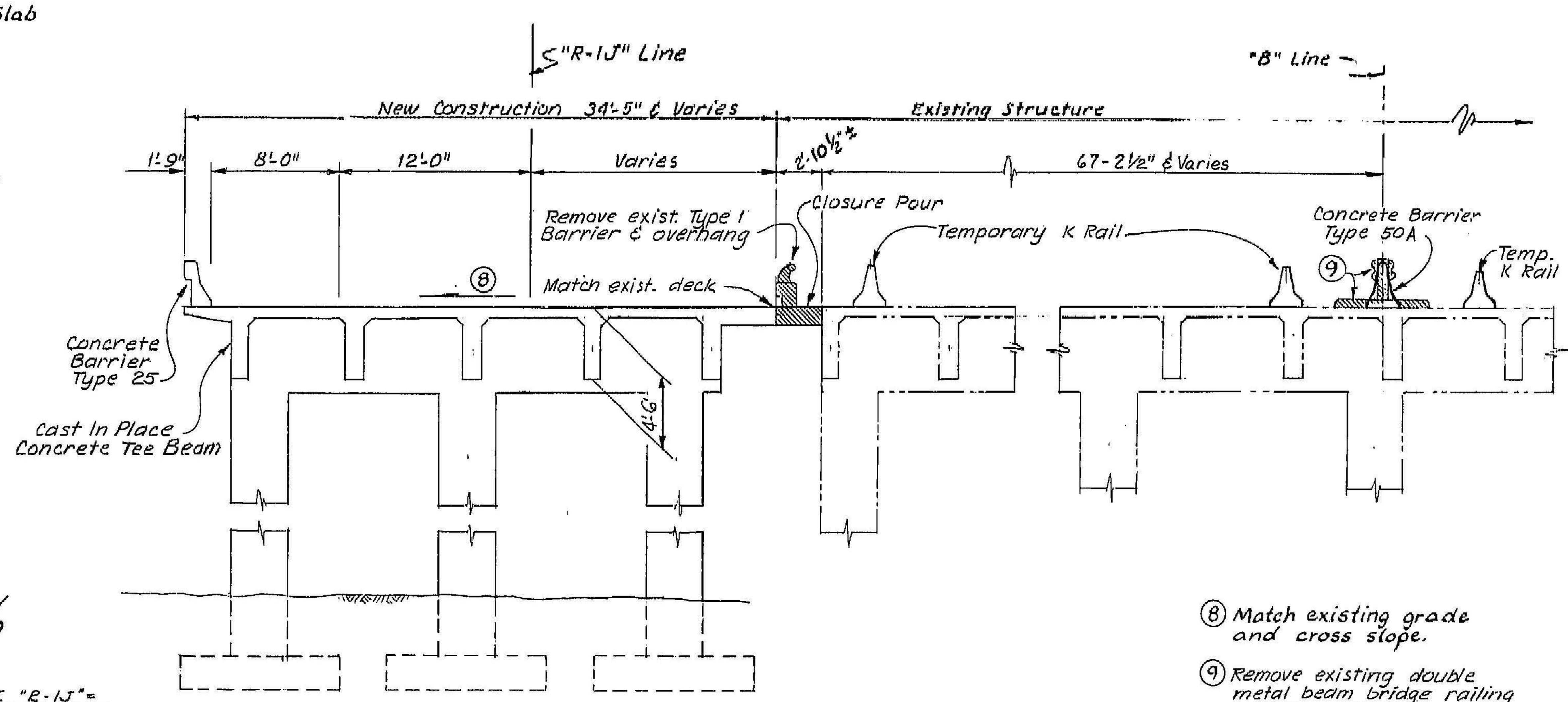


ELEVATION
1" = 20'-0"

Note: Permanent Elev References - Brass pins in top of barrier.



PLAN
1" = 20'



TYPICAL SECTION
3/16" = 1'-0"

⑧ Match existing grade and cross slope.

⑨ Remove existing double metal beam bridge railing & 3" Type C-3 curb with a 2" AC cover.

APPROXIMATE QUANTITIES

TEMPORARY RAILING (TYPE K)	620 LF
BRIDGE REMOVAL (PORTION)	LUMP SUM
DRILL AND GROUT DOWEL	5 LF
REFINISH BRIDGE DECK	830 SQFT
NEOPRENE STRIP	71 LF
JOINT SEAL (TYPE B-MR 1")	81 LF
CONCRETE BARRIER (TYPE 25)	190 LF
CONCRETE BARRIER (TYPE 50A)	138 LF

FINAL PAY QUANTITIES

STRUCTURE EXCAVATION (BRIDGE)	380 CY
STRUCTURE BACKFILL (BRIDGE)	210 CY
PERVIOUS BACKFILL MATERIAL	9 CY
STRUCTURAL CONCRETE, BRIDGE FOOTING	92 CY
STRUCTURAL CONCRRETE, BRIDGE	485 CY
STRUCTURAL CONCRETE, APPROACH SLAB	94 CY
BAR REINFORCING STEEL (BRIDGE)	127,000 LB

INDEX TO PLANS

STANDARD PLANS DATED JULY, 1984

~~A-35-B~~	~~APPROACH SLAB~~ Delete
A62-C	EXCAVATION AND BACKFILL - LIMITS OF PAYMENT (BRIDGE)
B0-1	BRIDGE DETAILS.
B0-3	BRIDGE DETAILS.
B0-5	BRIDGE DETAILS.
B0-13	BRIDGE DETAILS.
B6-1	T-BEAM DETAILS.
B6-21	JOINT SEALS
B11-30	TEMPORARY RAILINGS. (TYPE K)
B11-53	CONCRETE BARRIER TYPE 25.

Notes:

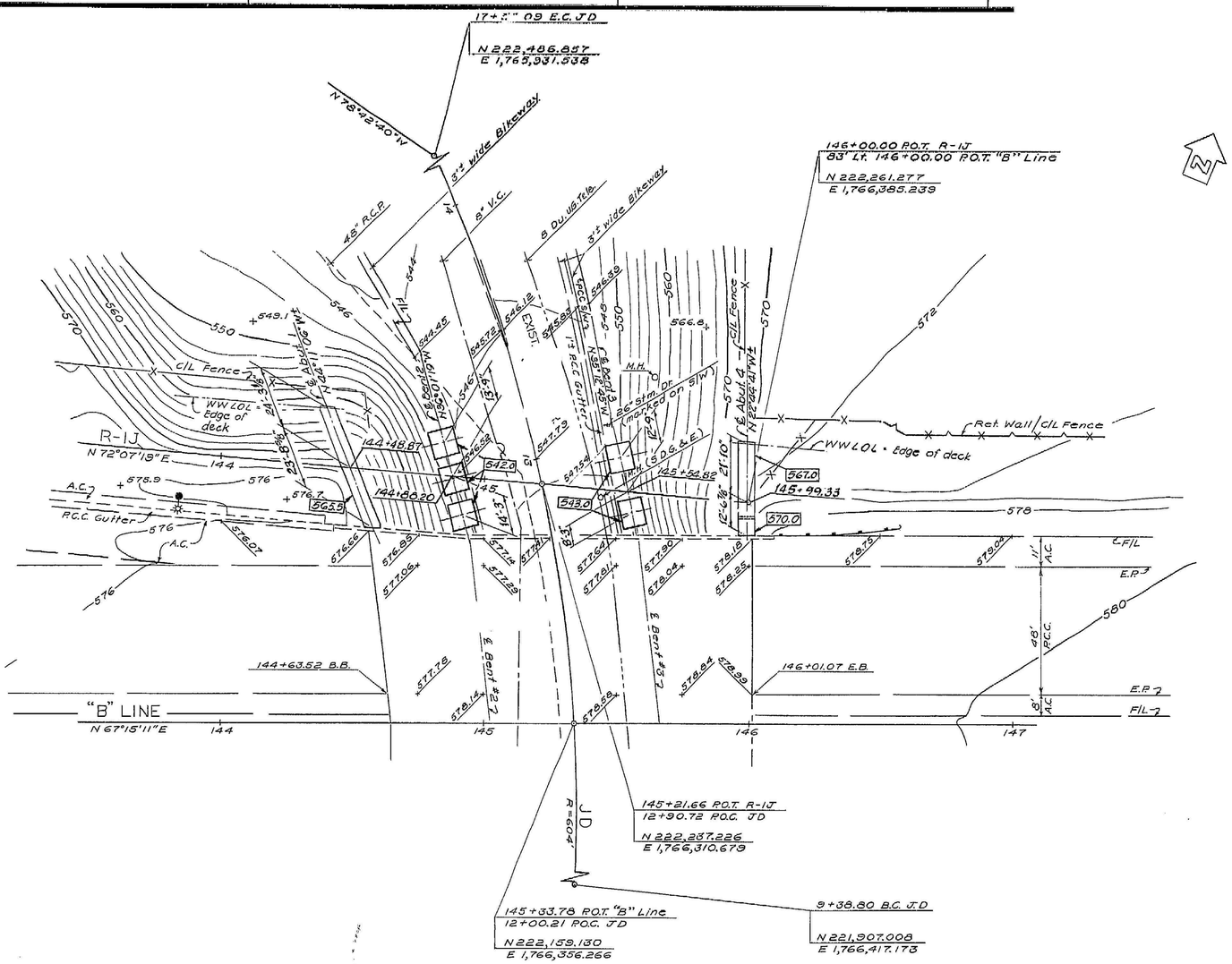
① Paint Bridge No.
② Paint
③ Temporary Railing Type K
④ Metal Beam Guard Railing (see 'Road Plans')
⑤ Concrete Barrier Type 50A
⑥ 5' × 8' openings
⑦ Slope Paving (See Road Plans)
⊛ Point of minimum vertical clearance
For "General Notes" see 'Typical Section' sheet.

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

175

CURVE DATA

R = 604'
Δ = 77°31'43"
T = 485.009'
L = 817.290'
⊙ N 221,894.543
E 1,765,813.301



NOTES

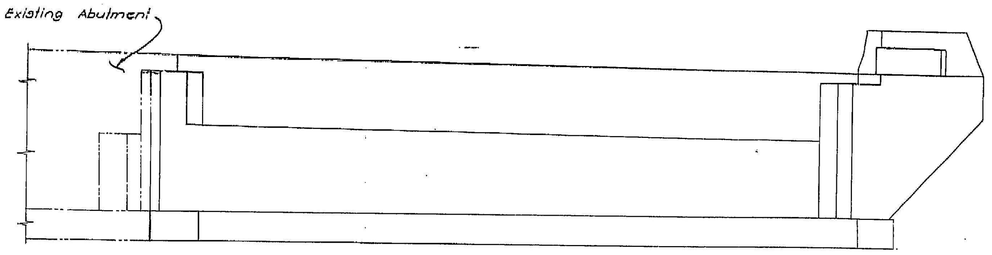
Underground utilities as shown are approx.
\+ Denotes spot elev.
●☼ Denotes electrolier.

570.0 Indicates bottom of footing elevations.

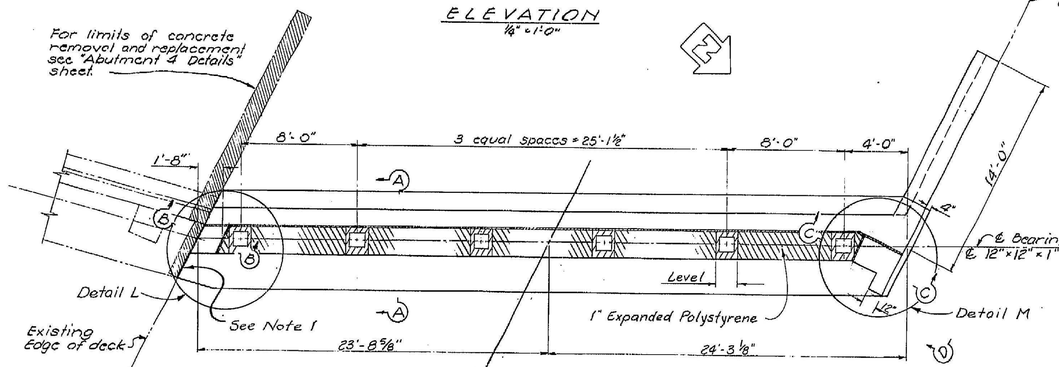
NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

176

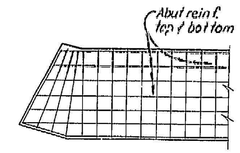
Note:
1. Match abutment & bearing at edge of widening.



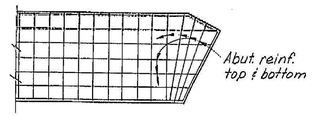
ELEVATION
1/4" = 1'-0"



PLAN
1/4" = 1'-0"



DETAIL L
No Scale



DETAIL M
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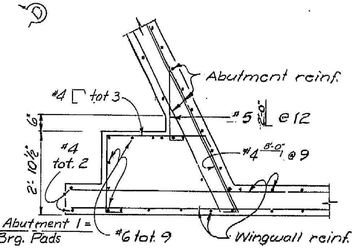
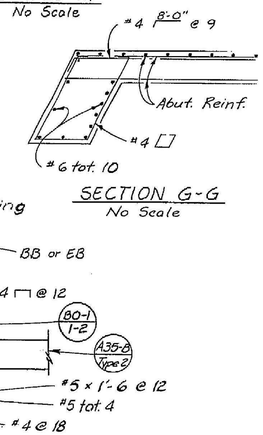
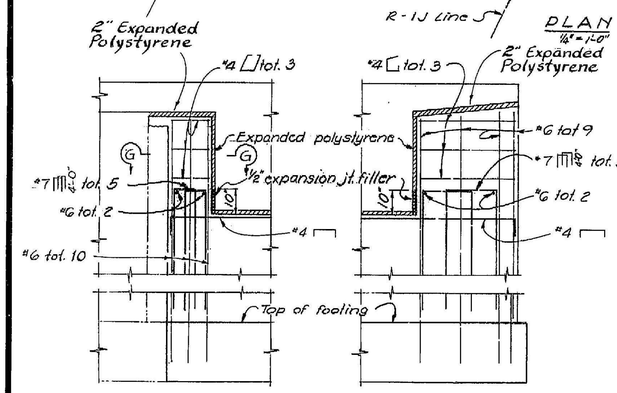


SECTION F-F
½" = 1'-0"



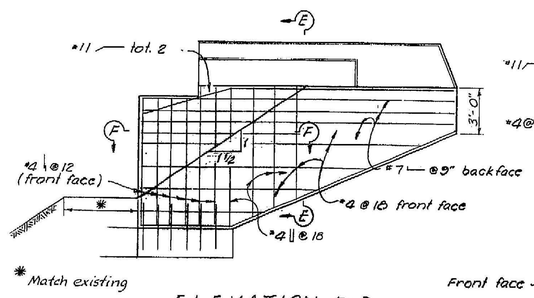
SECTION G-G
No Scale

SECTION A-A
½" = 1'-0"

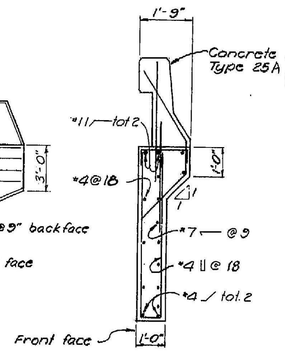


SECTION B-B
½" = 1'-0"

SECTION C-C
½" = 1'-0"

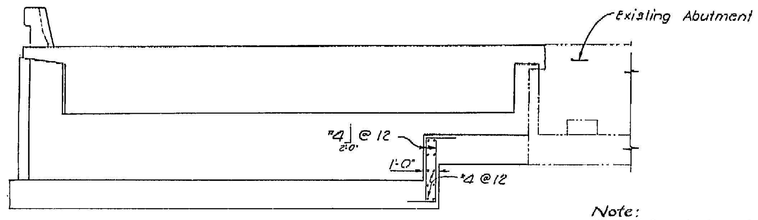


ELEVATION D-D
½" = 1'-0"



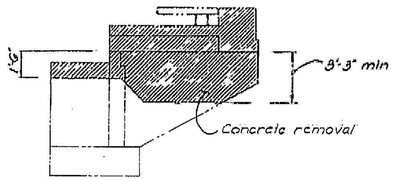
SECTION E-E
½" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

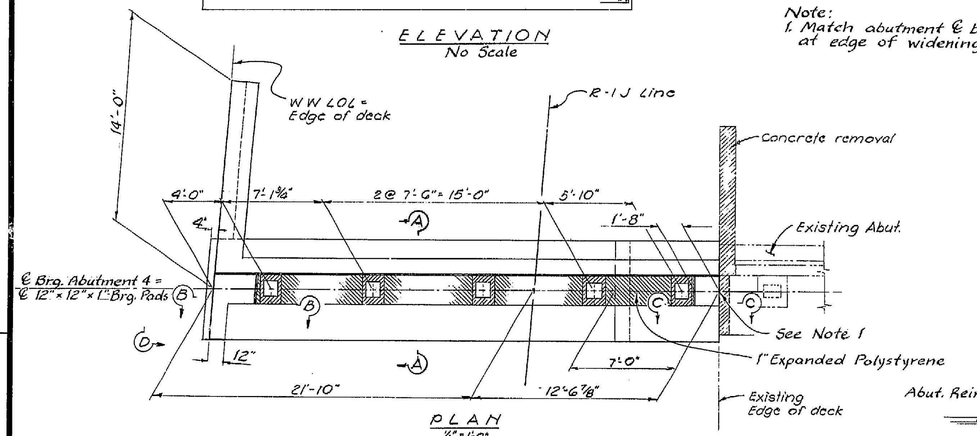


ELEVATION
No Scale

Note:
1. Match abutment & bearing at edge of widening.

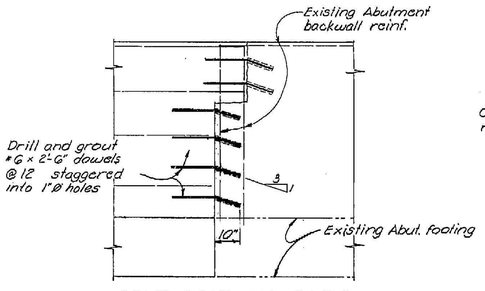


LIMITS OF CONCRETE REMOVAL
1/4" = 1'-0"

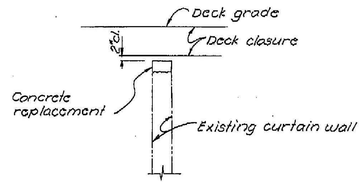


PLAN
1/4" = 1'-0"

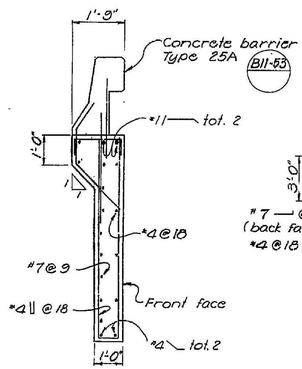
Note:
For Section A-A, see "Abutment 1 Details" sheet.



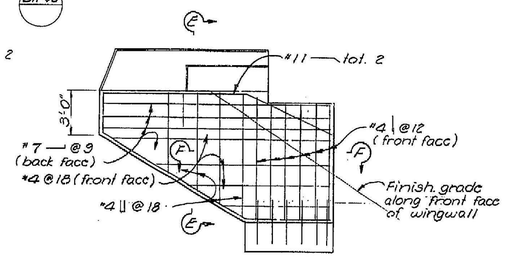
ABUT. BACKWALL ELEV.



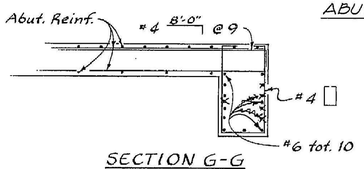
SECTION @ CURTAIN WALL



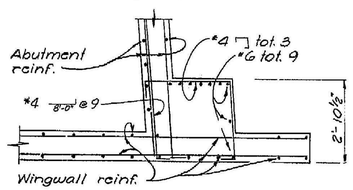
SECTION E-E
No Scale



ELEVATION D-D
No Scale

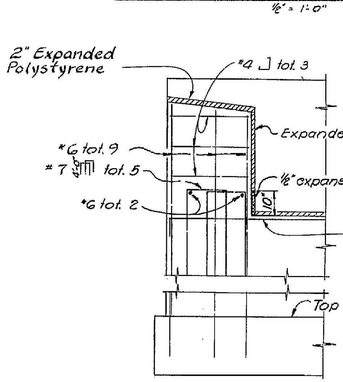


SECTION G-G
1/2" = 1'-0"

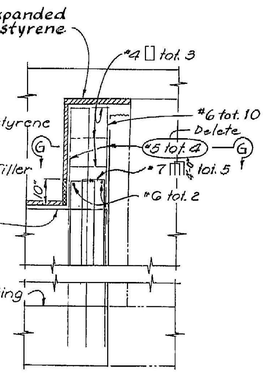


SECTION F-F
1/2" = 1'-0"

CONCRETE REPLACEMENT DETAILS
1/2" = 1'-0"

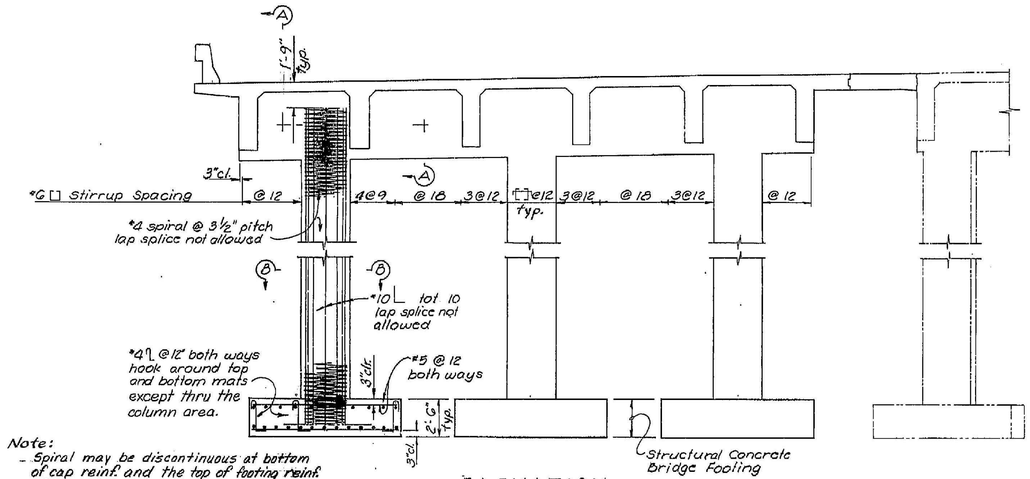


SECTION B-B
1/2" = 1'-0"



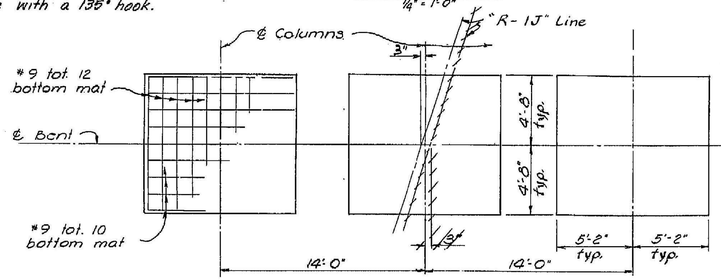
SECTION C-C
1/2" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

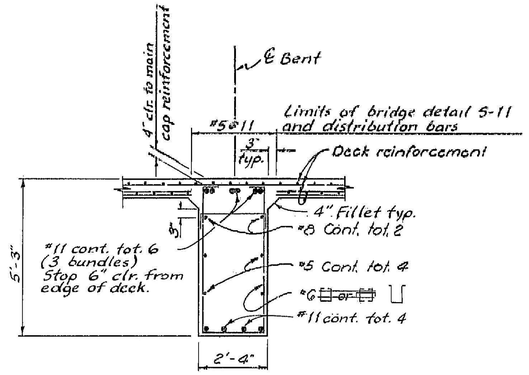


Note:
- Spiral may be discontinuous at bottom of cap reinf. and the top of footing reinf. If spiral is discontinuous, ends must terminate with a 135° hook.

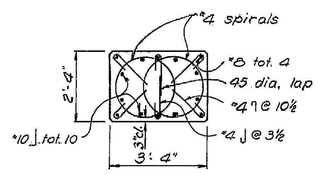
ELEVATION
1/4" = 1'-0"



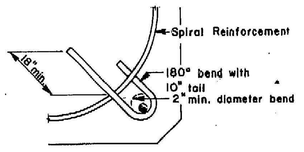
FOOTING PLAN
1/2" = 1'-0"



SECTION A-A
1/2" = 1'-0"



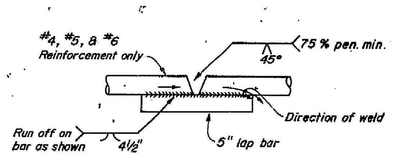
SECTION B-B
1/2" = 1'-0"



TIE BAR DETAIL
VERTICAL BAR OUTSIDE OF SPIRAL

Note:
1. For lapped splices, spiral reinforcement shall be lapped at least 80 diameters.
2. Spiral reinforcement at lapped splices and at ends shall be terminated by a 135 degree hook around a longitudinal bar.

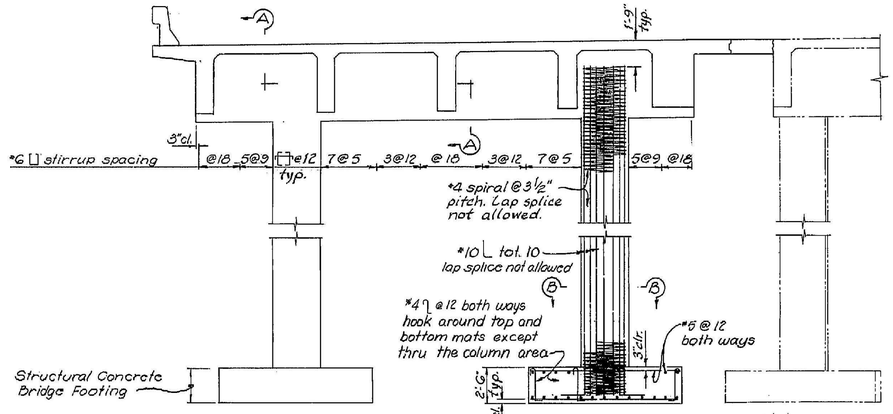
COLUMN SPIRAL DETAIL



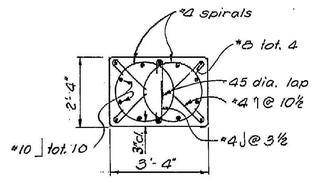
Notes:
1. Butt weld to be made first.
2. Butt weld to be in flat or horizontal position.
3. Lap bar centered on splice.
4. Flare weld to be made in direction shown.
5. Lap bar equal in size to spiral bar.

