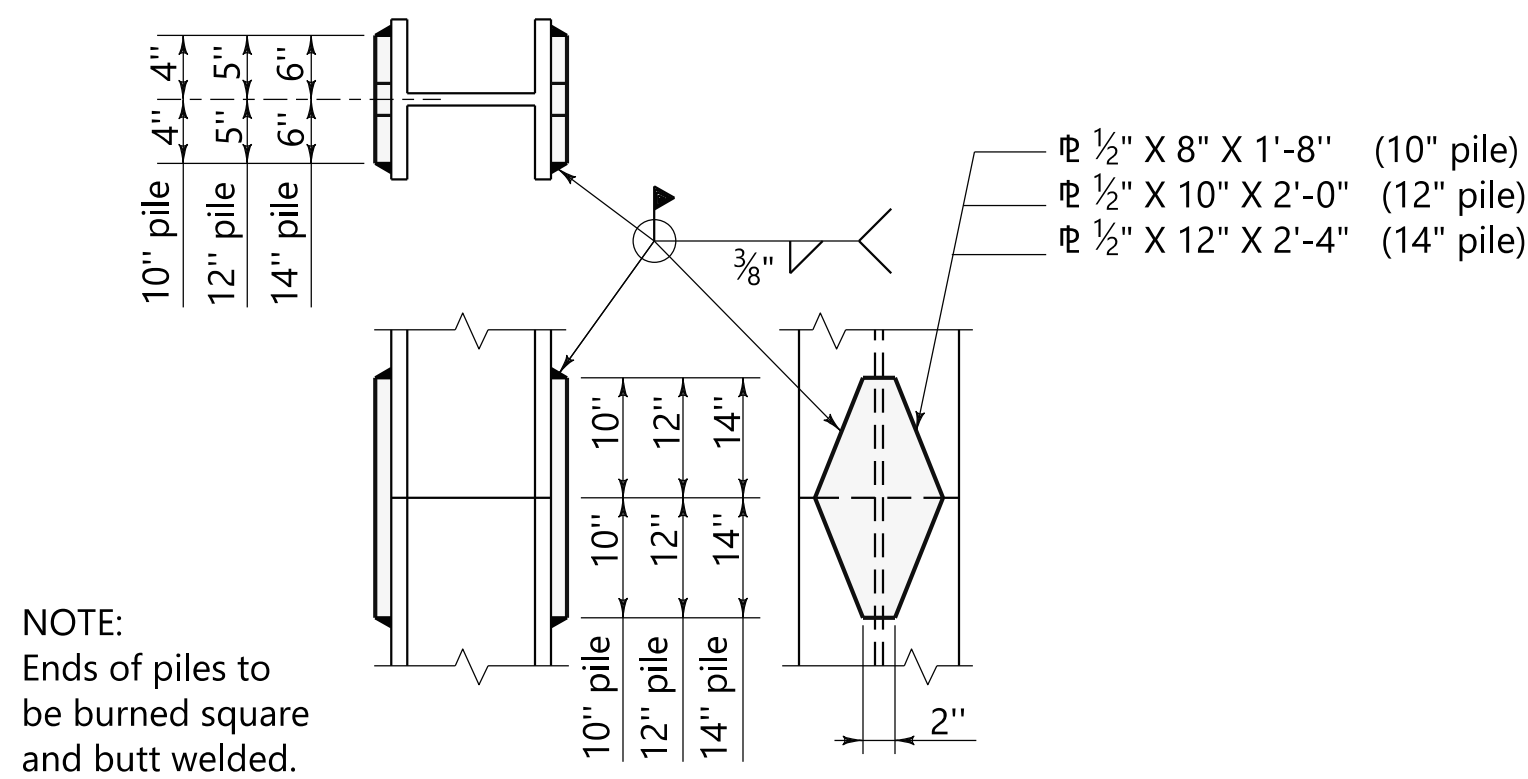
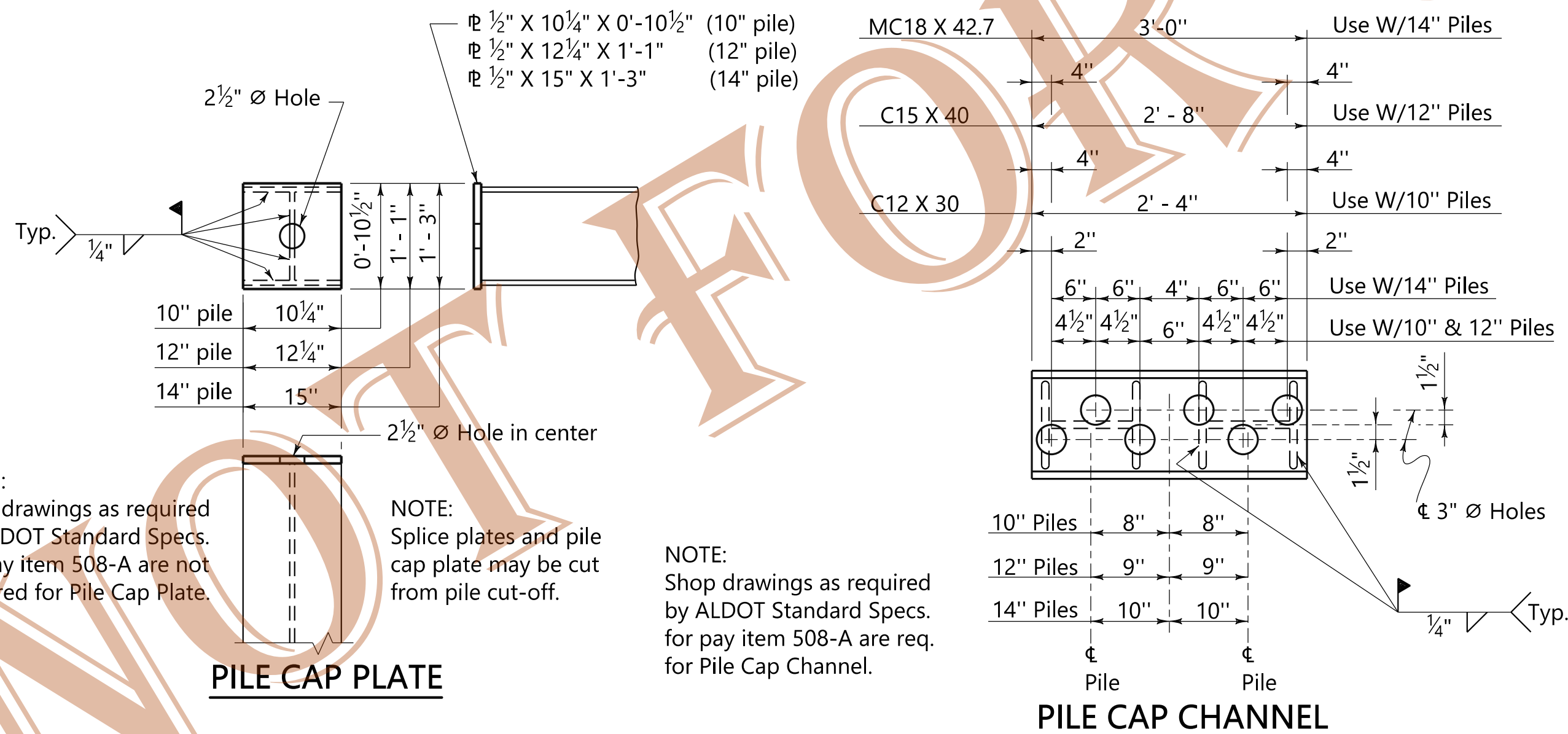
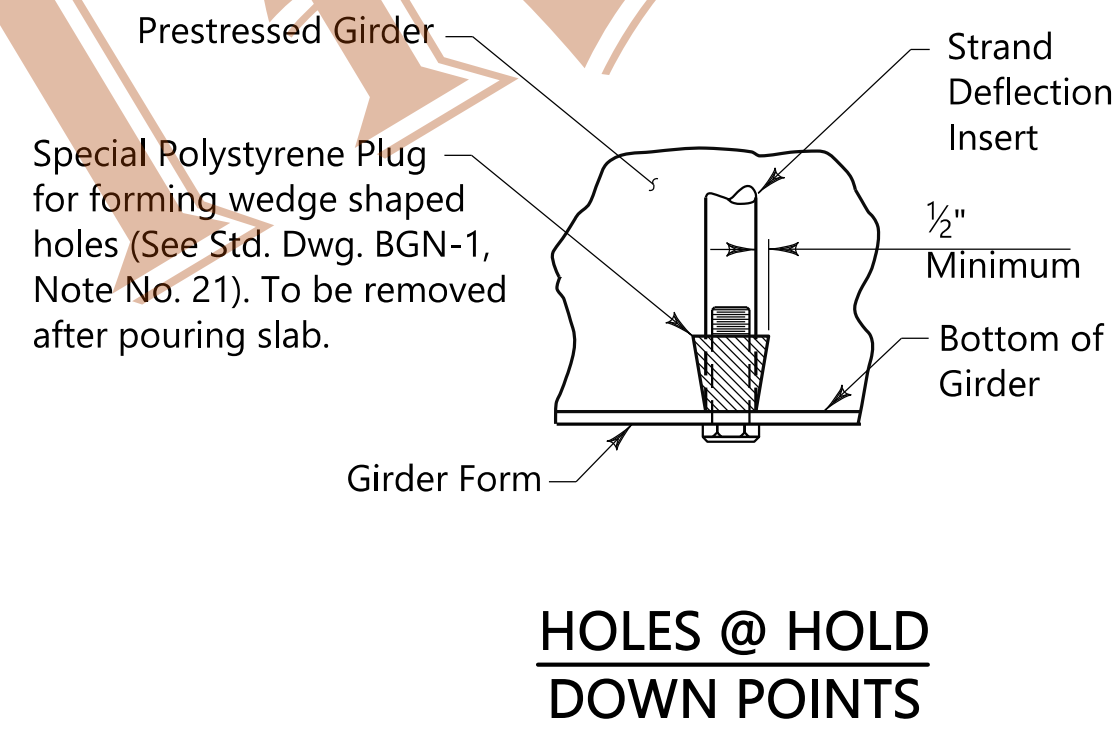
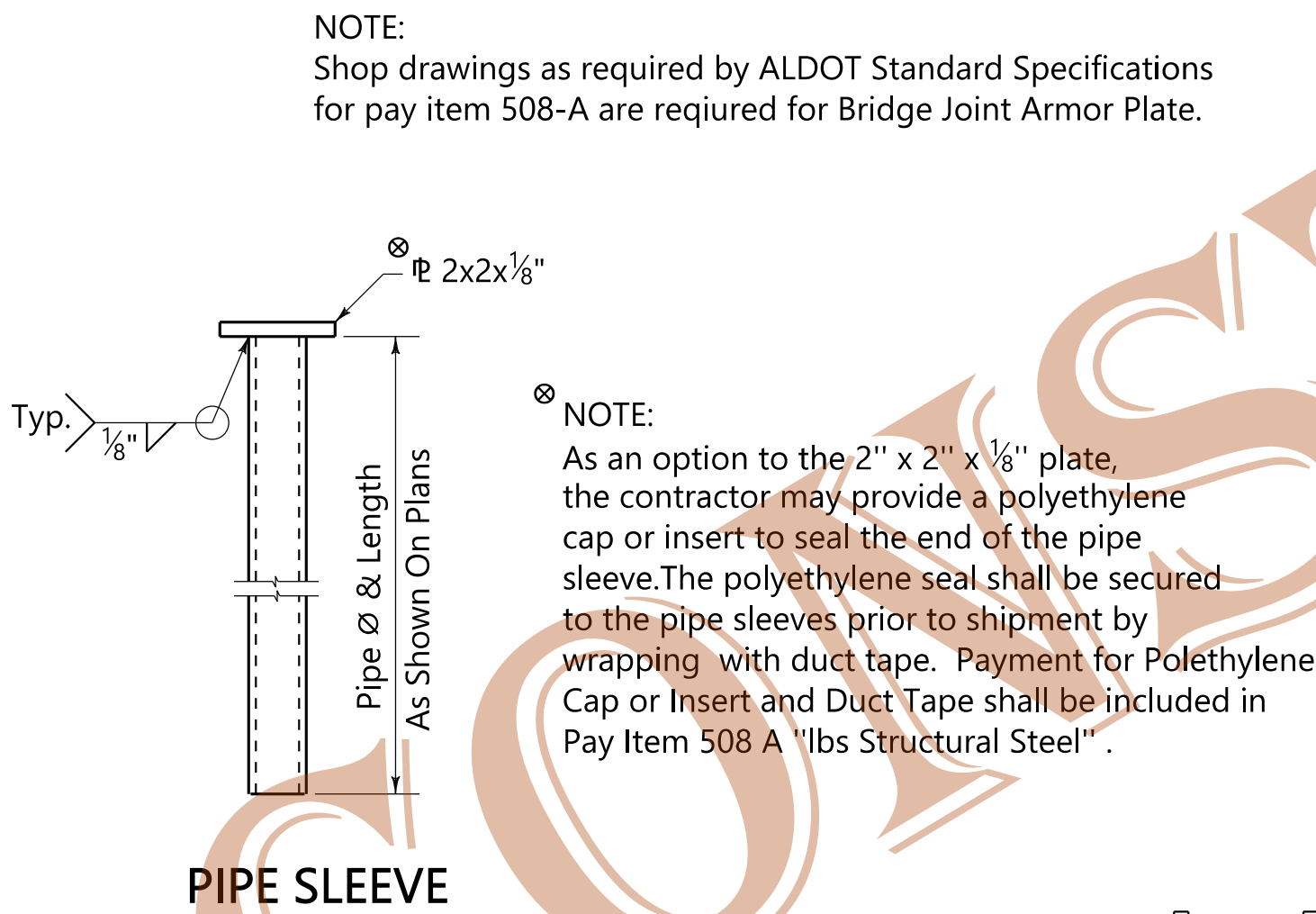
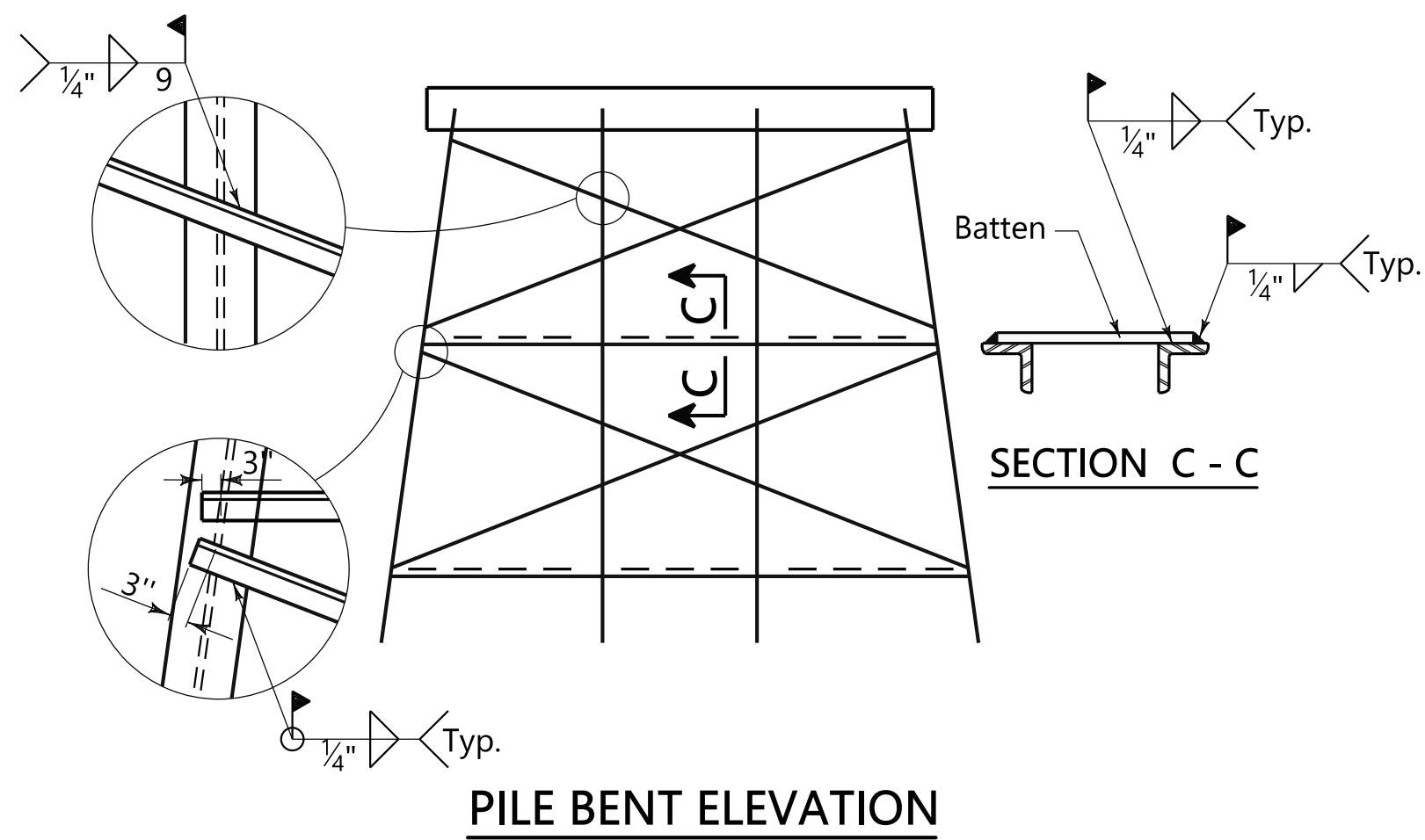
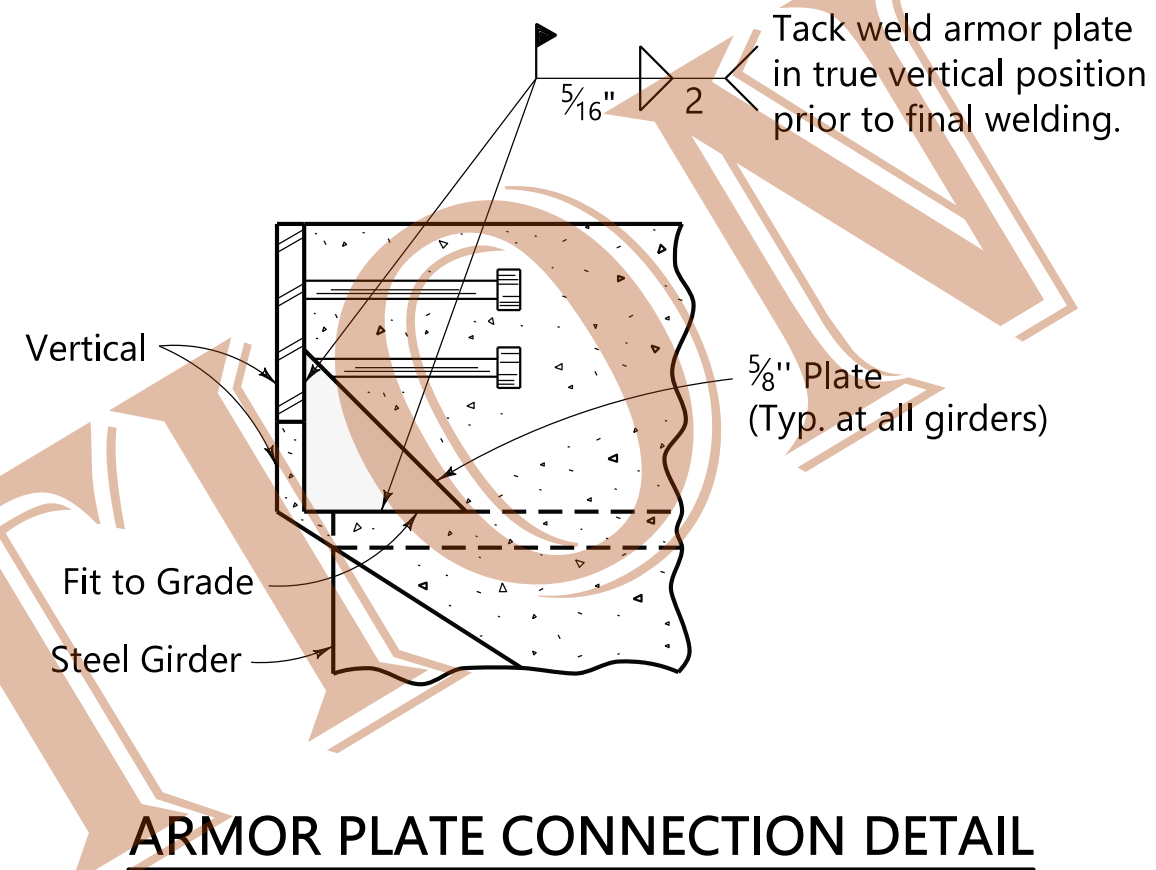
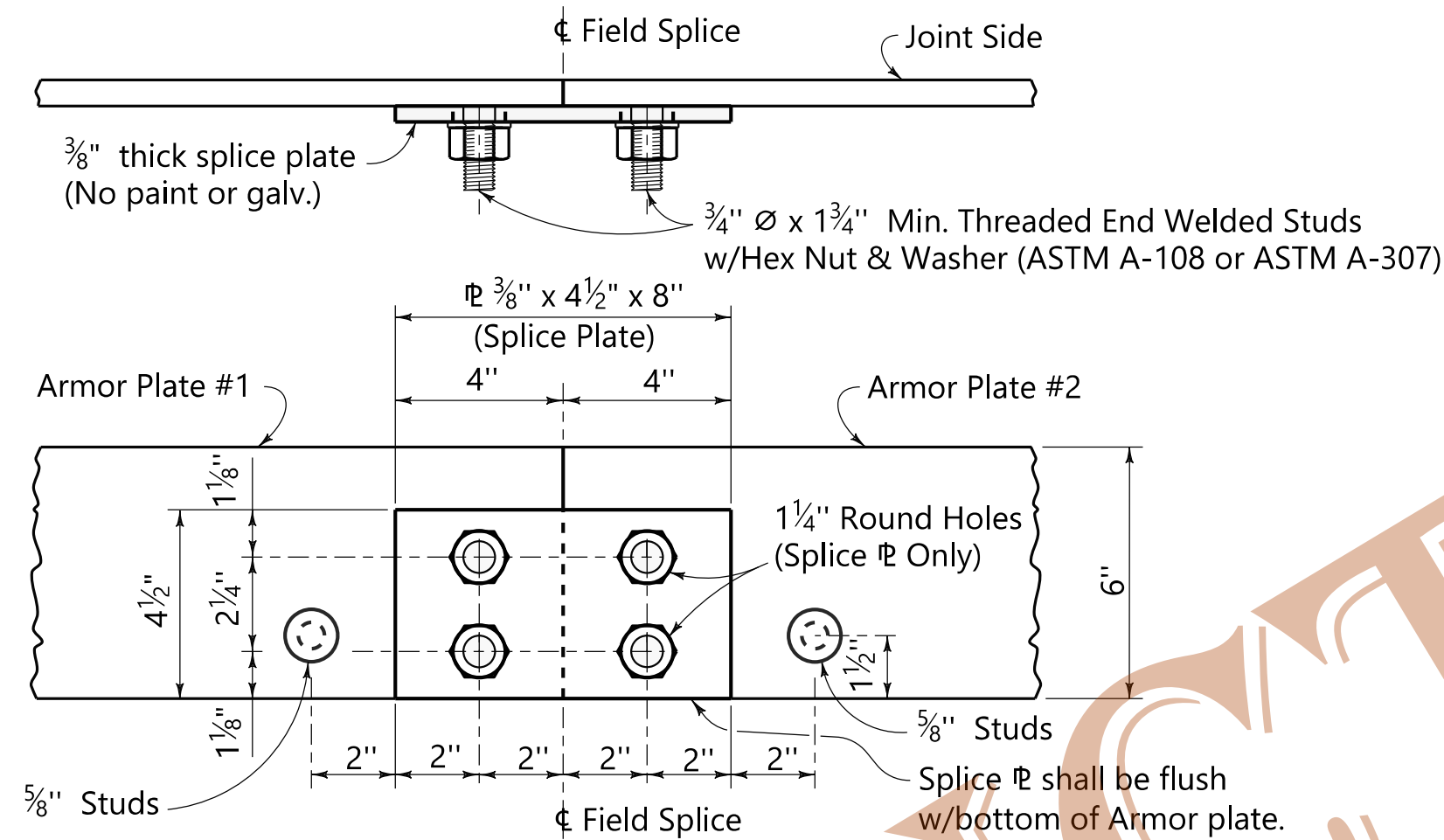
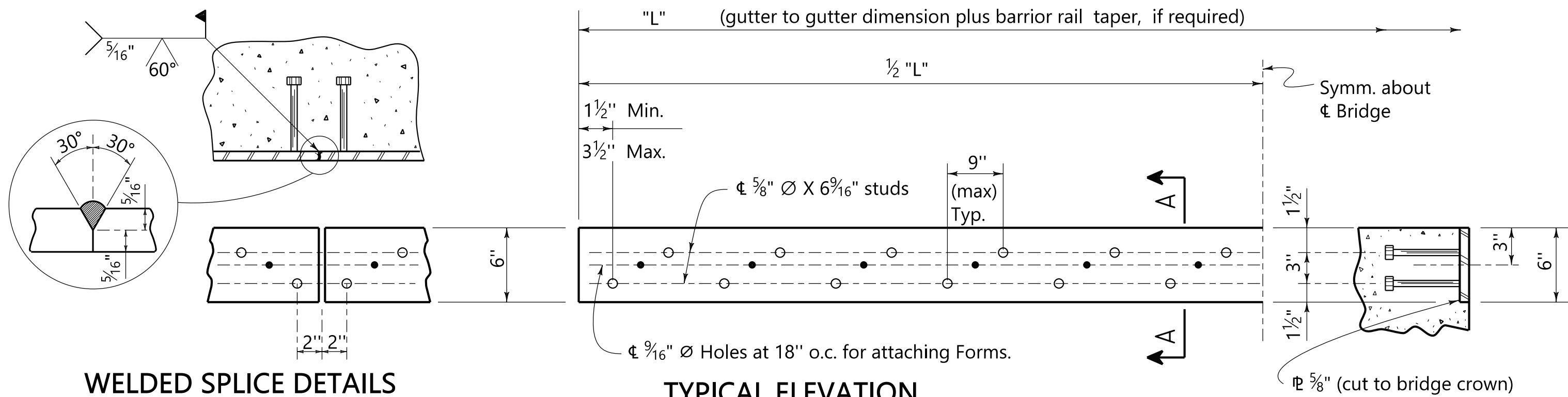
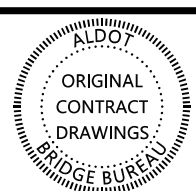


