

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



SPECIFICATIONS

AASHTO Standard Specifications for Highway Bridges 1961 with Interim Specifications.

DESIGN LOADING

HS 20-44 (Modified for Interstate)

MATERIALS

Concrete:
Structural Wearing Surface..... Class "LP"
Barriers, Curbs, Sidewalks & Transition Barriers..... Class "LP"
All Other..... Class "A"
Reinforcing Steel..... ASTM A 615/A 615M, Grade 60
Structural Steel:
All Material (except as noted)..... ASTM A 709, Grade 50
High Strength Bolts..... ASTM A 325, Type 3

BASIC DESIGN STRESSES

Concrete..... f 'c = 4,350 psi
Reinforcing Steel..... f y = 60,000 psi
Structural Steel:
ASTM A 709, Grade 50..... F y = 50,000 psi
ASTM A 709, Grade 36..... F y = 36,000 psi
ASTM A 325..... F μ = 120,000 psi

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OAKFIELD
AROOSTOOK COUNTY
I-95 NORTHBOUND
OVER
OAKFIELD-SMYRNA ROAD
PIN 21475.00
EXTERIOR GIRDER REPLACEMENT
PROJECT LENGTH 0.04 mi.
BRIDGE NO. 1397

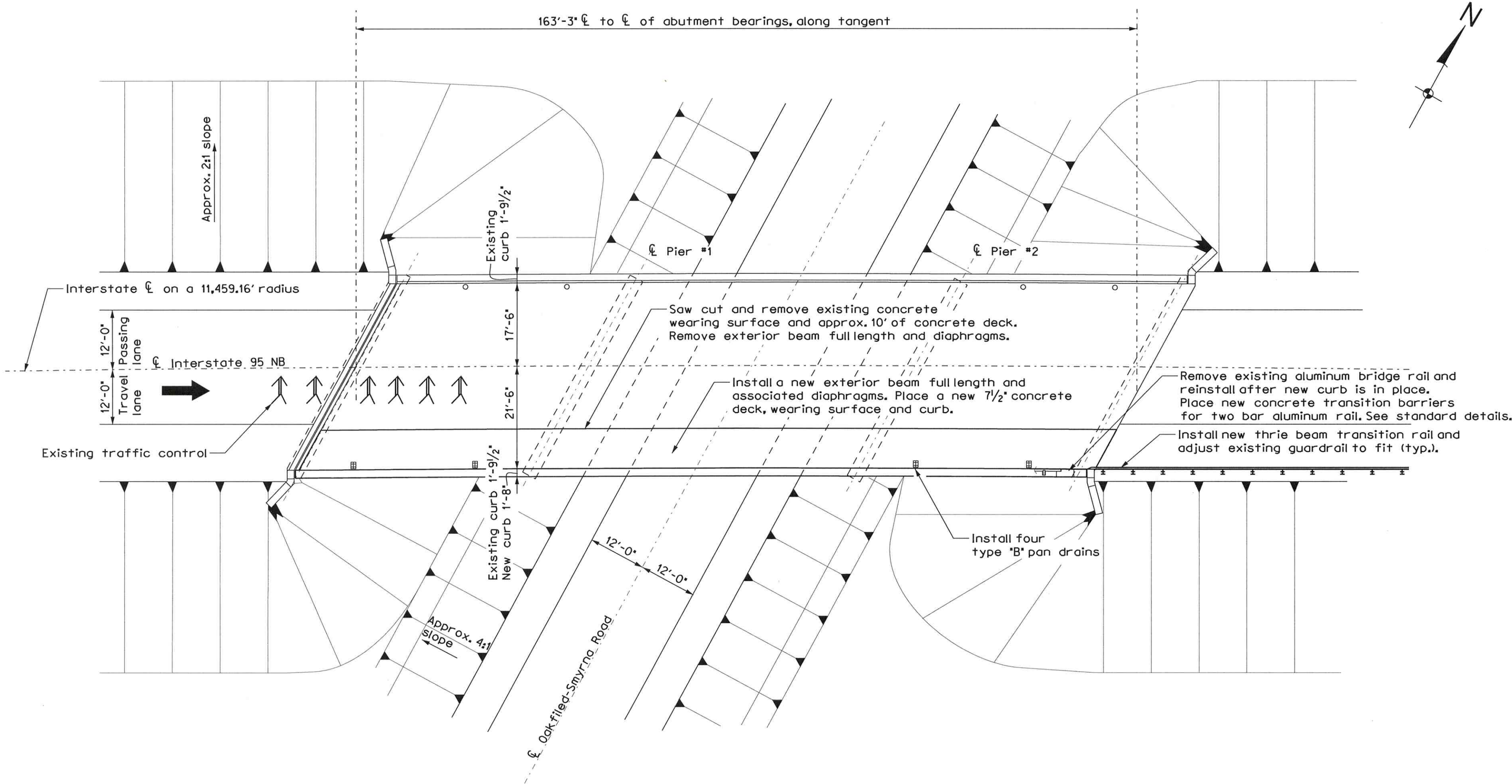
As-built plans
L.S. Bernier, Resident
1/22/16

UTILITIES

Emera Maine
Fairpoint Communications
Polaris Cable

PROJECT LOCATION:	On I-95 over the Oakfield-Smyrna Road at Exit 284 Lat. N 46°6'36" Long. W 68°9'36"
PROGRAM AREA:	Bridge Maintenance
OUTLINE OF WORK:	Replacement of damaged exterior beam in kind.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
	1/24/16	
OAKFIELD I-95 NB/OAKFIELD-SMYRNA RD.	COMMISSIONER:	1/24/16
	CHIEF ENGINEER:	1/24/16
PROJECT INFORMATION	SIGNATURE	DATE
	1/24/16	1/24/16
OAKFIELD I-95 NB/OAKFIELD-SMYRNA RD.	PROJECT MANAGER	DATE
	1/24/16	1/24/16
TITLE SHEET	PROJECT RESIDENT	DATE
	1/24/16	1/24/16
SHEET NUMBER		
1		
OF 7		