SPIRAL SPLICE DETAILS
WELDED OPTION

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

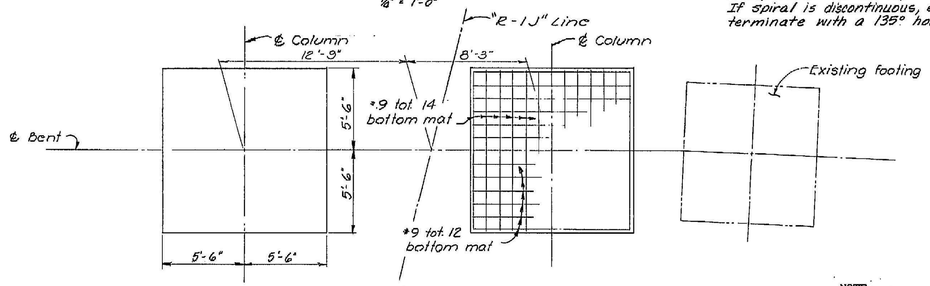


ELEVATION
1/8" = 1'-0"



SECTION B-B
1/2" = 1'-0"

Note:
Spiral may be discontinuous at bottom of cap reinf. and the top of footing reinf. If spiral is discontinuous, ends must terminate with a 135° hook.

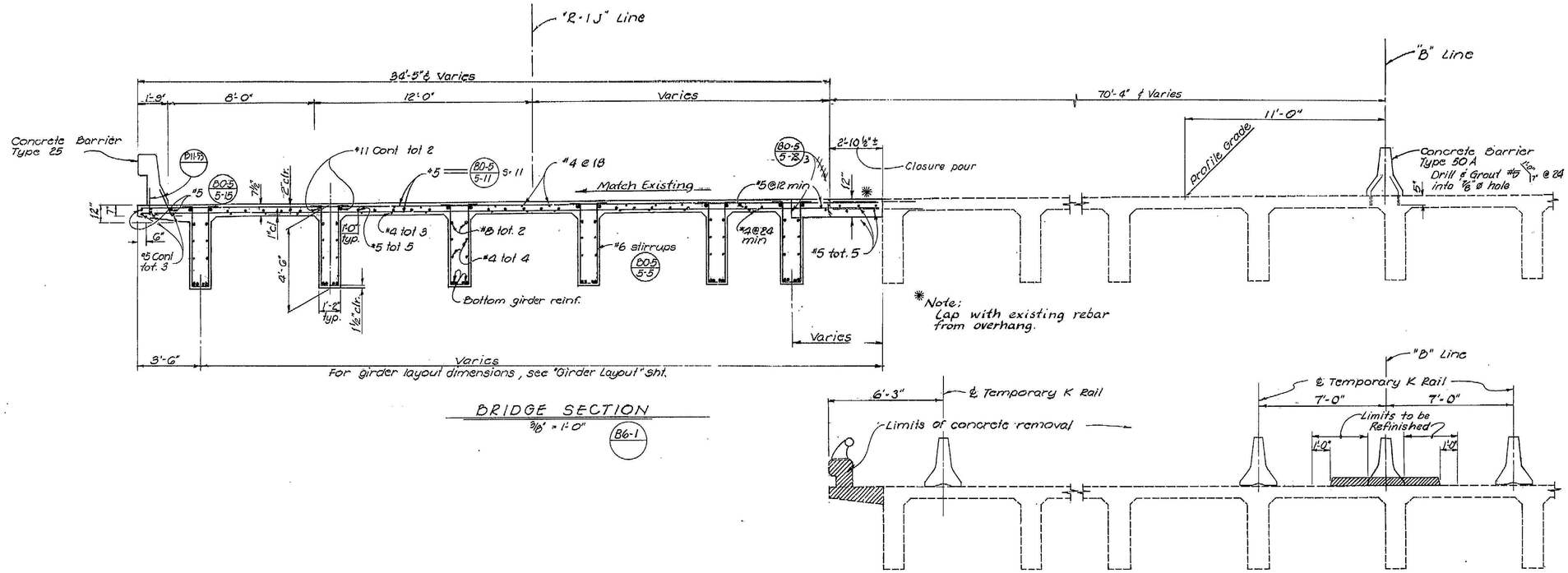


FOOTING PLAN
1/8" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

Note:
For Sections A-A see "Bent 2 Details" sheet.

For column 'Tie Bar', 'Spiral Splice' and 'Column Spiral' details, see "Bent 2 Details" sheet.



BRIDGE SECTION

3/16" = 1'-0"

B6-1

STAGE 1 CONSTRUCTION

3/16" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

GENERAL NOTES
LOAD FACTOR DESIGN

DESIGN: BRIDGE DESIGN SPECIFICATIONS (1977 AASHTO with interims and

DEAD LOAD: Includes 35 psf for future wearing surface.

LIVE LOADING: HS20-44 and alternative and permit design load.

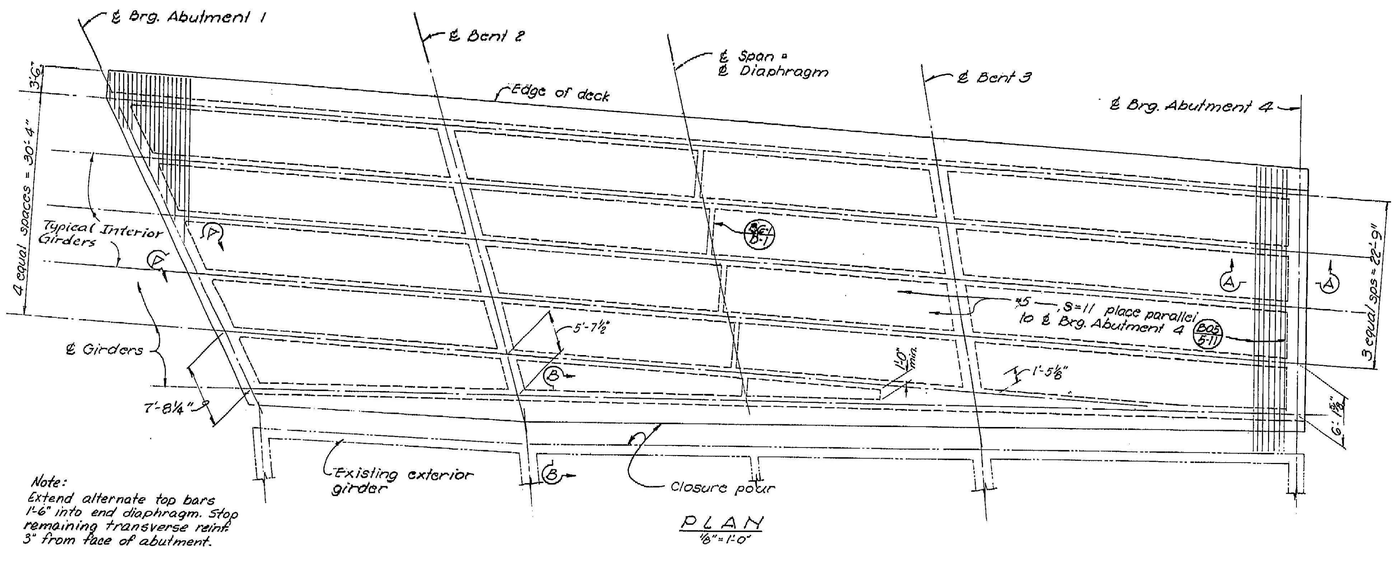
REINFORCED CONCRETE: f_y = 60,000 psi
f'_c = 3,250 psi
n = 9

Transverse deck slabs (working Stress Design)
f_s = 20,000 psi
f_c = 1,200 psi
n = 10

FOOTING PRESSURE (TONS PER SF)		ALLOWABLE	DESIGN
Bent	2 & 3	4.0	4.0
Abuts	1 & 4	2.5	2.5

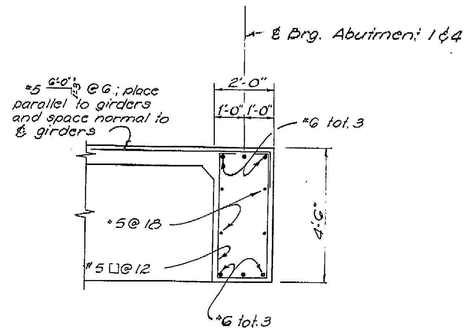
FALSEWORK RELEASE

Falsework shall be released as soon as permitted by the specifications. Closure pour shall not be placed sooner than 60 days after the falsework has been released.

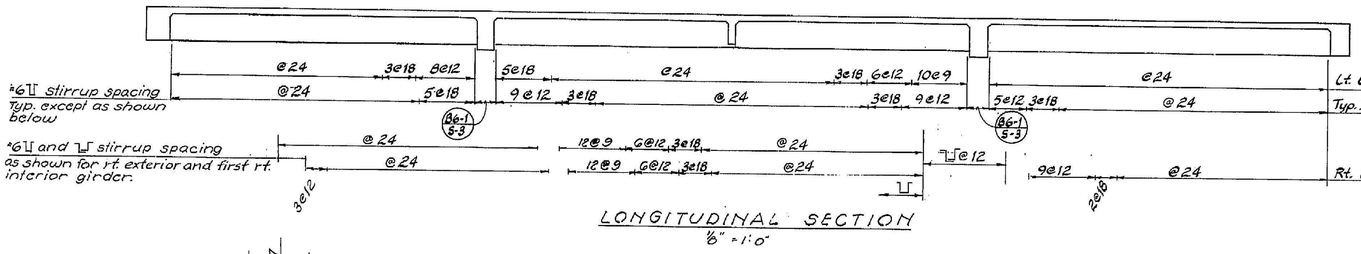


Note:
Extend alternate top bars 1'-6" into end diaphragm. Stop remaining transverse reinf. 3" from face of abutment.

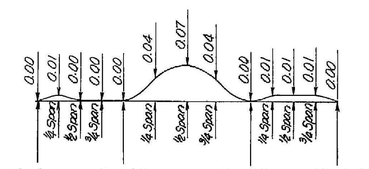
PLAN
⅛" = 1'-0"



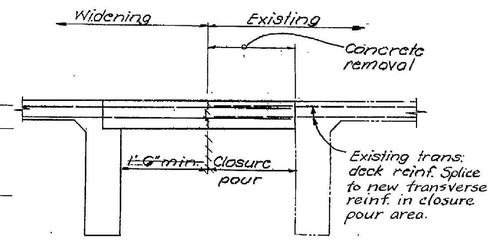
SECTION A-A
½" = 1'-0"



LONGITUDINAL SECTION
⅛" = 1'-0"

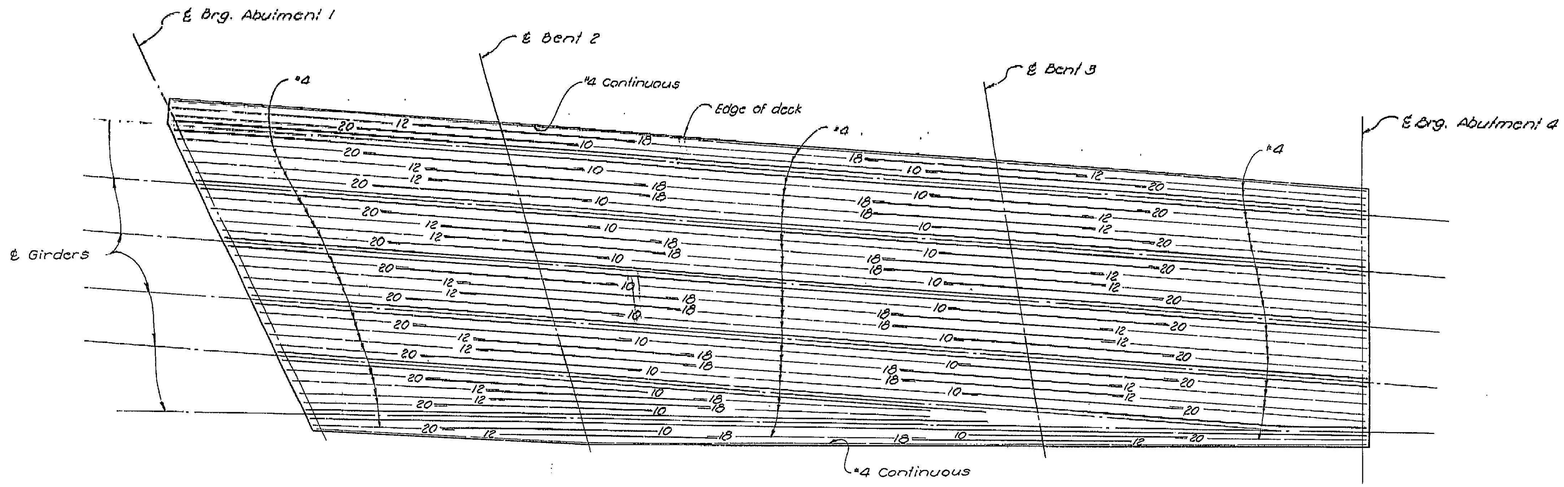


CAMBER DIAGRAM
No Scale

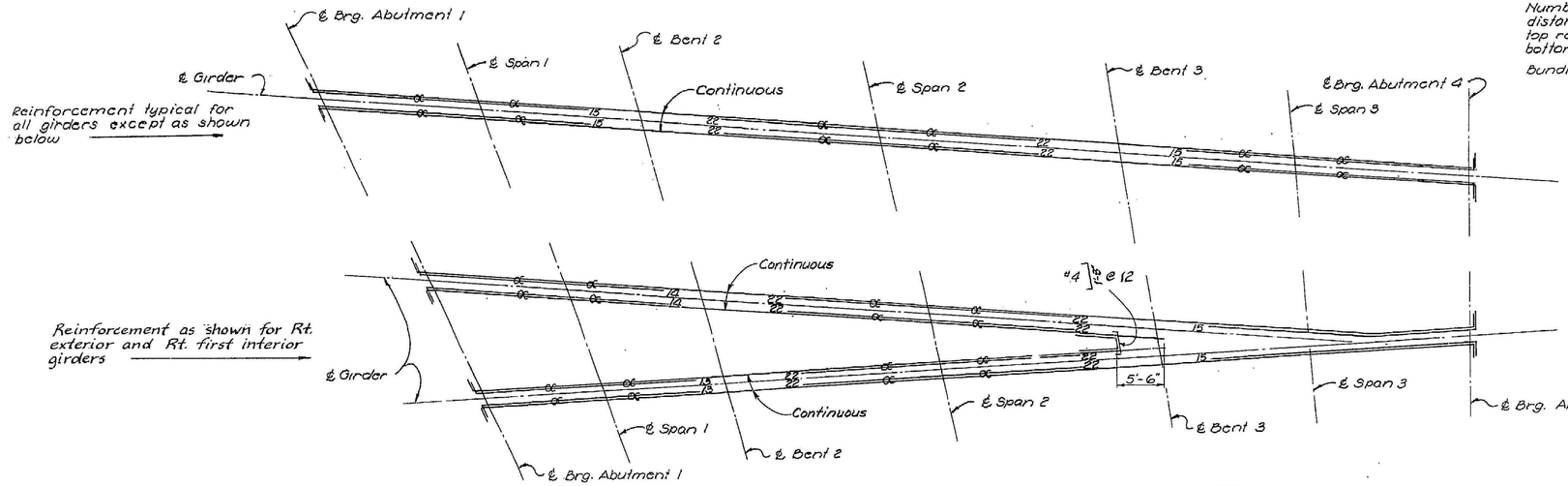


SECTION B-B
½" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



TOP REINFORCEMENT
1/8" = 1'-0"



BOTTOM REINFORCEMENT
No Scale

Note :
All reinforcement #11 unless otherwise noted.

Numbers at ends of bars indicate distance in feet from ℄ Bent for top reinforcement and ℄ Span for bottom reinforcement.

Bundled bars shown thus: ═06═

NO CORRECTIONS THIS SHEET

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

Penetration Index (Blows / Ft.)	Granular	Cohesive
0-5	Very loose	Very soft
5-10	Loose	Soft
10-20	Slightly compact	Stiff
20-35	Compact	Very stiff
35-70	Dense	Hard
70	Very dense	Very hard

LEGEND OF EARTH MATERIALS

GRAVEL, SAND, SILT, CLAY, SANDY CLAY or CLAYEY SAND, SANDY SILT or SILTY SAND, SILTY CLAY or CLAYEY SILT, PEAT and/or ORGANIC MATTER, FILL MATERIAL, IGNEOUS ROCK, SEDIMENTARY ROCK, METAMORPHIC ROCK

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

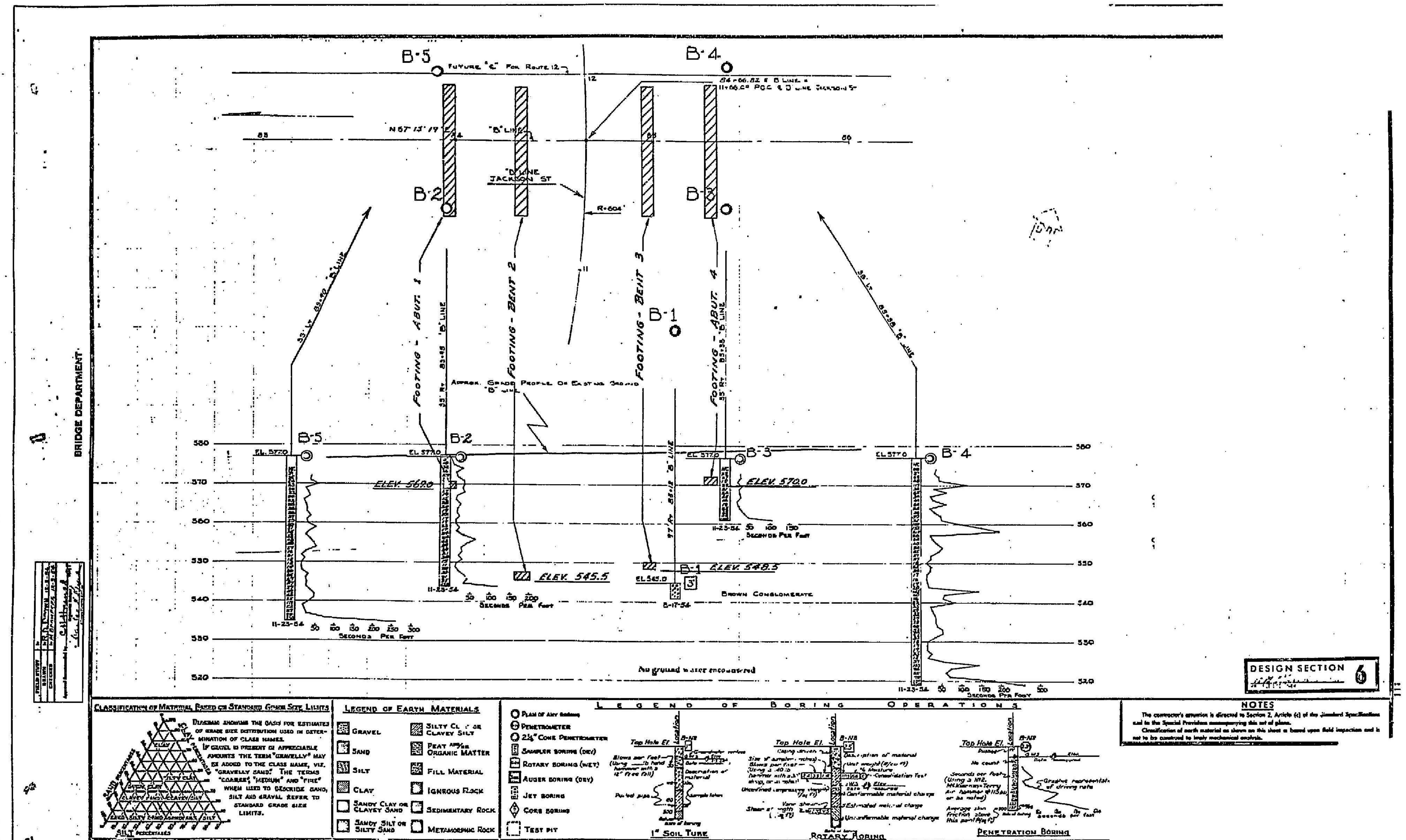
LEGEND OF BORING OPERATIONS

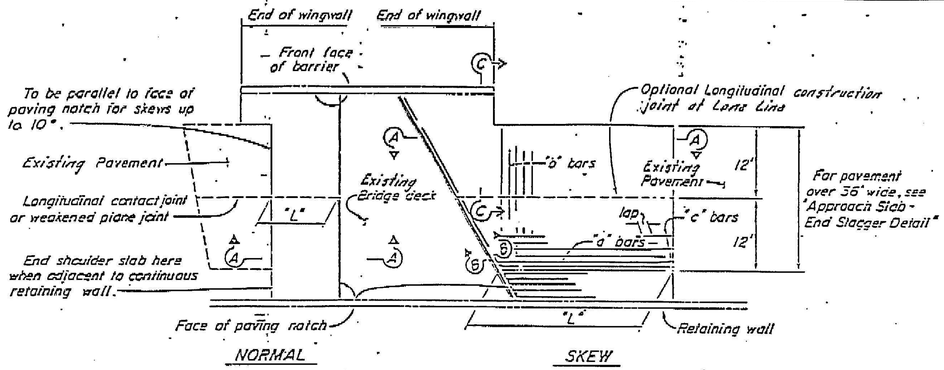
1" SOIL TUBE — ROTARY BORING — PENETRATION BORING

2 1/4" CONE PENETROMETER; SAMPLER BORING (DRY); ROTARY BORING (WET); AUGER BORING (DRY); JET BORING; CORE BORING; TEST PIT

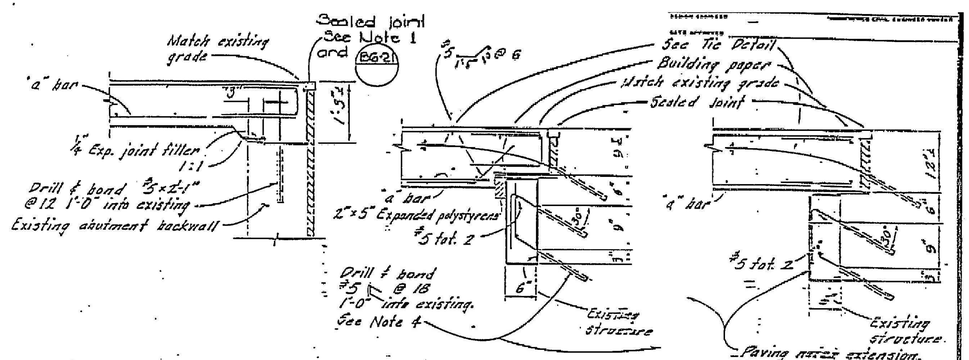
UNIFIED SOIL CLASSIFICATION SYSTEM

184





PLAN

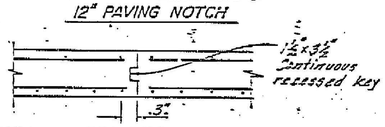


ABUTMENT WITH BACKWALL

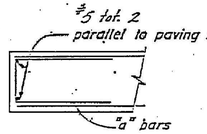
9" PAVING NOTCH

12" PAVING NOTCH

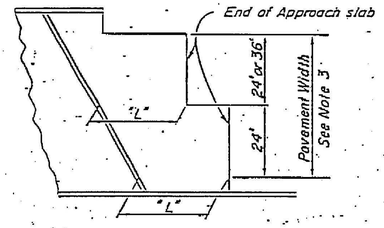
DETAIL A



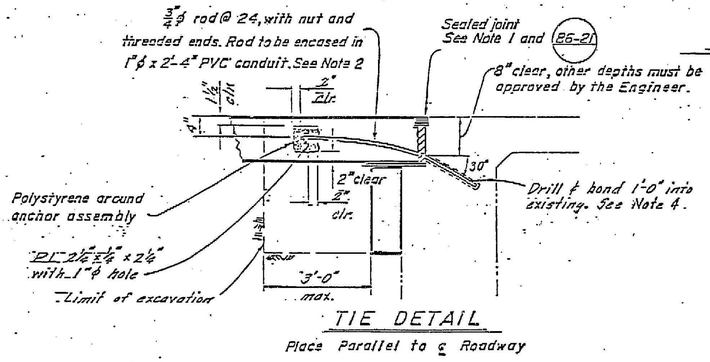
LONGITUDINAL CONSTRUCTION JOINT



SECTION B-B



APPROACH SLAB - END STAGGER DETAIL



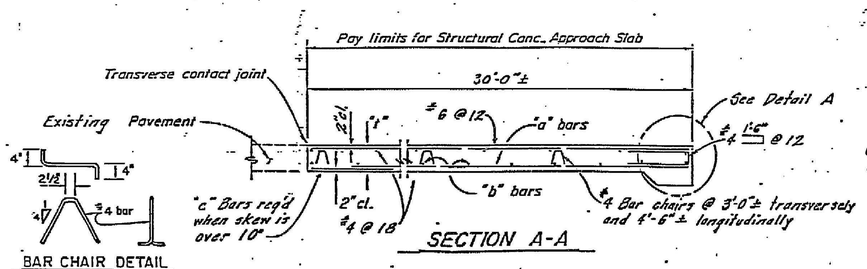
TIE DETAIL

Place Parallel to ℄ Roadway

Notes:

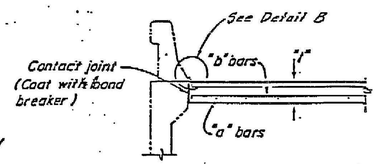
1. Sealed joint M.R. (Movement Rating)=___. Adjust bar reinforcement to clear a sawcut for sealed joint, when required.
2. All metal parts to be galvanized. #5 Grade 60 reinforcing bar may be substituted for 3/4" rod. Place parallel to ℄ Roadway.
3. Approach slabs to skewed structures shall be staggered at lane lines. Staggered lines may be 24' or 36' apart for skews at 45° or less and at any lane line for skews greater than 45°.
4. Space to avoid existing prestress anchorages and main reinforcement.
5. Paving notch extension is required when the existing paving notch is less than 6" wide.