REFERENCE PROJECT NUMBER	FISCAL YEAR	SHEET NUMBER
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FIELD WELDING	
The following field welds may be made by an electric arc welder who demonstrates to the project engineer that he is a proficient welder.	
<ol style="list-style-type: none">Pile cap plates and pile cap channel to piles.Field splices in bridge joint armor plates.	
This welder is not required to have a qualification card issued by the Alabama Department Of Transportation. All other field welds shall be performed by welders who have current Alabama Department Of Transportation welders qualification cards. No field welding will be permitted on steel girders or steel caps unless otherwise noted on the bridge drawings or approved in writing by the Bridge Engineer.	
ASSISTANT BRIDGE ENGINEER DATE 10/12/21	BRIDGE ENGINEER DATE 10/12/2021

ALABAMA DEPARTMENT
OF TRANSPORTATION



REVISIONS

THIS BRIDGE SPECIAL PROJECT DRAWING FOR USE ONLY ON:
PROJECT NO. _____
COUNTY(S) _____

THESE DRAWINGS REPRESENT DESIGNS PREPARED FOR USE BY THE ALABAMA DEPARTMENT OF TRANSPORTATION AND ARE NOT TO BE COPIED, REPRODUCED, ALTERED, OR USED BY ANYONE, OR ANY ORGANIZATION, WITHOUT THE EXPRESSED WRITTEN CONSENT OF THE ALABAMA DEPARTMENT OF TRANSPORTATION REPRESENTATIVE AUTHORIZED TO APPROVE SUCH USE. ANYONE MAKING UNAUTHORIZED USE OF THESE DRAWINGS MAY BE PROSECUTED TO THE FULLEST EXTENT OF THE LAW.