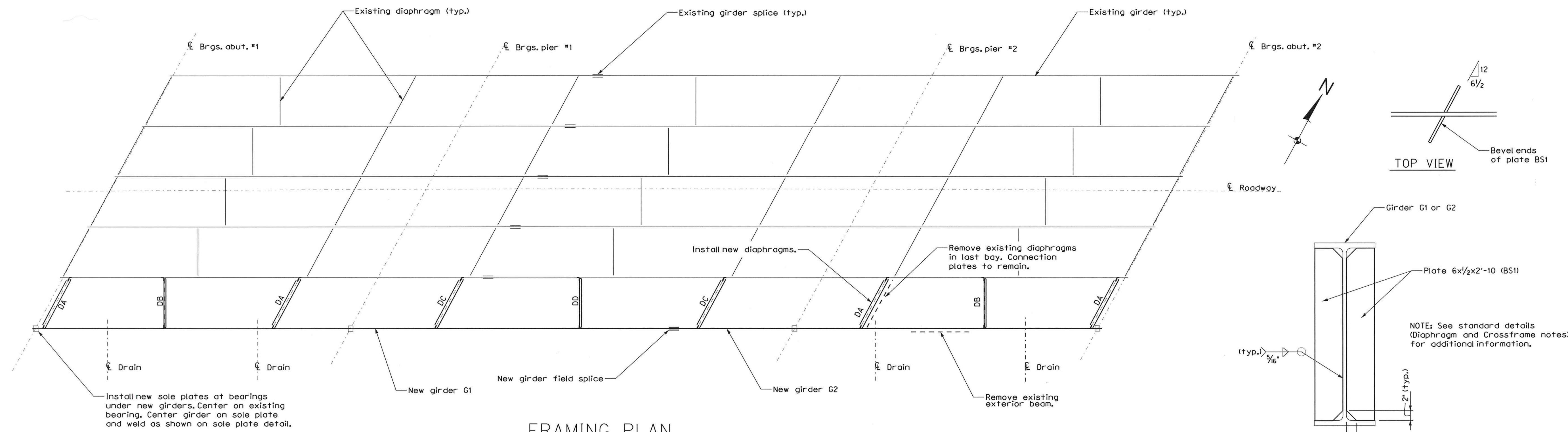
PLAN VIEW

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
910.301	SPECIAL WORK	1	L.S.

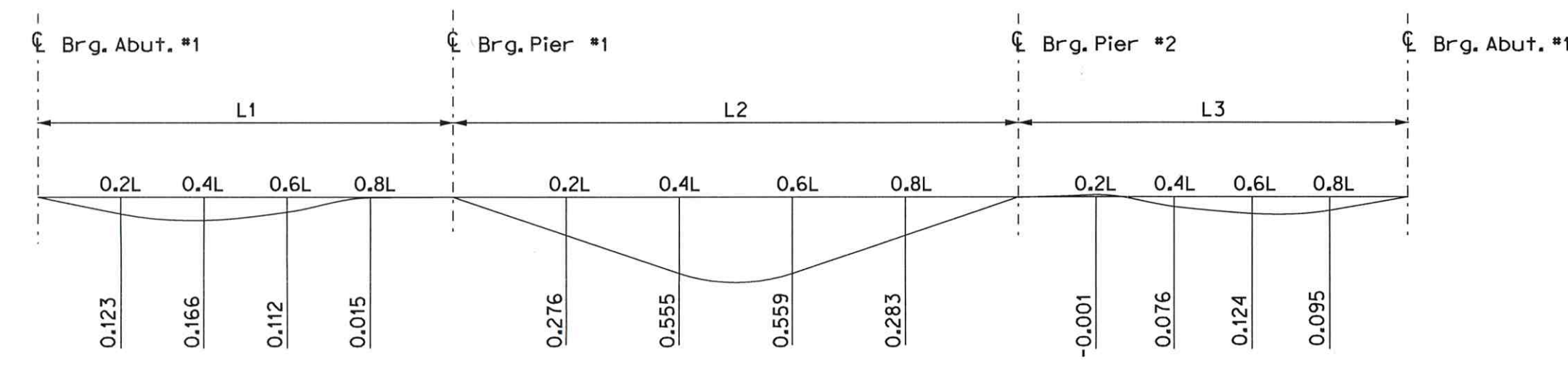
GENERAL CONSTRUCTION NOTES

1. Project information referred to below may be accessed at the following MaineDOT web address: <http://www.maine.gov/mdot/contactors/index.shtml>.
2. The existing bridge plans may be accessed at the MaineDOT web address. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.
3. All utility facilities shall be adjusted by the respective utilities unless otherwise noted.
4. The Contractor shall submit a Bridge Demolition Plan to the Resident at least 10 business days prior to the start of demolition work. The plan shall outline the methods and equipment to be used to remove and dispose of all materials included in the existing bridge. No work related to the removal of the bridge shall be undertaken by the Contractor until MaineDOT has reviewed the Bridge Demolition Plan for appropriateness and completeness. Payment for all work necessary for developing, submitting and finalizing the Demolition Plan will be considered incidental to the bridge removal pay item.
5. A portion of the existing bridge shall be removed by and become the property of the Contractor except where noted. The steel portions of the existing bridge are coated with a lead based paint system. The Contractor is responsible for the containment proper management and disposal of all lead-contaminated hazardous waste generated by the process of demolishing the bridge. The Contractor is responsible for implementing appropriate OSHA mandated personal protection standards related to this process. Once the designated portion of the existing bridge is removed the Contractor is solely responsible for the care, custody and control of the components of the existing bridge and any hazardous waste generated as a result of the storage, recycling or disposal of the bridge components, including lead-coated steel. The Contractor shall recycle or reuse the steel in accordance with the Maine Department of Environmental Protection's "Maine Hazardous Waste Management Regulations," Chapter 850. A copy of this regulation is available at MaineDOT's offices on Child Street in Augusta.
6. During demolition of the bridge, care shall be taken as not to damage the pavement or traveling public on the roadway below.
7. The granite curb shall remain the property of the MaineDOT upon removal. The Contractor will notify the Department when the granite is ready to be picked up.
8. The existing aluminum rail posts and tube sections shall be re-used. Care shall be taken not to damage the rail or posts during removal. New attachments and anchorages shall be used for re-installation on the new portion of bridge.
9. Quantities included are provided by MaineDOT for informational purposes only. The project in its entirety will be paid for under Lump Sum Item 910.301 Special Work with no addition or reduction in payment to the Contractor if the actual final quantities are different from the MaineDOT provided estimated quantities.
10. The Northern Long Eared Bat may occupy cracks and crevices in and under bridges. If bats are observed on the bridge or, leaving the bridge when work is taking place, the Contractor should stop work and contact the project Resident. The Resident will contact the MaineDOT Environmental Office.
11. If notified of observed bats, the Department will review the site and provide appropriate project direction. The Department's Standard Specifications, Subsection 109.5 Adjustment for Delays, Paragraph B Compensable Delay will be applied if the Contractor is delayed as a result of these provisions.
12. Due to impact damage to exterior girder, traffic control is already in place on the I-95 bridge superstructure and approaches. Contractor shall be responsible for any traffic control necessary on the Oakfield-Smyrna roadway.
13. Contractor to re-establish bridge centerline before removal of deck. Do not rely on crown in roadway or pavement markings to indicate bridge centerline.