Approach Slab Type	"L"	"t"	Bar Reinforcement Table			
			"a" bars	"b" bars	"c" bars	Lap
Type 2	30'-0"	1.00'	#8 @ 29'-6" @ 6	#5 @ 12	#5 @ 12	2'-4"



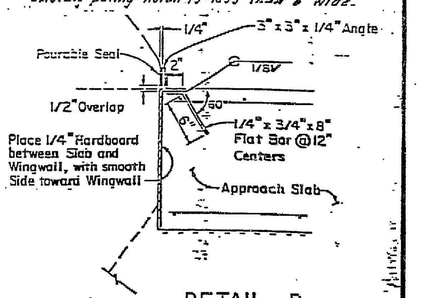
SECTION A-A

BAR CHAIR DETAIL



SECTION C-C

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

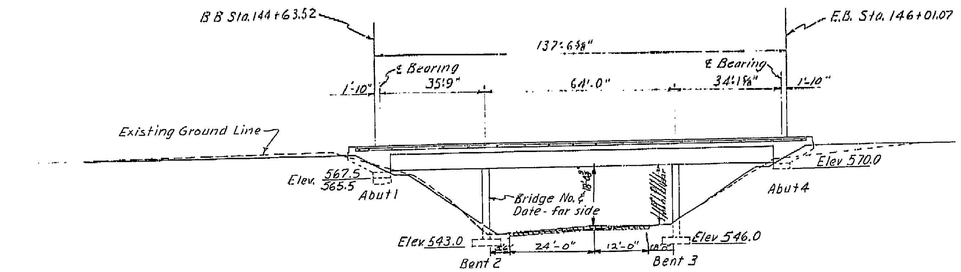


DETAIL B

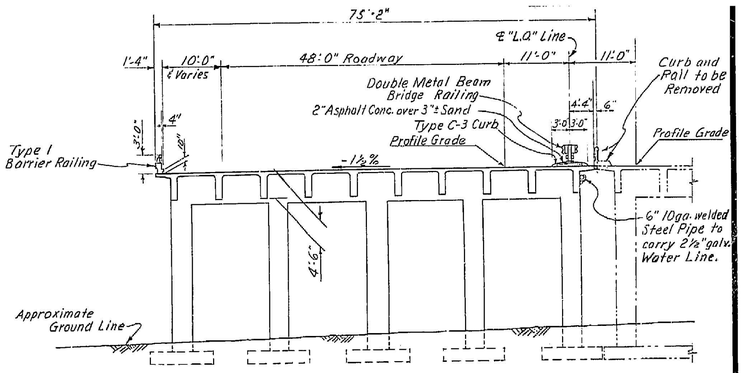
(Low side of roadway only)

DESIGN	By		Checked
DETAILS	By		Checked
QUANTITIES	By		Checked

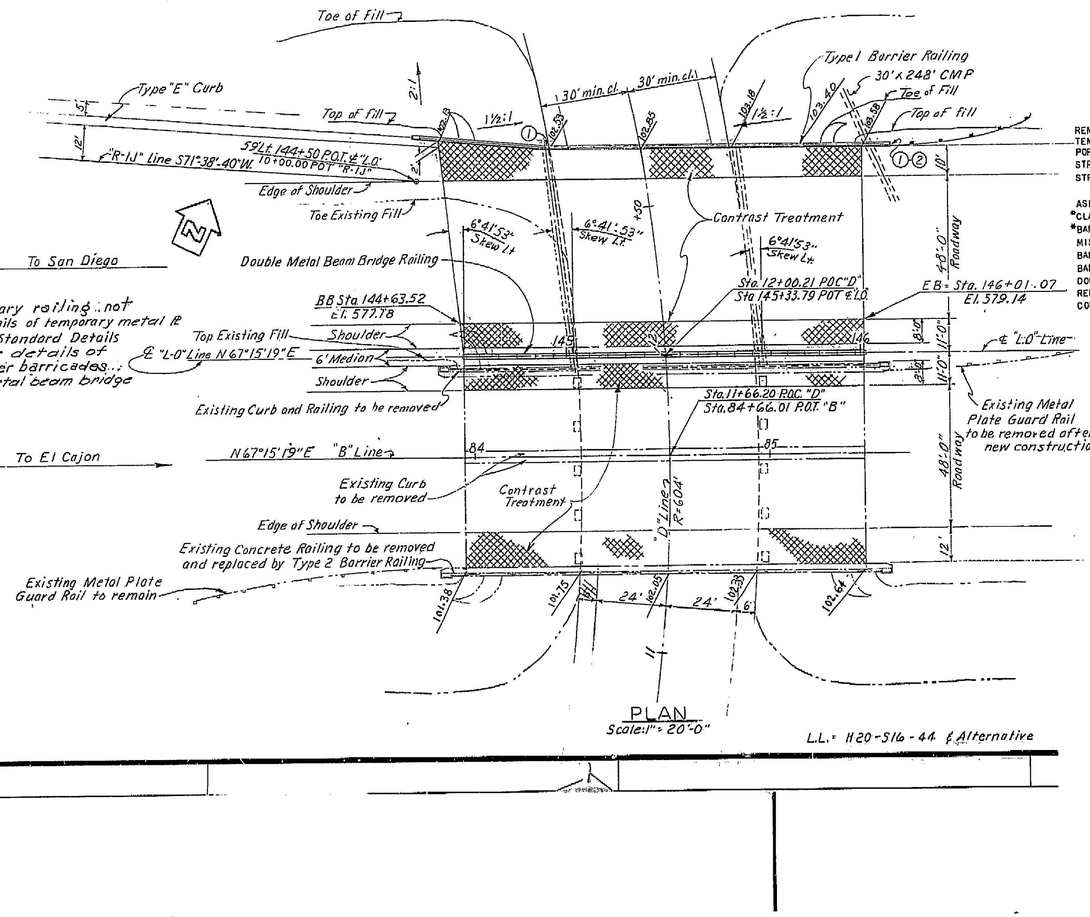
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



ELEVATION
Scale 1" = 20'-0"



TYPICAL SECTION
Scale: 1" = 10'-0"



PLAN
Scale: 1" = 20'-0"

Note: Temporary railing not shown. For details of temporary metal ℄ guard rail see "Standard Details No. 2" sheet. For details of portable timber barricades.. see "Double metal beam bridge railing" sht.

APPROXIMATE QUANTITIES

REMOVING CONCRETE (BRIDGE)	33 C.Y.
TEMPORARY RAILING	140 L.F.
PORTABLE TIMBER BARRICADES	20 EA.
STRUCTURE EXCAVATION	500 C.Y.
STRUCTURE BACKFILL	218 C.Y.
ASPHALT CONCRETE	7.6 TONS
*CLASS "A" CONCRETE (BRIDGE)	836 C.Y.
*BAR REINFORCING STEEL (BRIDGE)	176,000 LBS.
MISCELLANEOUS METAL (BRIDGE)	5,700 LBS.
BARRIER RAILING (TYPE 1)	162 L.F.
BARRIER RAILING (TYPE 2)	154 L.F.
DOUBLE BLOCKED OUT BEAM BARRIER (BRIDGE)	138 L.F.
REFINISHING BRIDGE DECK	850 S.F.
CONTRAST TREATMENT	282 S.Y.

*FINAL QUANTITIES

INDEX TO PLANS

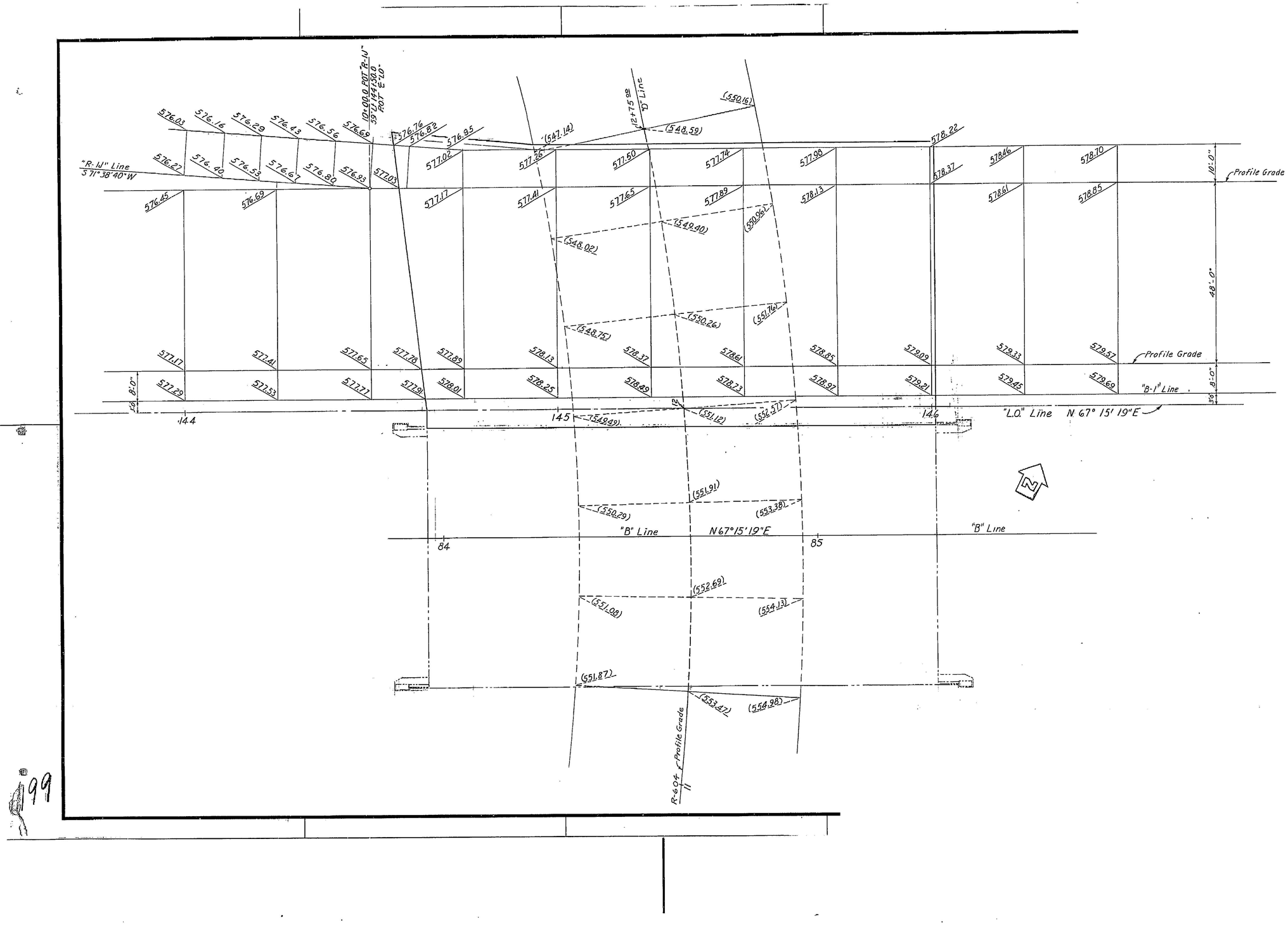
① Paint Bridge Number and Date
② Paint Name of Bridge

BENCH MARK
N.E. corner of Light Standard Base 50'± West of Abut #1 on North side of off-ramp. Assumed El. 100.00

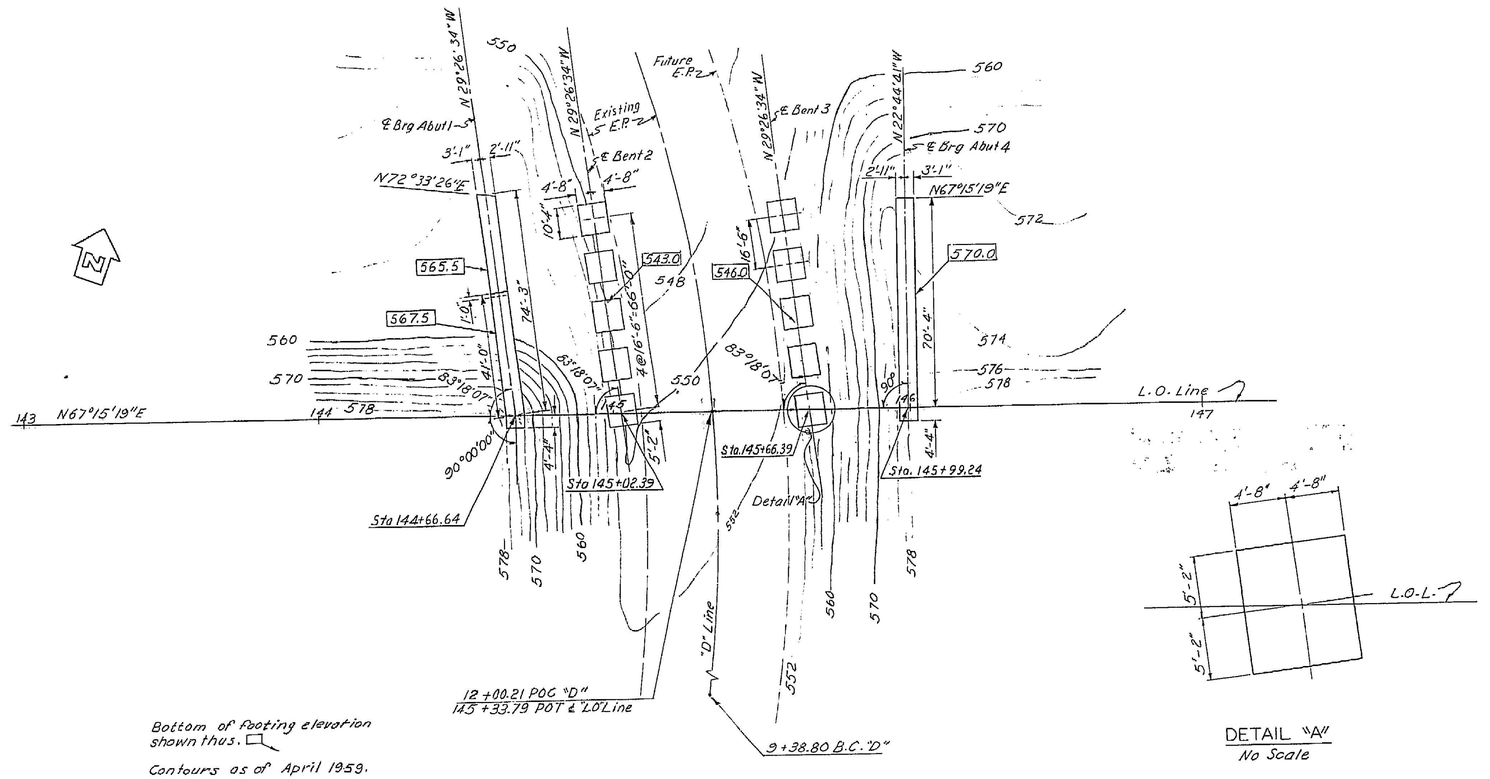
FOR "GENERAL NOTES" SEE "STANDARD DETAILS NO. 2" SHEET.

198

L.L.: 1120-516-44 ℄ Alternative



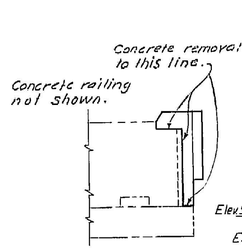
199



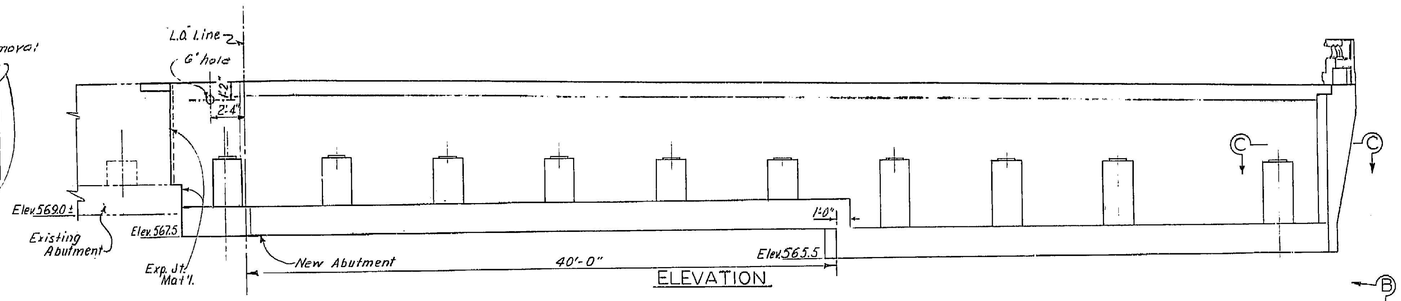
Bottom of footing elevation shown thus. □

Contours as of April 1959.

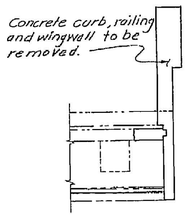
DETAIL "A"
No Scale



ELEVATION



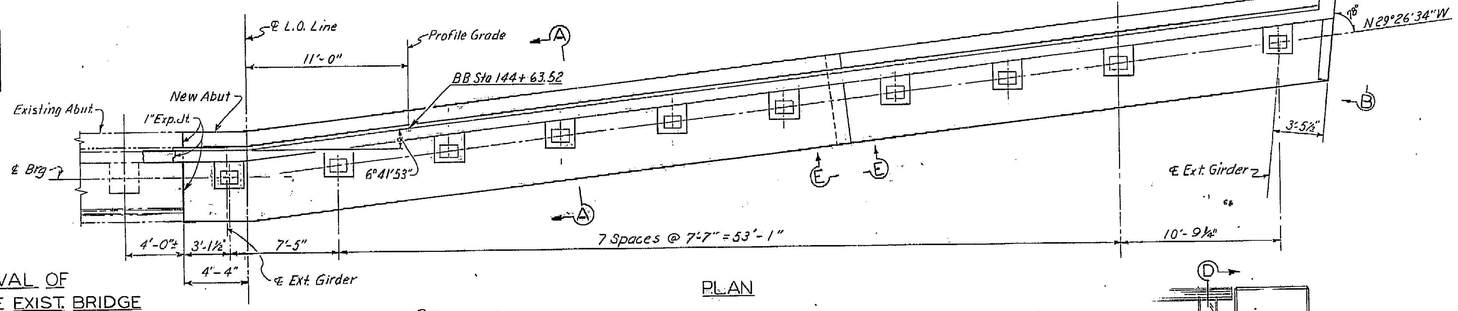
ELEVATION



PLAN

LIMITS OF REMOVAL OF ABUTMENT, LEFT SIDE EXIST. BRIDGE

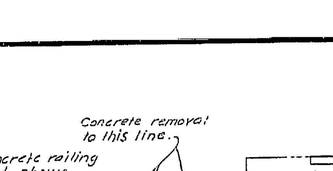
Scale: 1/4" = 1'-0"



PLAN

NEW CONSTRUCTION

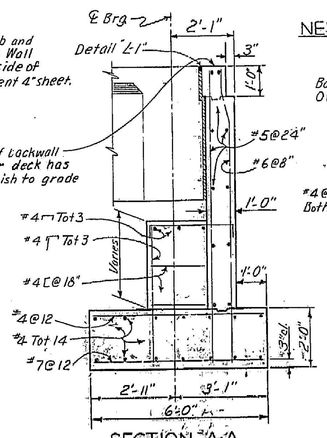
Scale ½" = 1'-0"



SECTION E-E

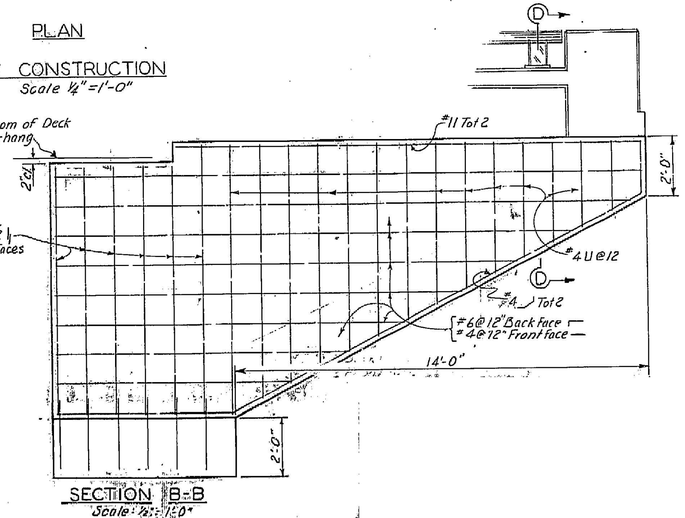
Scale ½" = 1'-0"

NOTE: For detail of curb and railing on existing Curtain Wall and Wingwall on right side of existing bridge see "Abutment 4" sheet.



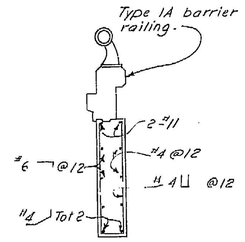
SECTION A-A

Scale ½" = 1'-0"



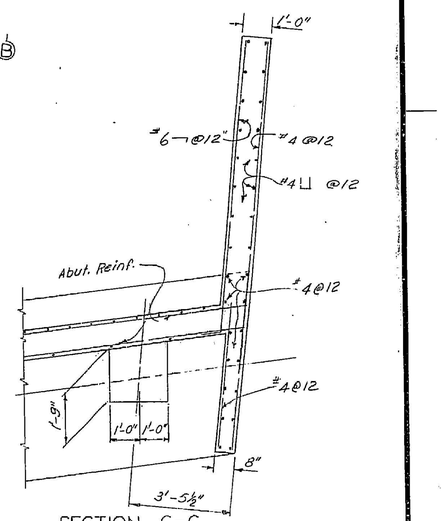
SECTION B-B

Scale ½" = 1'-0"



SECTION D-D

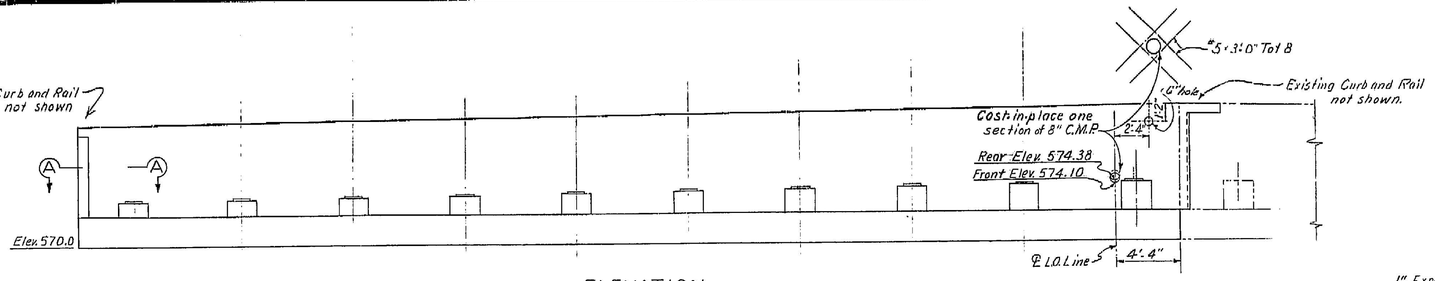
Scale ½" = 1'-0"



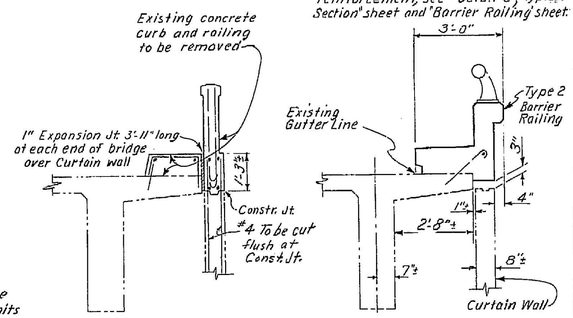
SECTION C-C

Scale ½" = 1'-0"

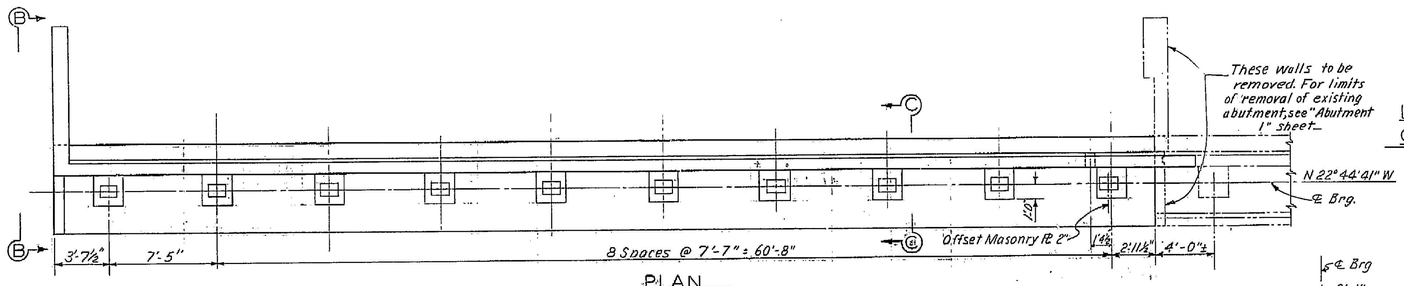
201



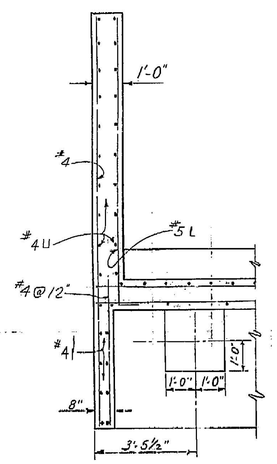
ELEVATION
Scale ⅛"=1'-0"



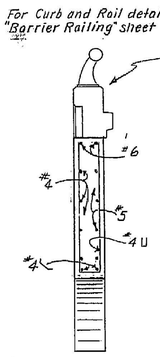
LIMITS OF REMOVAL NEW CONSTRUCTION
CURTAIN WALL, RIGHT SIDE EXISTING BRIDGE
Scale ½"=1'-0"



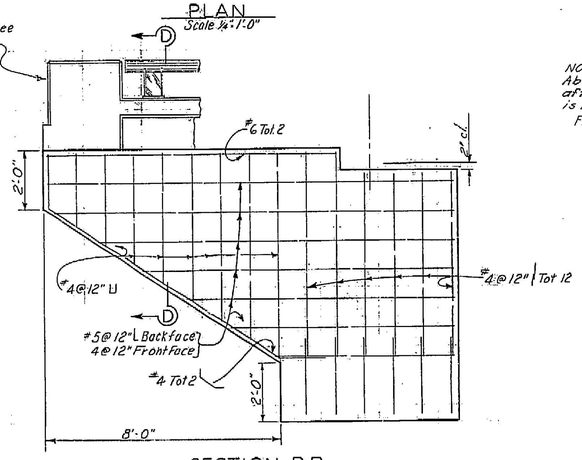
PLAN
Scale ⅛"=1'-0"



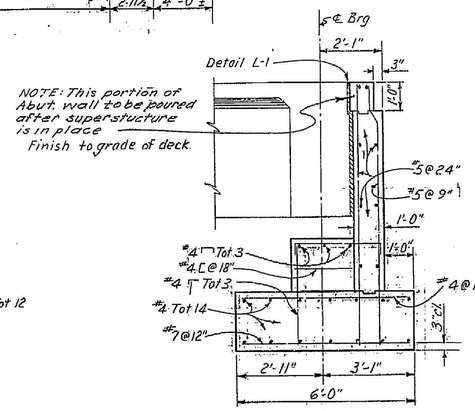
SECTION A-A
Scale ½"=1'-0"



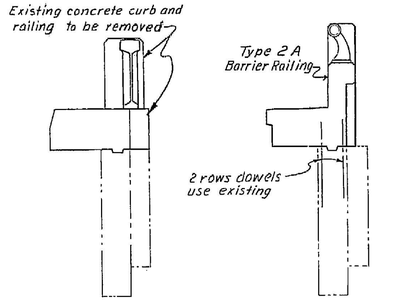
SECTION D-D
Scale ½"=1'-0"



SECTION B-B
Scale ½"=1'-0"