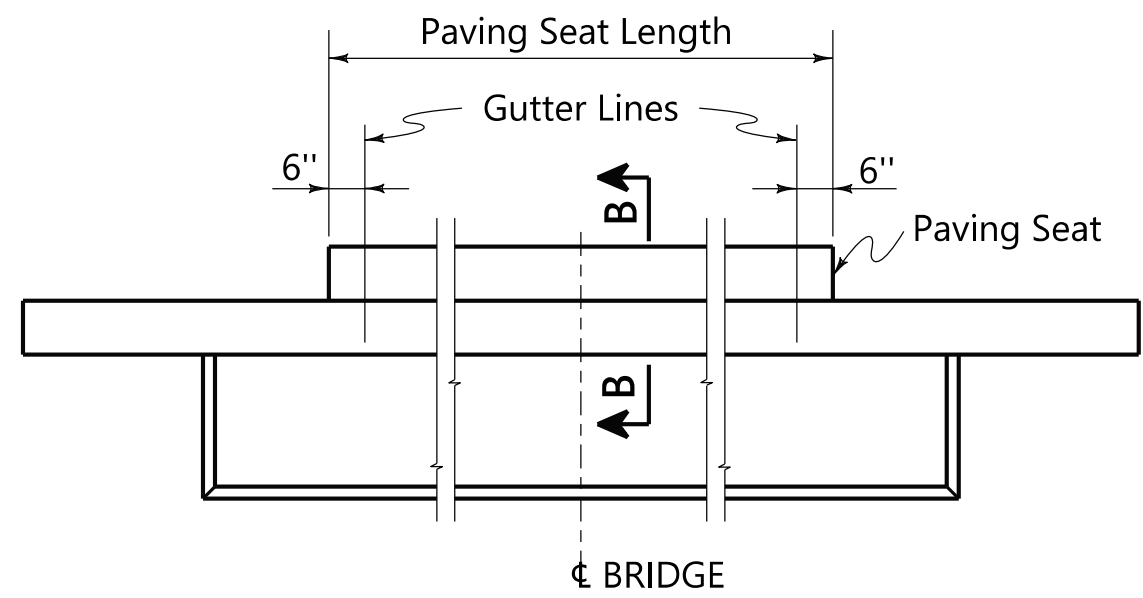
STANDARD DETAILS

BRIDGE SPECIAL PROJECT DRAWING

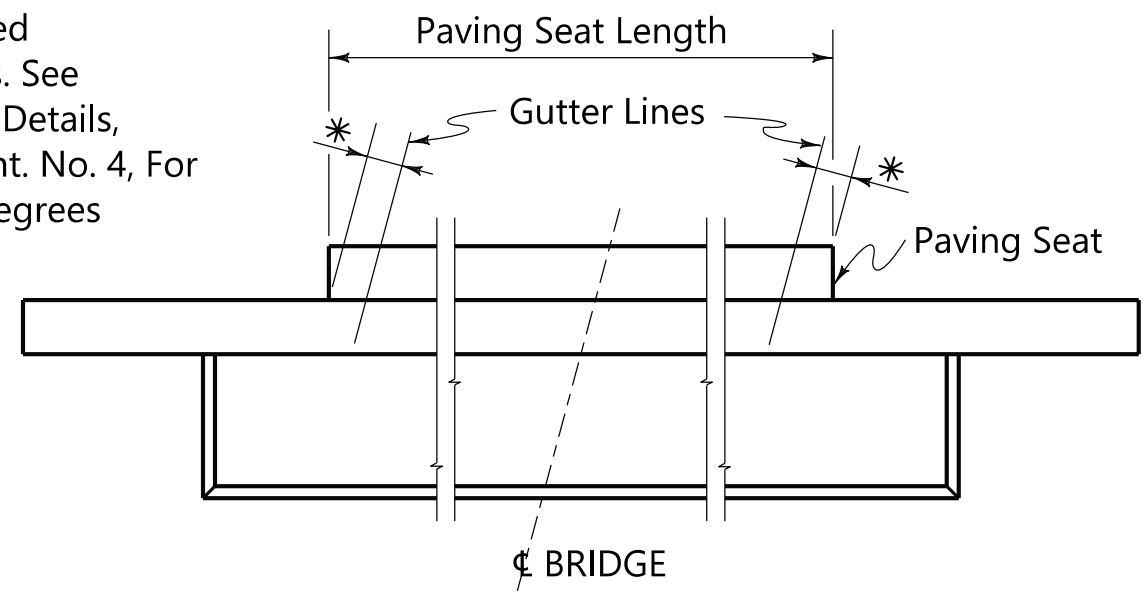
I-131

SHEET
1 OF 8

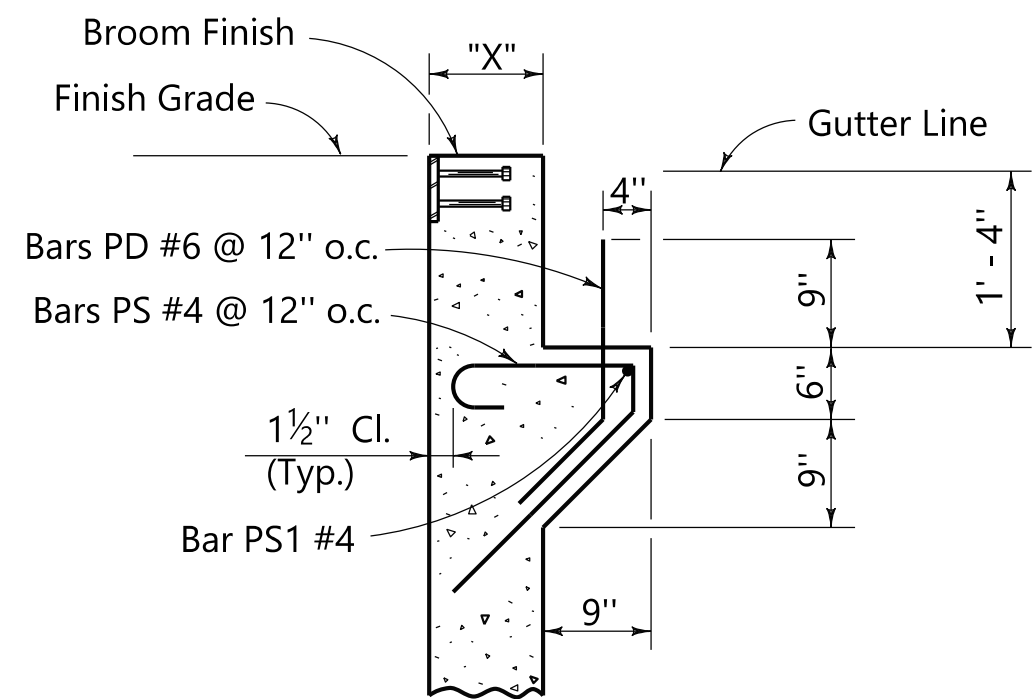
REFERENCE PROJECT NUMBER	FISCAL YEAR	SHEET NUMBER



ABUTMENT PLAN - NO SKEW



ABUTMENT PLAN - ON SKEW



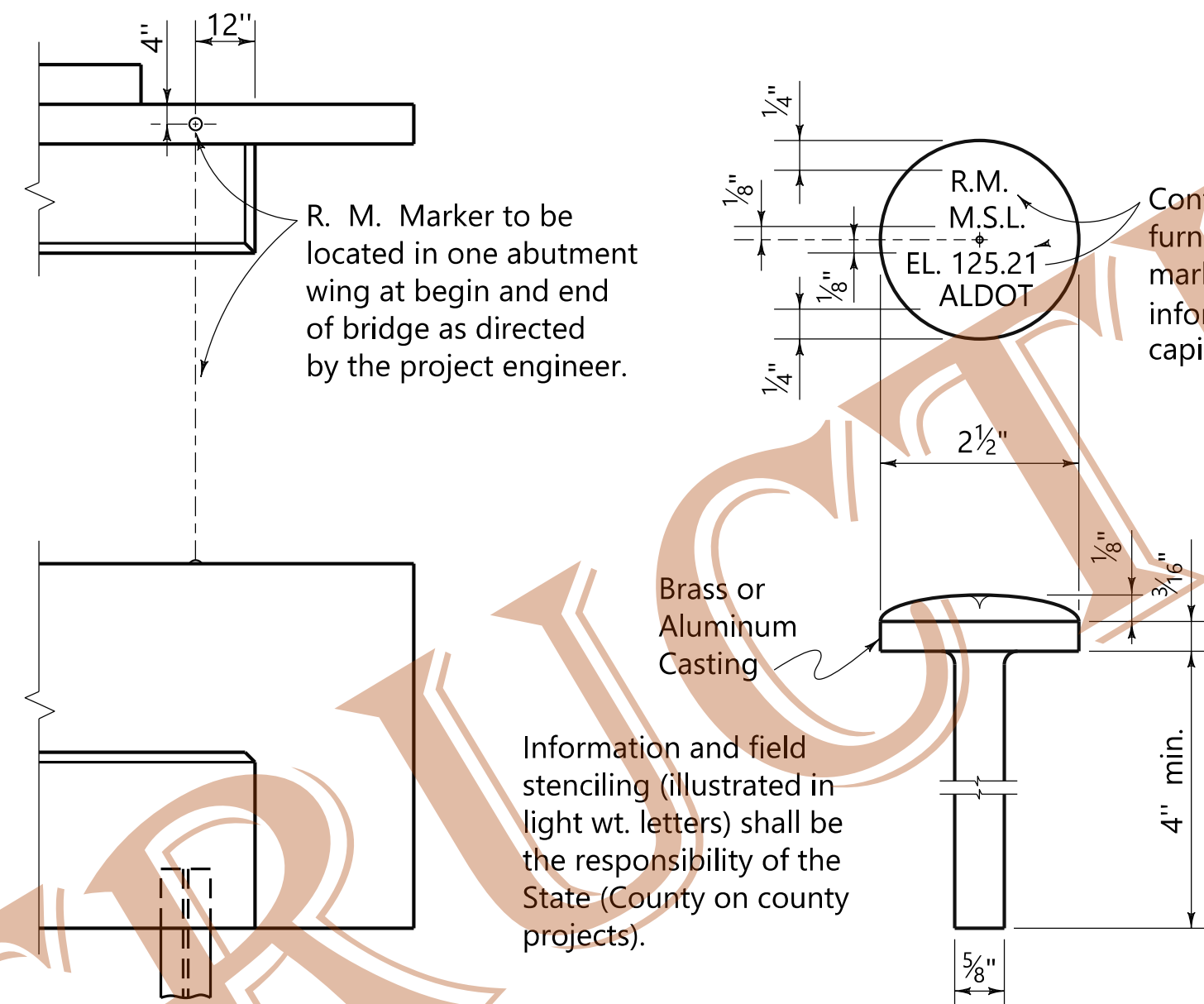
SECTION B - B



BAR PS

BAR PS1

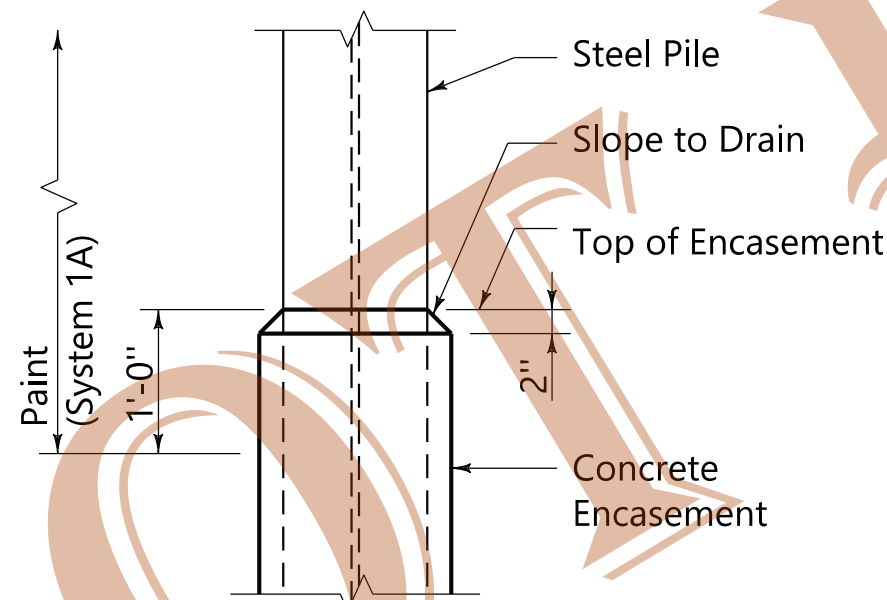
BAR PD



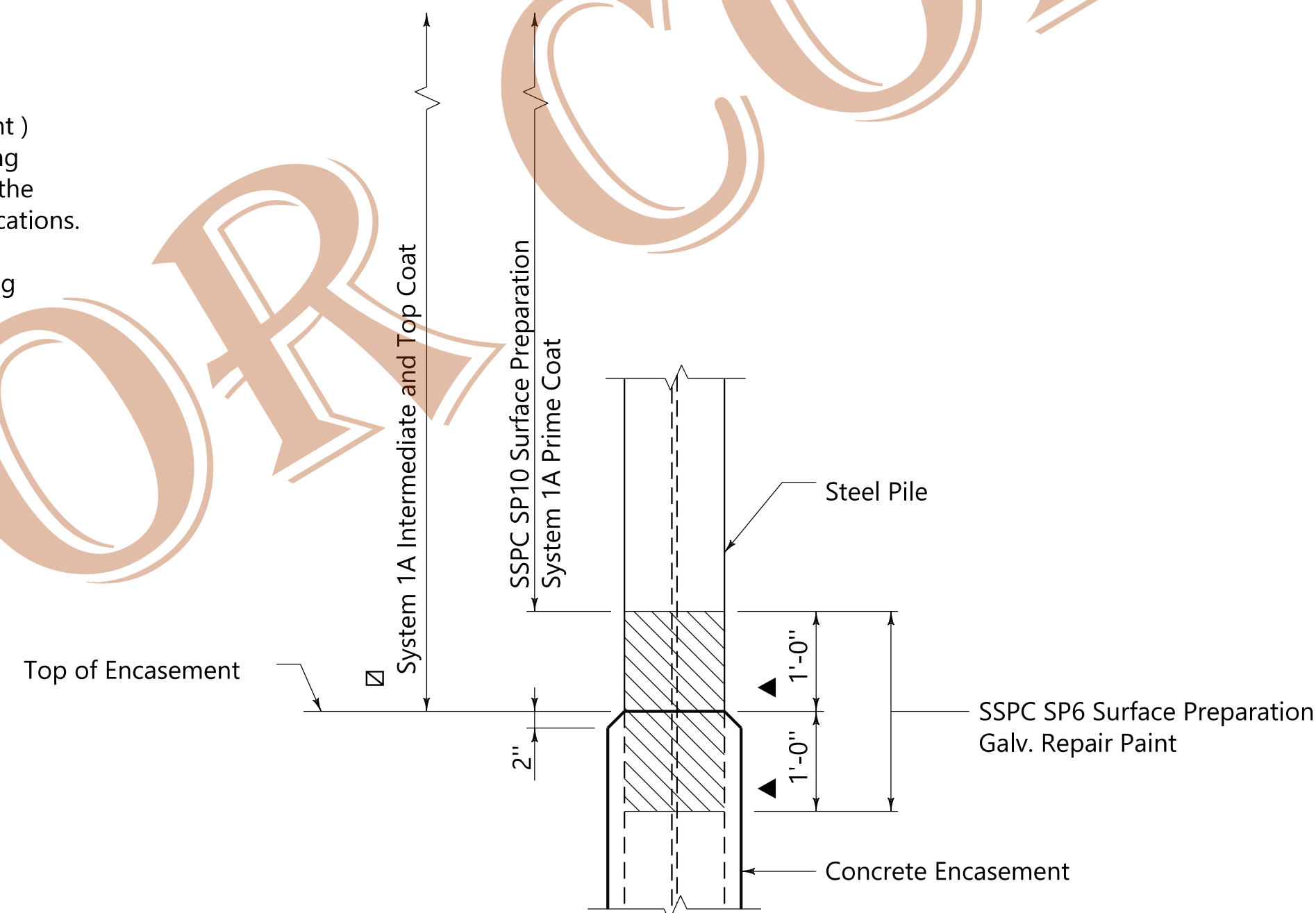
PERMANENT REFERENCE MARK DETAIL

PILE PAINTING DETAIL NOTES

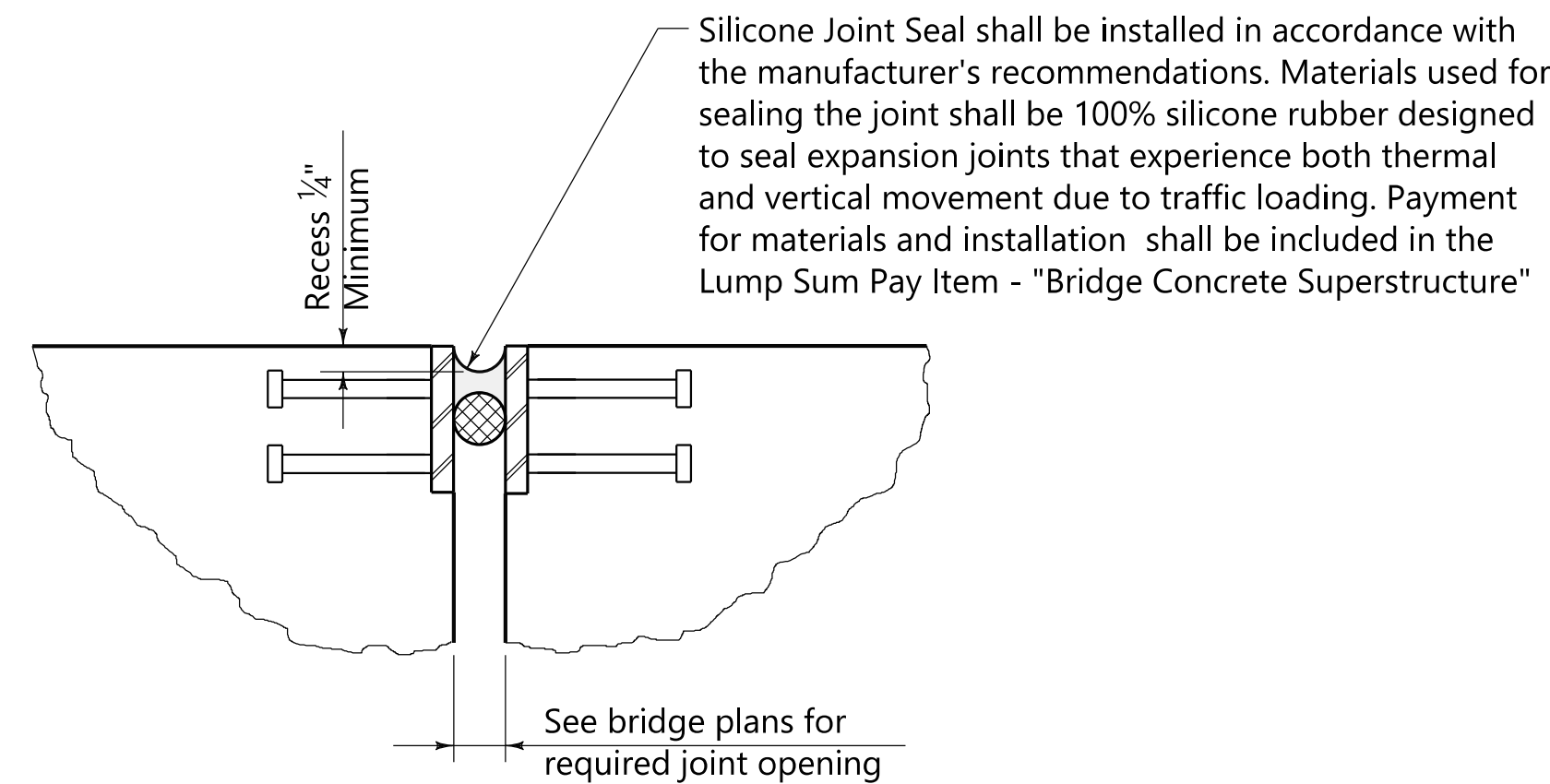
- 1. The System 1A Intermediate and Top Coat may be omitted whenever Concrete Encasement extends to within 6" from bottom of cap.
- 2. Hatched Surface (1'-0" above & below top of encasement) shall receive a SSPC SP6 Surface Preparation prior to being coated with an approved Galv. Repair Paint that satisfies the requirements of sub-article 855.15 of the Standard Specifications.
- 3. Surface Preparation and Painting for Pile and Sway Bracing shall be Field Applied.



PILE PAINTING DETAIL
(OPTION "A")



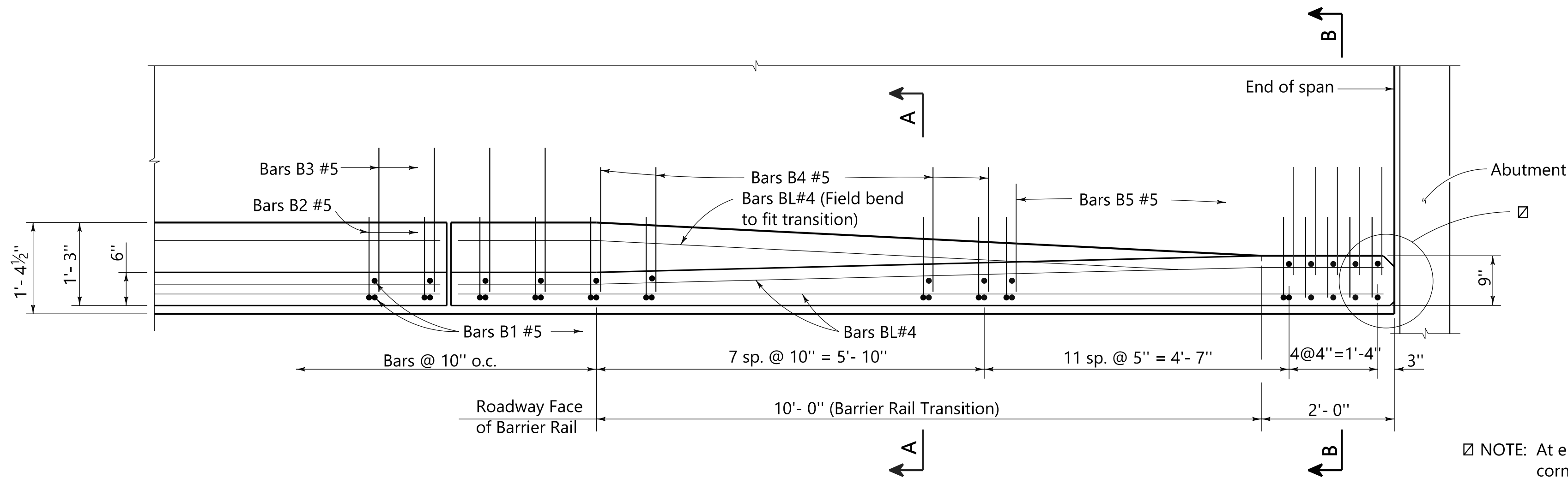
PILE PAINTING DETAIL
(OPTION "B")



JOINT SEAL DETAIL

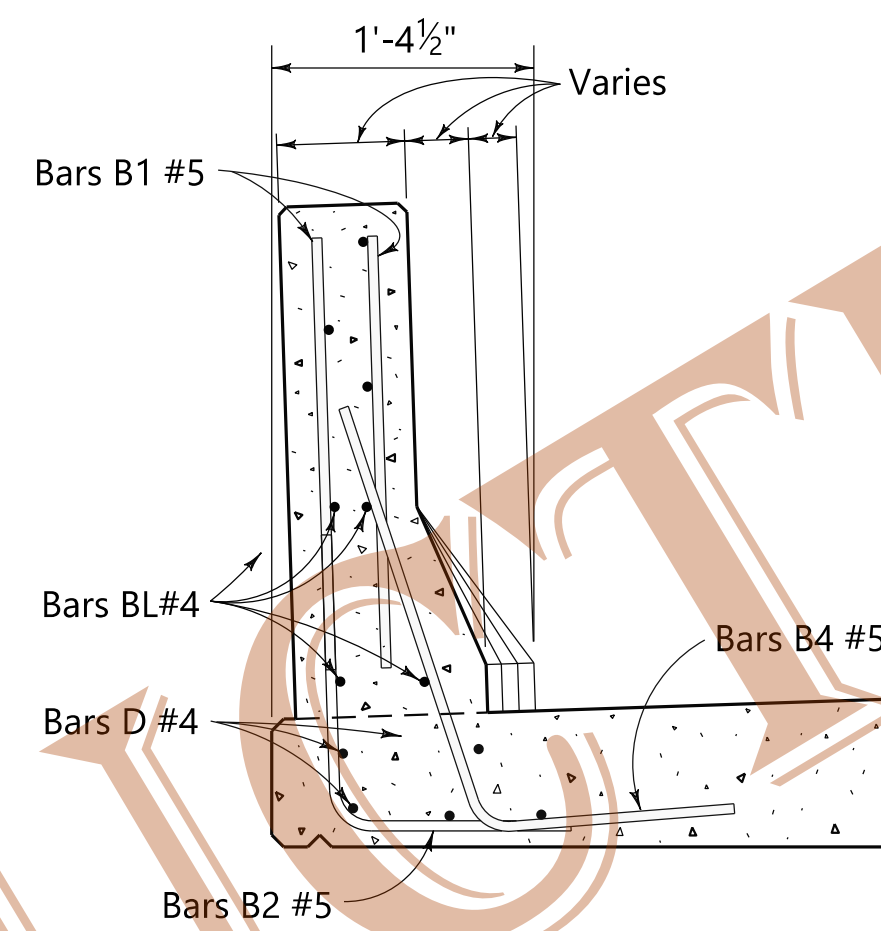
NOTE: Brass marker to be cast in one piece, out of leaded-semi-red brass ASTM B-584 alloy 848 or approved equal. Aluminum disc shall be aluminum alloy CS 208 in accordance with ASTM B-26 or approved equal.

REFERENCE PROJECT NUMBER	FISCAL YEAR	SHEET NUMBER
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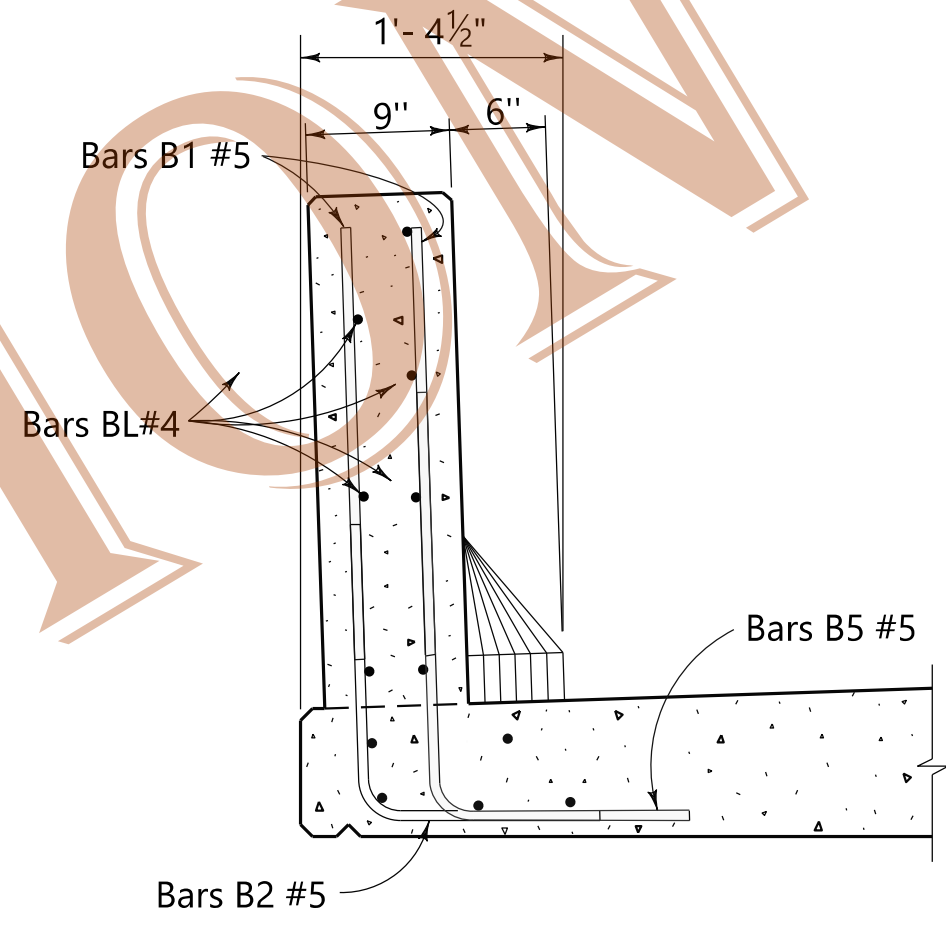


PART PLAN - BARRIER RAIL

NOTE: At end of Barrier Rail, chamfer corner of inside face 2" and corner of outside face 3/4".

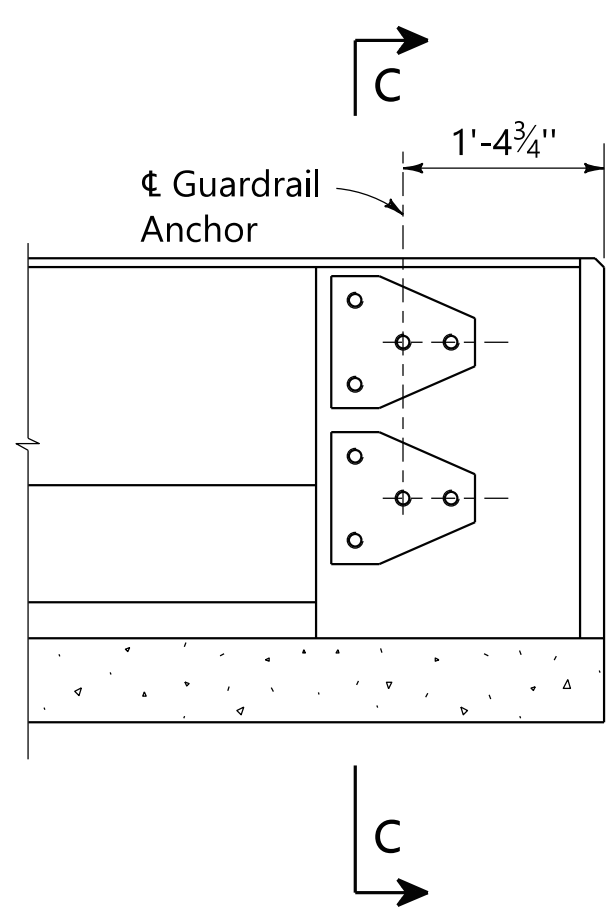


SECTION A-A

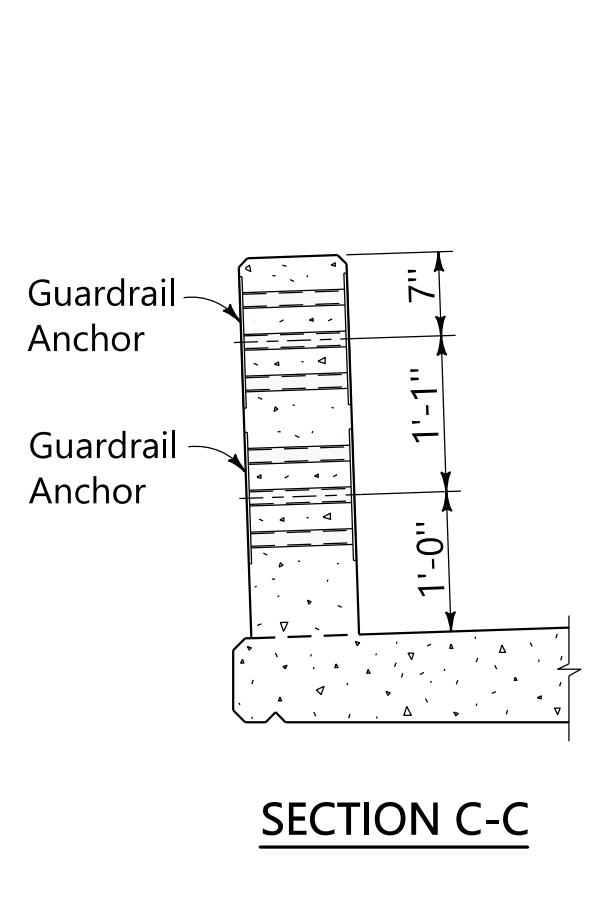


SECTION B-B

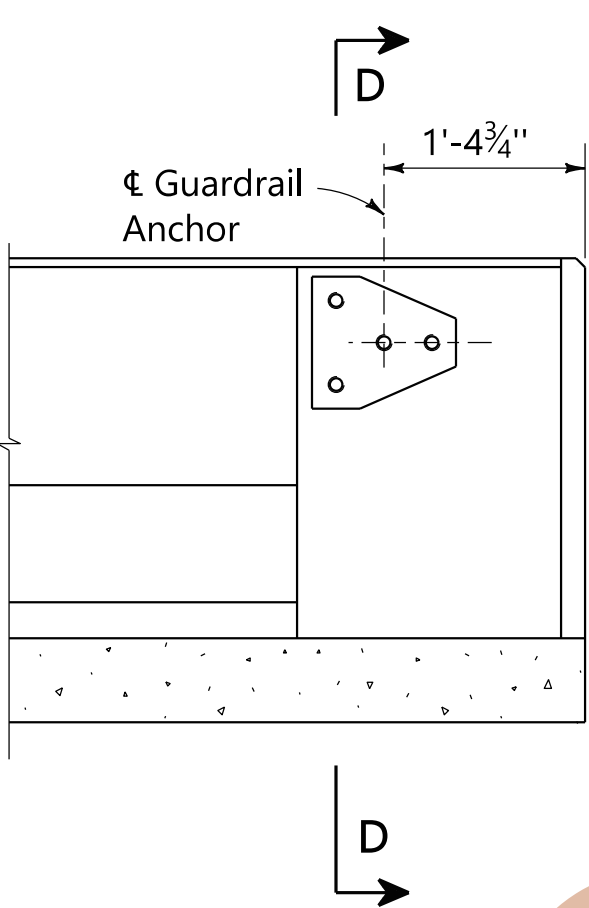
NOTE: Bars BL #4 shall be placed continuously and cut at joint locations to provide for two inch (2") end cover. Field bend Bars BL #4 to fit transition. Bars BL #4 shall be spliced twenty-four (24) diameters.