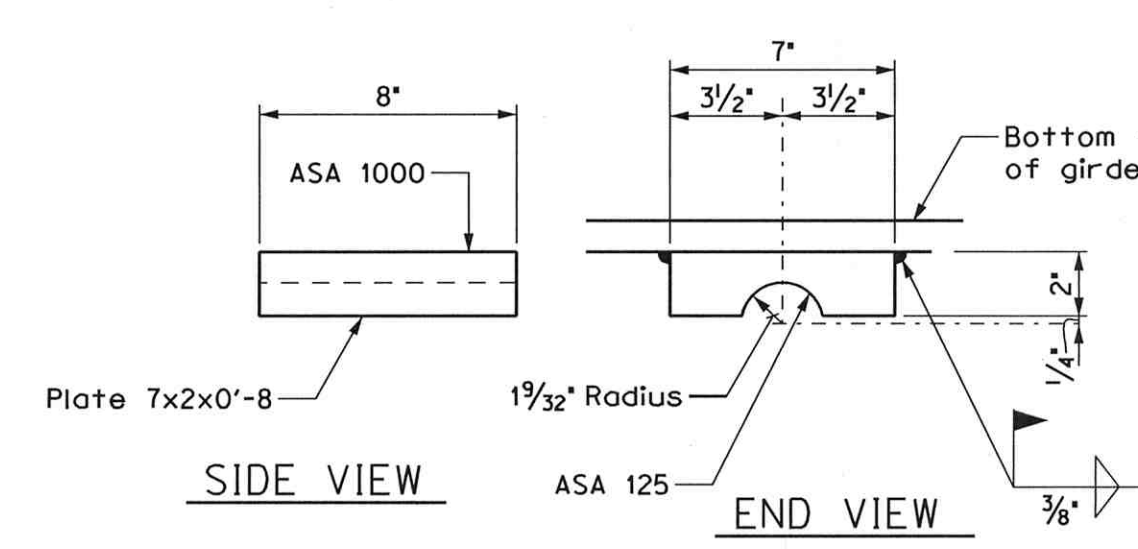
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OAKFIELD					ESTIMATED QUANTITIES				
I-95 NB/OAKFIELD-SMYRNA RD.									
SHEET NUMBER					2				
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FRAMING PLAN



DEAD LOAD DEFLECTION DIAGRAM
(All deflections in inches)



SOLE PLATE DETAIL
(4 each req'd.)

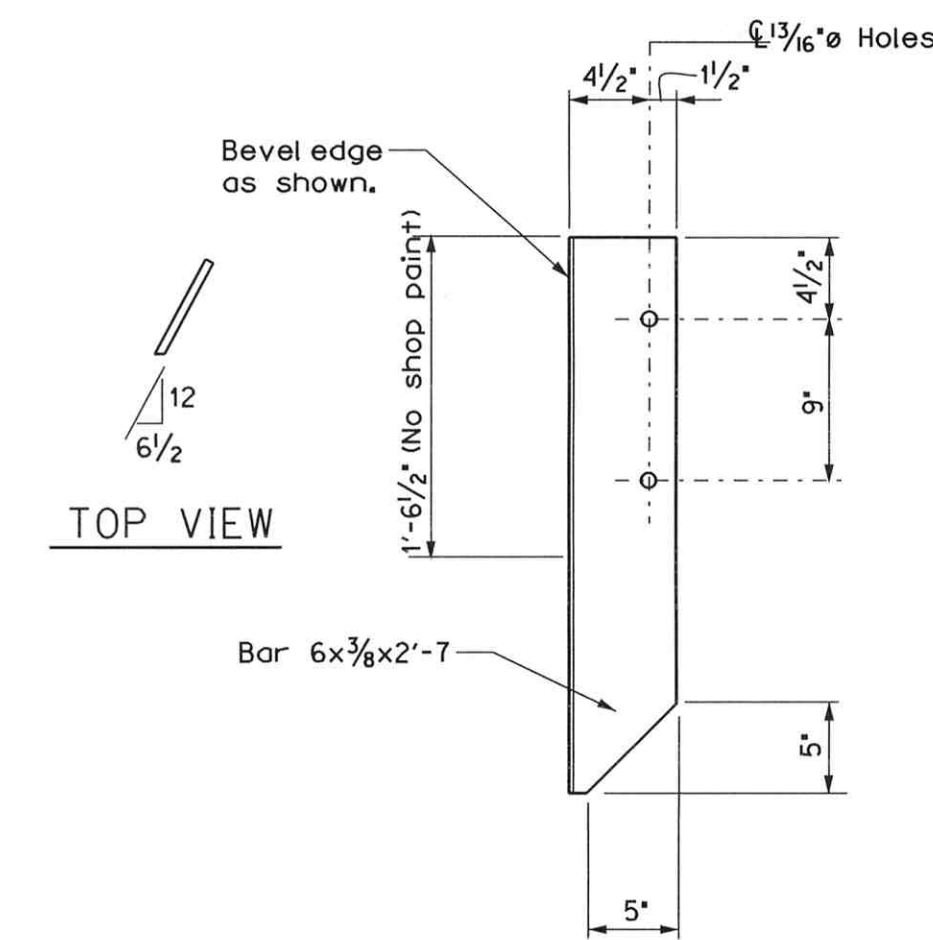
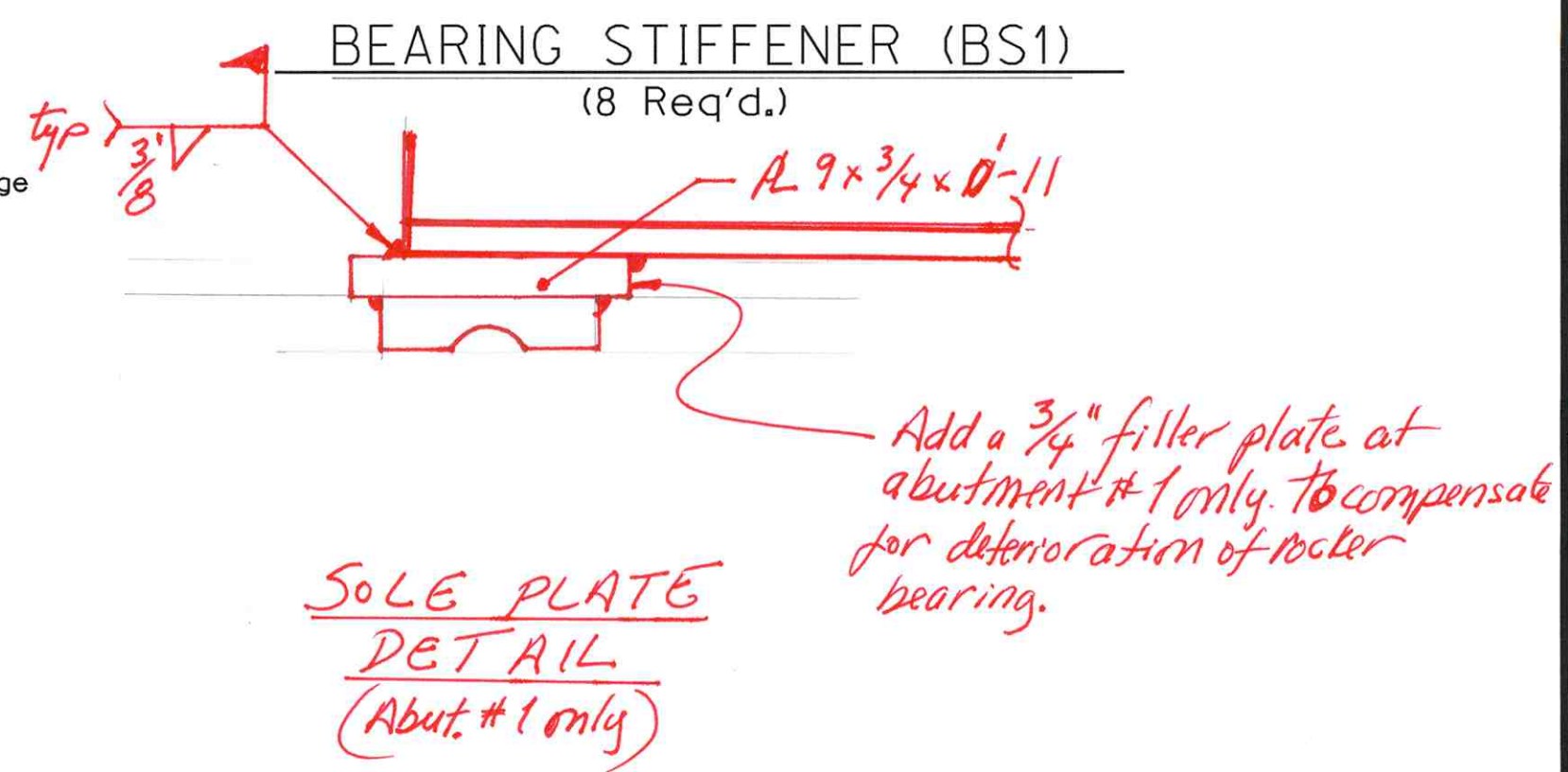