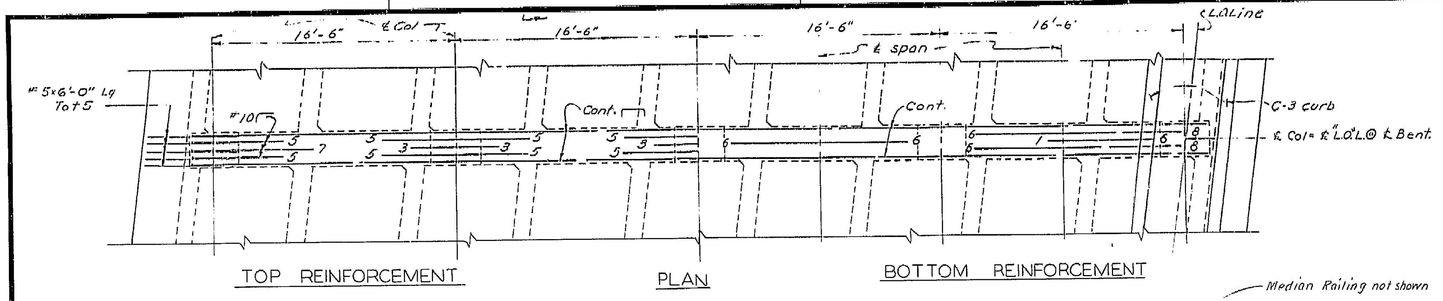


SECTION C-C
Scale ½"=1'-0"

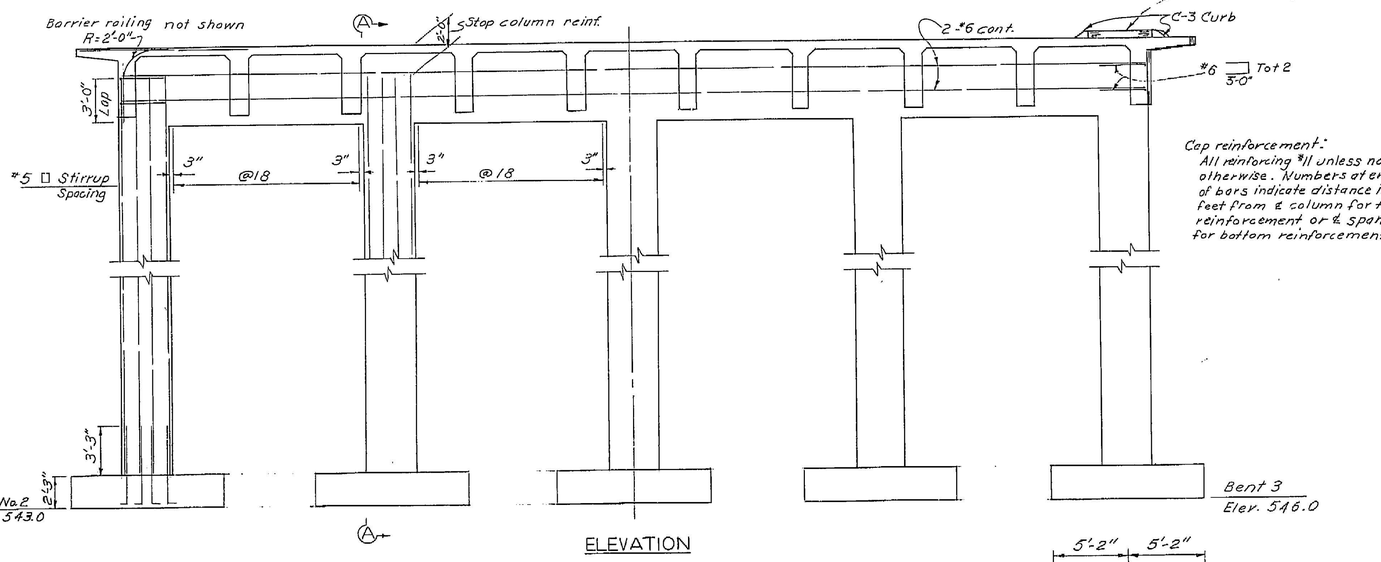


LIMITS OF REMOVAL NEW CONSTRUCTION
WINGWALL, RIGHT SIDE EXISTING BRIDGE
Scale ½"=1'-0"

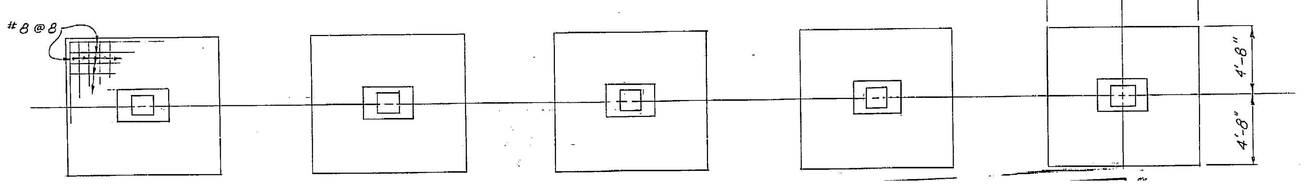
202



TOP REINFORCEMENT — PLAN — BOTTOM REINFORCEMENT

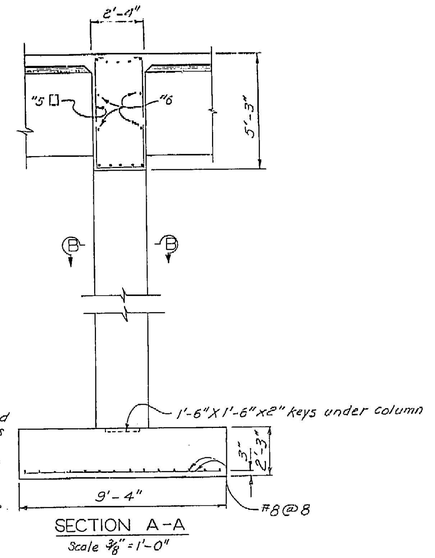


ELEVATION

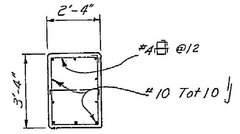


FOOTING PLAN

Cap reinforcement:-
All reinforcing #11 unless noted otherwise. Numbers at ends of bars indicate distance in feet from ℄ column for top reinforcement or ℄ span for bottom reinforcement.

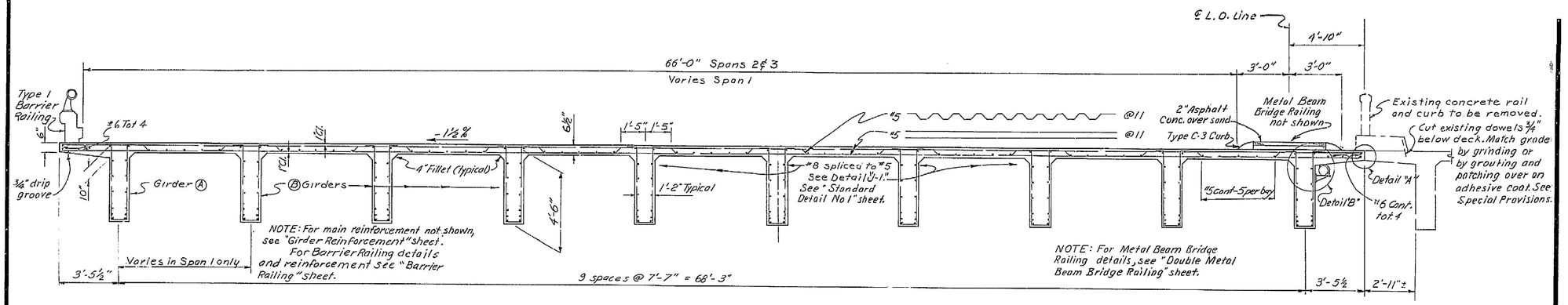


SECTION A-A
Scale 3/8" = 1'-0"

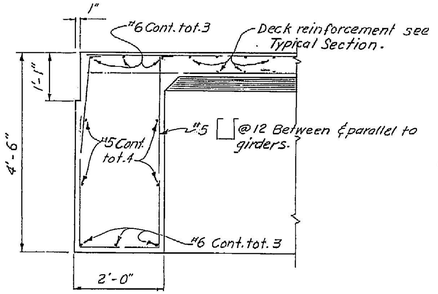


SECTION B-B
Scale 3/8" = 1'-0"

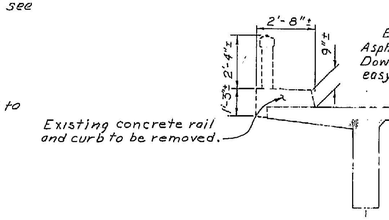
203



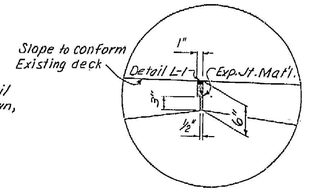
TYPICAL SECTION
Scale ⅜" = 1'-0"



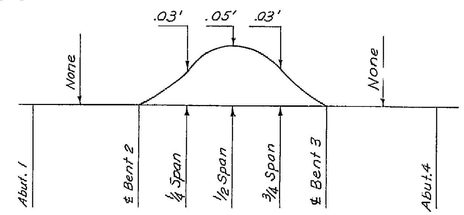
END DIAPHRAGM
Scale ¾" = 1'-0"



EXISTING TYPICAL SECTION
Scale ⅜" = 1'-0"

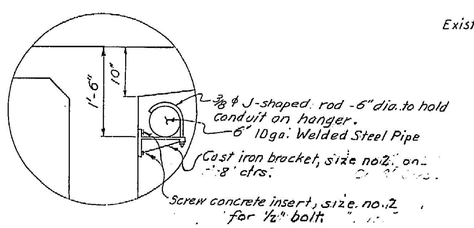


DETAIL A
Scale 1" = 1'-0"

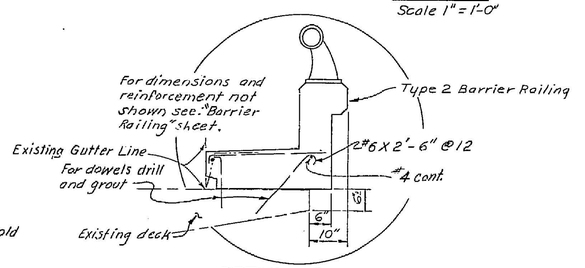


CAMBER DIAGRAM

Note:
The total deflection will be reached about 4 years after falsework removal. For values at time of falsework removal divide those shown by 4. The amount of camber for construction will be determined by the engineer.

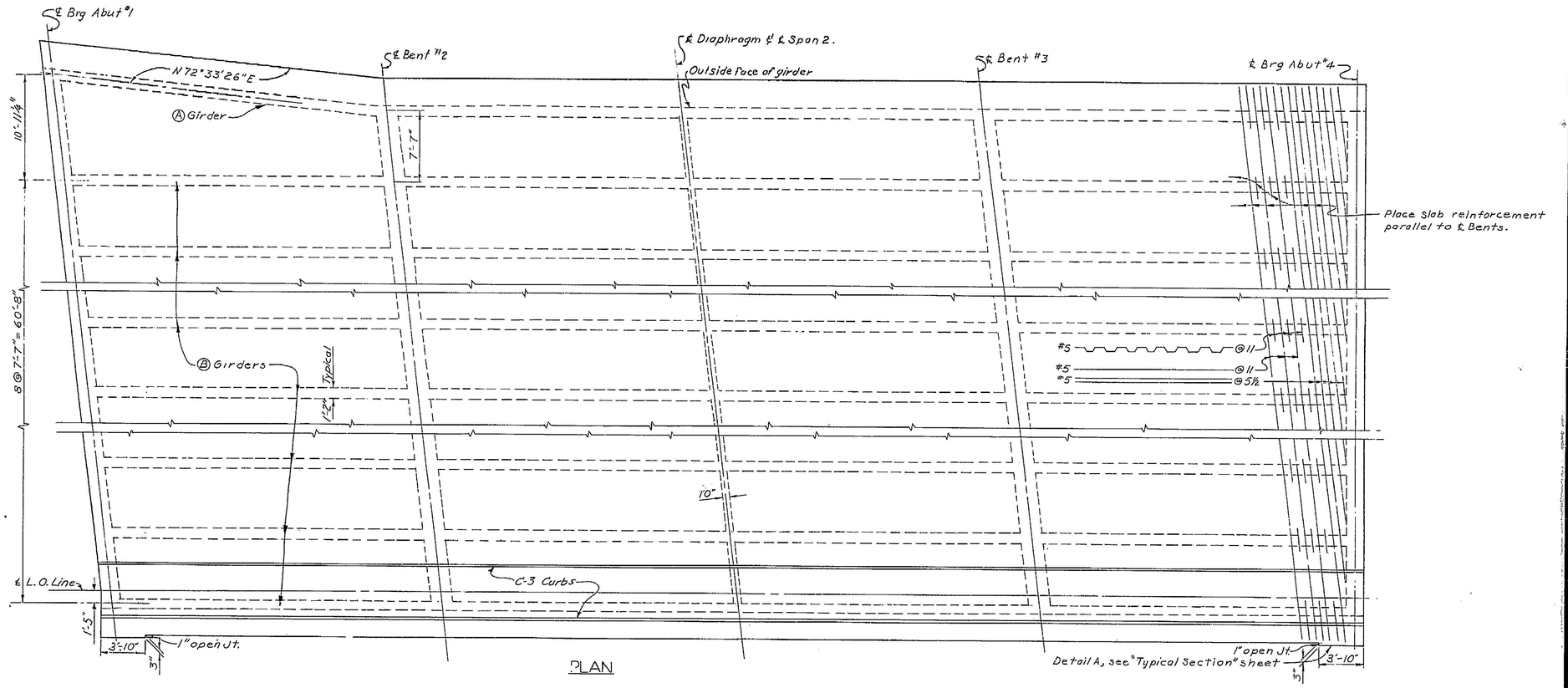


DETAIL B
Scale 1" = 1'-0"

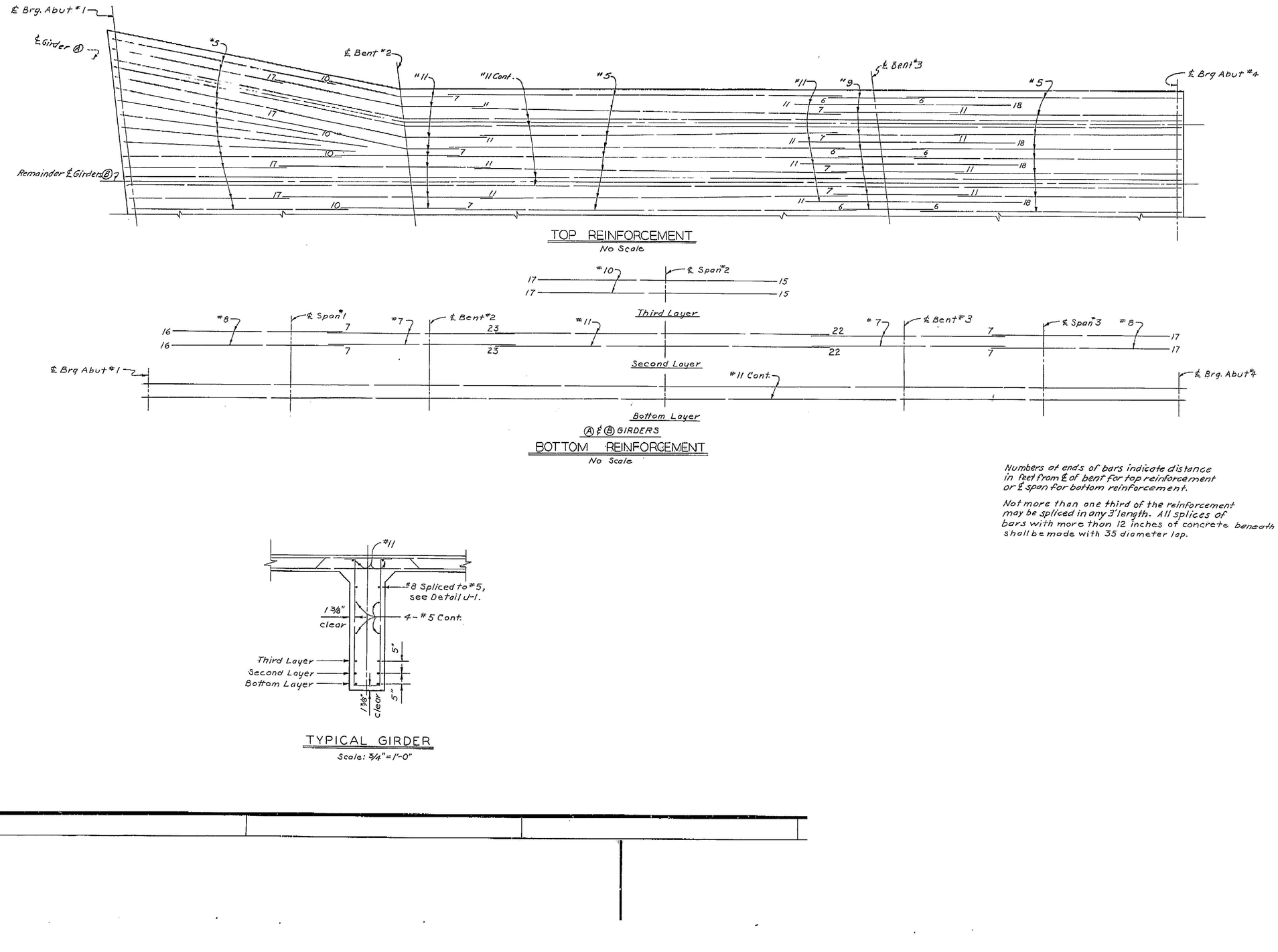


DETAIL C
Scale ¾" = 1'-0"

2004


℄ Brg Abut #1
℄ Bent #2
℄ Diaphragm & ℄ Span 2.
Outside face of girder
℄ Bent #3
℄ Brg Abut #4
N 72°33'26"E
Ⓐ Girder
10'-1¼"
7'-7"
8@7'-7"=60'8"
Ⓑ Girders
Typical
1'-2"
10"
Place slab reinforcement parallel to ℄ Bents.
#5 @ 11
#5 @ 11
#5 @ 5½
℄ L.O. Line
C-3 Curbs
1'-5"
3'-10"
1" open Jt.
3"
1" open Jt.
Detail A, see "Typical Section" sheet
3'-10"
3"
PLAN
6½"
3"
3"
3"
3"
3"
3"
#5 U Stirrups
18 Max
4@15
18 Max
4@15
18 Max.
LONGITUDINAL SECTION

205



TOP REINFORCEMENT

No Scale

Ⓐ ℄ Ⓑ GIRDERS

BOTTOM REINFORCEMENT

No Scale

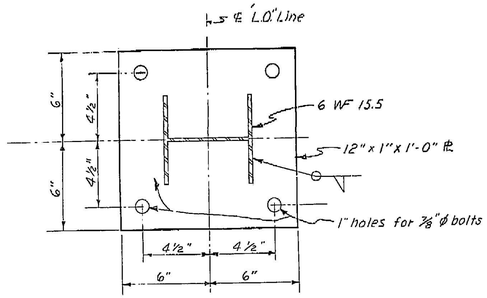
TYPICAL GIRDER

Scale: 3/4" = 1'-0"

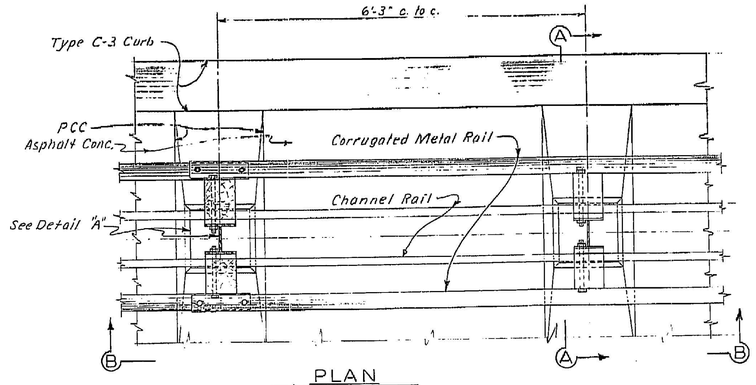
Numbers at ends of bars indicate distance in feet from ℄ of bent for top reinforcement or ℄ span for bottom reinforcement.

Not more than one third of the reinforcement may be spliced in any 3' length. All splices of bars with more than 12 inches of concrete beneath shall be made with 35 diameter lap.

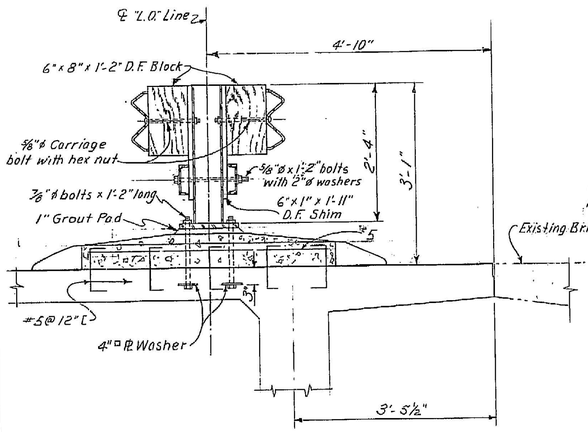
206



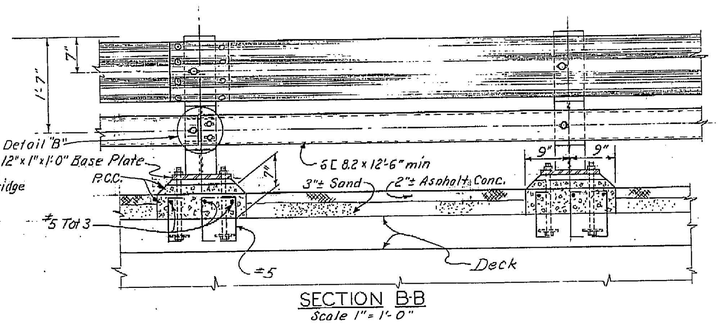
BASE PLATE
DETAIL "A"
Scale 3" = 1'-0"



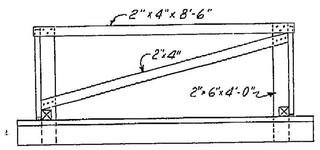
PLAN
Scale: 1" = 1'-0"



SECTION A-A
Scale 1" = 1'-0"

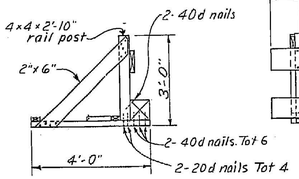


SECTION B-B
Scale 1" = 1'-0"

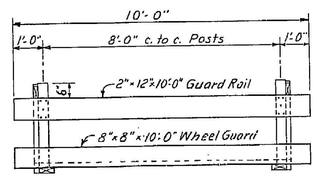


PLAN

LAMINATED WHEEL GUARD
OPTIONAL



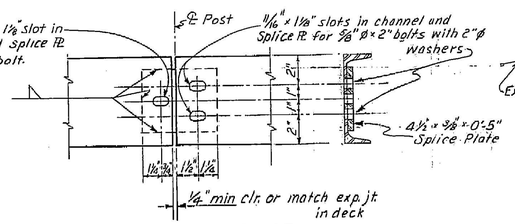
END VIEW



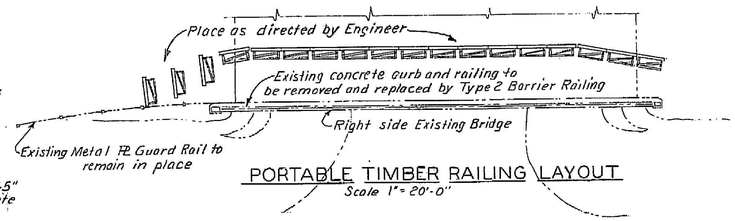
ELEVATION

NOTE:
All nails are 16d except as noted.
Paint entire unit white. See Special Provisions.
All timber to be S4S

PORTABLE TIMBER BARRICADES
Scale ½" = 1'-0"

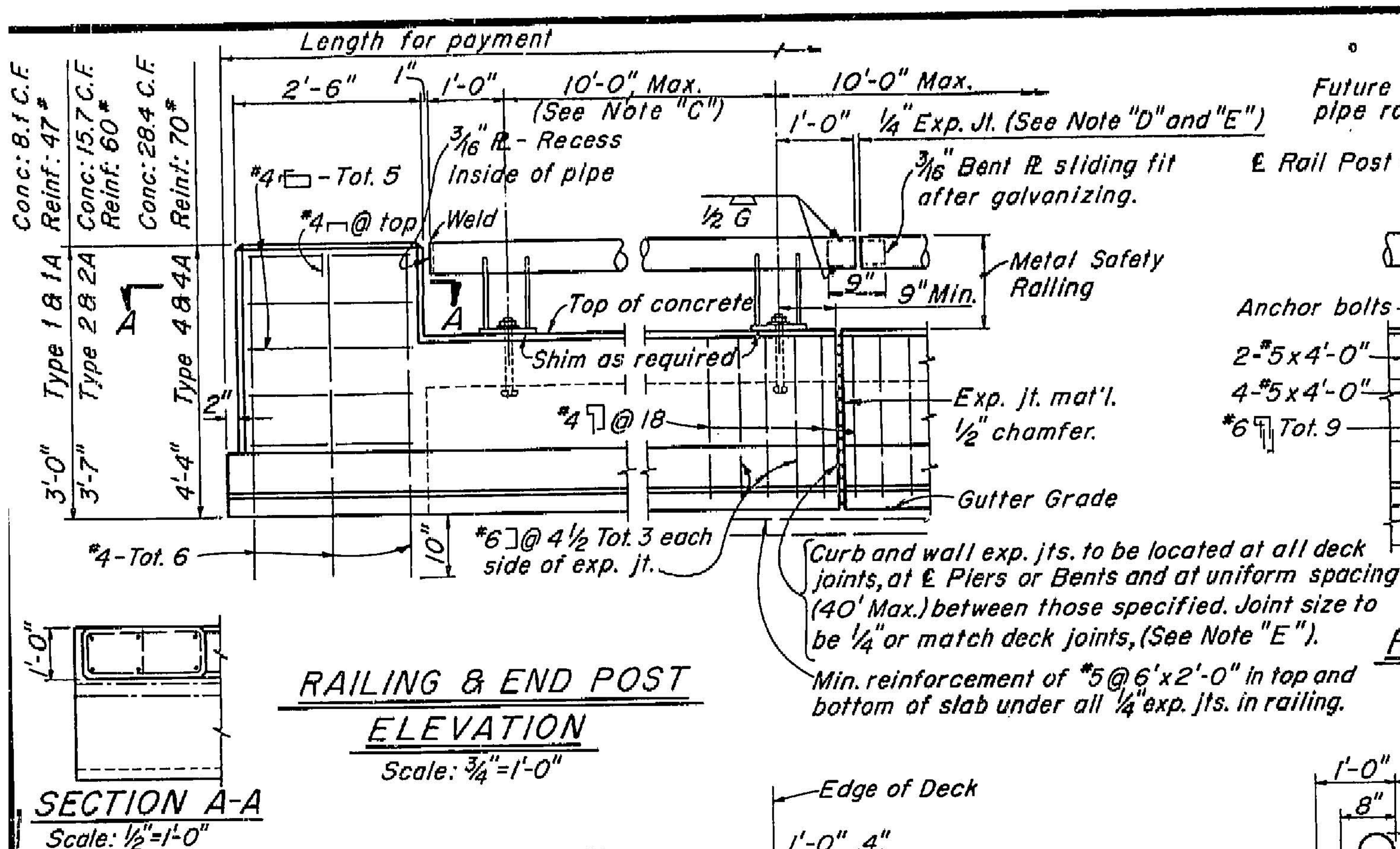


BOTTOM RAIL SPLICE
DETAIL "B"
Scale: 3" = 1'-0"