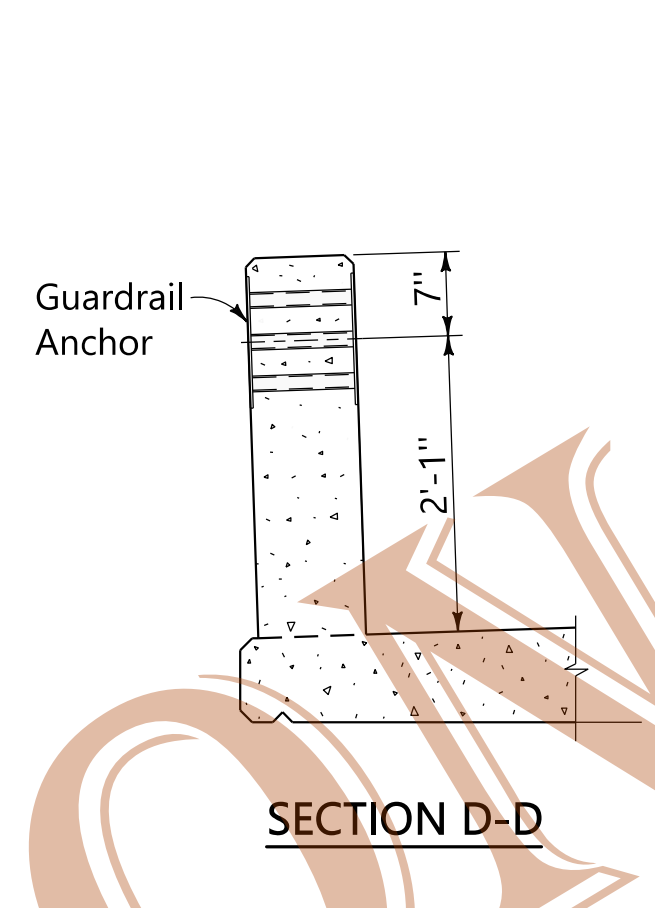
PART ELEVATION - BARRIER RAIL
(DOUBLE ANCHOR)



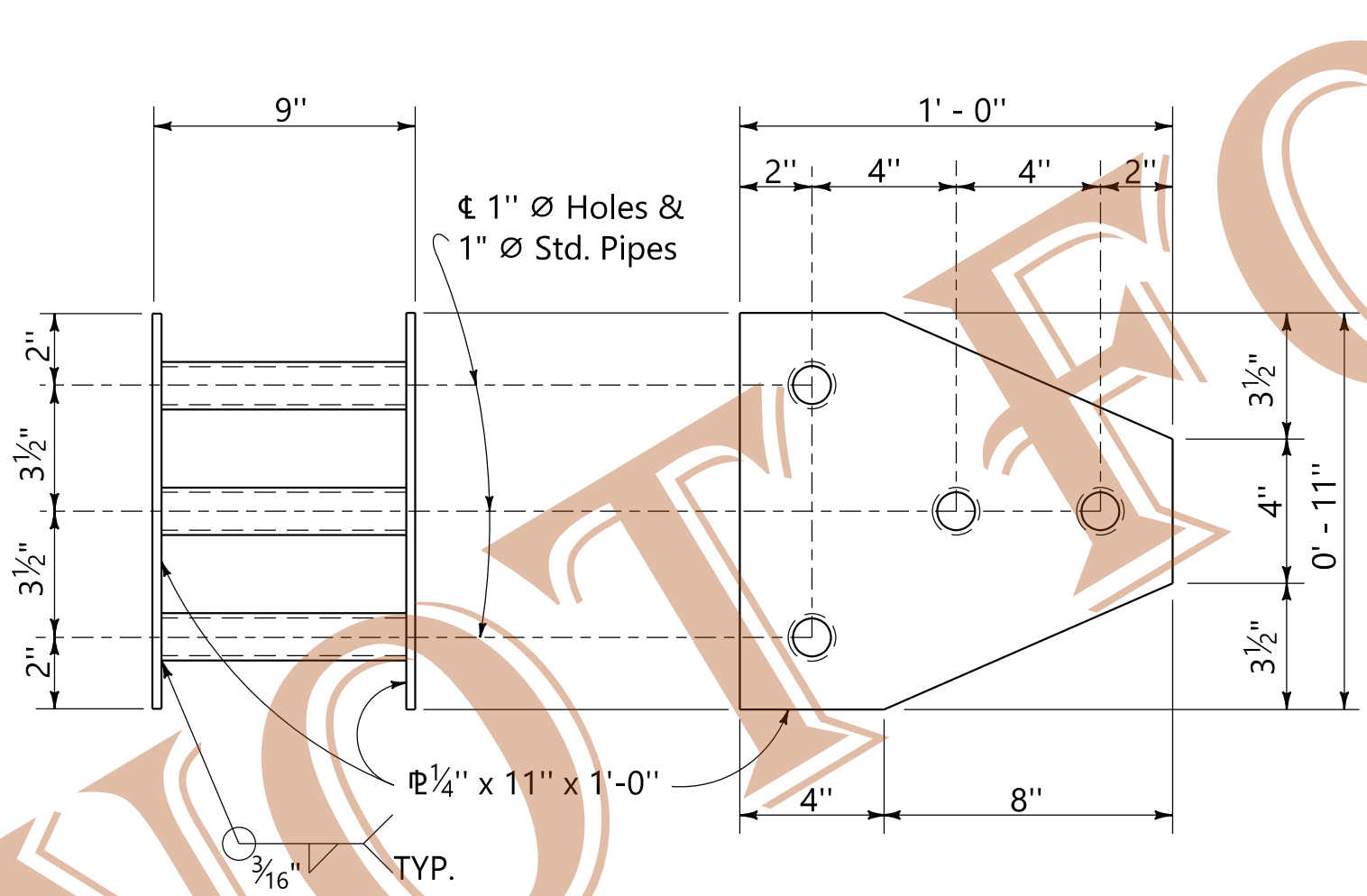
SECTION C-C



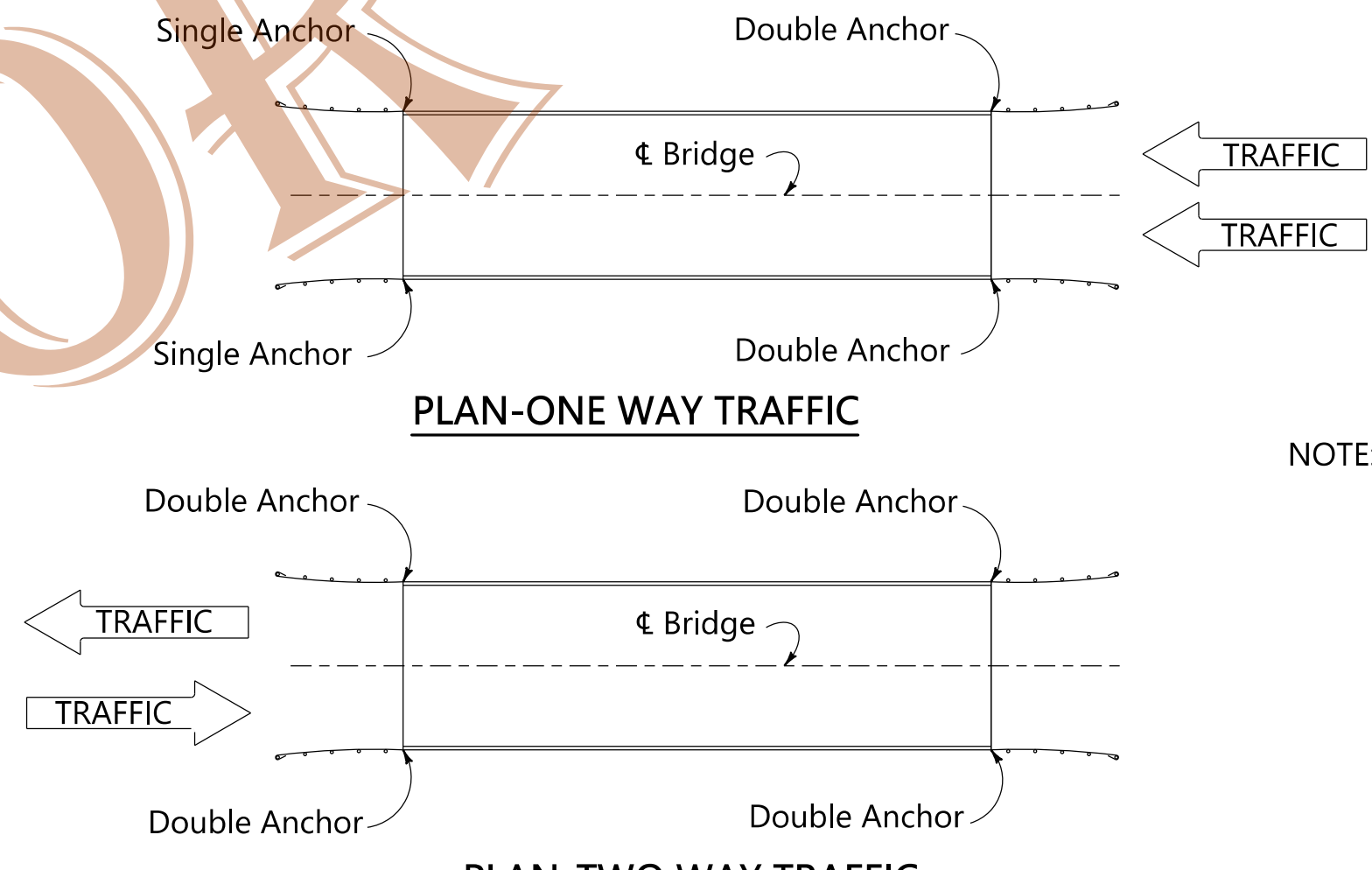
PART ELEVATION - BARRIER RAIL
(SINGLE ANCHOR)



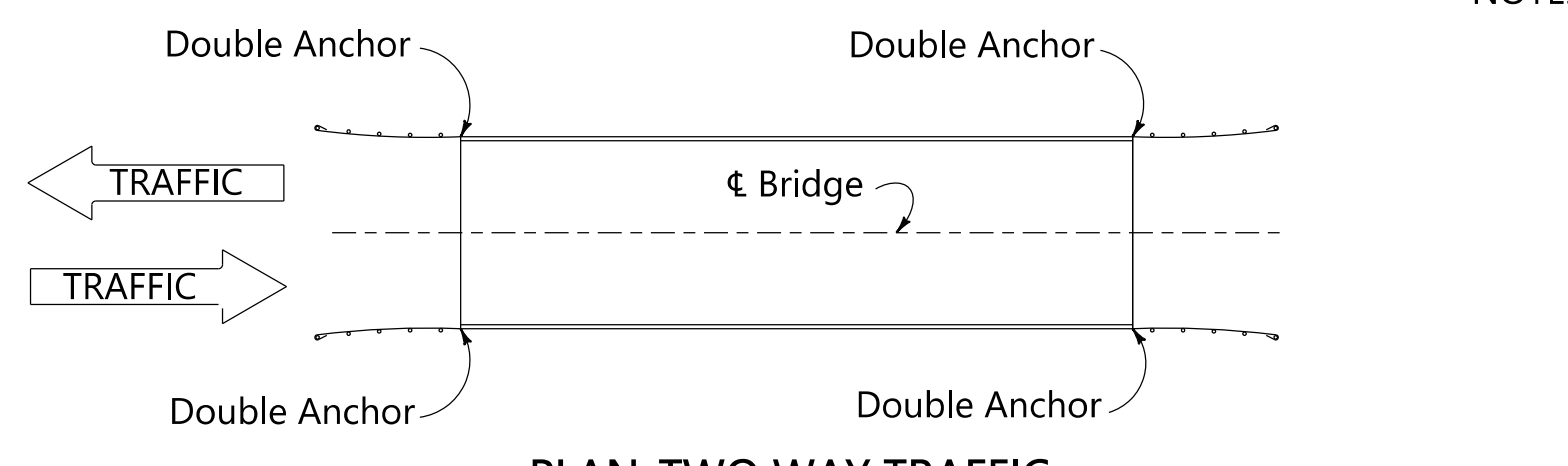
SECTION D-D



GUARDRAIL ANCHOR DETAIL



PLAN-ONE WAY TRAFFIC

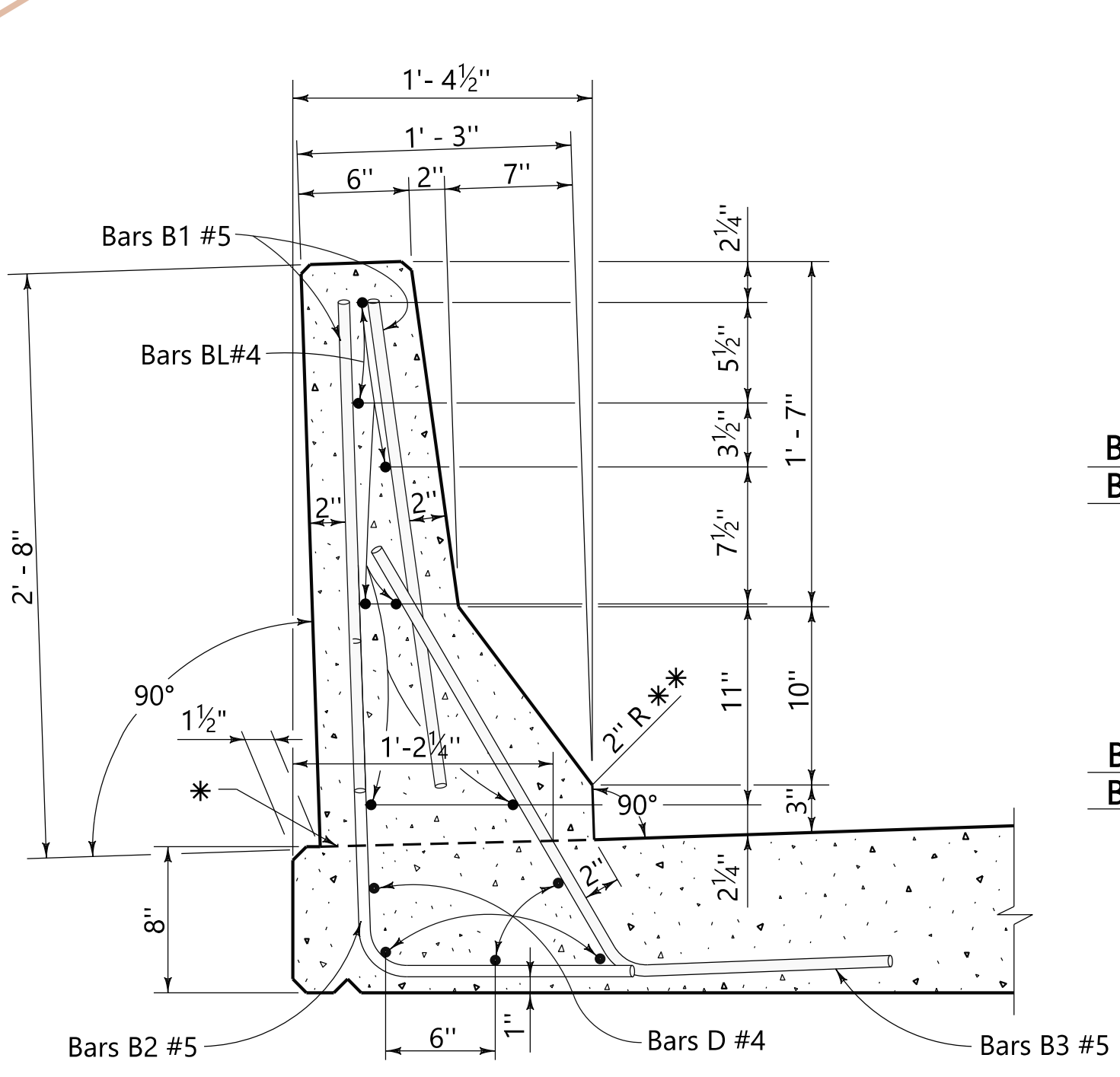


PLAN-TWO WAY TRAFFIC

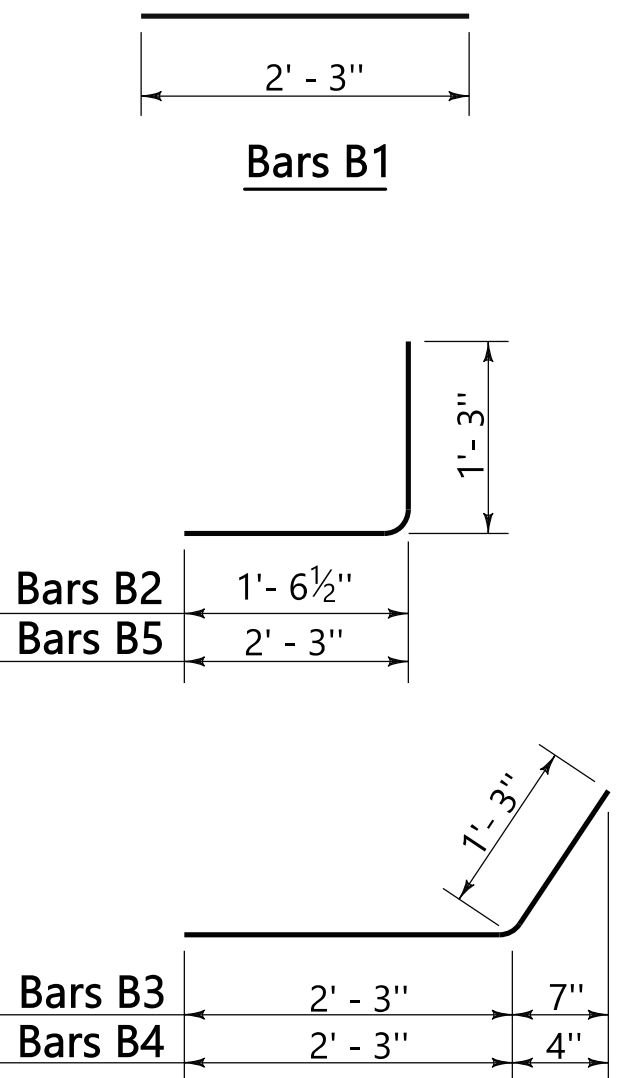
▲ GUARDRAIL ANCHOR LOCATIONS

NOTE: Guardrail Anchors are required at both ends of all bridges, as shown. Plates shall be ASTM A 36 steel. Pipe material shall be one inch (1") Ø ASTM A 53 schedule 40. Galvanize complete Guardrail Anchor after fabrication in accordance with AASHTO M 111. Attach securely to forms to assure the exposed faces are flush with concrete faces of Barrier Rail. Cost of Guardrail Anchors shall be included in pay item 508-A, Lbs. Structural Steel. Shop drawings as required by ALDOT Standard Specifications for pay item 508-A are required for Guardrail Anchors.