PLATE B1
(4 Req'd.)

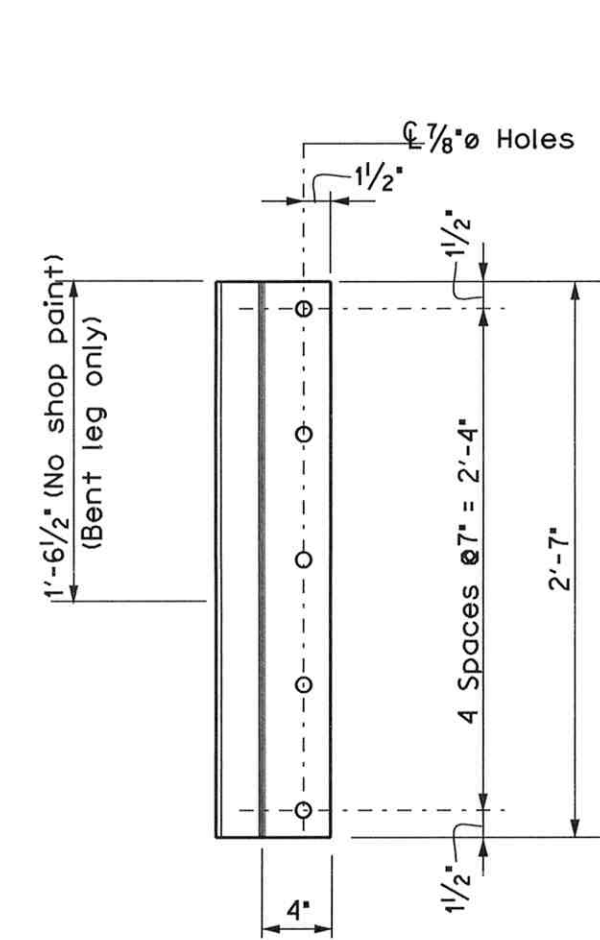


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(6 Req'd.)