PORTABLE TIMBER RAILING LAYOUT
Scale 1" = 20'-0"

207

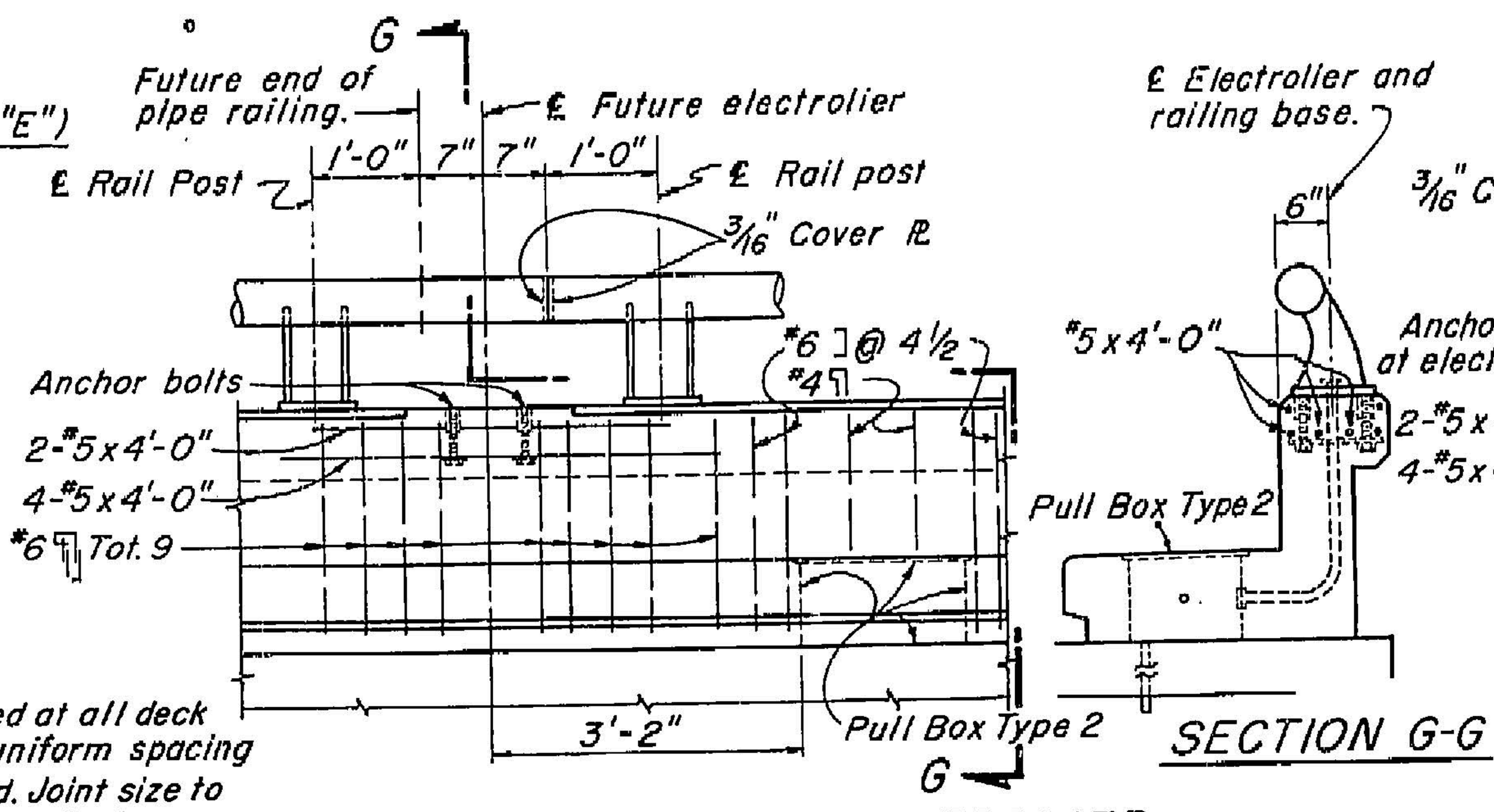


RAILING & END POST ELEVATION

Scale: 3/4"=1'-0"

Curb and wall exp. jts. to be located at all deck joints, at ℄ Piers or Bents and at uniform spacing (40' Max.) between those specified. Joint size to be 1/4" or match deck joints, (See Note "E").

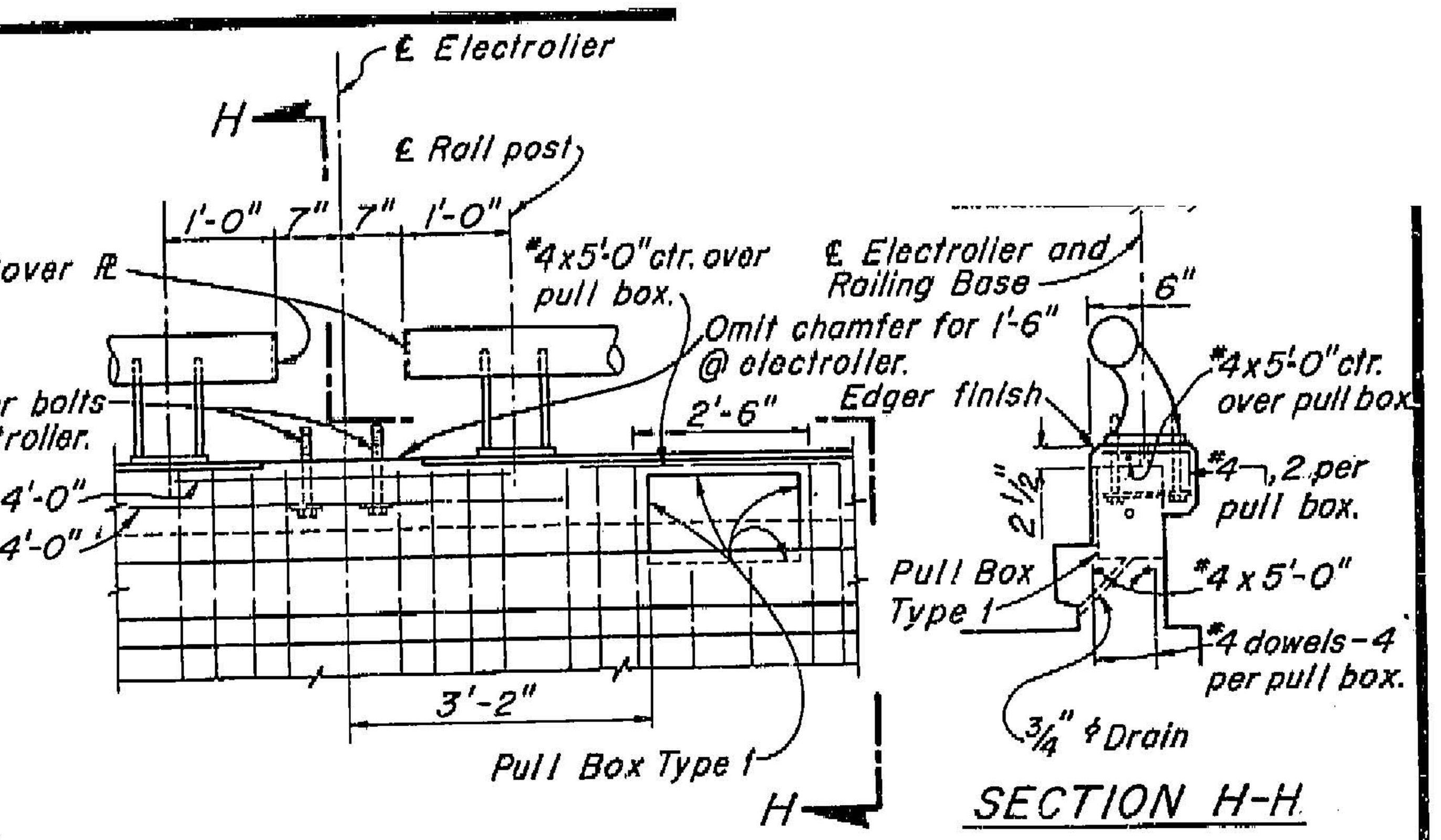
Min. reinforcement of *5 @ 6' x 2'-0" in top and bottom of slab under all 1/4" exp. jts. in railing.



RAILING CLOSURE AT ELECTROLIER

(SHOWING TYPE 2 CURB)

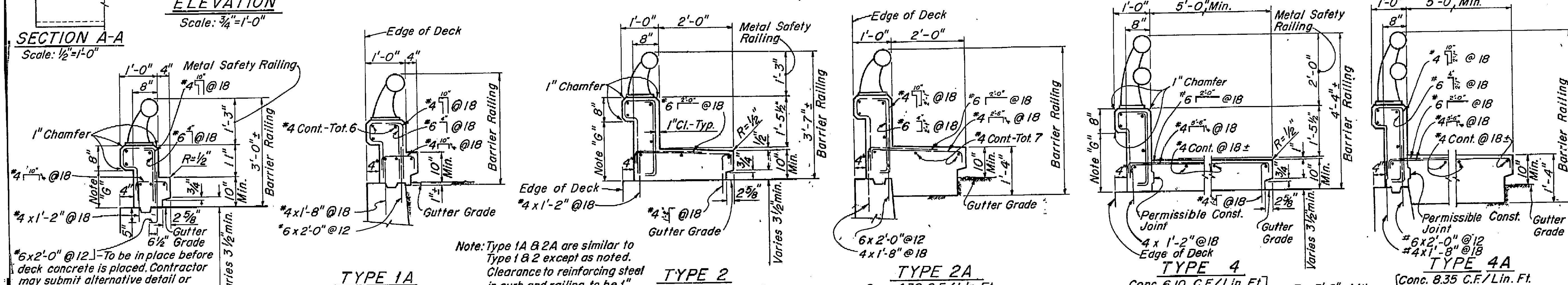
Scale: 3/4"=1'-0"



RAILING AT ELECTROLIER

(SHOWING TYPE 1 CURB)

Scale: 3/4"=1'-0"



TYPE 1
Conc. 1.61 C.F./Lin. Ft.
Reinf. 11.8 #/Lin. Ft.

TYPE 1A
Conc. 1.61 C.F./Lin. Ft.
Reinf. 12.0 #/Lin. Ft.

Note: Type 1A & 2A are similar to Type 1 & 2 except as noted. Clearance to reinforcing steel in curb and railing to be 1".

TYPE 2
Conc. 3.43 C.F./Lin. Ft.
Reinf. 14.7 #/Lin. Ft.

TYPE 2A
Conc. 4.30 C.F./Lin. Ft.
Reinf. 17.3 #/Lin. Ft.

TYPE 4
Conc. 6.10 C.F./Lin. Ft.
Reinf. 17.2 #/Lin. Ft. — For 5'-0" width
Conc. 0.84 C.F./Lin. Ft.
Reinf. 2.1 # / Lin. Ft. — Per additional ft. (width)

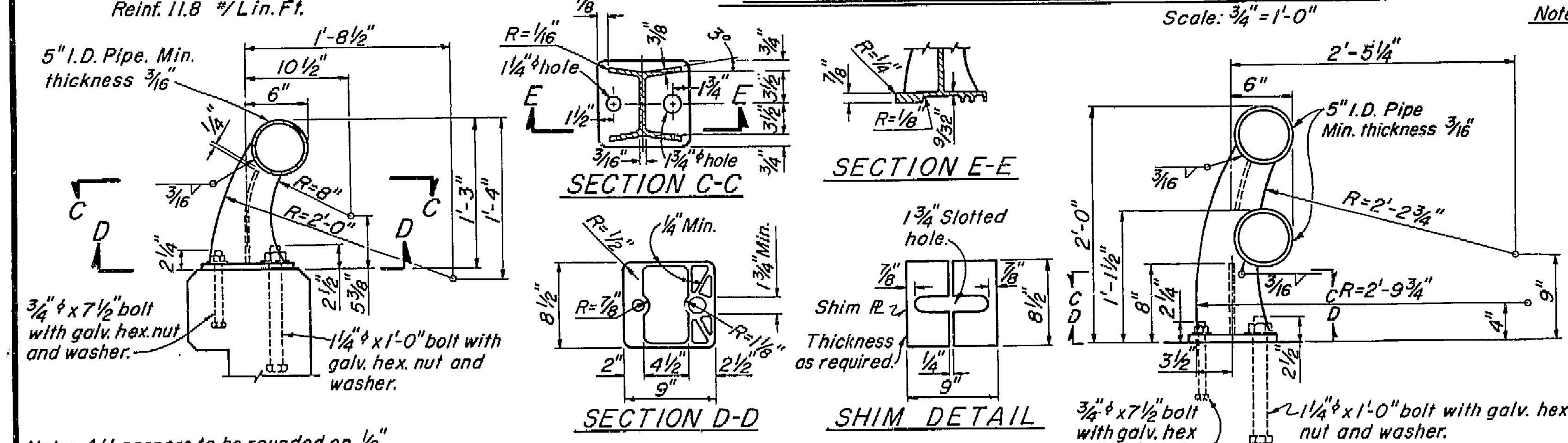
TYPE 4A
Conc. 8.35 C.F./Lin. Ft.
Reinf. 19.7 #/Lin. Ft. — For 5'-0" width
Conc. 1.34 C.F./Lin. Ft.
Reinf. 2.1 #/Lin. Ft. — Per additional ft. (width)

TYPICAL CURB & RAIL SECTIONS

Scale: 3/4"=1'-0"

Note:
(A) Railing shall conform to horizontal and vertical alignment.
(B) Posts shall be normal to railing.
(C) The exact location of railing posts to be determined from shop plans.
(D) Joints in Metal Safety Railing shall be 20'± max. apart, except as approved by the Engineer.
(E) At expansion joint in deck, rail joint shall be increased to same size.
(F) Steel railing assembly to be galvanized after fabrication.
(G) Dimension will vary with superelevation transition.
(H) Walls are to be backfilled before railing is placed.
(I) Construct 3" deep x 12" wide overflow scupper 2" above deck at low points in grade.

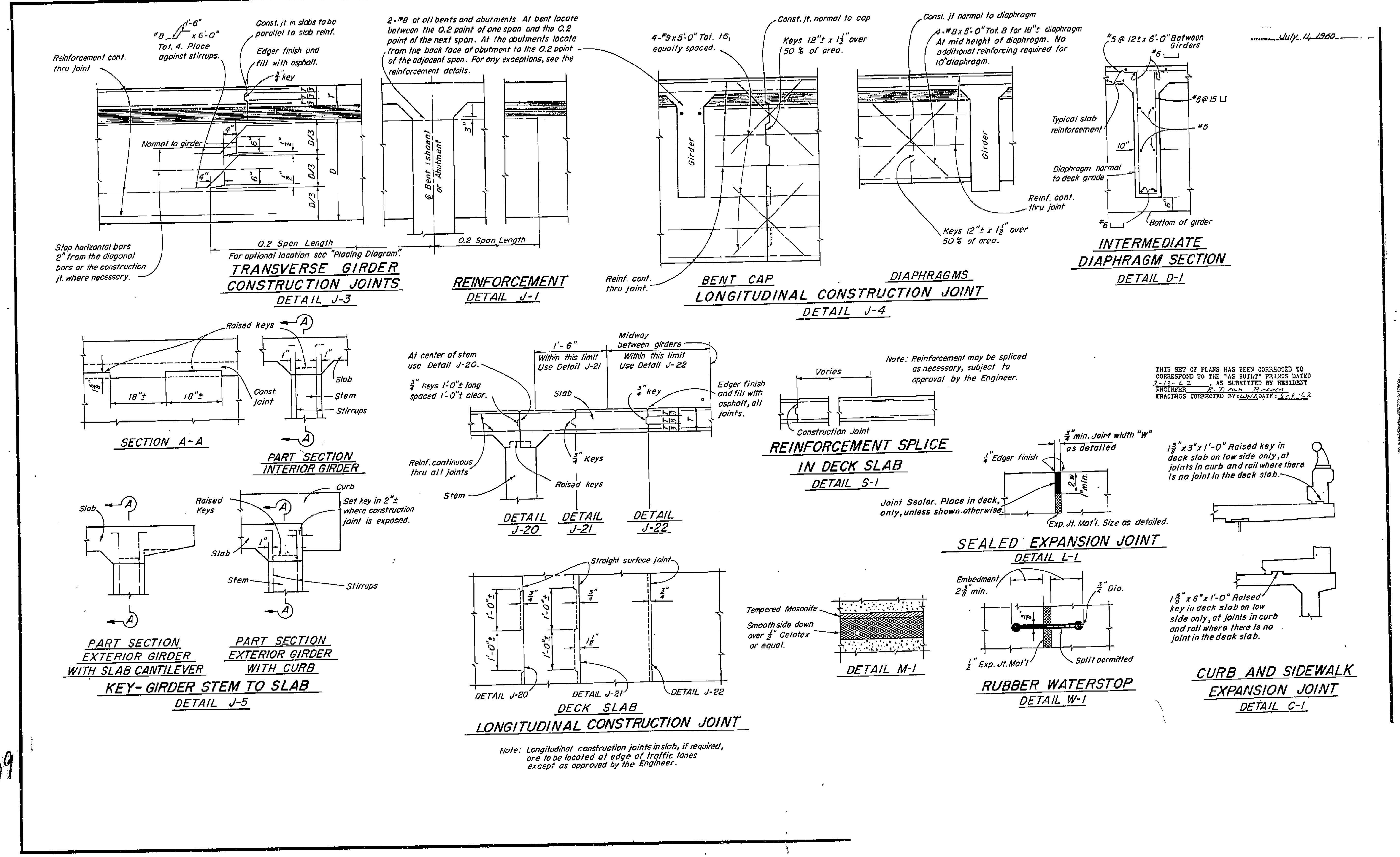
Note: At the option of the Contractor material for the railing may be one of the following:
1. Steel pipe rail and cast steel post.
2. Aluminum pipe rail and cast aluminum post. Shims to be of asbestos sheet packing.
Alternative details may be submitted for approval.



Note: All corners to be rounded on 1/8" radius except as noted. All fillets are 1/8" radius.

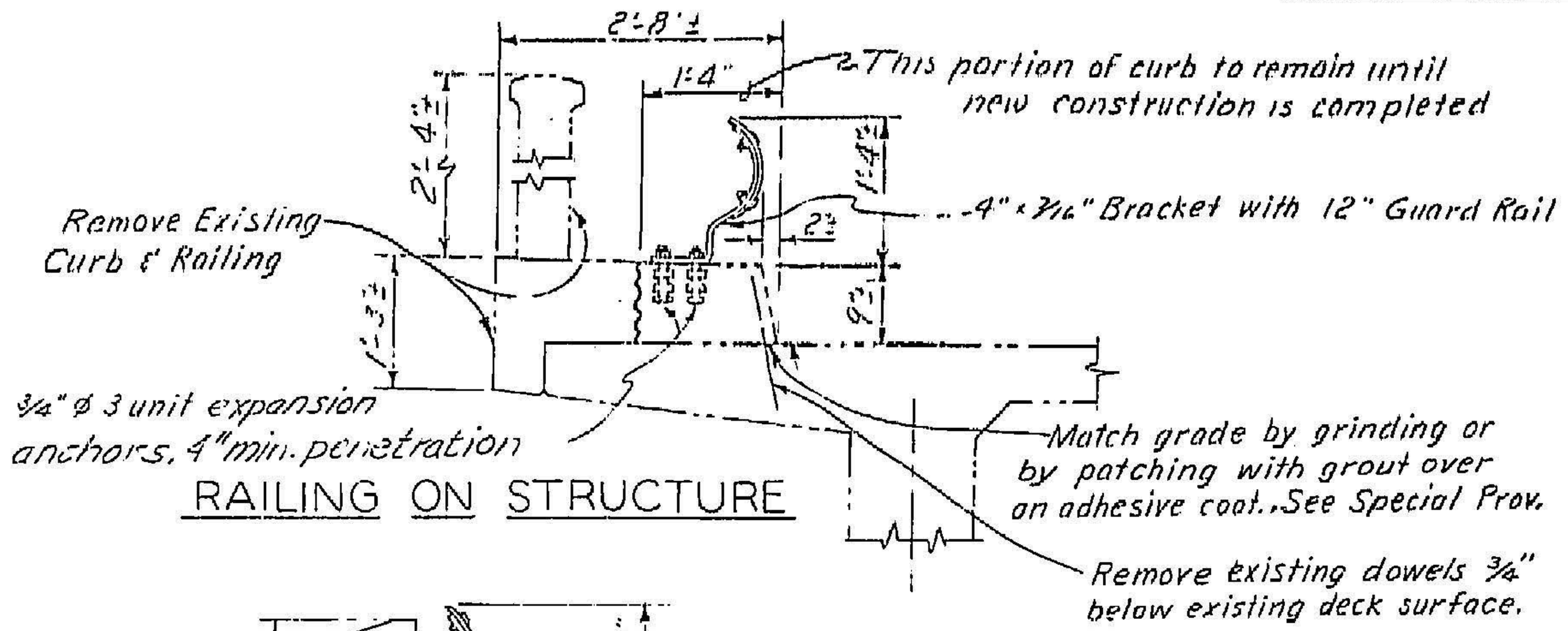
RAIL POST DETAILS

Scale: 1 1/2"=1'-0"

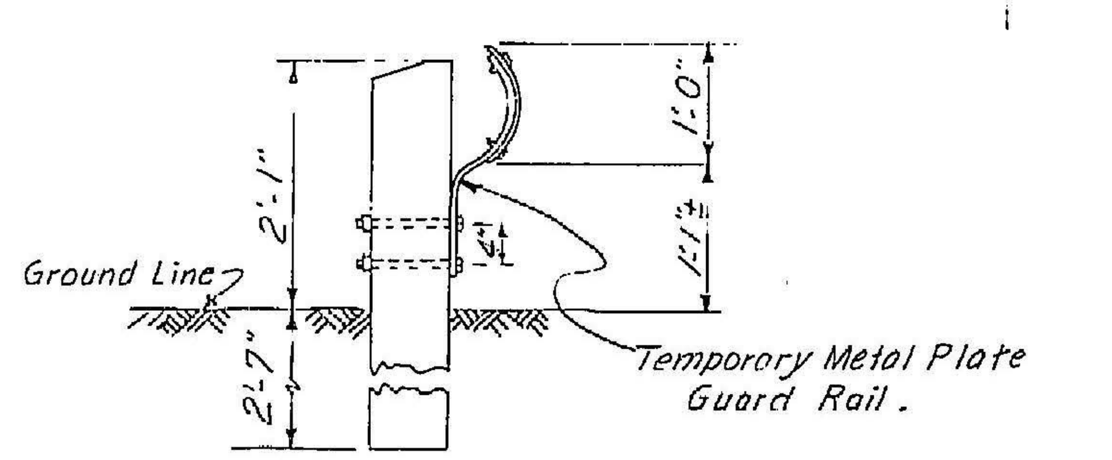


THIS SET OF PLANS HAS BEEN CORRECTED TO CORRESPOND TO THE "AS BUILT" PRINTS DATED 2-13-62, AS SUBMITTED BY RESIDENT ENGINEER R. Dean Brown
TRACINGS CORRECTED BY: WNS DATE: 5-9-62

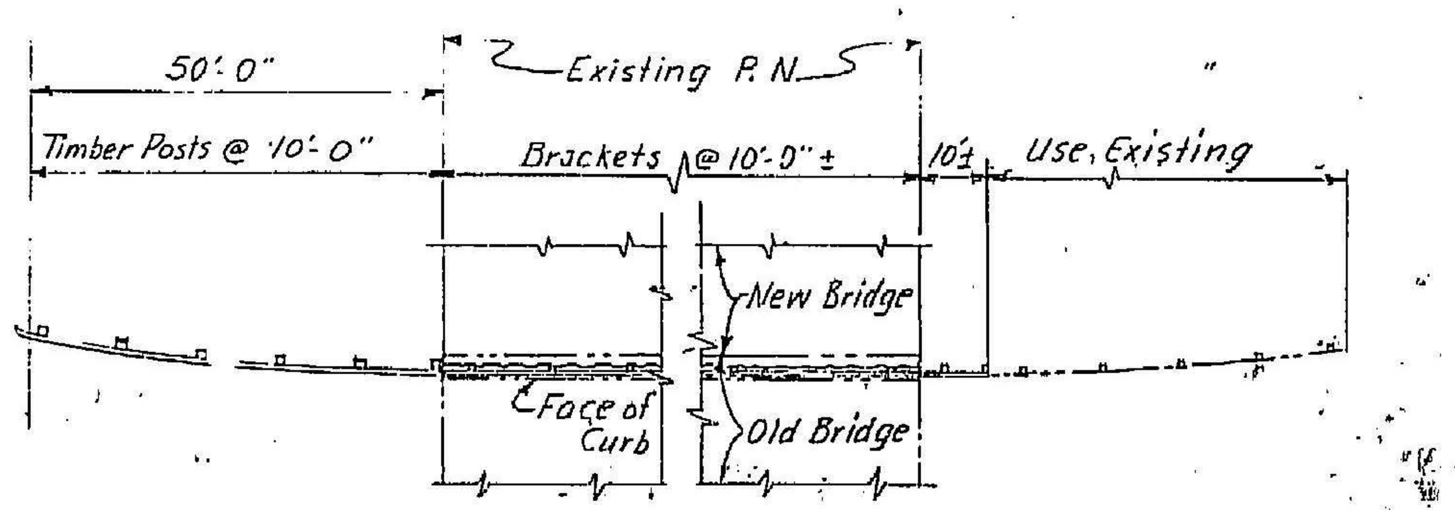
209



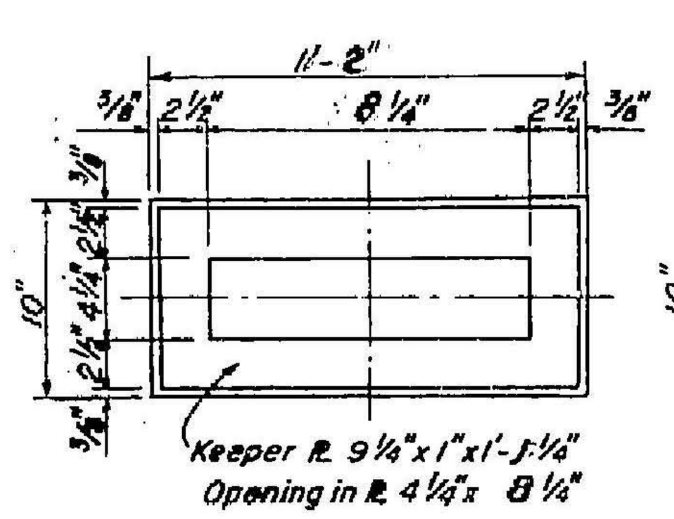
RAILING ON STRUCTURE



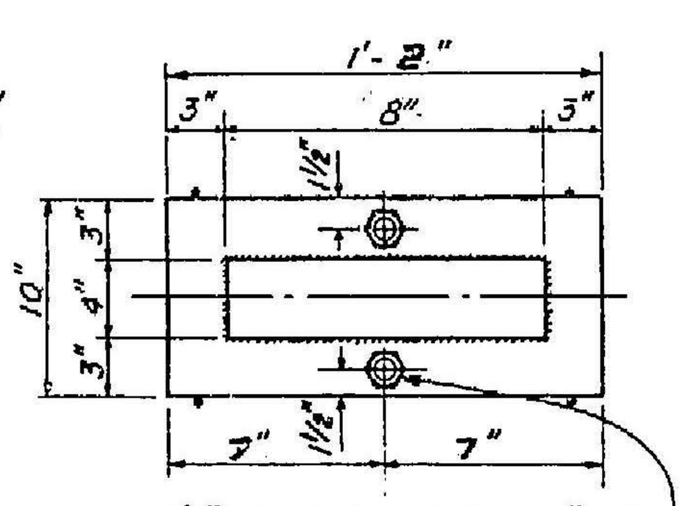
TIMBER POST DETAIL - RAILING OFF STRUCTURE