▲ Guardrail Anchor shall be cast with Bridge Barrier Rail.



TYPICAL SECTION - THRU RAIL

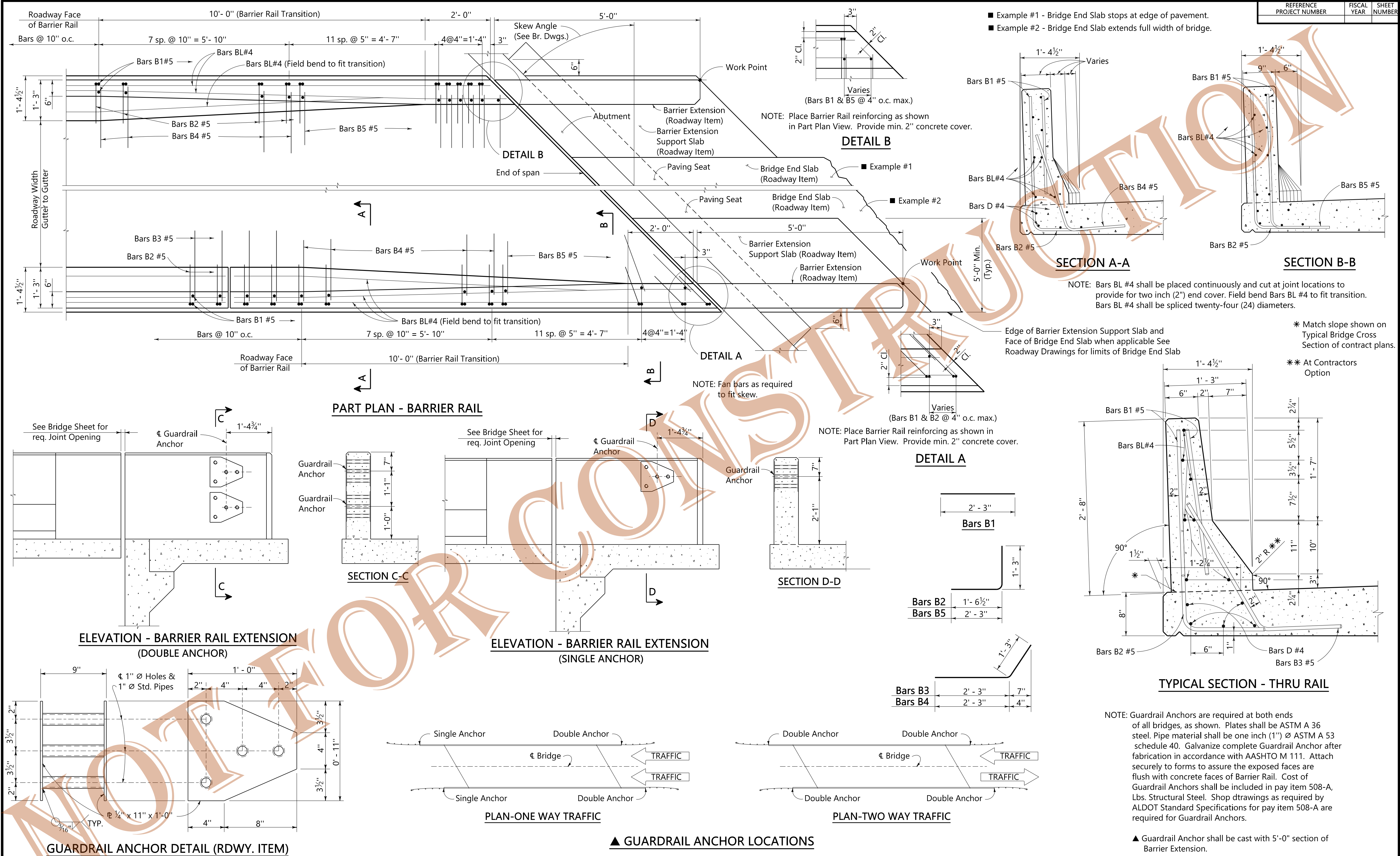


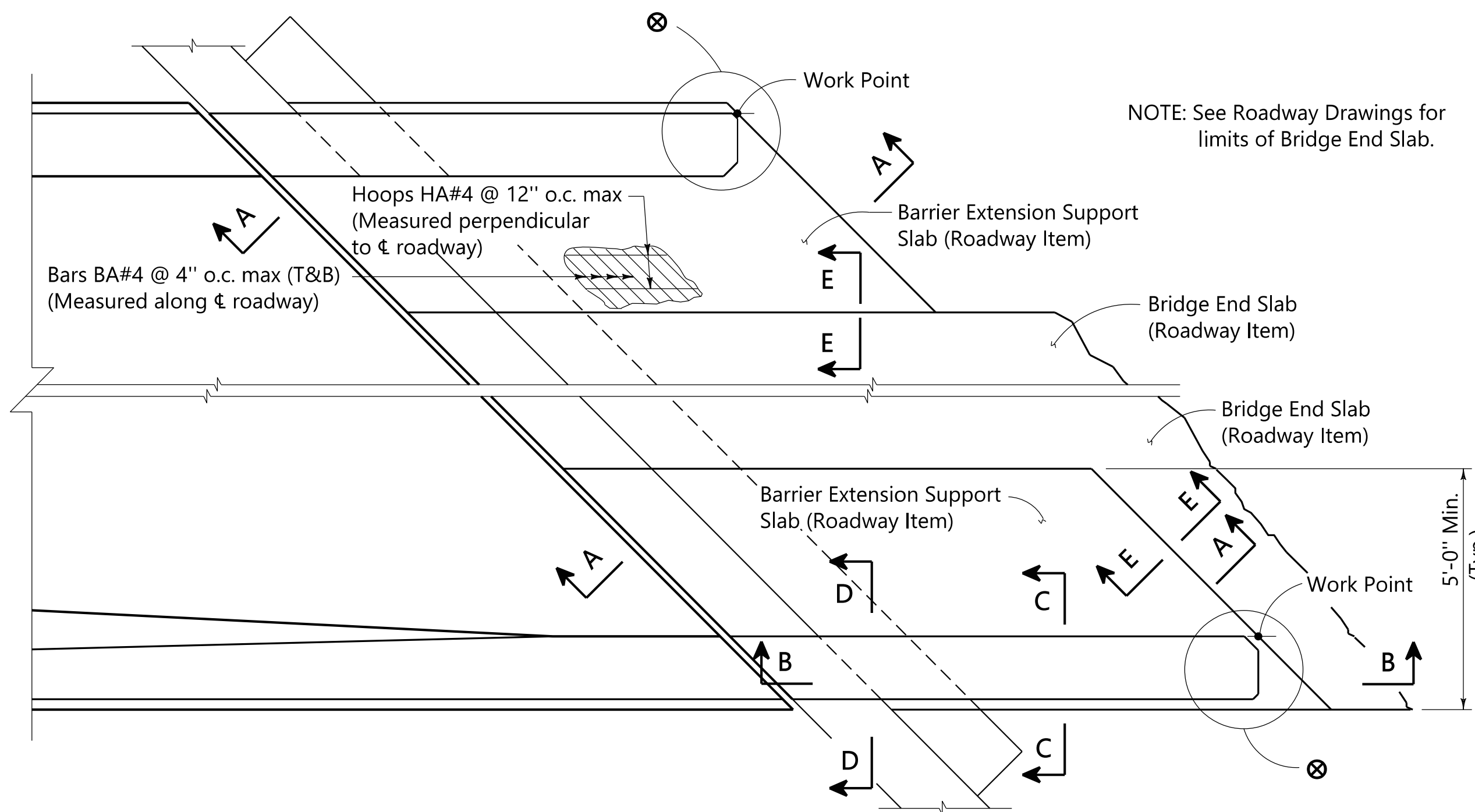
* Match slope shown on Typical Bridge Cross Section of contract plans.
** At Contractors Option.

2"
1"
0
SHEET REFERENCE

\\brms002\BridgeStandard\Special\Bridge Special DGN Files\2022 DGM\Standard to Special Dwg.s\I-131.dgn

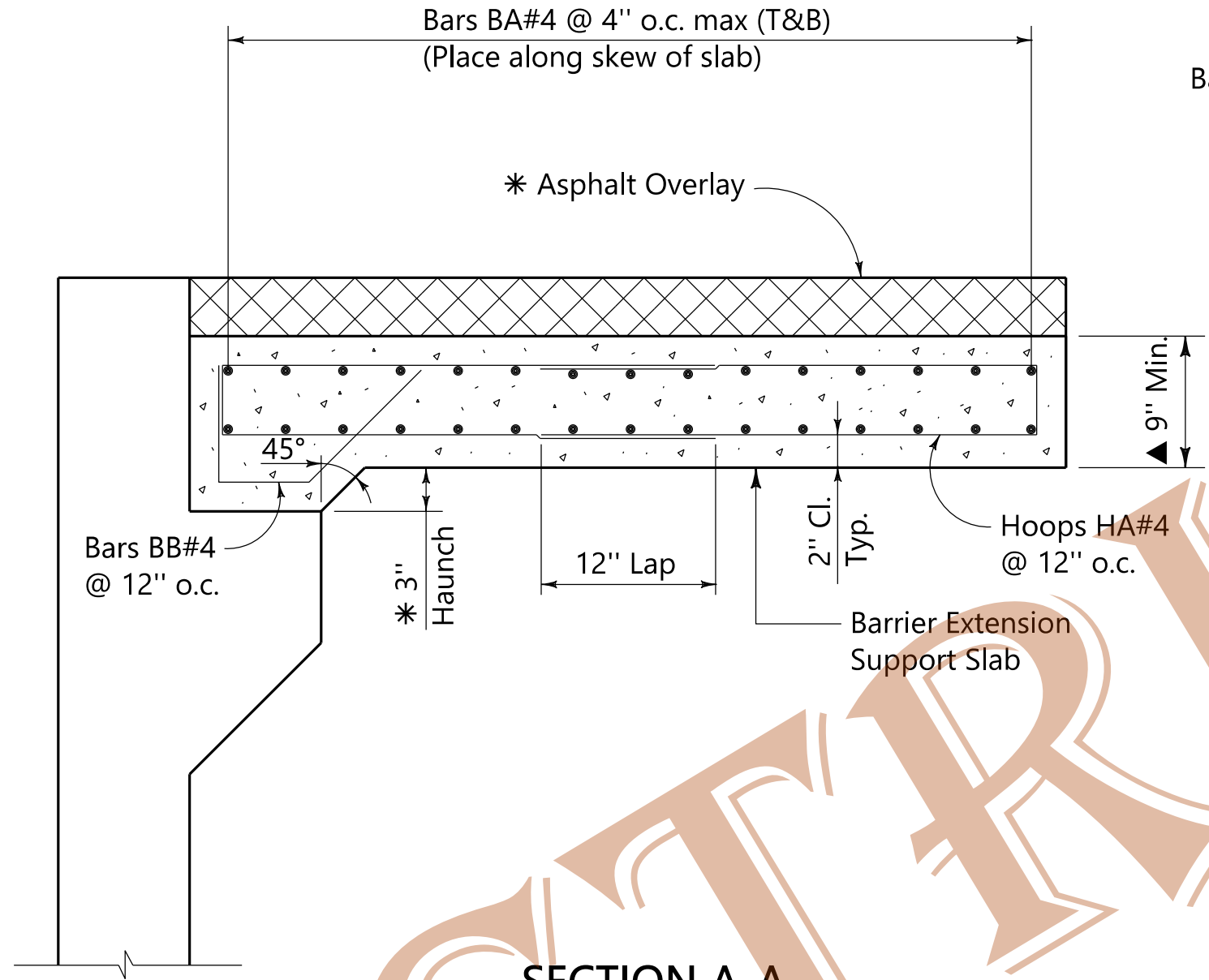
PLOTTED: 13-Oct-21 at 11:10



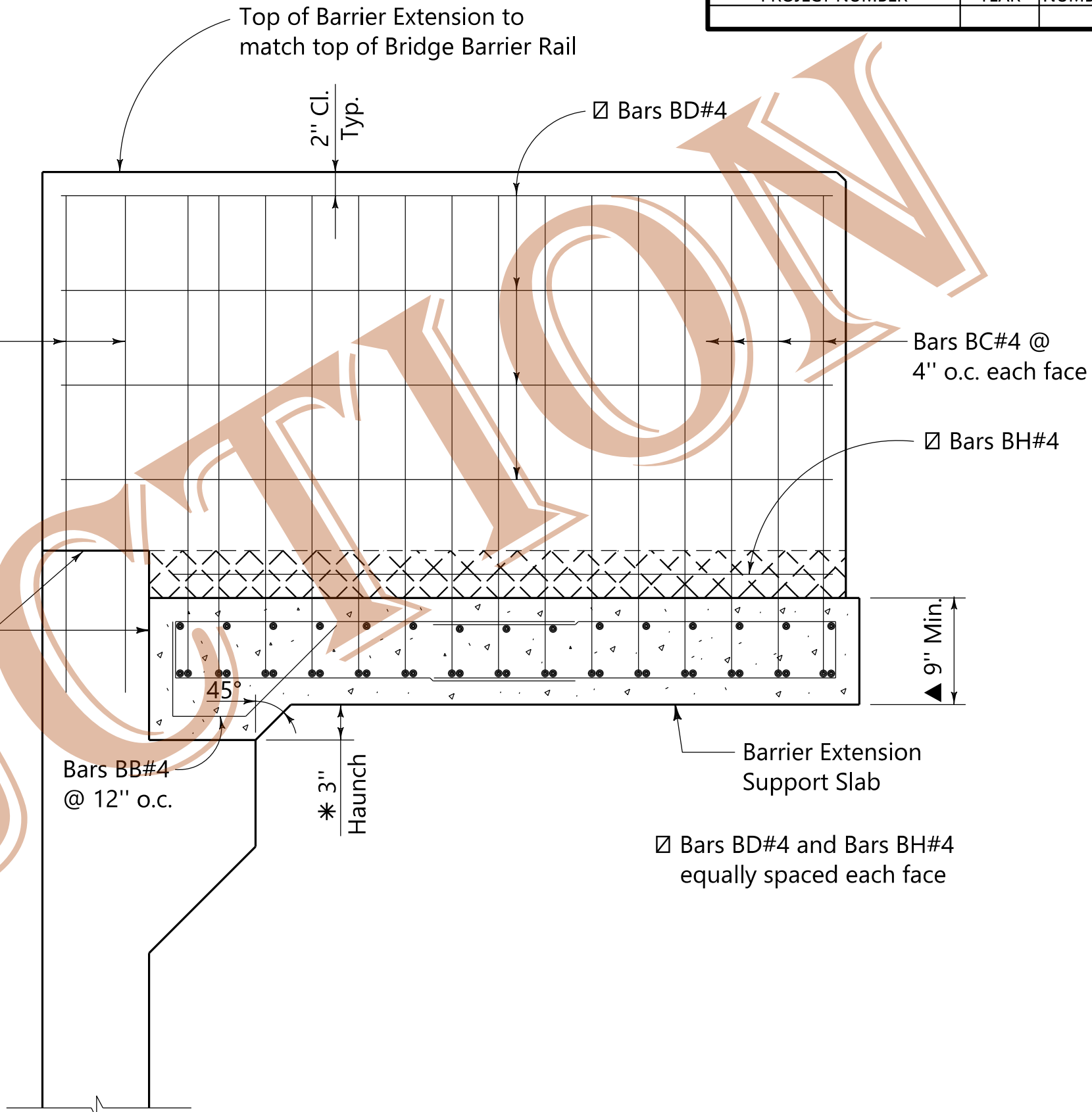


**PLAN - BARRIER EXTENSION &
BARRIER EXTENSION SUPPORT SLAB**

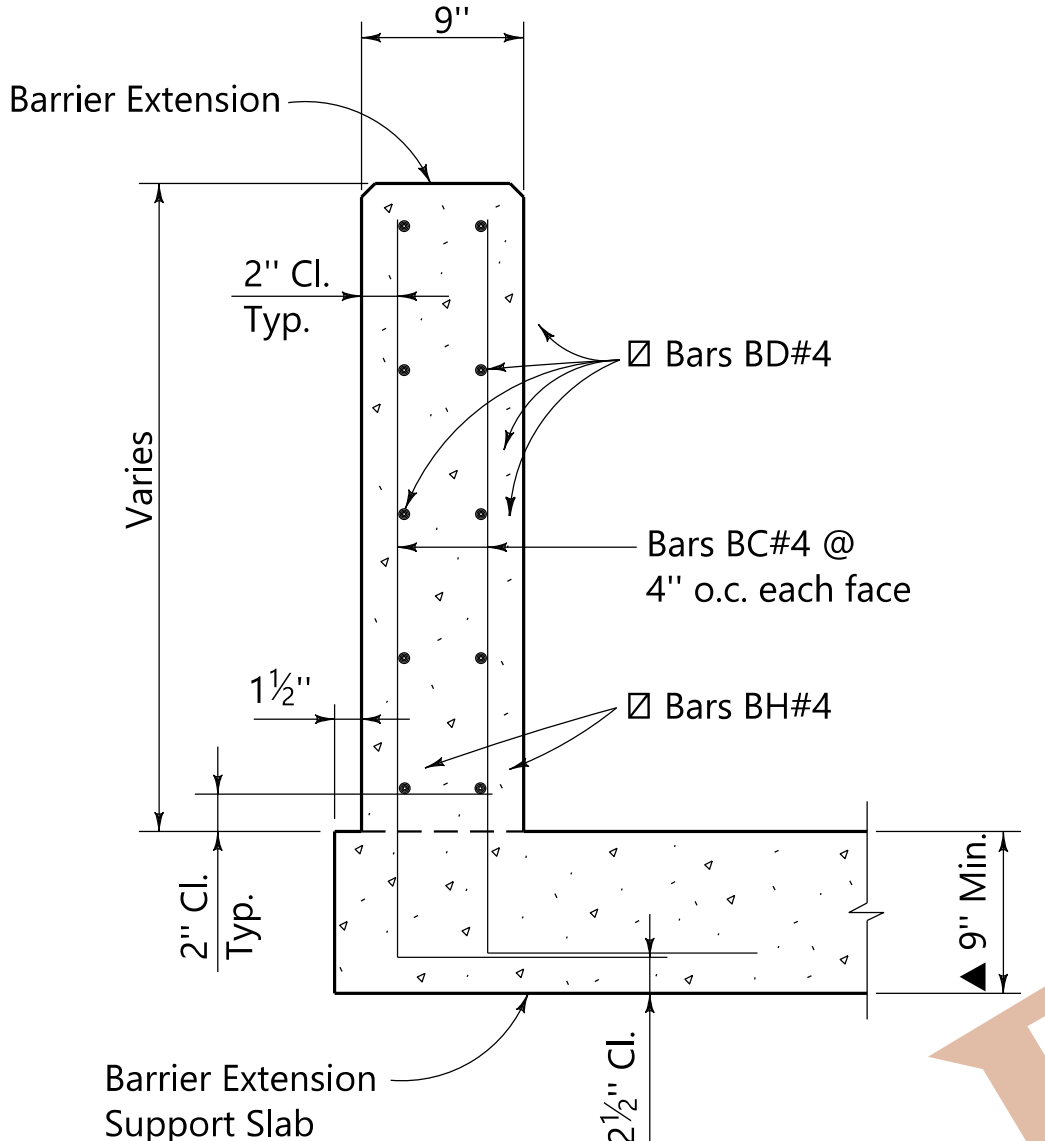
⊗ NOTE: At end of Barrier Extension, chamfer corner of inside face 2" and corner of outside face 3/4".