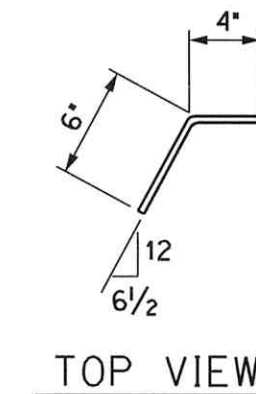


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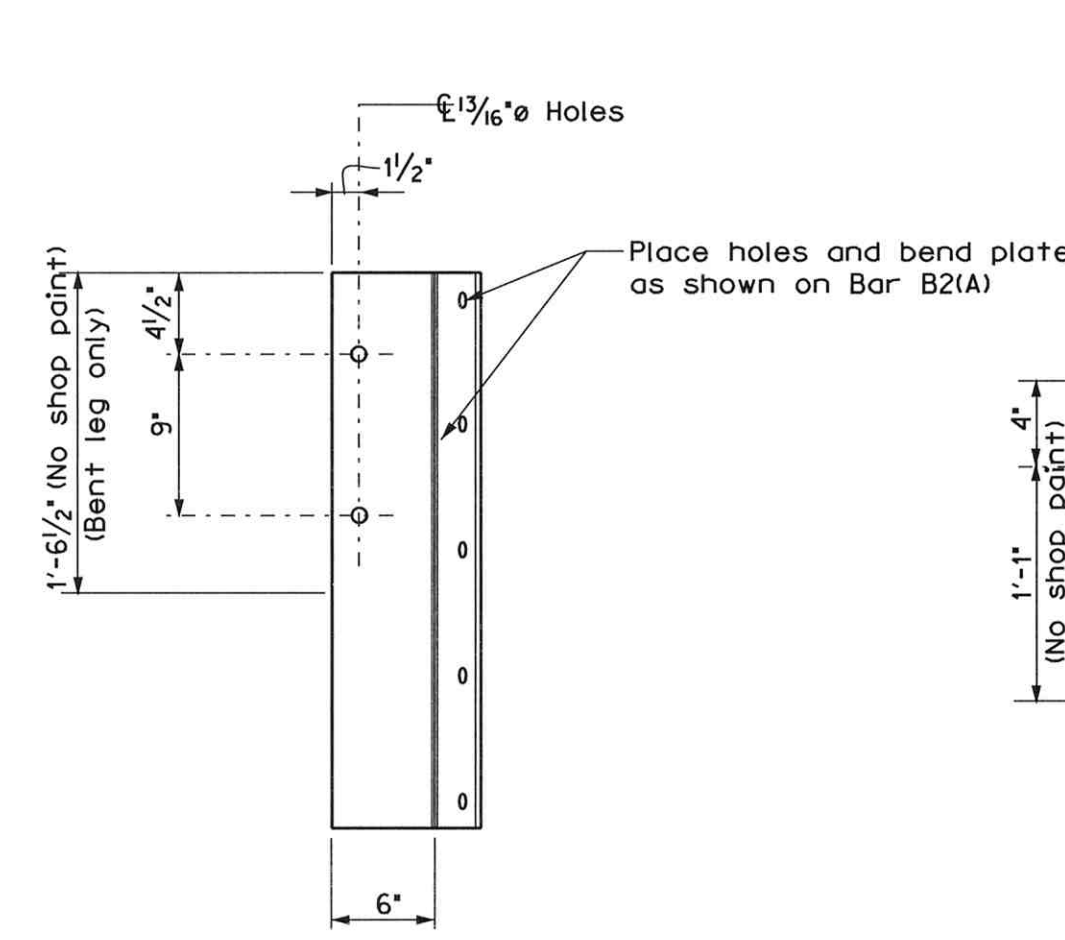
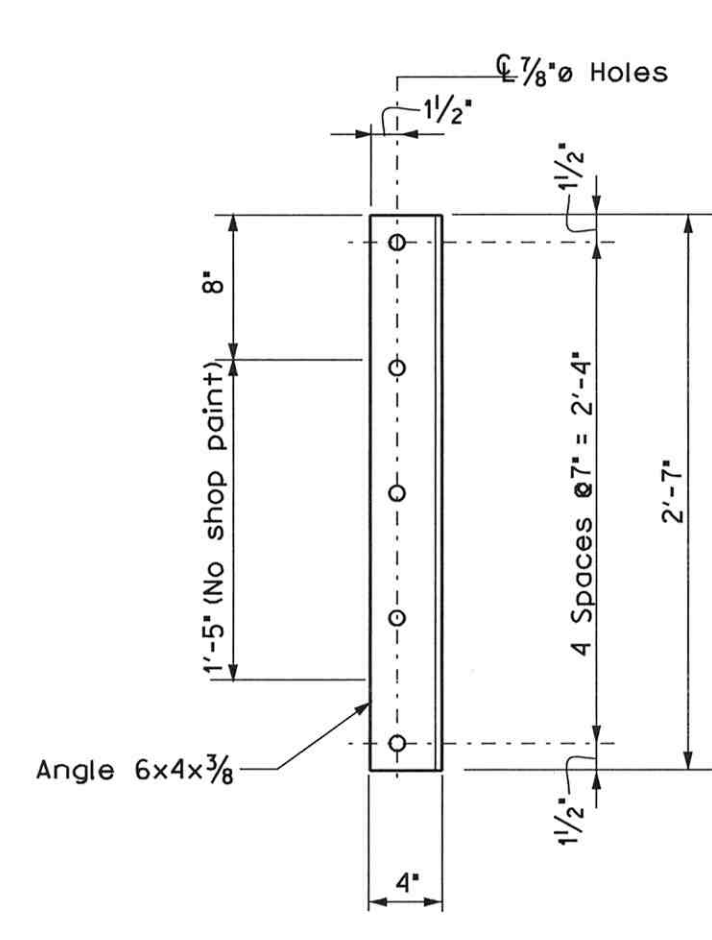
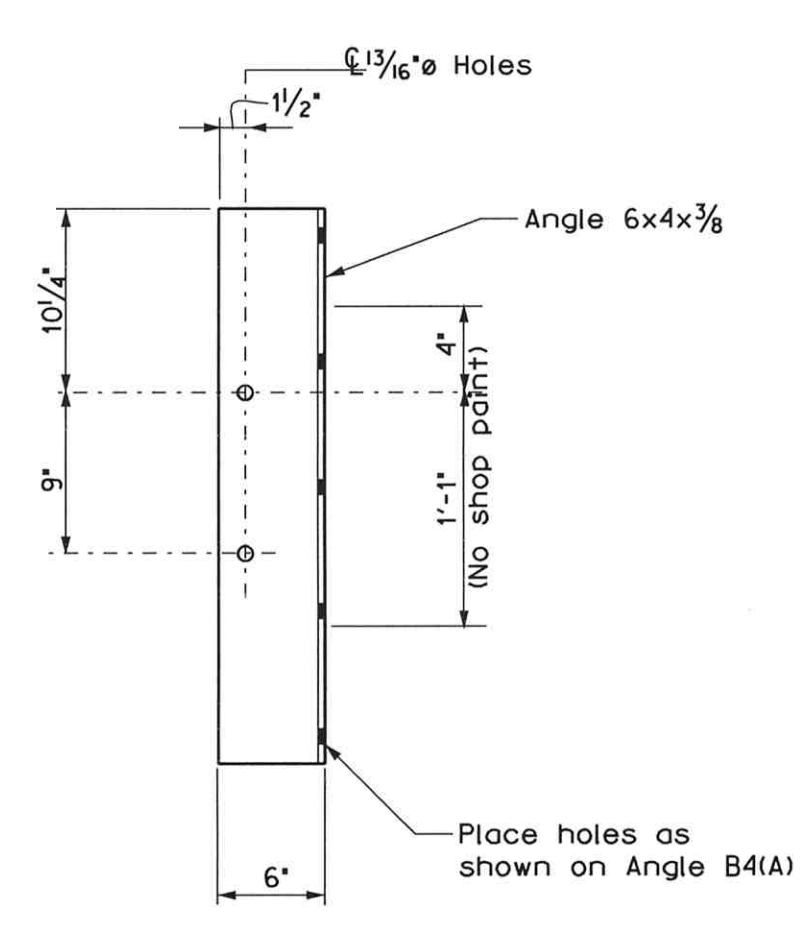