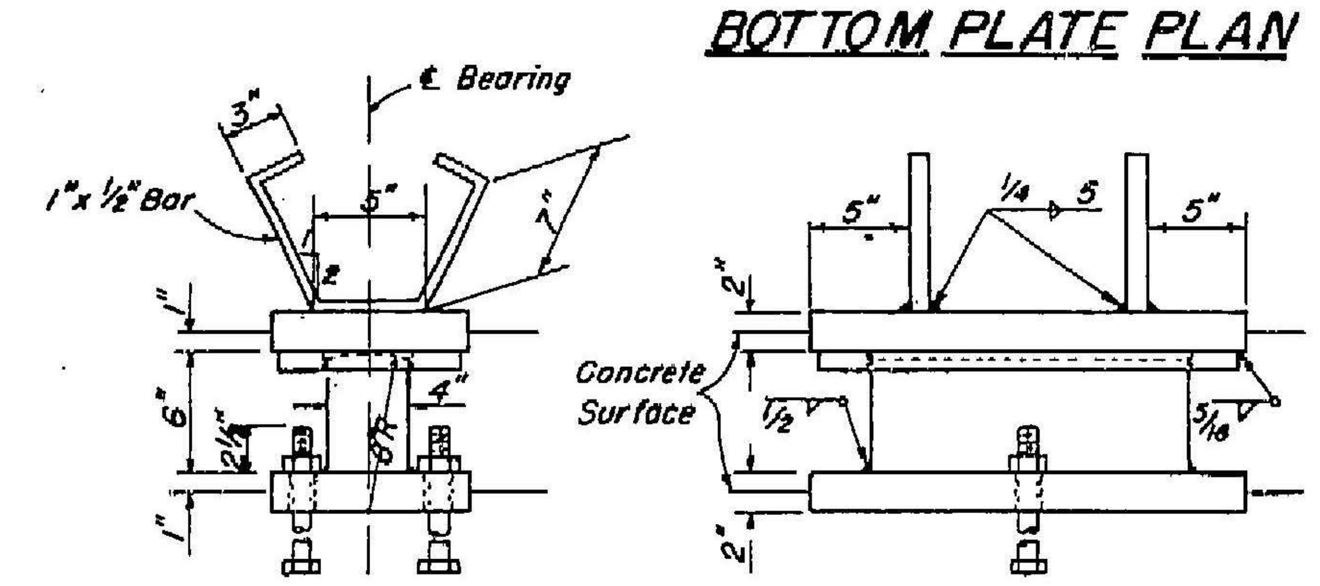
TEMPORARY METAL PLATE GUARD RAIL DETAILS



TOP PLATE

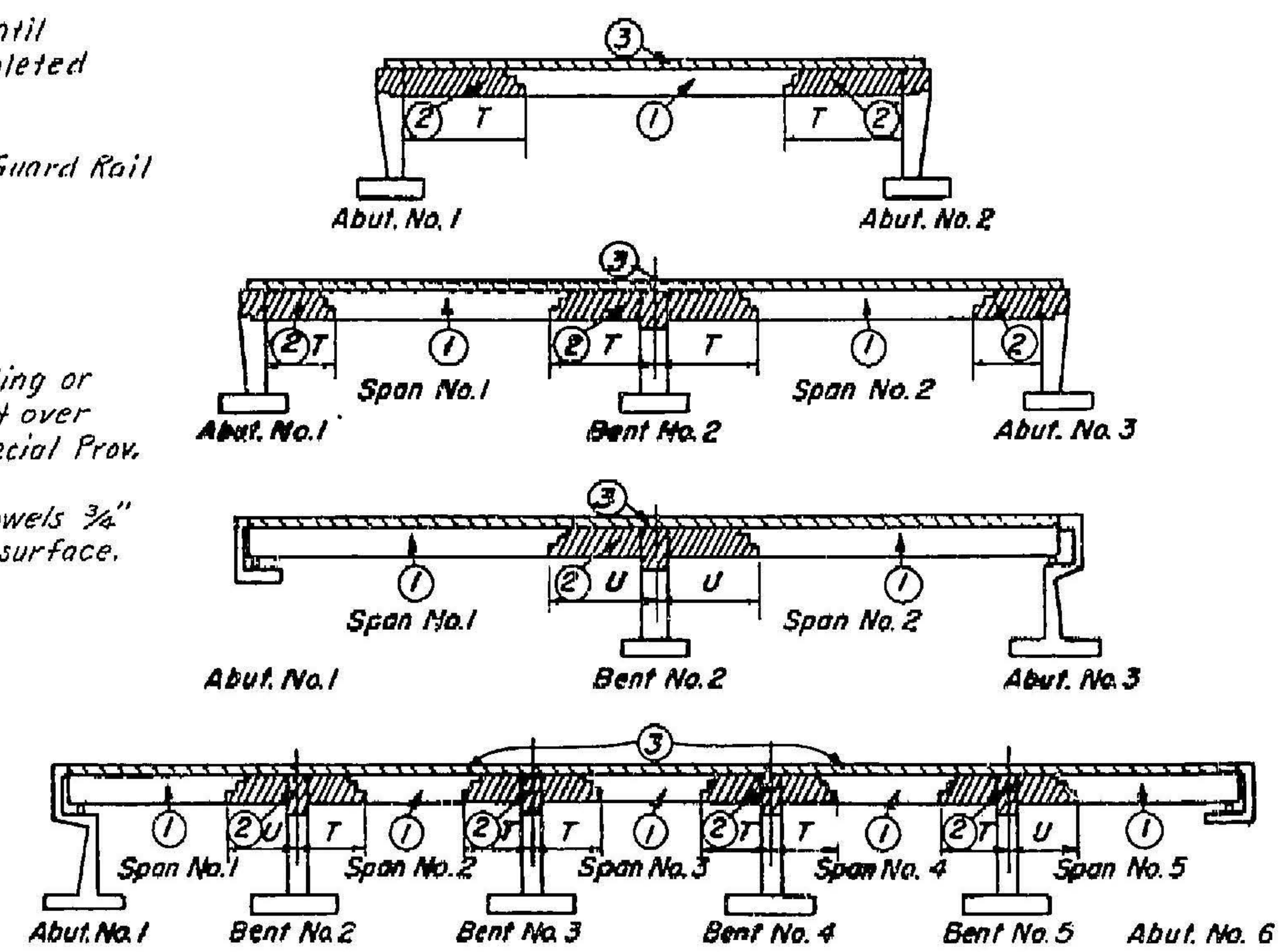


BOTTOM PLATE PLAN



10"x14" FIXED BEARING ASSEMBLY

0 Required · No Scale



TEE BEAM SUPERSTRUCTURE PLACING DIAGRAM

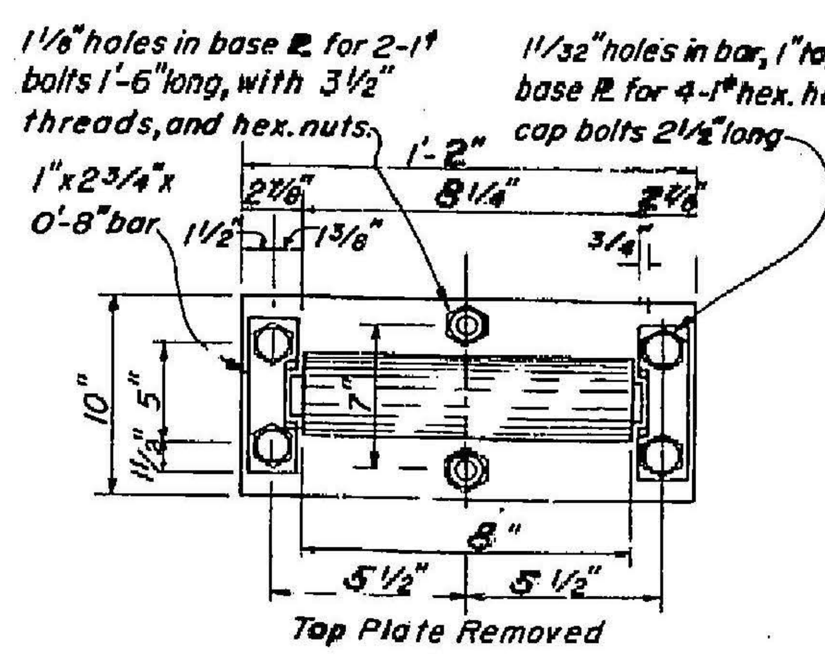
Numbers (1) and (2) indicate sequence of placing girder stem concrete. (2) may be placed simultaneously with (1) when approved by the Engineer, and provided that the (1) sections are placed in adjoining spans.

Top slab concrete (3) may be placed separately from (1) and (2). (3) may be placed continuously or in parts as approved by the Engineer, however the only joints permitted shall be located within 2'-0" of the girder joints between (1) and (2).

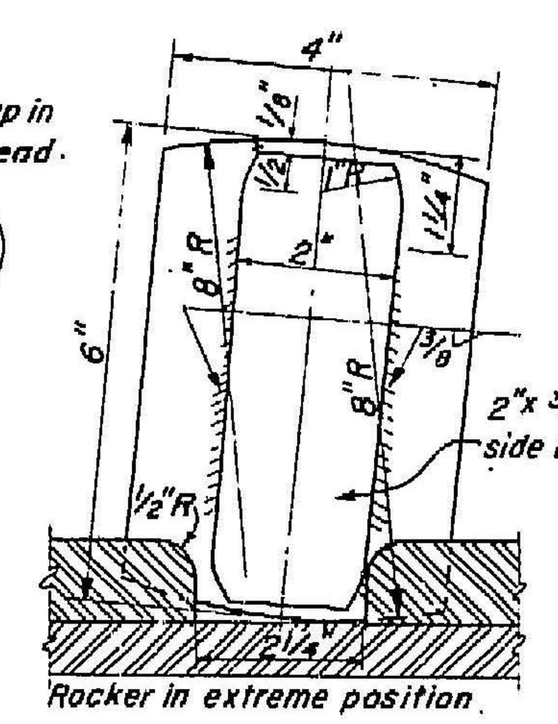
T = ⅓ span length

U = ¼ span length

For any deviation from the above the contractor shall submit a diagram to the Engineer.

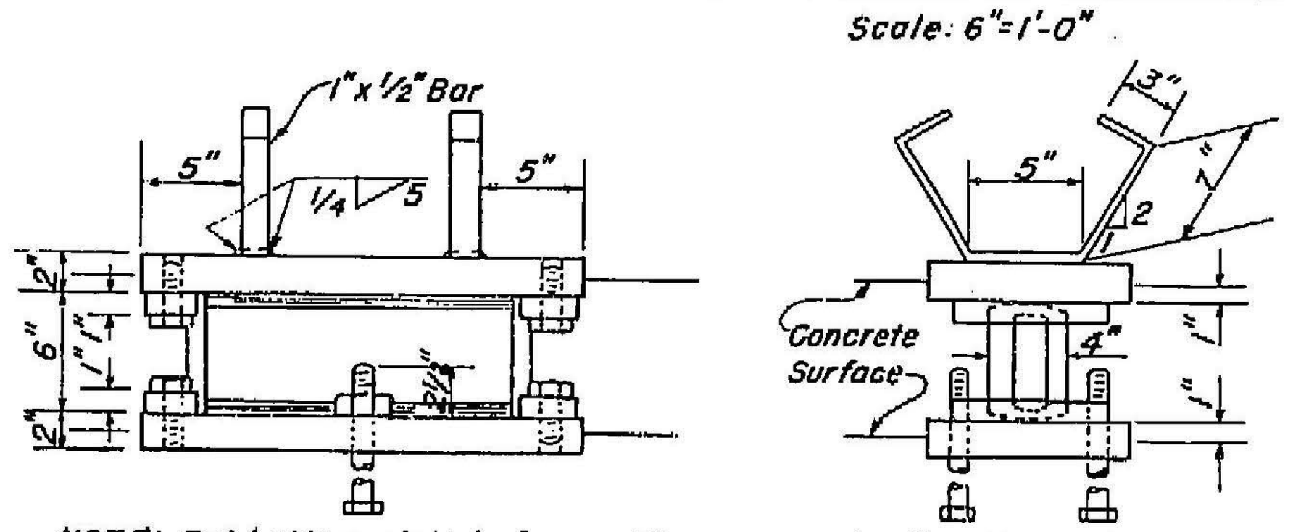


BOTTOM PLATE PLAN



END VIEW OF ROCKER

Scale: 6"=1'-0"



NOTE: Set bottom plate in forms. Place concrete directly against bottom plate. All bearing assemblies to be galvanized after fabrication.

10"x14" EXPANSION BEARING ASSEMBLY

20 Required · No Scale

GENERAL NOTES

Specifications:

Design: A.A.S.H.O dated 1957 with revisions and as supplemented by Bridge Planning and Design Manual.

Construction: Standard Specifications, Division of Highways, dated January 1960 and the Special Provisions.

Live Loading: H20-S16-44 and alternative.

Unit Stresses:

Reinforced Concrete:

f_s = 20,000 p.s.i.

n = 10

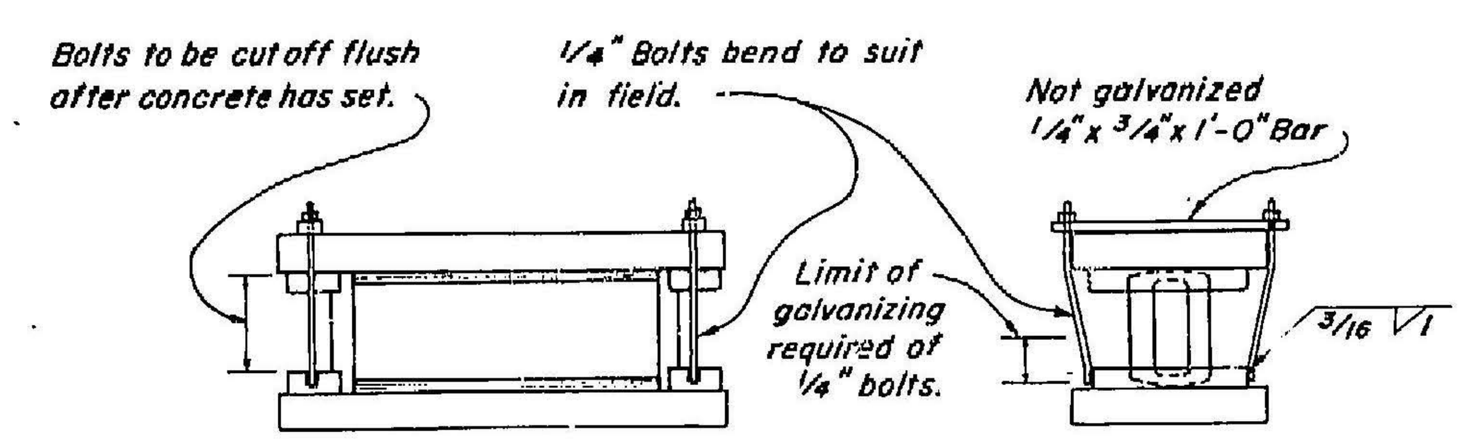
f_c = 1,200 p.s.i.

Footing Pressure: tons p.s.f.

2.5 T.S.F. Abutments

4.0 T.S.F. Bents

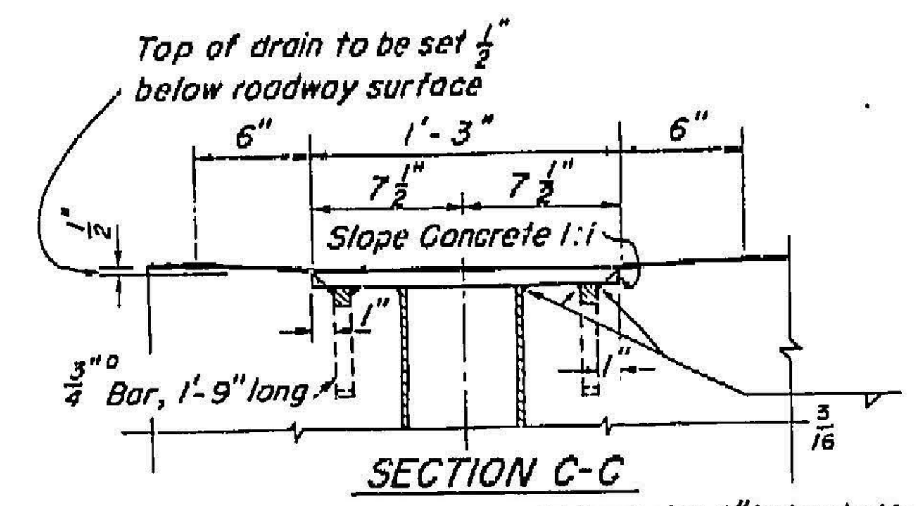
THIS SET OF PLANS HAS BEEN CORRECTED TO CORRESPOND TO THE "AS BUILT" PRINTS DATED 2-13-62, AS SUBMITTED BY RESIDENT ENGINEER R. Dean Brown
TRACINGS CORRECTED BY [illegible] DATE: 8-8-62



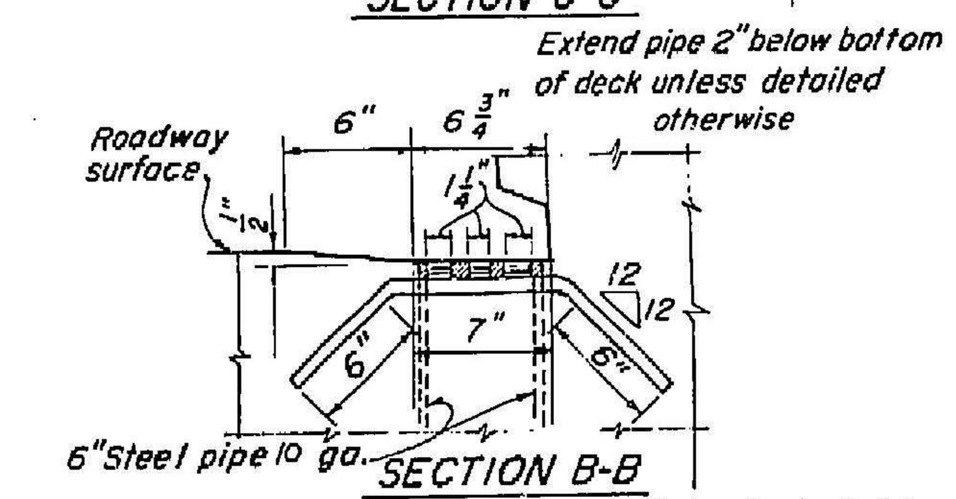
DETAIL OF ERECTION BOLTS

No Scale

DATE July 11, 1960

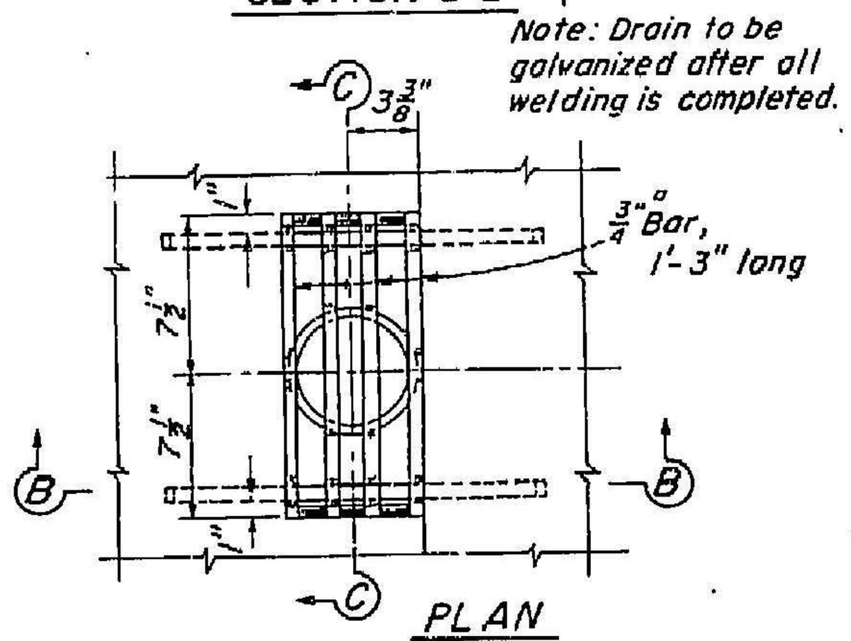


SECTION C-C



SECTION B-B

Note: Drain to be galvanized after all welding is completed.

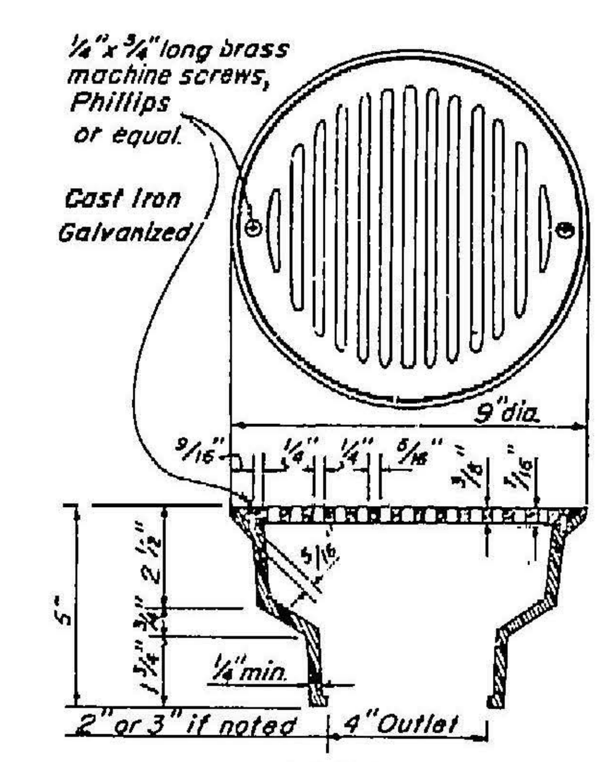


PLAN

DRAIN DETAIL TYPE "A"

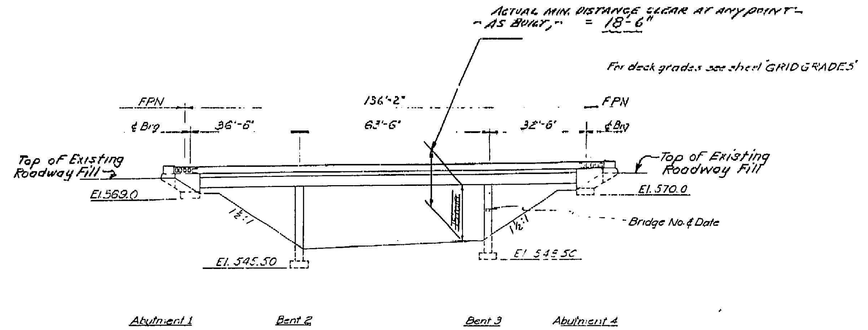
None Required

Scale 1½"= 1'-0"



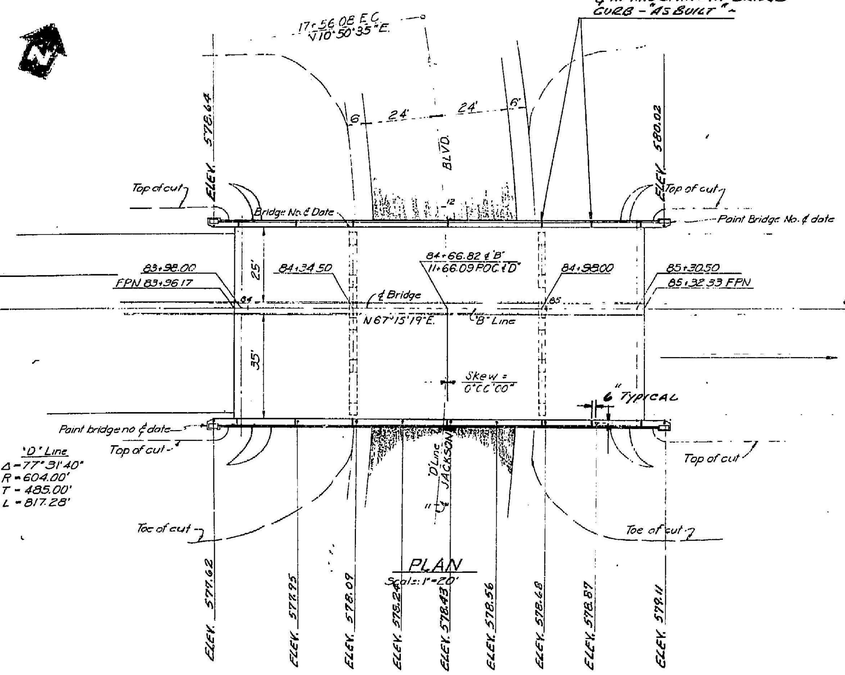
AREA DRAIN

None Required



ELEVATION

Scale: 1"=20'



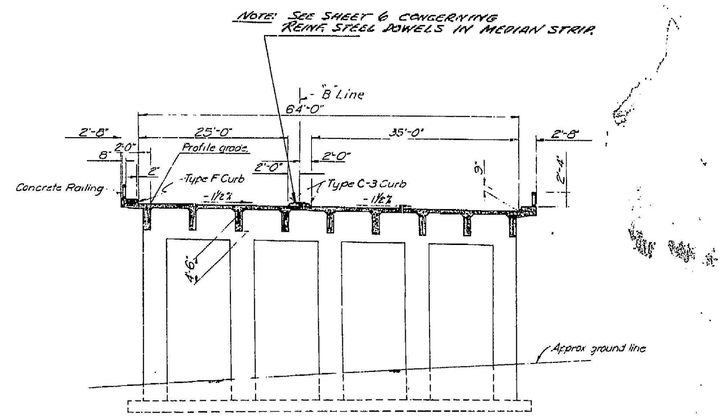
PLAN

Scale: 1"=20'

PERMANENT ELEVATIONS

APPROXIMATE QUANTITIES

STRUCTURE EXCAVATION	300 C.Y.
STRUCTURE BACKFILL	220 C.Y.
CLASS A CONCRETE (BRIDGE)(780 C.Y.)	LUMP SUM
CONCRETE RAILING	308 L.F.
BAR REINFORCING STEEL (BRIDGE)(145,000 LBS.)	LUMP SUM
MISCELLANEOUS IRON & STEEL	9,500 LBS.
4" ASBESTOS-CEMENT PIPE	80 L.F.