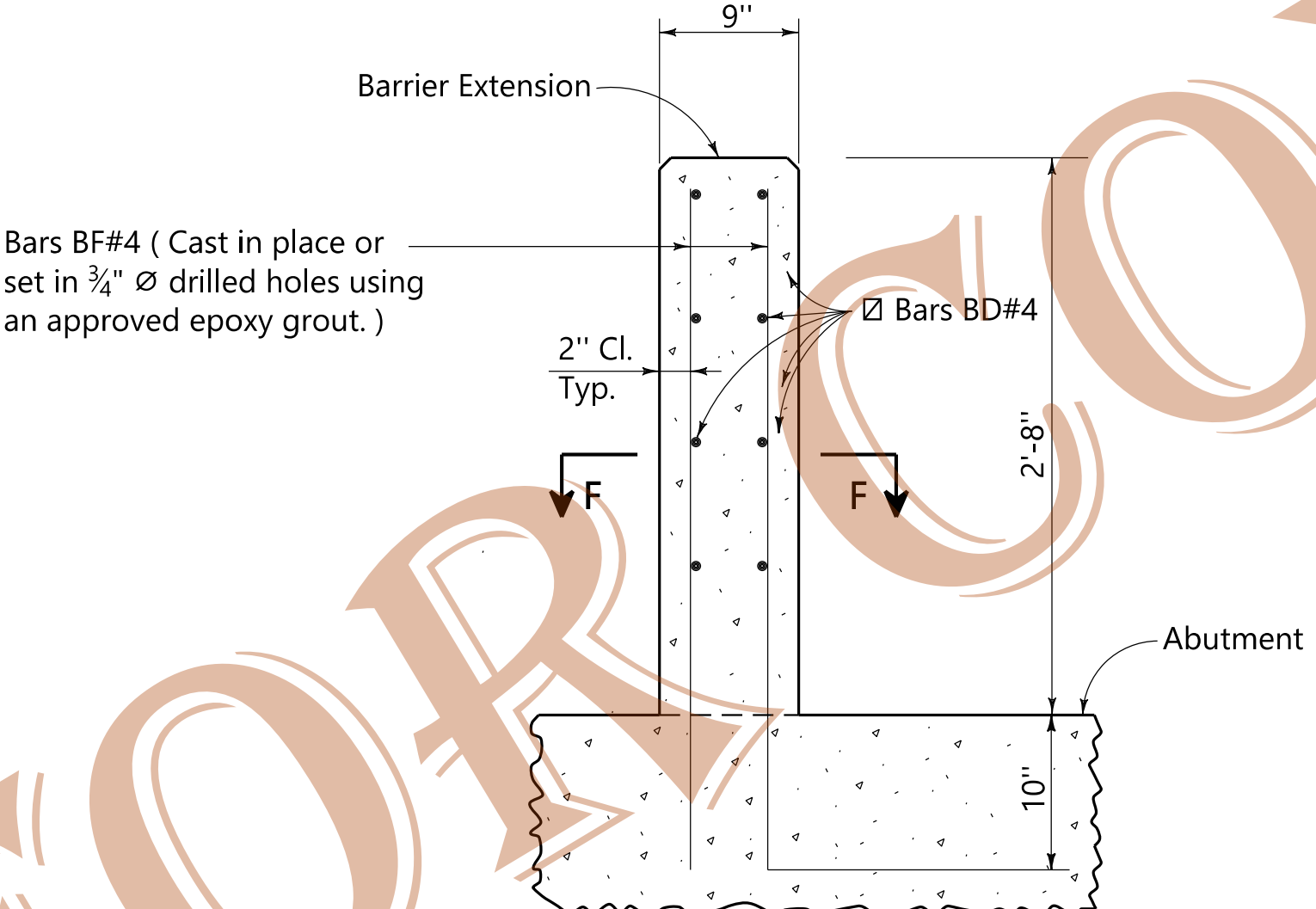
SECTION A-A



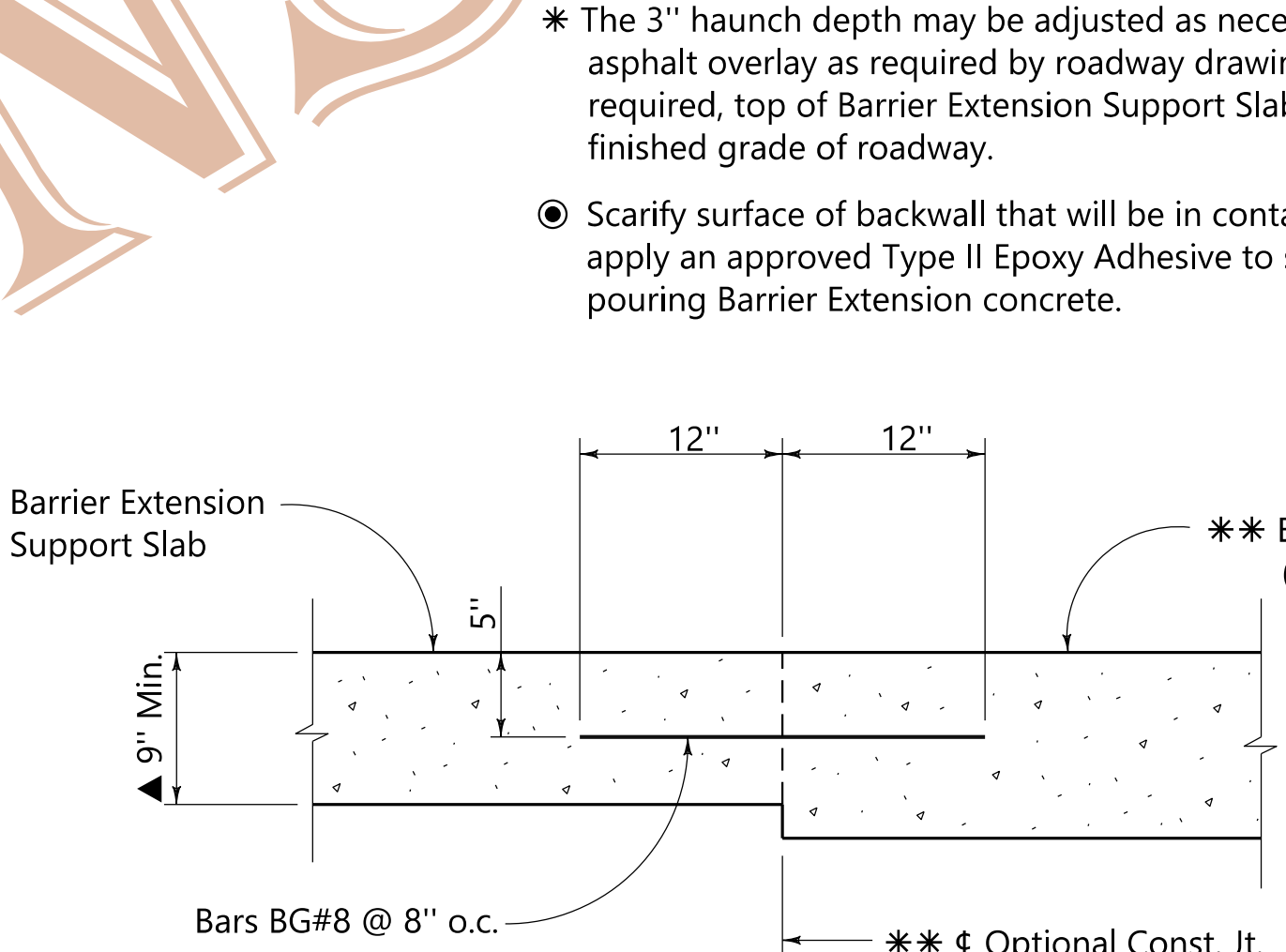
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

** When Barrier Extension Support Slab is poured continuous with Bridge End Slab, Bars BG#8 may be omitted and Bars BA#4 extended 1'-0" into Bridge End Slab. When these pours are made separate, Bars BG#8 may be cast with first pour or installed in drilled 1/4" diameter dowel holes using an approved epoxy grout. When no Bridge End Slab is required, Barrier Extension Support Slab shall extend full width of roadway.

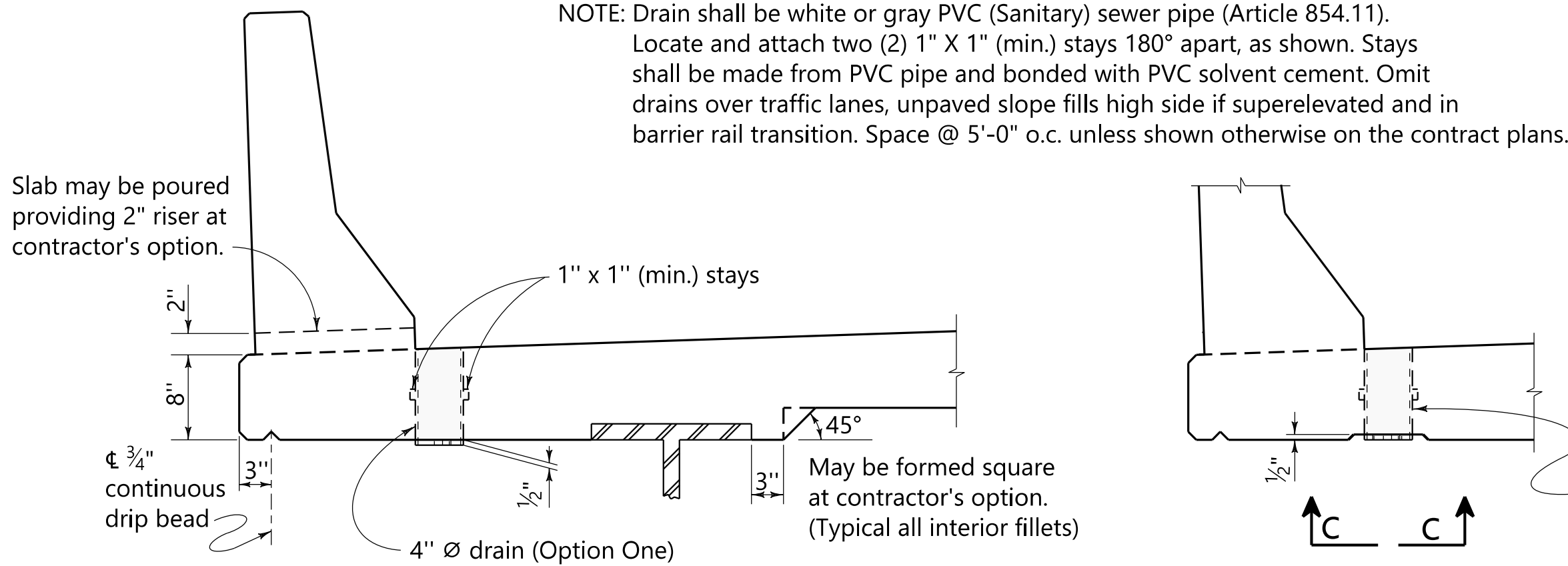


SECTION F-F

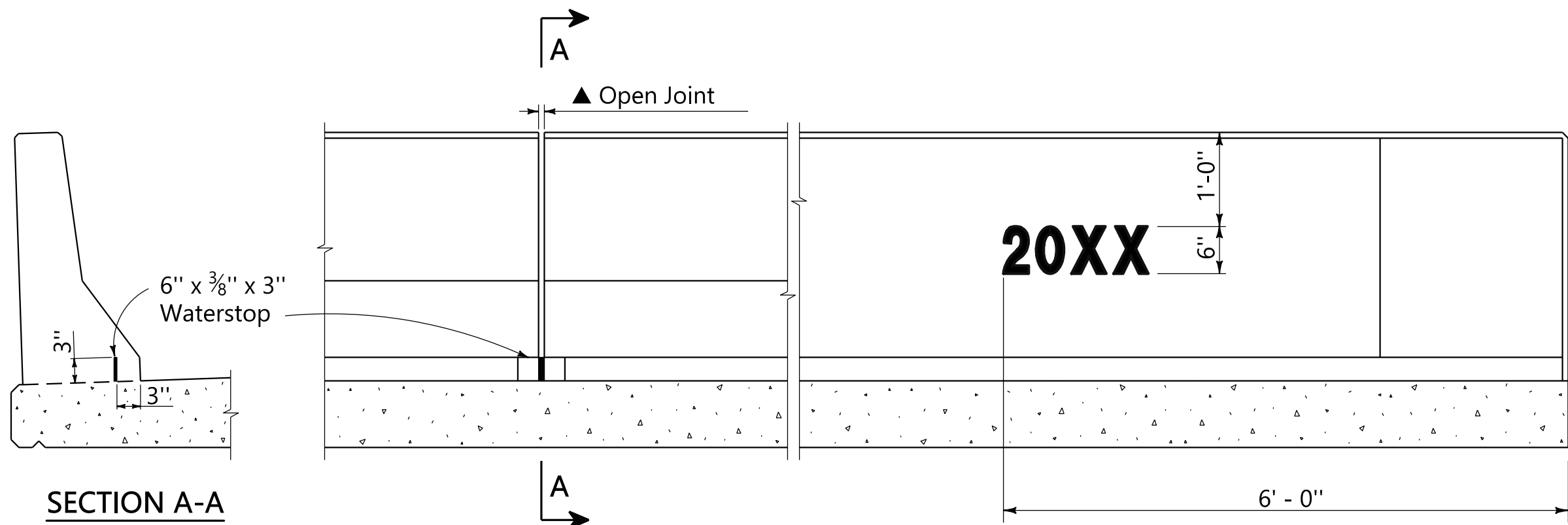
▲ At the contractor's option, the Barrier Support Slab may be poured to the same thickness as the Bridge End Slab. Pay quantities are based on a 9" thick Barrier Extension Support Slab.

NOTE:
Concrete for Barrier Extension shall have a minimum 28 day compressive strength of 4000 psi. Reinforcing steel for Barrier Extension Support Slab shall be Gr. 60. Concrete Quantities and Reinforcing Quantities for the Barrier Extension and Barrier Extension Support Slab are included in pay item 450-B Reinforced Cement Concrete Bridge End Slab. (Roadway Item).

REFERENCE PROJECT NUMBER	FISCAL YEAR	SHEET NUMBER



MISCELLANEOUS SLAB DETAILS



WATERSTOP DETAIL

NOTE: Open joints in barrier rail to be sealed with a 6"x3/8" x 3" waterstop, except as noted below. Waterstop material shall conform to requirements of sub-article 832.05 (b) of the Standard Specifications. Waterstop shall be bonded to bridge deck with an approved adhesive meeting requirements of sub-article 832.03 (a) 2b of the Standard Specifications.

Waterstop not required on high side of sloped decks, when Class 3 surface finish is required, or when joint opening is saw cut per sub-article 510.03(j) of the Standard Specifications.

Cost of waterstops shall be included in pay item "Bridge Concrete Superstructure".

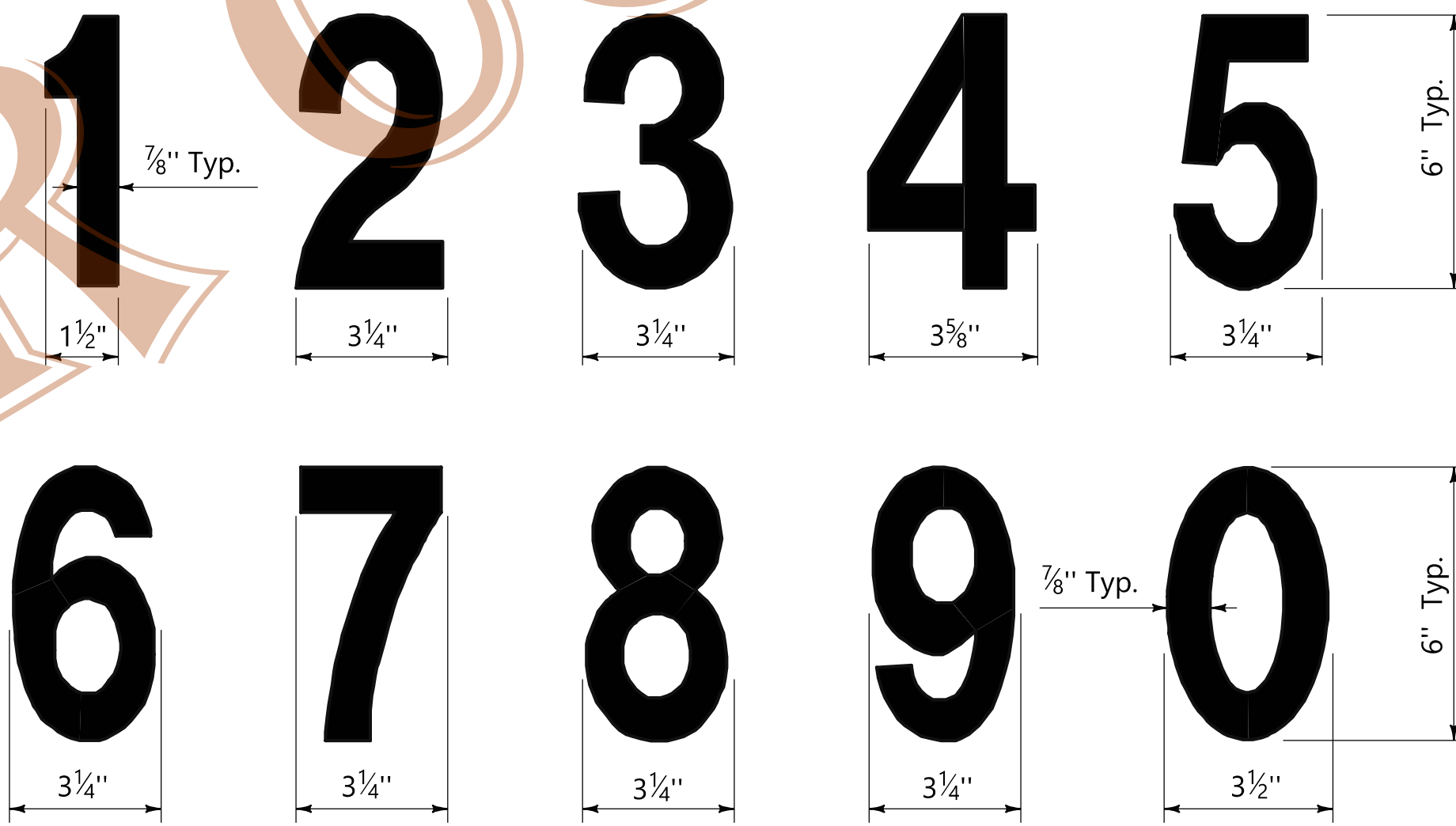
NOTE: The year of completion of bridge shall be constructed on the inside face of barrier rail at begin and end, as shown. Numerals to be similar to those shown on this sheet.

Numerals may be constructed of suitable material and attached to forms in order to cast six inch (6") high by three-eighths inch (3/8") deep indentations in concrete. Edges of numerals should have inward bevel to facilitate removal of forms.

Upon approval of the engineer, the contractor may use preformed, black, six inch (6") high by three-eighths inch (3/8") minimum depth numerals that are permanently embedded within the barrier rail so the face of the numerals are flush with concrete face. Edges of numerals to have outward bevel to insure permanent embedment.

Cost of numerals shall be included in pay item "Bridge Concrete Superstructure".