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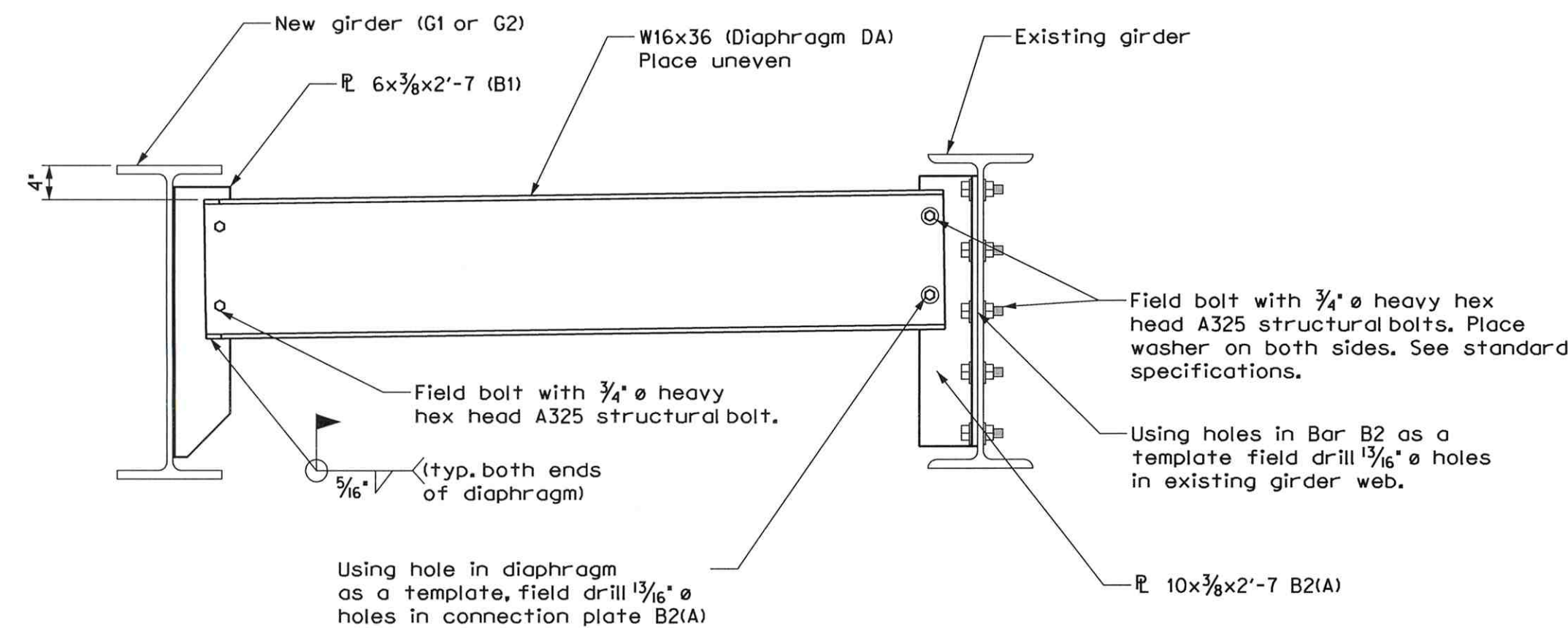


ANGLE B4(A)
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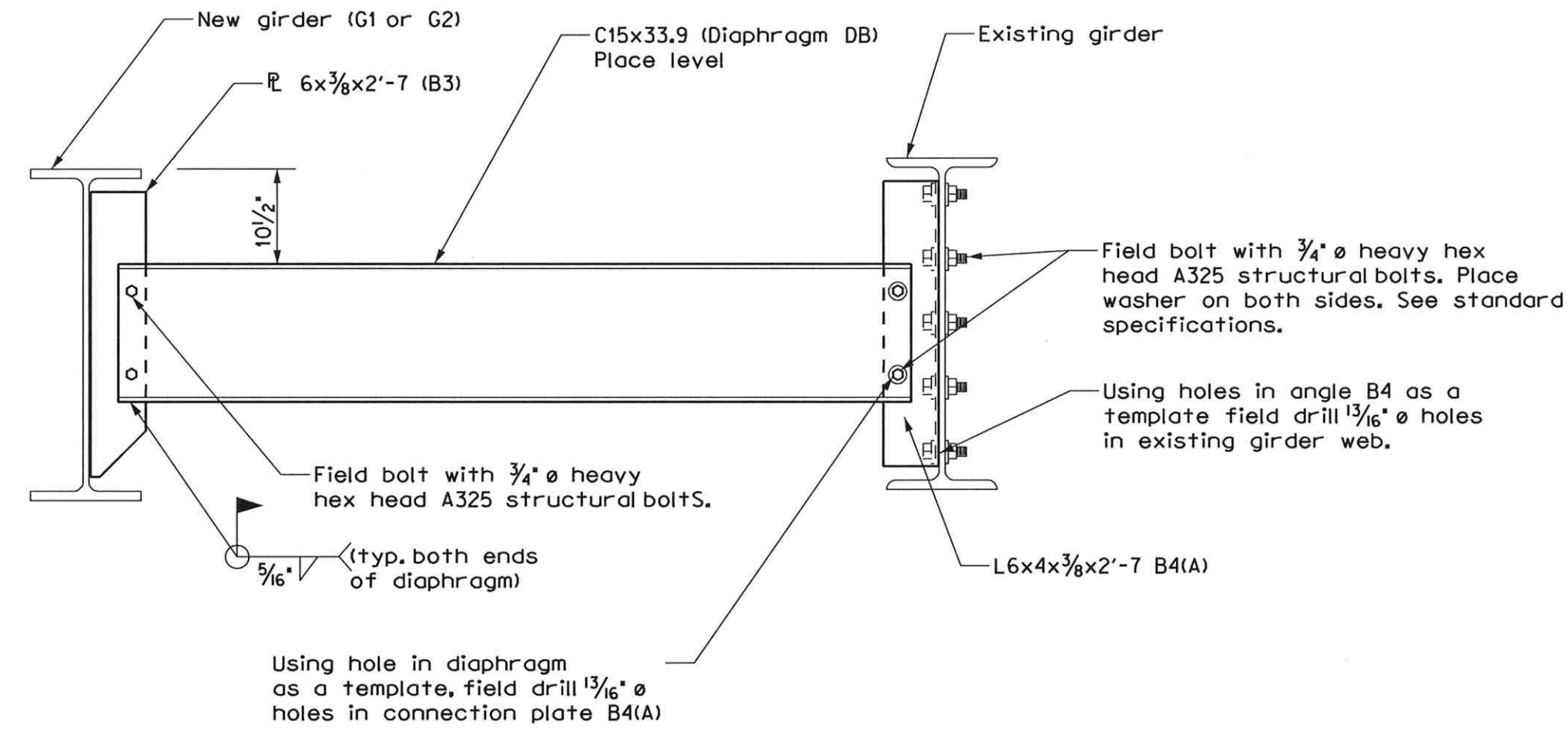