TYPICAL SECTION

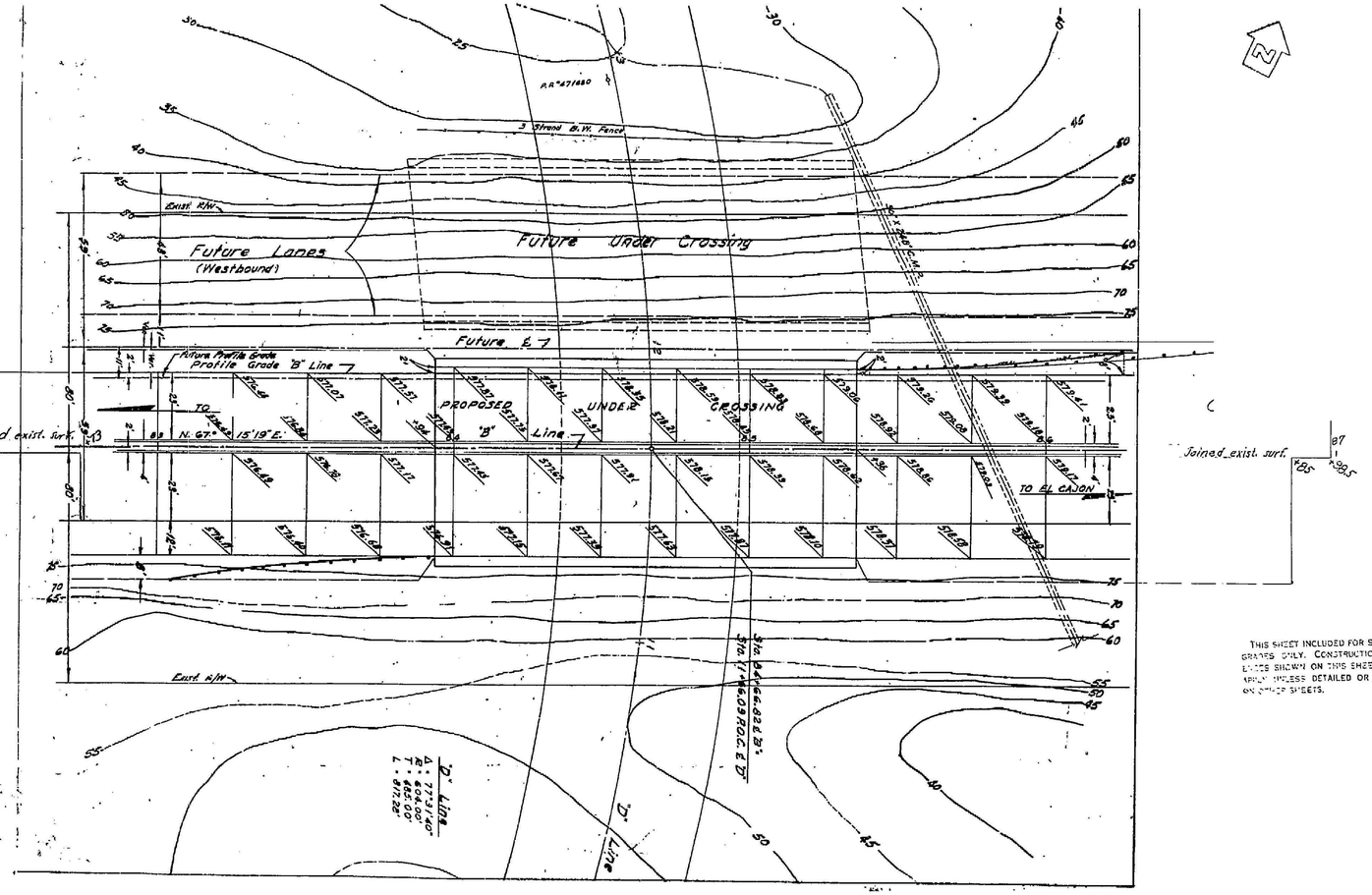
Scale: 1"=10'

INDEX TO PLANS

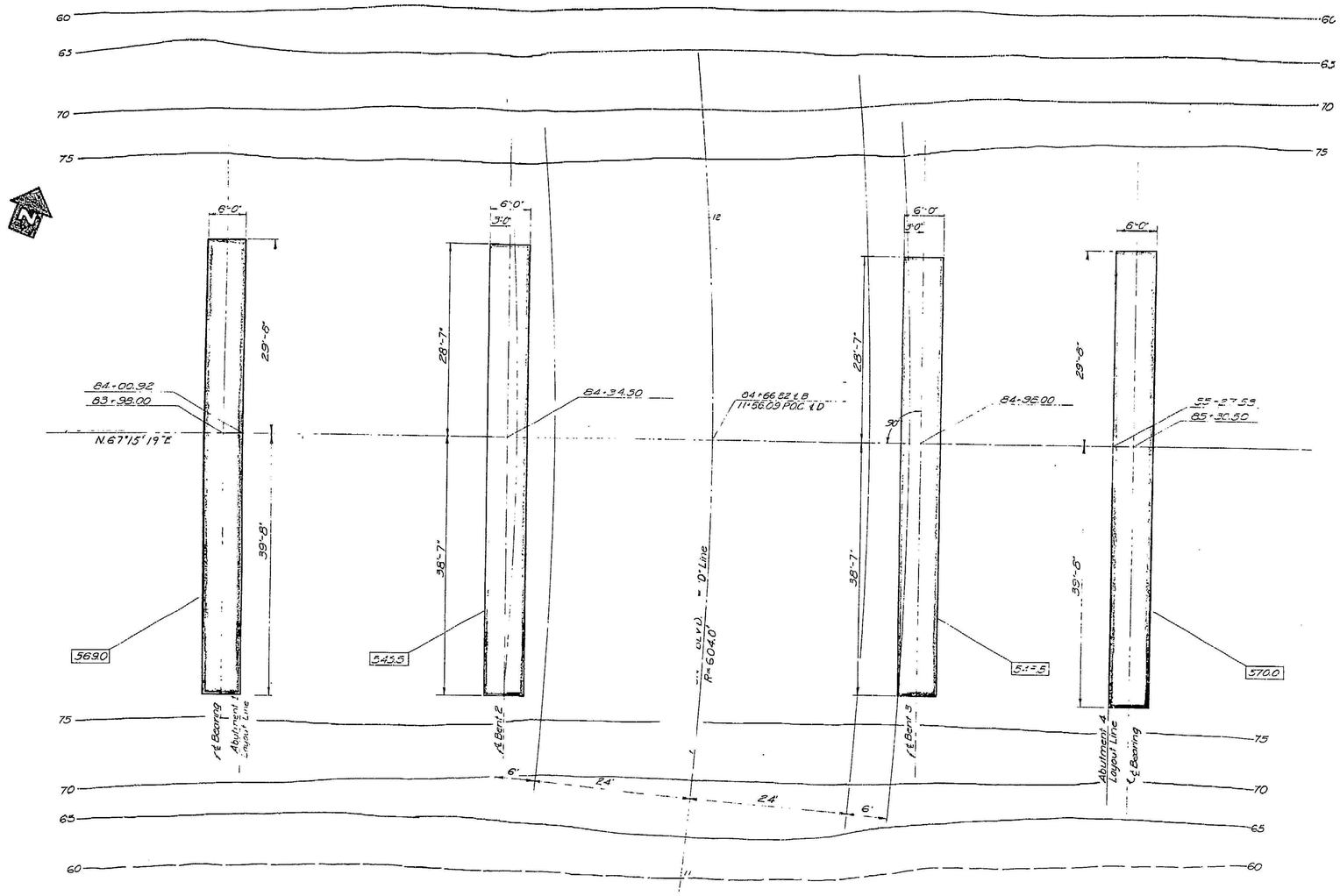
Sheet	Title
1	General Plan
2	Grid Grades
3	Foundation Plan
4	Abut. Nos. 1 & 4 - Layout & Details
5	Bents No. 2 & No. 3
6	Typical Section
7	Girder Layout
8	Girder Reinforcement
9	Misc. Details
10	Standard Details
11	Concrete Railing
12	Log of Test Borings

For "General Notes", see "Concrete Railing" sheet.

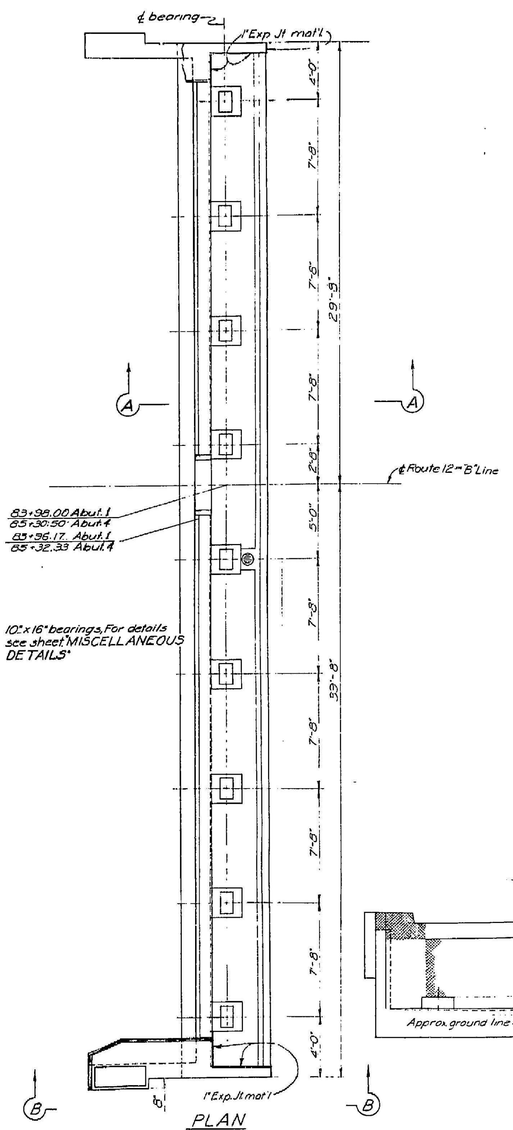
Live Loading HS20-S16-44



THIS SHEET INCLUDED FOR STRUCTURE GRADES ONLY. CONSTRUCTION REFERENCES SHOWN ON THIS SHEET DO NOT APPLY UNLESS DETAILED OR SPECIFIED ON OTHER SHEETS.

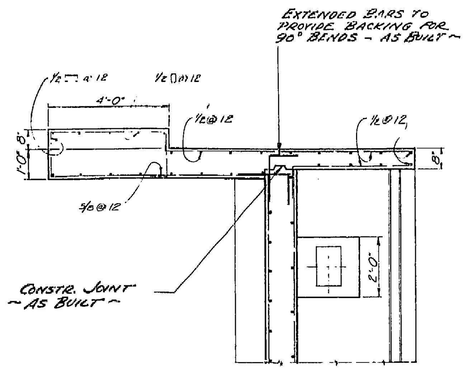


All footings normal to 'B' Line



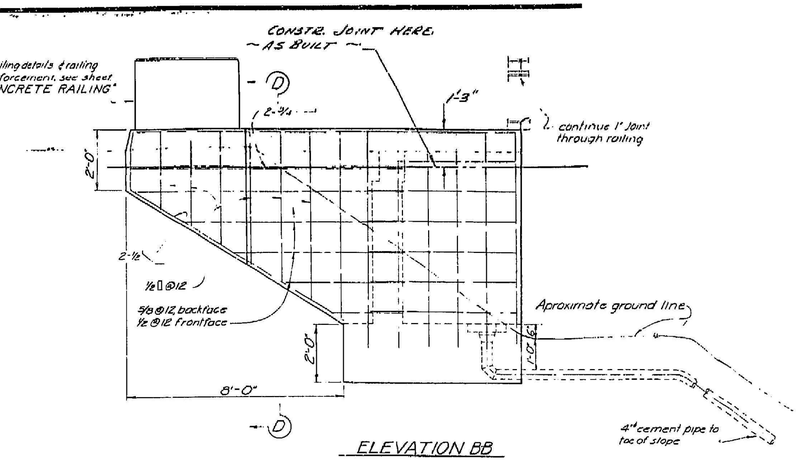
PLAN

Scale: 1/16"=1'-0"



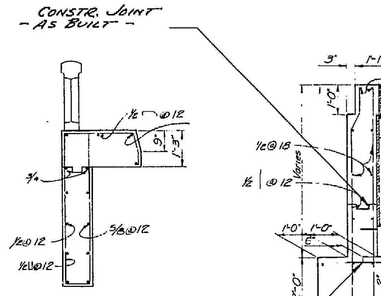
SECTION C-C

Scale: 1/2"=1'-0"



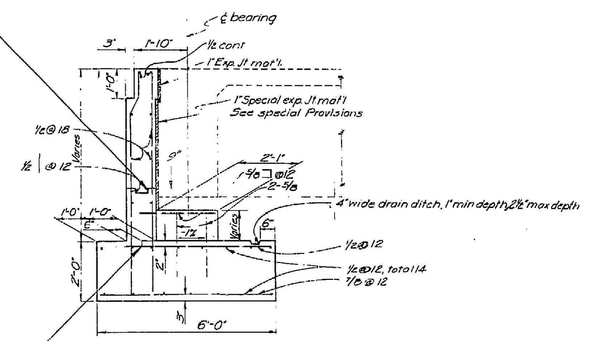
ELEVATION BB

Scale: 1/2"=1'-0"



SECTION-DD

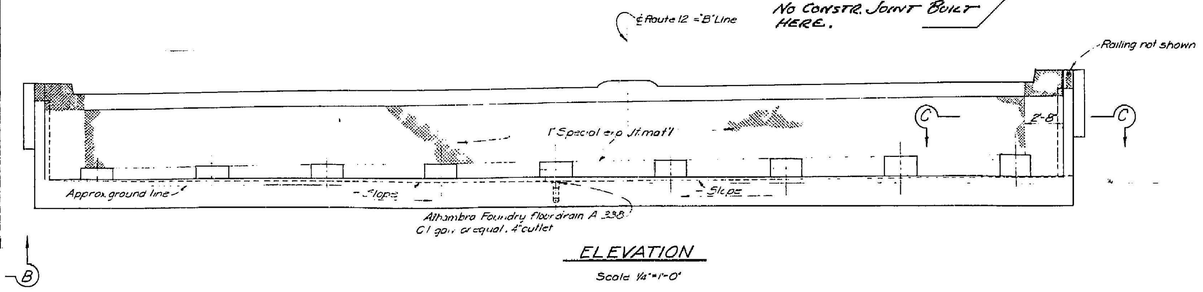
Scale: 1/2"=1'-0"



SECTION A-A

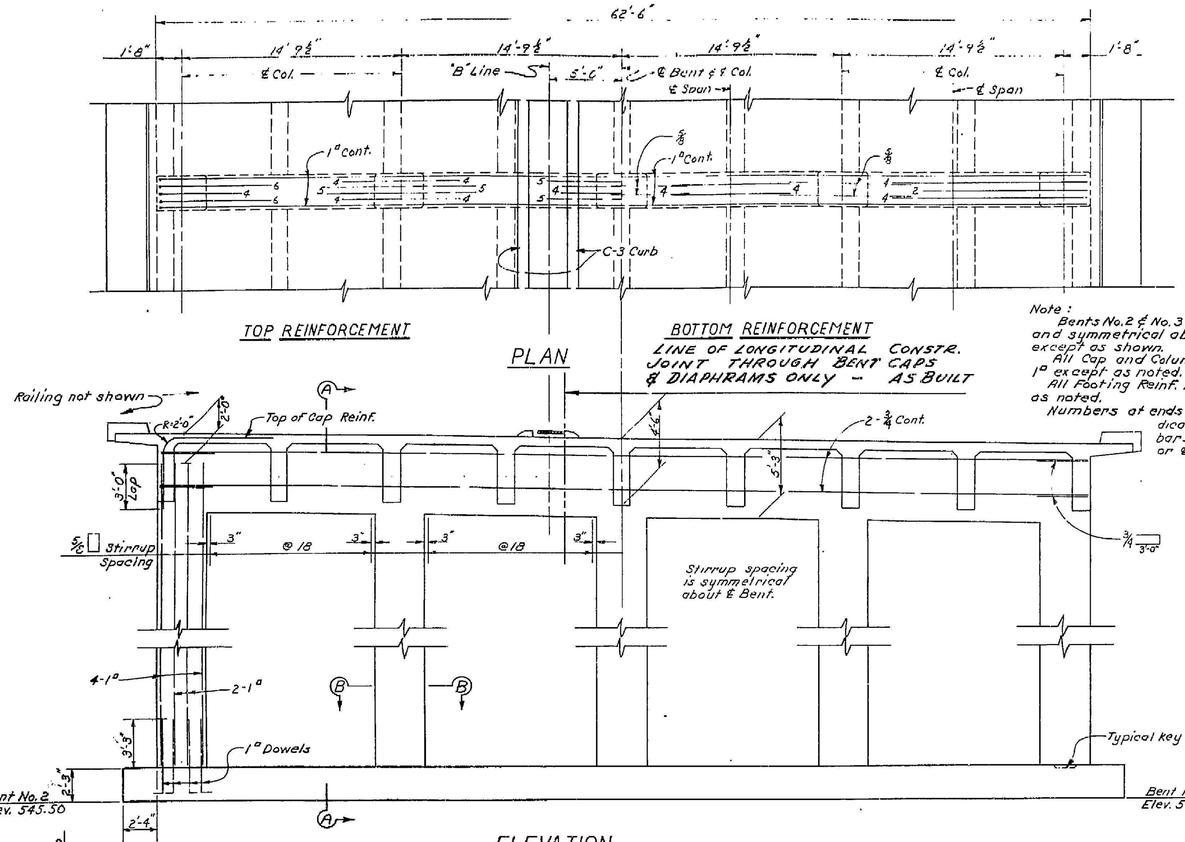
Scale: 1/2"=1'-0"

NO CONSTR. JOINT BUILT HERE.



ELEVATION

Scale: 1/4"=1'-0"



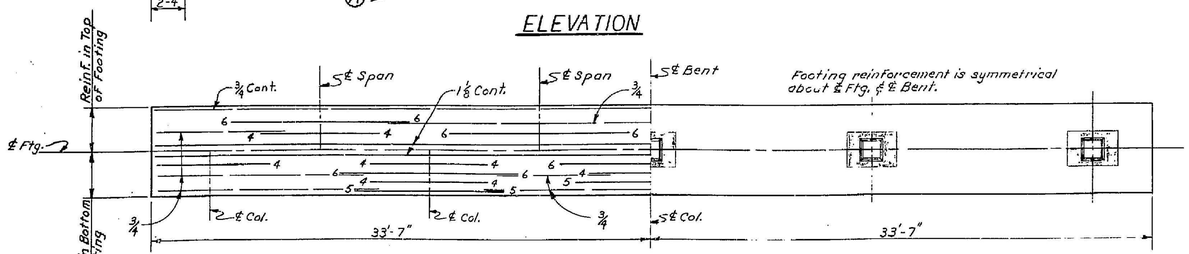
TOP REINFORCEMENT

PLAN

BOTTOM REINFORCEMENT
LINE OF LONGITUDINAL CONSTR. JOINT THROUGH BENT CAPS & DIAPHRAMS ONLY — AS BUILT

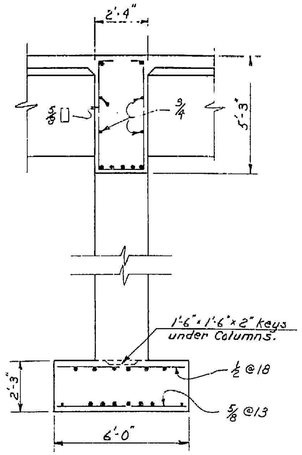
Note:
Bents No. 2 & No. 3 are similar and symmetrical about ℄ Bent except as shown.
All Cap and Column Reinf. is 1ª except as noted.
All Footing Reinf. is 1⅛ except as noted.
Numbers at ends of bars indicate length of bars from ℄ Spans or ℄ Columns.

ELEVATION

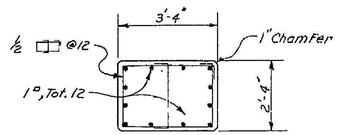


FOOTING PLAN

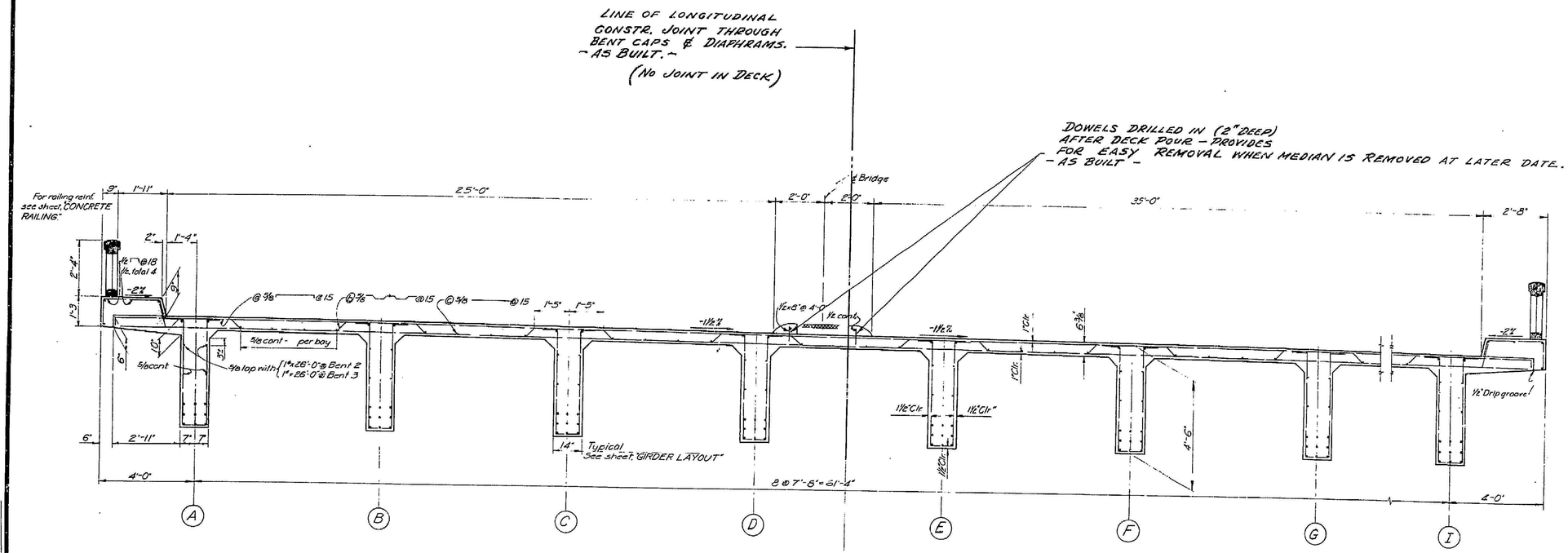
See "Foundation Plan" sheet for Bent Ftg. Layout.

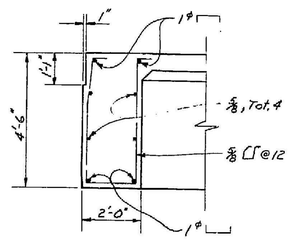


SECTION A-A
Scale: ⅜"=1'-0"



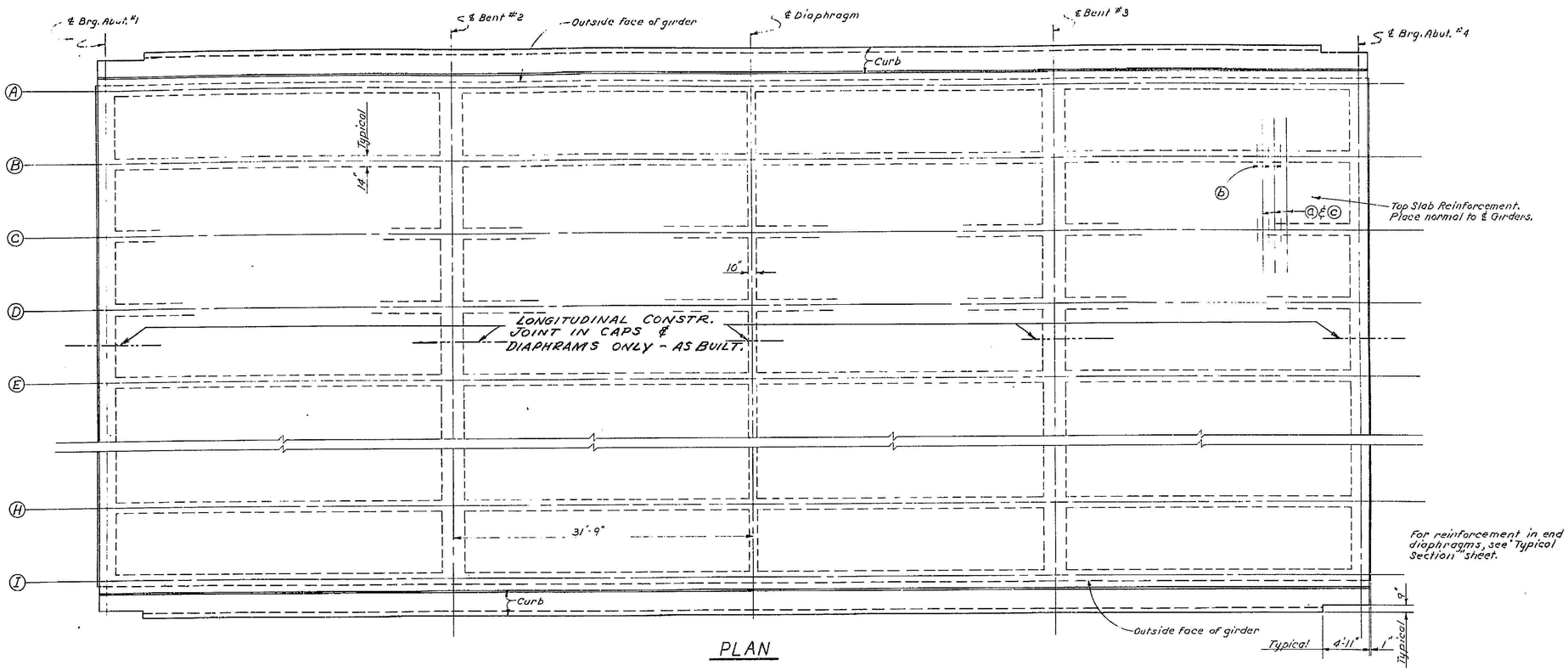
SECTION B-B
Scale: ½"=1'-0"



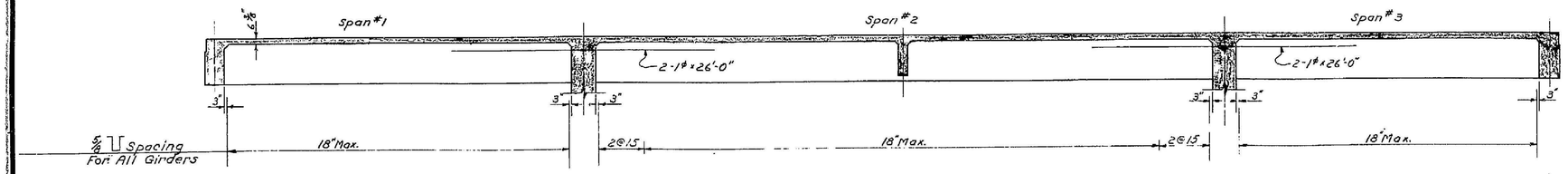


END DIAPHRAGM

Note: Only part of longitudinal reinforcement shown. See sheet "GIRDER REINFORCEMENT"