PART ELEVATION - BARRIER RAIL



NUMERAL DETAIL

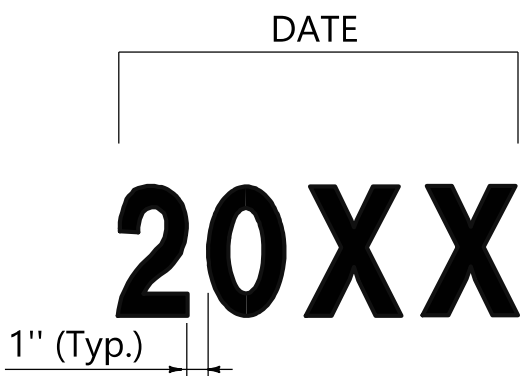
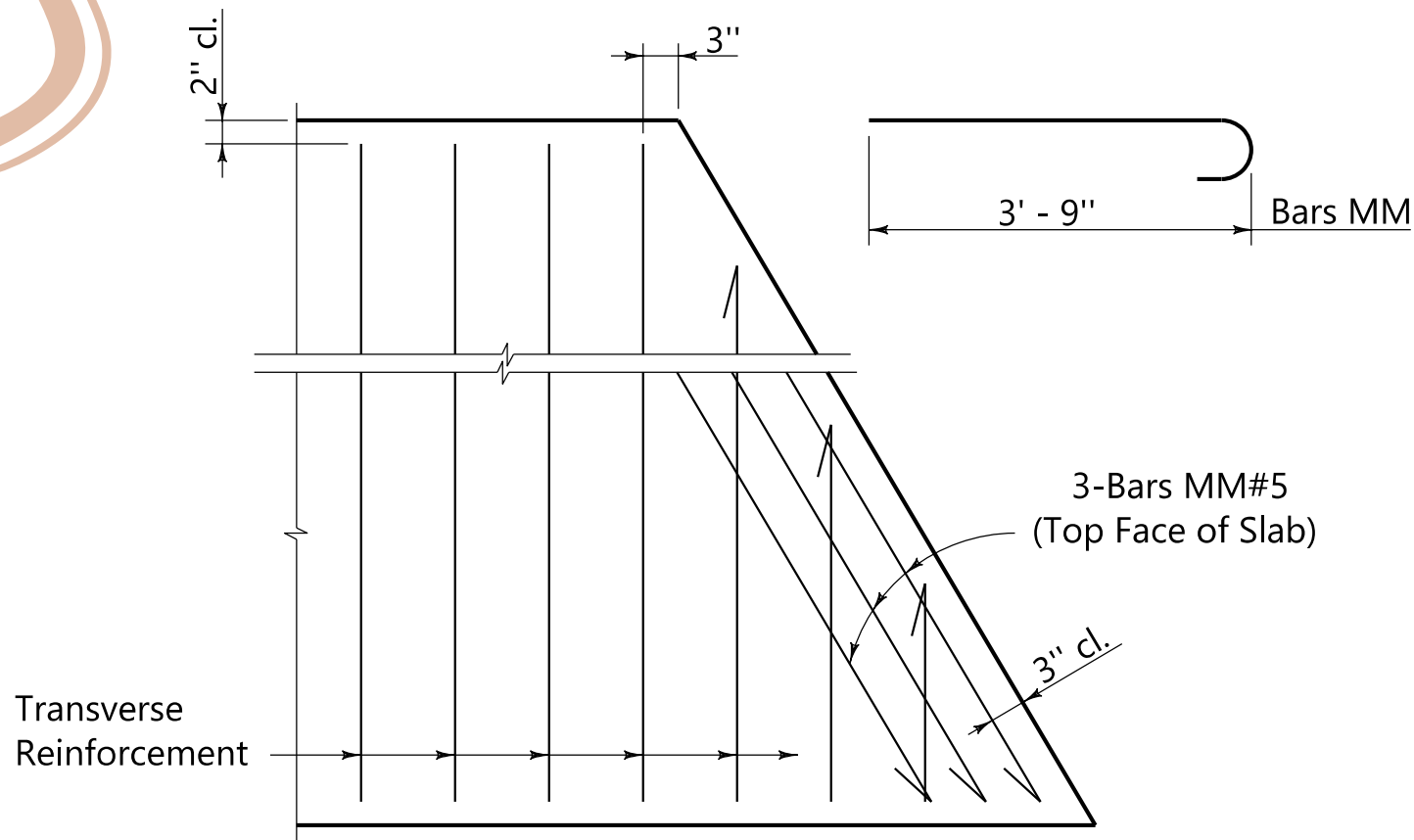
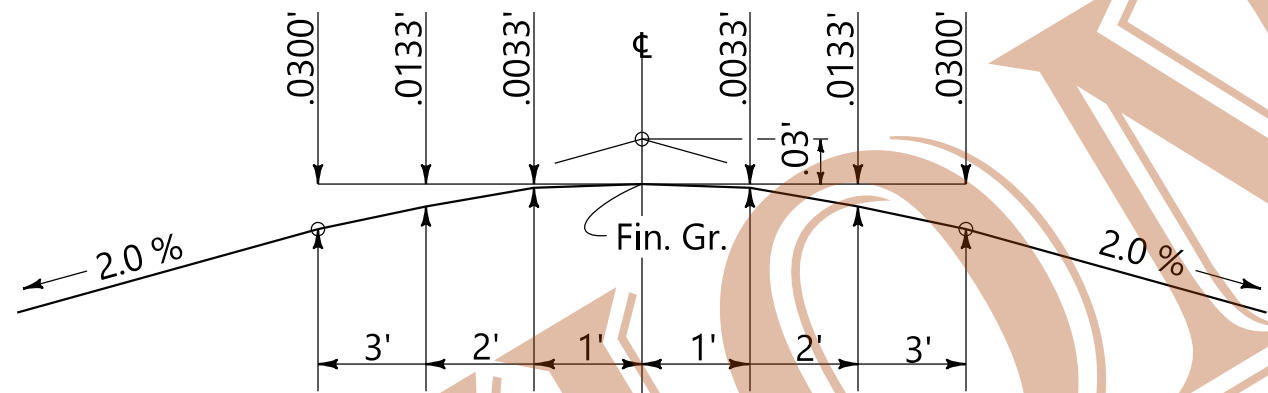
YEAR OF COMPLETION

NOTE: In addition to the open joints shown on the bridge drawings at the beginning and end of spans, open joints in barrier rails as specified in Article 510.03(j) of the Standard Specifications shall be located as follows:

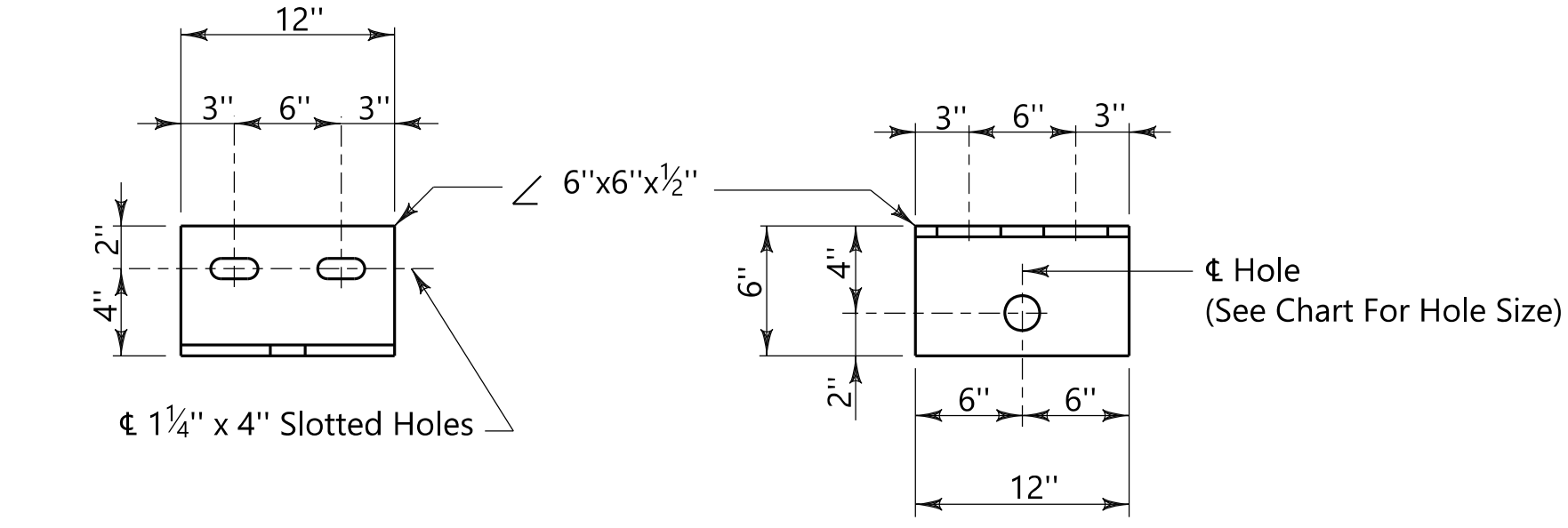
For spans up to 60 feet in length: Provide one open joint at mid-point of the span.

For spans exceeding 60 feet in length: Provide one open joint at mid-point of the span and additional joints at equal spaces not to exceed 30 feet between joints. For continuous span units, open joints in barrier rails shall also be provided at interior bent locations.

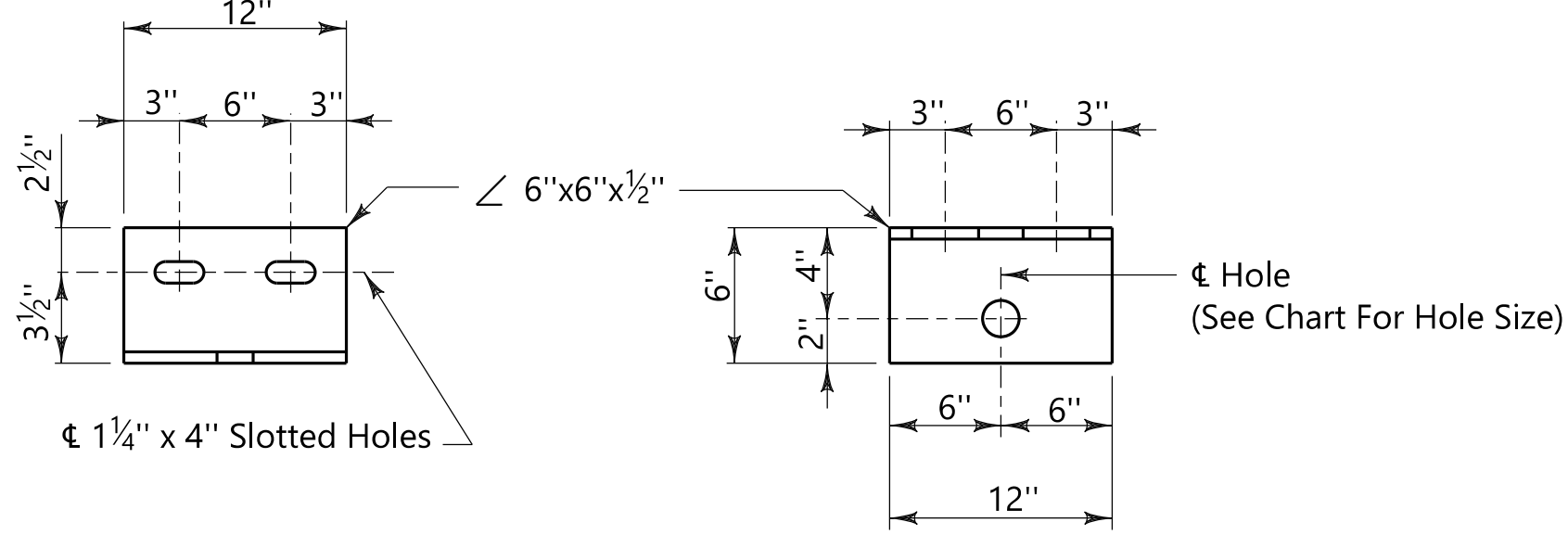
▲ Joint openings shall be three-quarters inch (3/4 ") in width whenever barrier rails are constructed by means other than a slip form extrusion machine.



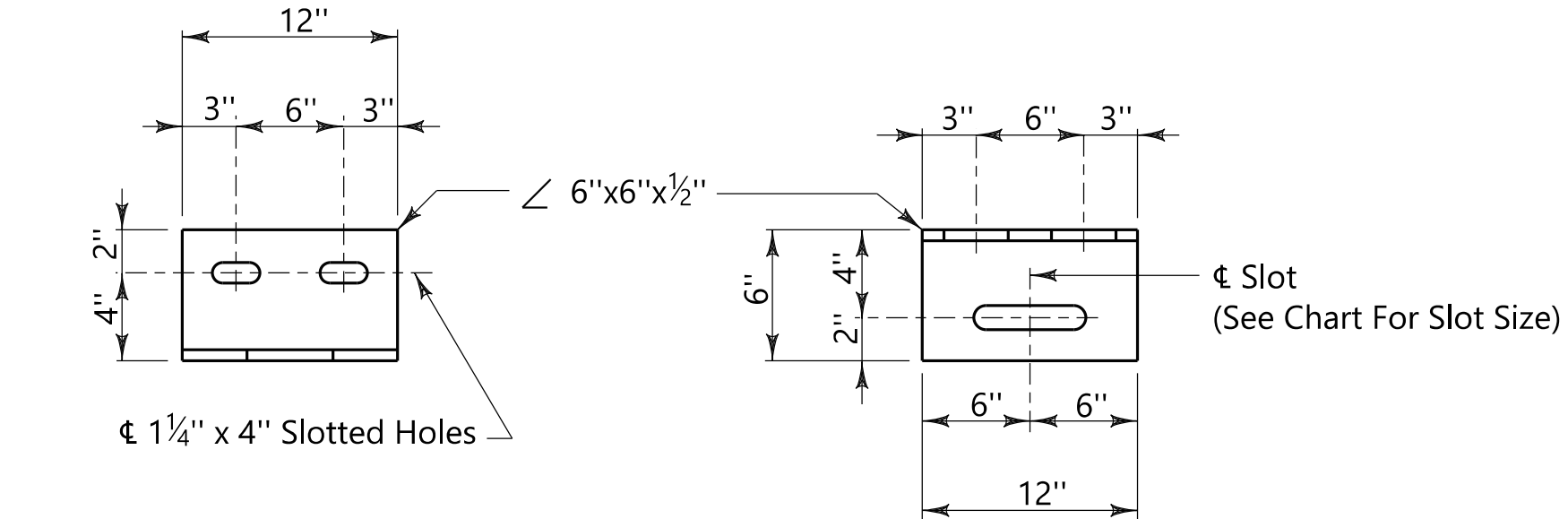
TYPICAL SPACING



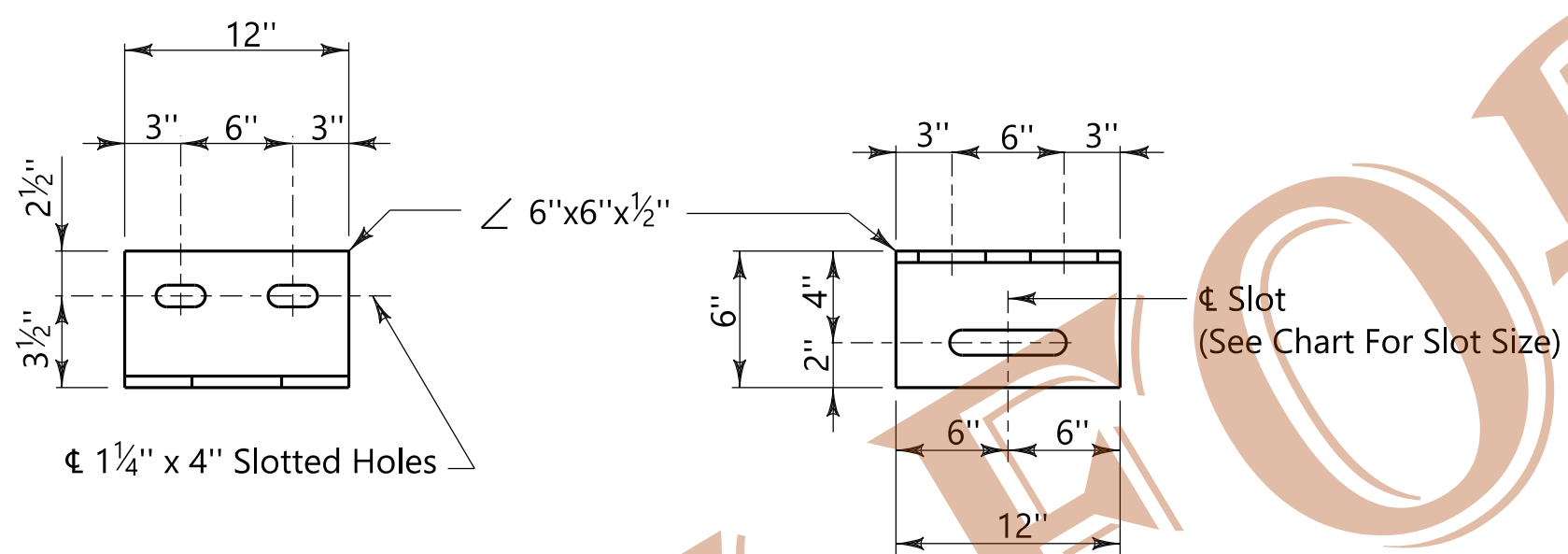
AASHTO TYPE GDR. CLIP ANGLE (FIXED)



BULB TEE TYPE GDR. CLIP ANGLE (FIXED)

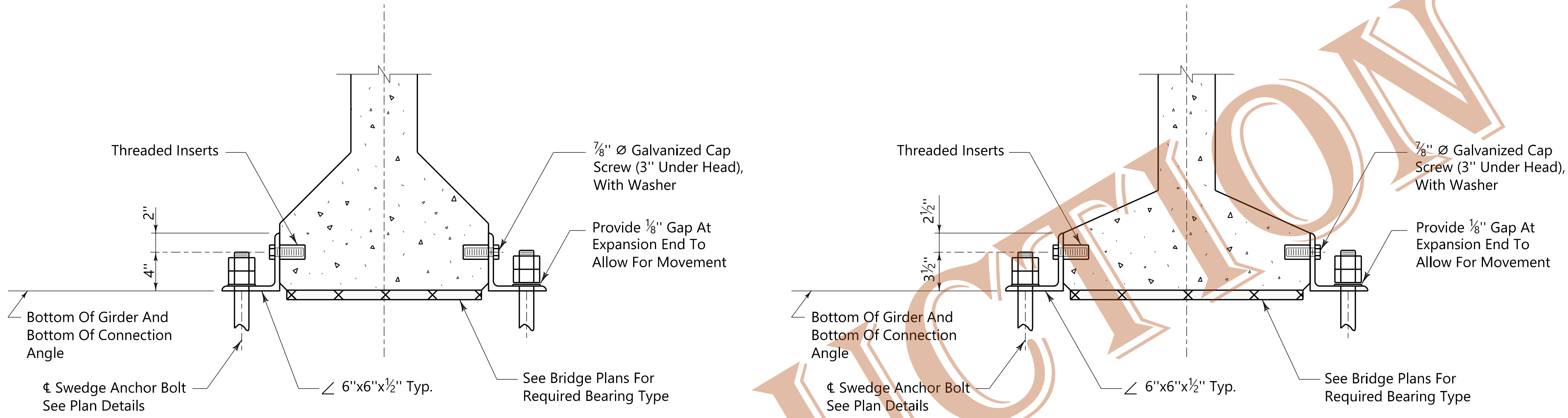


AASHTO TYPE GDR. CLIP ANGLE (EXP.)



BULB TEE TYPE GDR. CLIP ANGLE (EXP.)

CLIP ANGLE HOLE & SLOT SIZE		
BOLT	ROUND	SLOT
AB-1	1 1/4"	1 1/4" x 7"
AB-2	1 1/2"	1 1/2" x 7"
AB-3	1 3/4"	1 3/4" x 7"

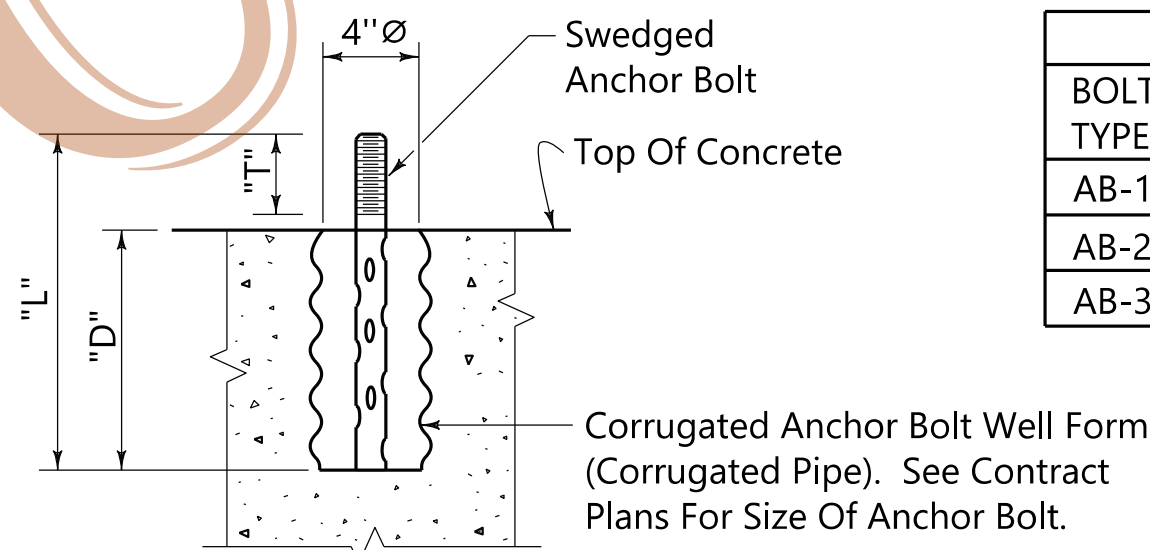


END VIEW AASHTO TYPE GDR.