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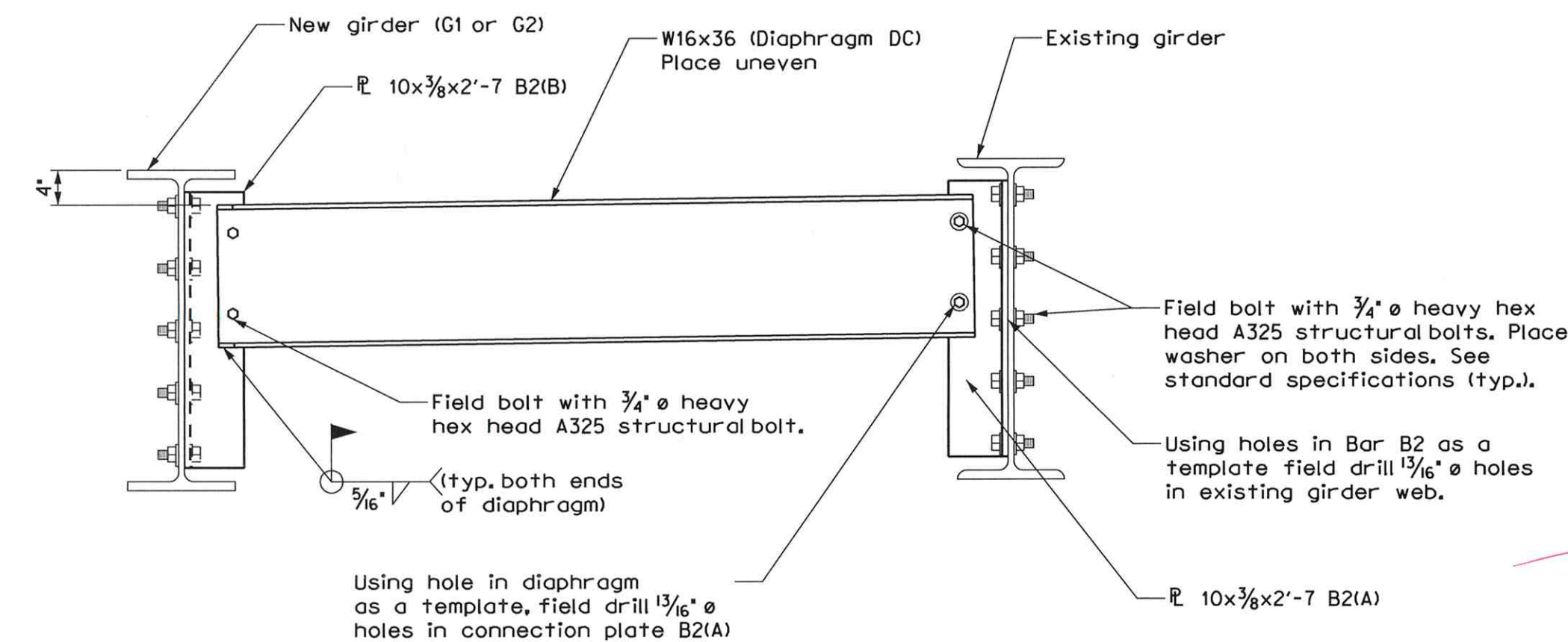
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CHECKED-REVIEWED	L. Steiner				
DESIGN2-DETAILED2					
DESIGN3-DETAILED3					
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REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					
SHEET NUMBER		3		OF 7	