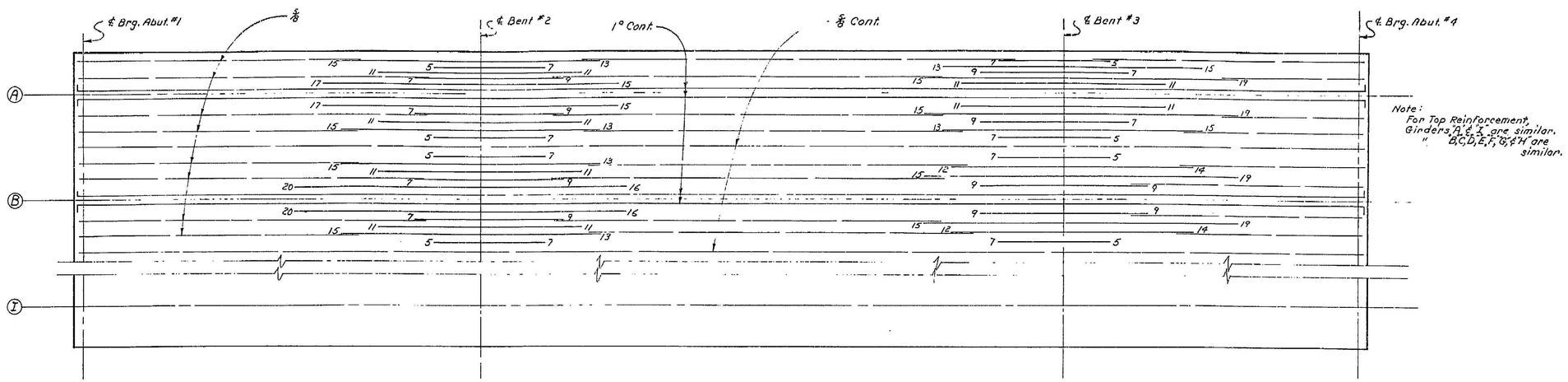


PLAN



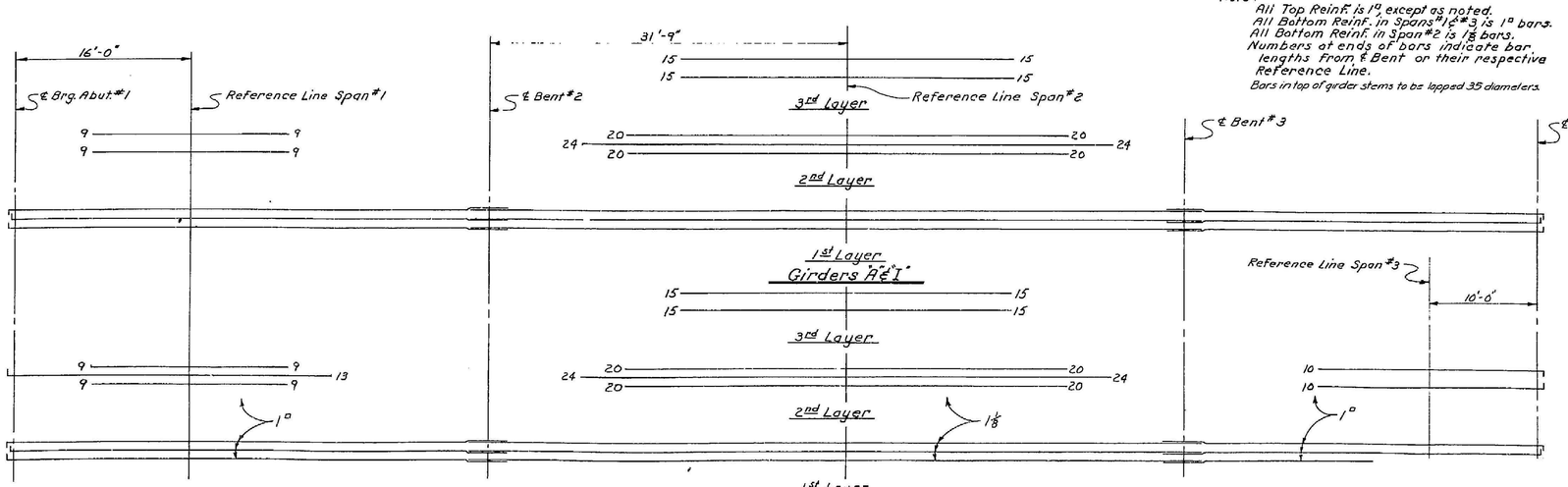
LONGITUDINAL SECTION

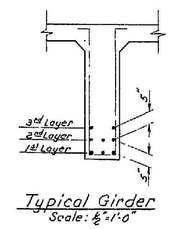
BRIDGE DEPARTMENT



TOP REINFORCEMENT

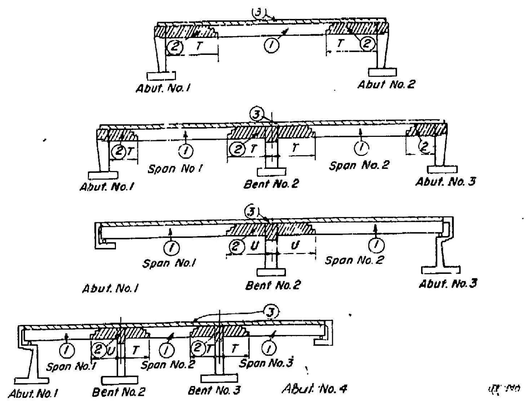
Note:
All Top Reinf. is 1⅛ except as noted.
All Bottom Reinf. in Spans #1 & #3 is 1° bars.
All Bottom Reinf. in Span #2 is 1⅛ bars.
Numbers at ends of bars indicate bar lengths from ℄ Bent or their respective Reference Line.
Bars in top of girder stems to be lapped 35 diameters.





Typical Girder
Scale: ½"=1'-0"

BOTTOM REINFORCEMENT



TEE BEAM SUPERSTRUCTURE PLACING DIAGRAM

Numbers (1) and (2) indicate sequence of placing girder stem concrete. (2) may be placed with (1) when approved, provided both adjoining (1) sections are placed.

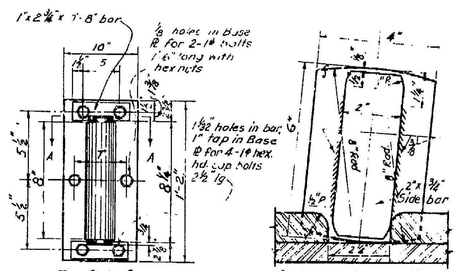
Top slab concrete (3) may be placed separately with construction joints as desired or with (1) and (2) except no construction joints in the area "T" or "U."

T = 1/5 span length

U = 1/4 span length

Longitudinal construction joints may be used when approved, provided falsework or shoring on each side of the construction joints support the loads.

Contractor shall submit falsework plans and a superstructure placing diagram for approval by the Engineer.



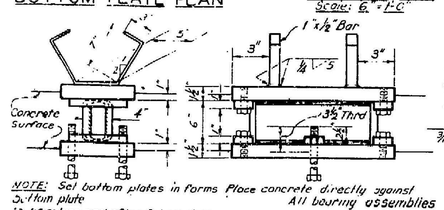
Top Plate Removed

BOTTOM PLATE PLAN

Rocker in extreme position

SECTION A-A

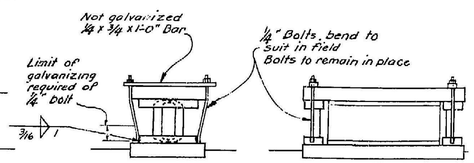
Scale: 6" = 1'-0"



NOTE: Set bottom plates in forms. Place concrete directly against bottom plate. All bearing assemblies to be galvanized after fabrication.

10×14" EXPANSION BEARING ASSEMBLY

18 Required Scale: 1½" = 1'-0"



DETAIL OF ERECTION BOLTS

Scale: 1½" = 1'-0"

For "GENERAL NOTES" see sheet "CONCRETE RAILING"

GENERAL NOTES

Specifications:

Design: A.A.S.H.O. dated 1953 with subsequent revisions, and Bridge Department Supplement dated 1953.

Construction: Standard Specifications, Division of Highways, dated ——— and the Special Provisions.

Live Loading: H20-S16-44

Unit Stresses:

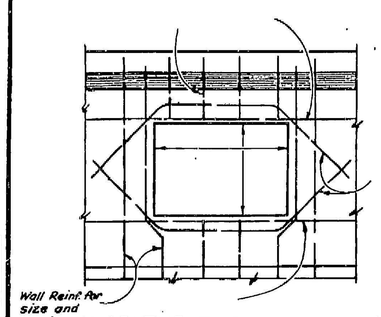
Reinforced Concrete: fs = 20,000 p.s.i., fc = 1250 p.s.i., n = 10

Pile Loading: 45 tons. Type: 10BP42 steel

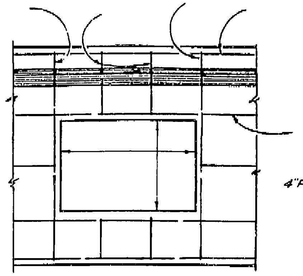
Reinforcement: Embedment is clear to outside of bar and is 2" to main reinforcement, except as noted. Backing for hooks is four diameters, except as noted.

Bar areas are based on rounds for less than 1" and squares for over 1".

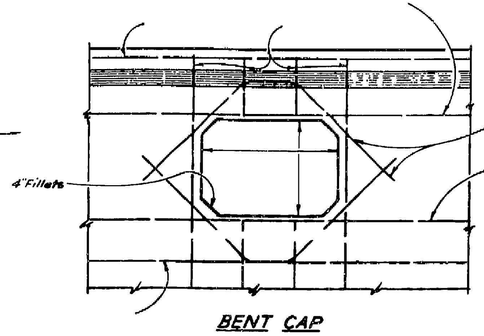
Where reinforcing bars are spliced they shall have a 20 diameter lap unless otherwise called for on the plans.



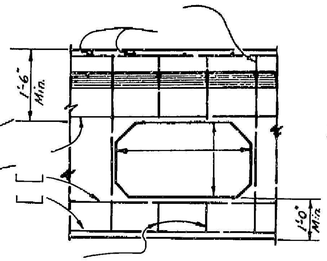
ABUTMENT BACKWALL
DETAIL U1



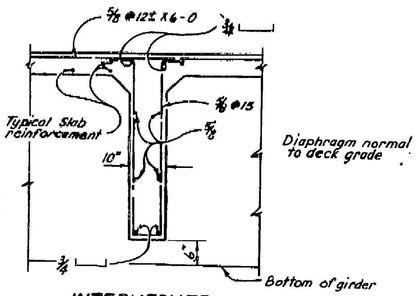
END DIAPHRAGM
DETAIL U2



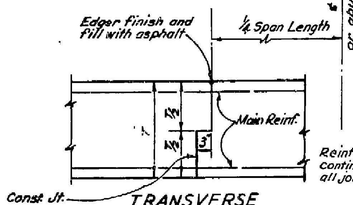
BENT CAP
DETAIL U3



INTERMEDIATE DIAPHRAGM
DETAIL U4

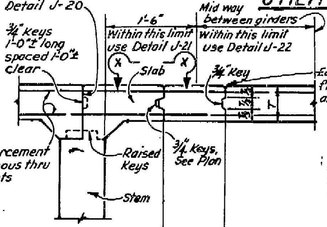


INTERMEDIATE DIAPHRAGM SECTION
DETAIL D1

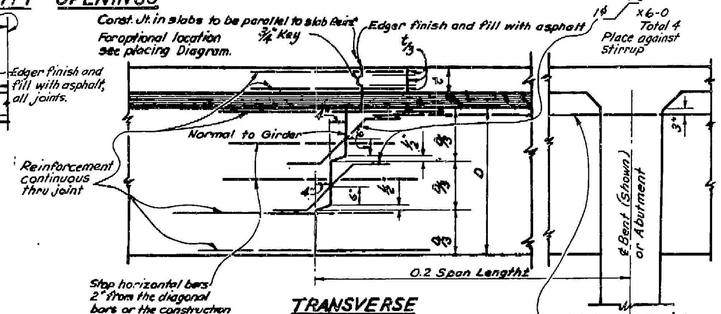


TRANSVERSE SLAB BRIDGE
DETAIL J-1

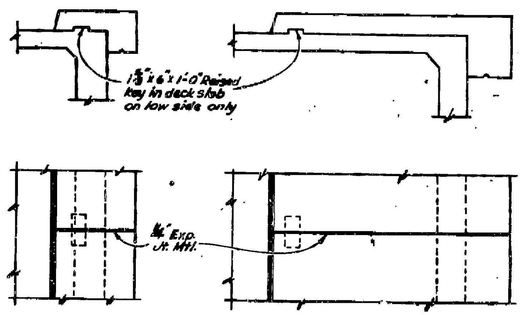
UTILITY OPENINGS



DETAIL J-20 DETAIL J-21 DETAIL J-22



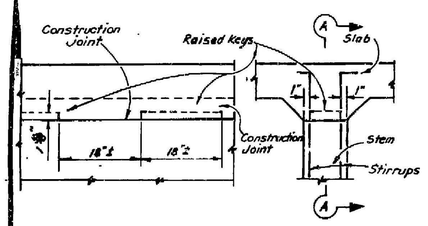
TRANSVERSE GIRDER
DETAIL J-3



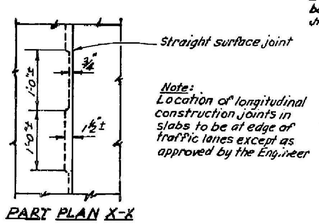
CURB
DETAIL C1

SIDEWALK
DETAIL S1

CURB AND SIDEWALK EXPANSION JOINTS



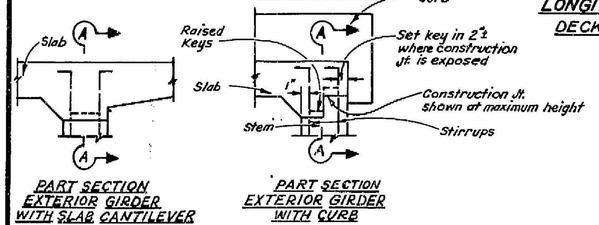
SECTION A-A



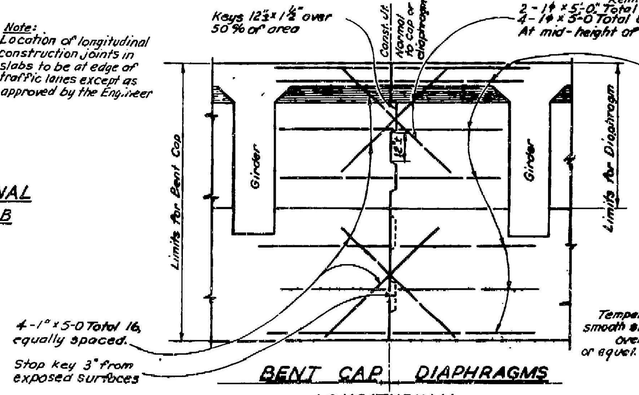
PART PLAN X-X

Note: Location of longitudinal construction joints in slabs to be at edge of traffic lanes except as approved by the Engineer

LONGITUDINAL DECK SLAB

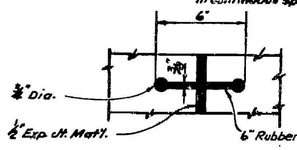


KEY - GIRDER STEM TO SLAB
DETAIL J-5

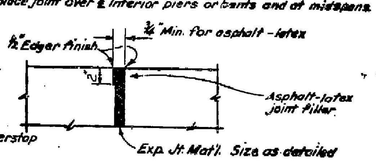


BENT CAP DIAPHRAGMS
LONGITUDINAL
DETAIL J-4

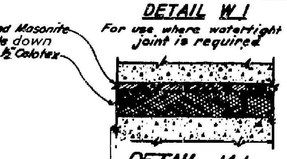
NOTE: In simple spans place joint at midspan. In continuous spans place joint over ℄ interior piers or bents and at midspans.



RUBBER WATERSTOP

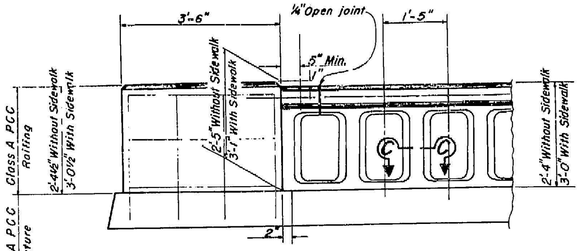


LATEX AT EXPANSION JOINT
DETAIL L1



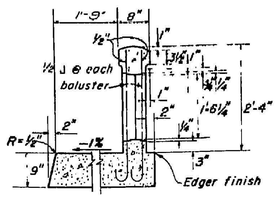
DETAIL M-1

CONSTRUCTION JOINTS



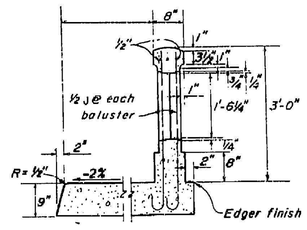
OUTSIDE ELEVATION

Scale ¾"=1'-0"



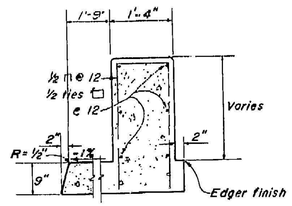
SECTION B-B WITHOUT SIDEWALK

Scale ¾"=1'-0"



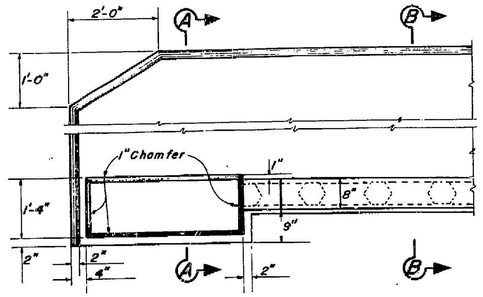
SECTION B-B WITH SIDEWALK

Scale ¾"=1'-0"



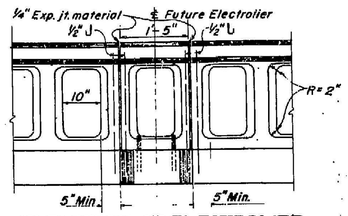
SECTION A-A

Scale ¾"=1'-0"



PLAN DETAILS CONCRETE RAIL & END POST

Scale ¾"=1'-0"



ELEVATION AT ELECTROLIER

Scale ¾"=1'-0"

NOTE: See "ELECTRICAL DETAILS" sheet for anchor bolt details and conduit. See Sheet No.____ for additional reinforcement at electrollers.

GENERAL NOTES

Specifications
Design A.A.S.H.O. dated 1953 with subsequent revisions, and Bridge Department Supplement dated 1953.

Construction: Standard Specifications, Divisions of Highways dated August 1954 and the Special Provisions.

Live Loading: H20—S16—44

Unit Stresses:
Reinforced Concrete: f_s = 20,000 p.s.i, f_c = 1250 p.s.i., ~~f_s = 1000 p.s.i.~~, n = 10

~~Structural Steel: f_s = 18,000 p.s.i.~~

Footing Pressure: 2 Tons p.s.f.

[redacted]

Reinforcement: Embedment is clear to outside of bar and is 2" to main reinforcement, except as noted.
Backing for hooks is four diameters, except as noted.
Bar areas are based on rounds for less than 1" and squares for over 1".
Where reinforcing bars are spliced they shall have a 20 diameter lap unless otherwise called for on the plans.

NOTE

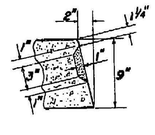
Open joints top of rail
Open joints shall be placed at deck expansion joints, at curb joints, at the first opening adjacent to the end post, and at 15½ centers maximum.

Expansion joints in base of rail
Expansion joints shall be placed at deck expansion joints and at curb joints.

Expansion joints in curbs
Expansion joints in curbs shall be placed at deck expansion joints, over bents or piers and at other points shown on the plans.

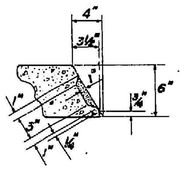
Expansion joints in the deck
At deck expansion joints the joints in curb and rail shall be increased by an amount equal to the width of the deck joint.

Structures set on a grade
When structure is set on a grade the balusters are to be set vertical and the bottoms set horizontal.



SECTION M-M TYPE F

Scale 1½"=1'-0"

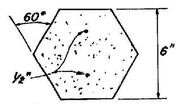


SECTION M-M TYPE B

Scale 1½"=1'-0"

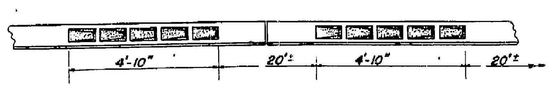
SECTION N-N

Scale 1½"=1'-0"



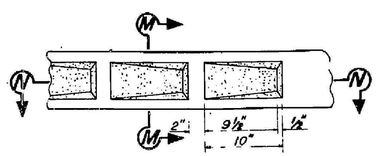
SECTION C-C

Scale 3"=1'-0"



DIRECTION OF TRAFFIC FLOW DIVIDING STRIP AND BRIDGE CURB

Scale 1½"=1'-0"

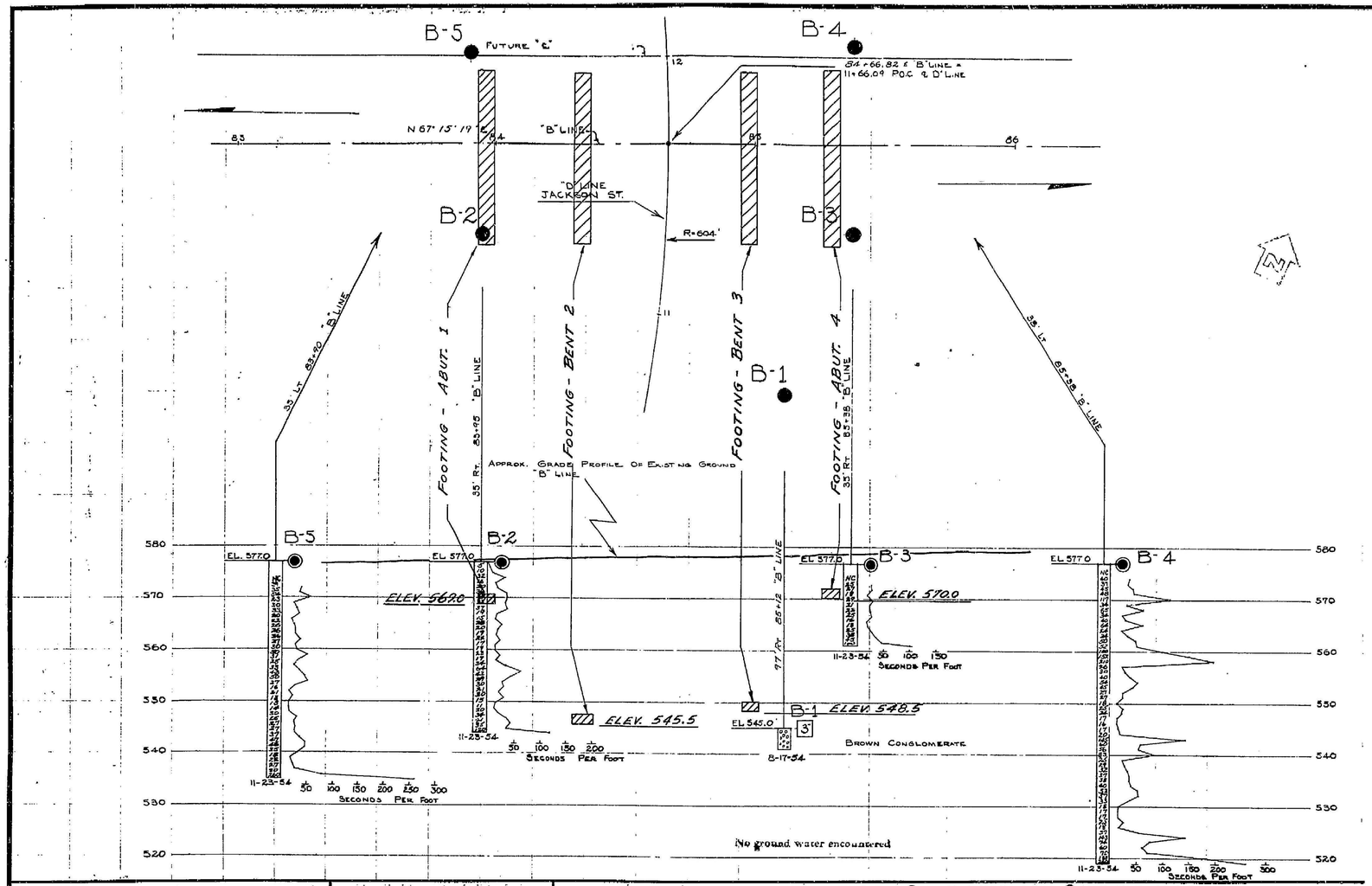


PANEL

Scale 1½"=1'-0"

Surfaces shown thus [redacted] shall be painted.

TABLE OF AVERAGE VOLUME & WEIGHT		
Height of Railing	3'-0"	2'-4"
One End Post	14.26 cu. ft.	11.13 cu. ft.
Railing	1.13 cu. ft. per l.f.	.72 cu. ft. per l.f.
Weight	170 lbs. per l.f.	108 lbs. per l.f.



Test Boring By Bridge Dept.

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

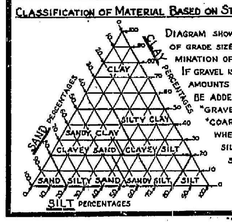


DIAGRAM SHOWING THE BASIS FOR ESTIMATES OF GRADE SIZE DISTRIBUTION USED IN DETERMINATION OF CLASS NAMES.

IF GRAVEL IS PRESENT IN APPRECIABLE AMOUNTS THE TERM "GRAVELLY" MAY BE ADDED TO THE CLASS NAME, VIZ. "GRAVELLY SAND." THE TERMS "COARSE", "MEDIUM" AND "FINE" WHEN USED TO DESCRIBE SAND, SILT AND GRAVEL REFER TO STANDARD GRADE SIZE LIMITS.

LEGEND OF EARTH MATERIALS

- GRAVEL
- SAND
- SILT
- CLAY
- SANDY CLAY OR CLAYEY SAND
- SANDY SILT OR SILTY SAND
- SILTY CLAY OR CLAYEY SILT
- PEAT AND/OR ORGANIC MATTER
- FILL MATERIAL
- IGNEOUS ROCK
- SEDIMENTARY ROCK
- METAMORPHIC ROCK

LEGEND OF BORING OPERATIONS

- PLAN OF ANY BORING
- PEN — PENETROMETER
- 2¼" — 2¼" CONE PENETROMETER
- SAMP — SAMPLER BORING (DRY)
- ROT — ROTARY BORING (WET)
- AUG — AUGER BORING (DRY)
- JET — JET BORING
- CORE — CORE BORING
- TEST PIT