END VIEW BULB TEE TYPE GDR.

CONNECTION ANGLE DETAILS

NOTE: Threaded inserts and 7/8" Ø x 3" Cap Screws with 1-washer each are to be included in the price bid per lin. ft. of P.P.C. girder. Swedge Anchor Bolts w/2 hex nuts and 1-washer each, and Connection Angles 6" x 6" x 1/2" are to be included in pay item 508-A pounds of structural steel. Shop drawings as required by ALDOT Standard Specifications for pay item 508-A are required for Swedge Anchor Bolts and Connection Angles. Connection Angles 6" x 6" x 1/2" shall be hot -dipped galvanized in accordance with AASHTO M-111. 7/8" Ø Cap Screws, Swedge Anchor Bolts and washers shall be hot -dipped galvanized in accordance with AASHTO M-232. Damaged galvanized surface not to be encased in concrete, shall be repaired in accordance with Standard Specification 855.15.



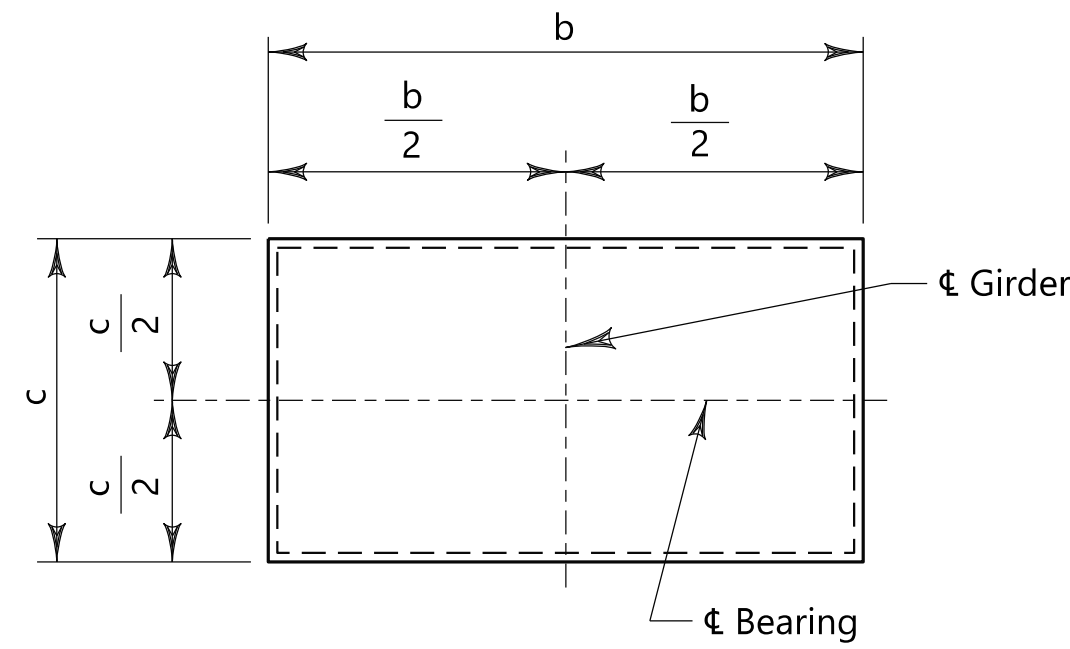
ANCHOR BOLT DIMENSIONS				
BOLT TYPE	DIAM.	LENGTH "L"	THREADS "T"	EMBED "D"
AB-1	1"	1'-10"	5"	1'-4"
AB-2	1 1/4"	2'-1"	6"	1'-6"
AB-3	1 1/2"	2'-4"	6"	1'-9"

NOTE: Swedge anchor bolts shall be set in 4" Ø blockouts, or drilled or cast-in-place using a template.

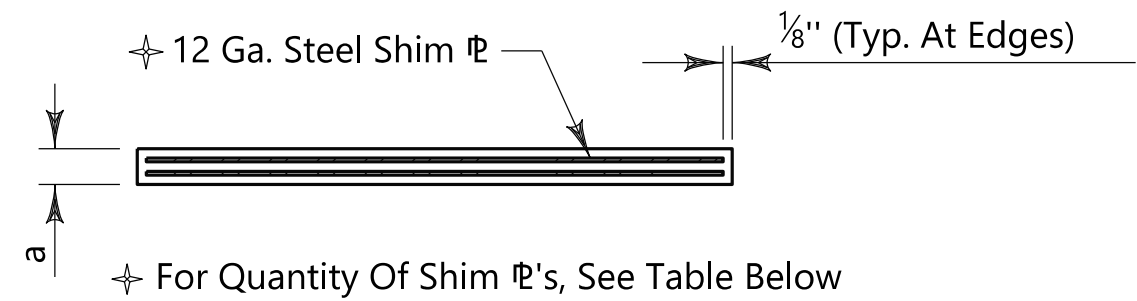
Provide each anchor bolt well with a readily removable watertight cap. Details to be approved by the engineer. The formwork, debris and standing water shall be removed from each well immediately prior to capping. It is mandatory that caps be in place throughout periods during which below freezing temperatures can be expected to occur. The contractor shall ensure that any water trapped in the wells does not freeze.

Remove corrugated well form prior to grouting around anchor bolts. Do not grout anchor bolts until girders have been completely erected, adjusted if necessary after erection, and approved by the engineer.

ANCHOR BOLT AND WELL DETAILS

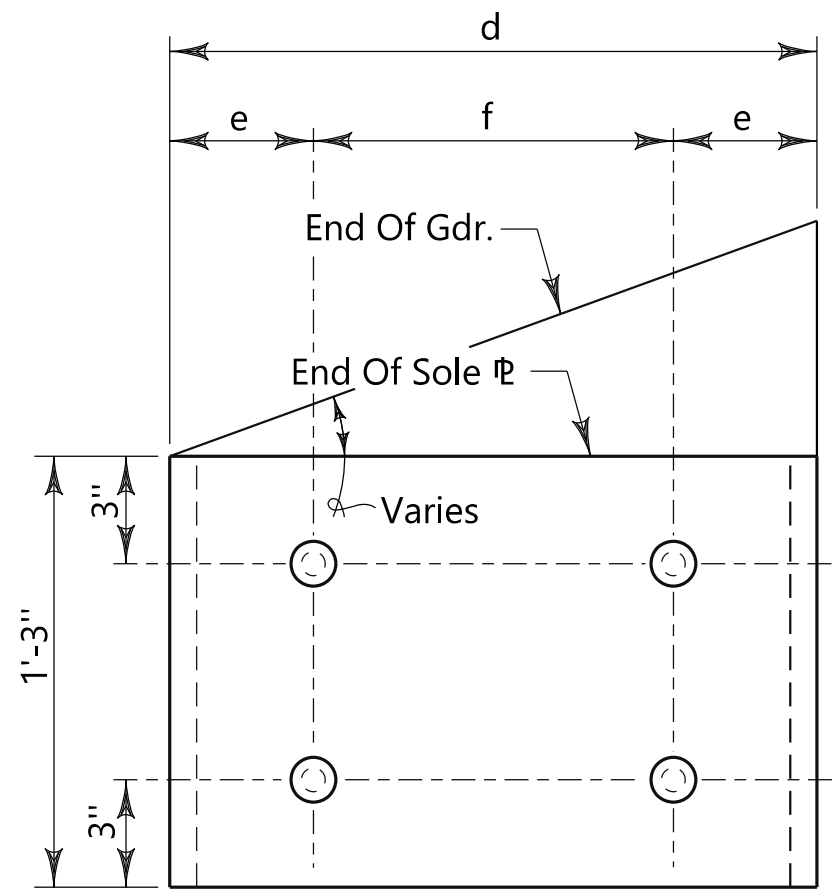


PLAN

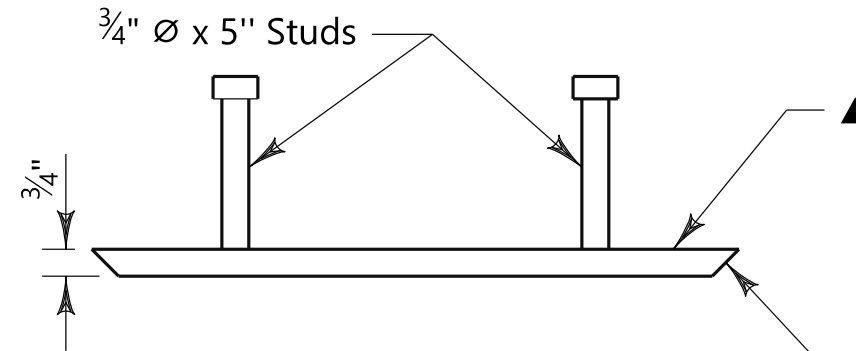


ELEVATION

ELASTOMERIC BEARING PAD DETAIL
(FOR BEARING MARK "B" & "VB")

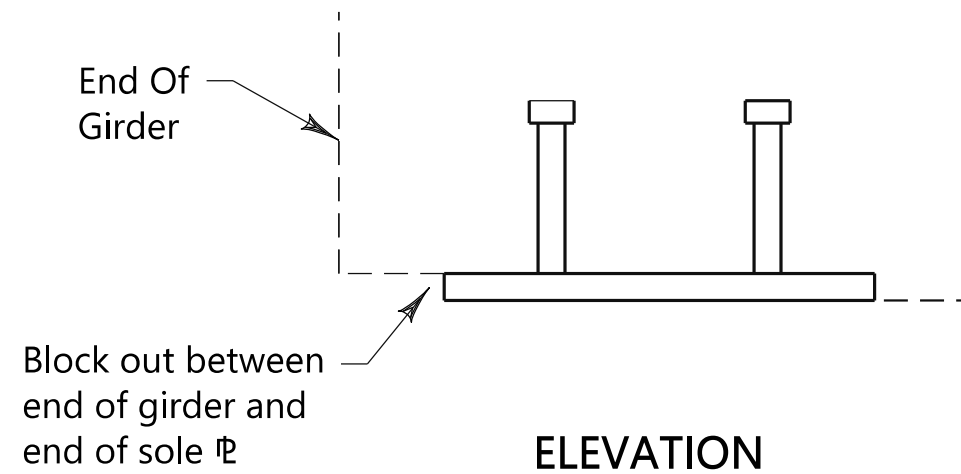


PLAN

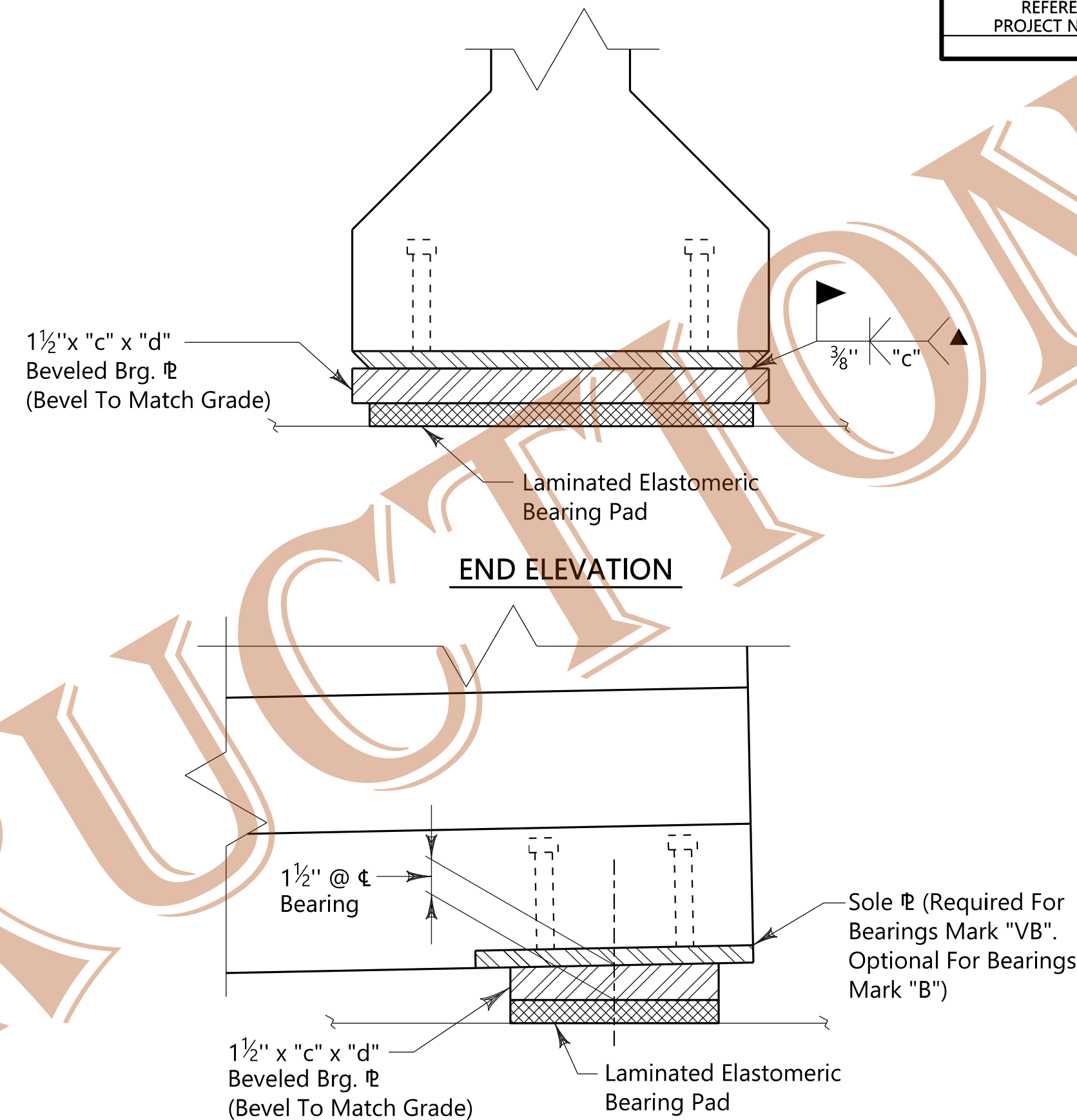


END VIEW

SOLE PLATE DETAIL
(FOR ALL GIRDER TYPES)



ELEVATION



END ELEVATION

SIDE ELEVATION

BEARING MARK "VB" DETAIL

▼ NOTE: A Bearing Layout (Erection Plan) Shall Be Provided By The Manufacturer Of The Bearings Whenever Type 4 Mark "VB" Elastomeric Bearings Are Specified In The Bridge Drawings. The Layout Shall Be Included In The Bearing Pad Fabrication Drawings Submitted To The Bridge Engineer For Approval And Shall Include All Bearings (Mark "VB" And Mark "B" If Applicable) For Each Structure. The Layout Shall Locate Each Bearing With Respect To Mark Number And Shall Indicate Correct Placement Of Bearing With Respect To Beveling.

▲ NOTE: Sole Plates Shall Be Hot-Dipped Galvanized In Accordance With AASHTO M-111. Beveled Edges Of The Sole Plate To Receive Field Welding Shall Be Ground To Bare Metal Before Being Cast In Girder. Reference Sections 511 & 837 Of The Standard Specifications For Bearing Plate Preparation Requirements.

The Contractor Shall Remove Any Rust That Appears In The Field Weld Areas Of The Bearing Plate and Sole Plate By Wire Brushing Just Prior To Field Welding These Plates. All Deck Pours Shall Be Completed Prior To Welding Bearing Plate To Sole Plate.

NOTE: For Anchor Bolt, Anchor Bolt Well, And Clip Angle Details See Std. Dwg. I-131 Sheet 7 of 8.

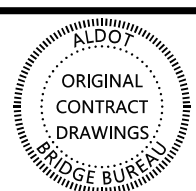
					Elastomeric Bearing Pad Data										Sole Plate & Bearing Plate Data		
Girder Type (AASHTO)	Maximum Span Length *	Maximum Load DL + LL	▼ Elastomeric Bearing		Bearing Pad Dimensions			Individual Layers **				Required 12 Gauge Steel Shim Plates			Sole Pl & Bevel Pl Length "d"	Connection Stud Spacing	
					Thickness "a"	Length "b"	Width "c"	Exterior		Interior						"e"	"f"
			Mark	Type				Number	Thickness	Number	Thickness	Number	Length	Width			
Type I	45 ft.	105 kips	VB1	4	0.75"	14.5"	9.0"	2	0.375"	- - -	- - -	1	14.25"	8.75"	16.0"	4.0"	8.0"
Type II	60 ft.	125 kips	VB2	4	0.75"	16.5"	9.0"	2	0.375"	- - -	- - -	1	16.25"	8.75"	18.0"	5.0"	8.0"
Type III	85 ft.	135 kips	VB3	4	1.00"	20.5"	9.0"	2	0.250"	1	0.500"	2	20.25"	8.75"	22.0"	5.0"	12.0"
BT-54	100 ft.	220 kips	VB4	4	1.50"	24.5"	9.0"	2	0.1875"	3	0.375"	4	24.25"	8.75"	26.0"	5.0"	16.0"
BT-63	125 ft.	220 kips	VB4	4	1.50"	24.5"	9.0"	2	0.1875"	3	0.375"	4	24.25"	8.75"	26.0"	5.0"	16.0"
BT-72	140 ft.	220 kips	VB4	4	1.50"	24.5"	9.0"	2	0.1875"	3	0.375"	4	24.25"	8.75"	26.0"	5.0"	16.0"
BT MOD.	300 ft.	289 kips	VB5	4	3.00"	26.5"	10.0"	2	0.2500"	5	0.500"	6	26.25"	9.75"	28.0"	6.0"	16.0"

					Elastomeric Bearing Pad Data									
Girder Type (AASHTO)	Maximum Span Length *	Maximum Load DL + LL	Elastomeric Bearing		Bearing Pad Dimensions			Individual Layers **				Required 12 Gauge Steel Shim Plates		
					Thickness "a"	Length "b"	Width "c"	Exterior		Interior				
			Mark	Type				Number	Thickness	Number	Thickness	Number	Length	Width
Type I	45 ft.	105 kips	B1	2	0.75"	14.5"	9.0"	2	0.375"	- - -	- - -	1	14.25"	8.75"
Type II	60 ft.	125 kips	B2	2	0.75"	16.5"	9.0"	2	0.375"	- - -	- - -	1	16.25"	8.75"
Type III	85 ft.	135 kips	B3	2	1.00"	20.5"	9.0"	2	0.250"	1	0.500"	2	20.25"	8.75"
BT-54	100 ft.	220 kips	B4	2	1.50"	24.5"	9.0"	2	0.1875"	3	0.375"	4	24.25"	8.75"
BT-63	125 ft.	220 kips	B4	2	1.50"	24.5"	9.0"	2	0.1875"	3	0.375"	4	24.25"	8.75"
BT-72	140 ft.	220 kips	B4	2	1.50"	24.5"	9.0"	2	0.1875"	3	0.375"	4	24.25"	8.75"
BT MOD.	300 ft.	289 kips	B5	2	3.00"	26.5"	10.0"	2	0.2500"	5	0.500"	6	26.25"	9.75"

* Length Used To Calculate Shear Deformation Of Elastomer.

** Exterior Layer Thickness Measured From Outside Surface Of Pad To Pl Shim Pl.
Interior Layer Thickness Measured From Pl Shim Pl To Pl Shim Pl.

ALABAMA DEPARTMENT
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BRIDGE SPECIAL PROJECT DRAWING

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