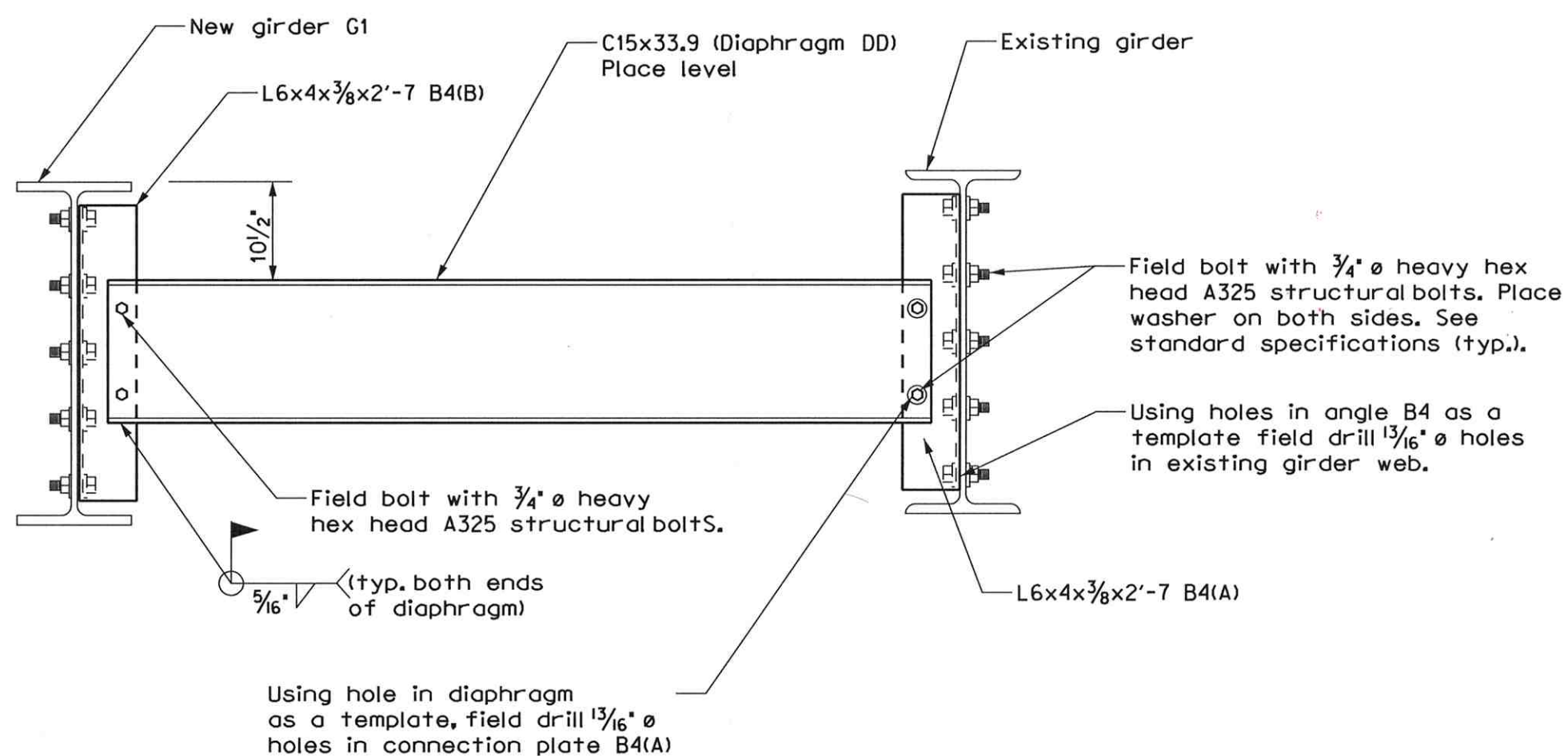
DIAPHRAGM "DA" CONNECTION DETAILS



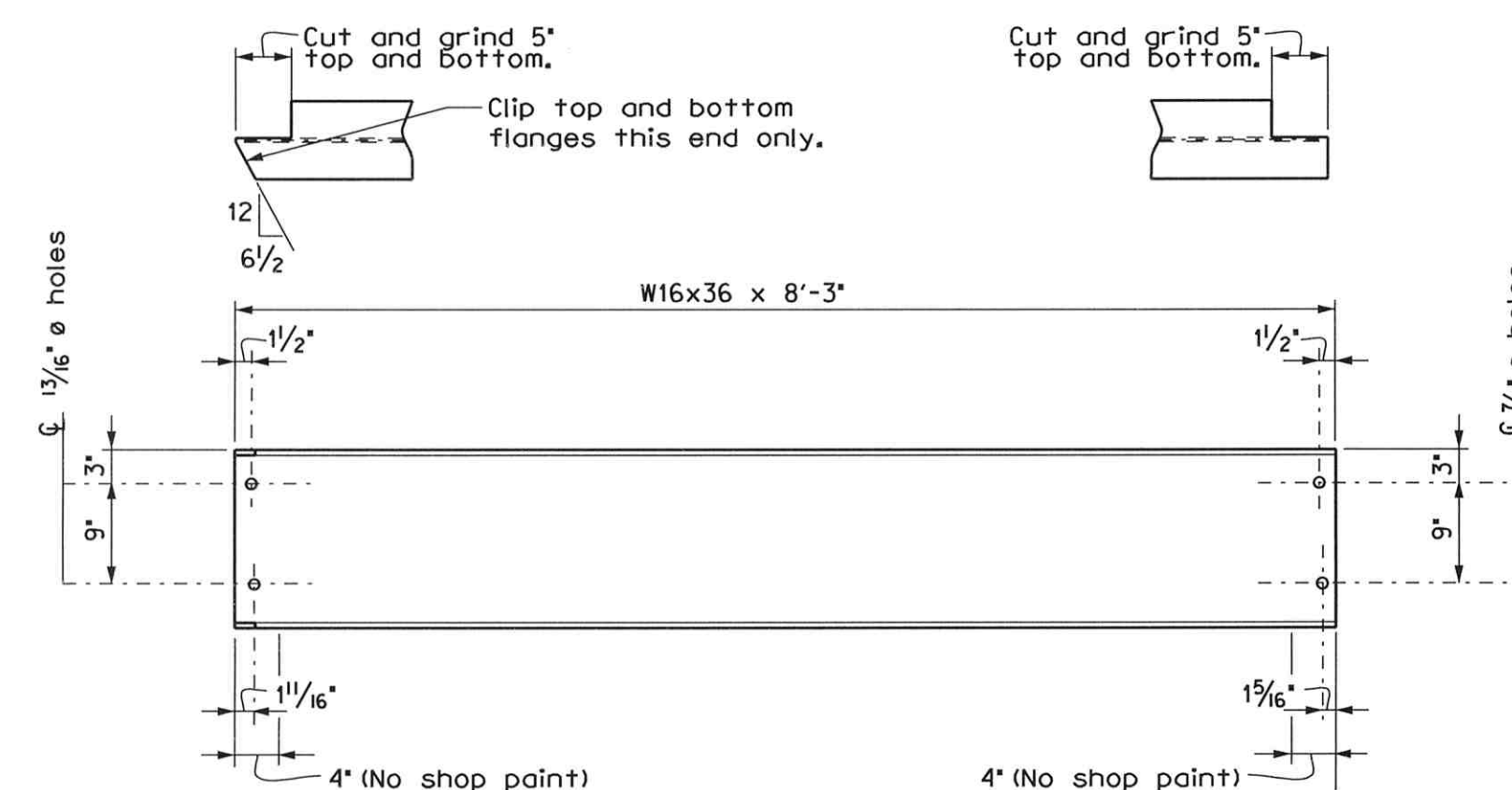
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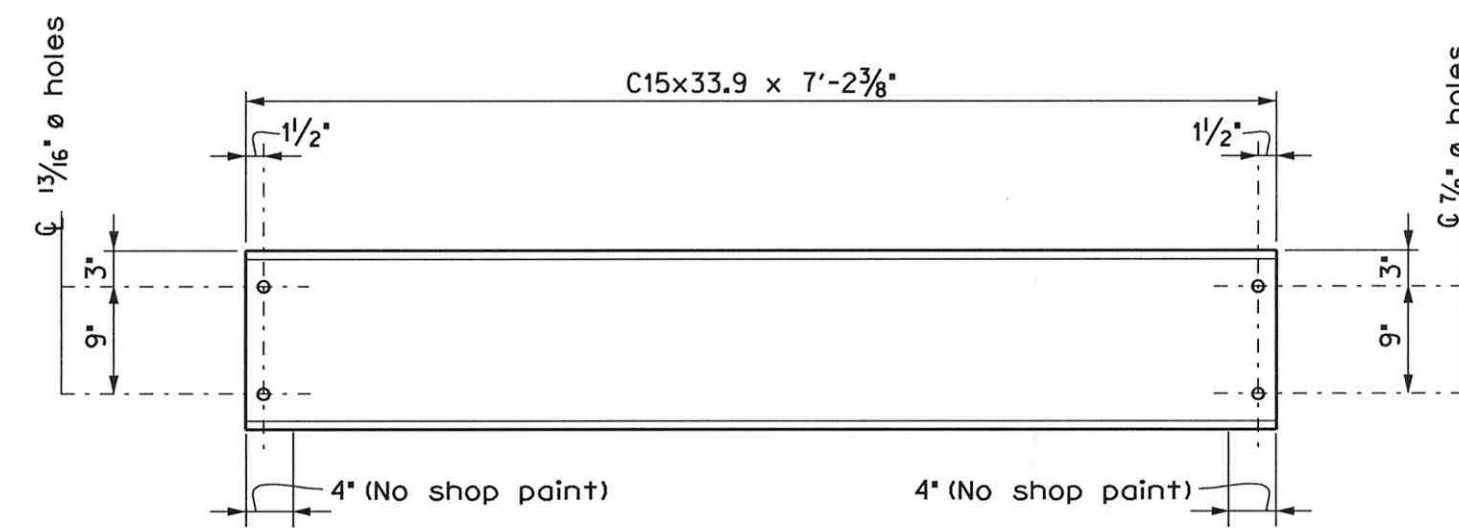
DIAPHRAGM "DC" CONNECTION DETAILS



DIAPHRAGM "DD" CONNECTION DETAILS

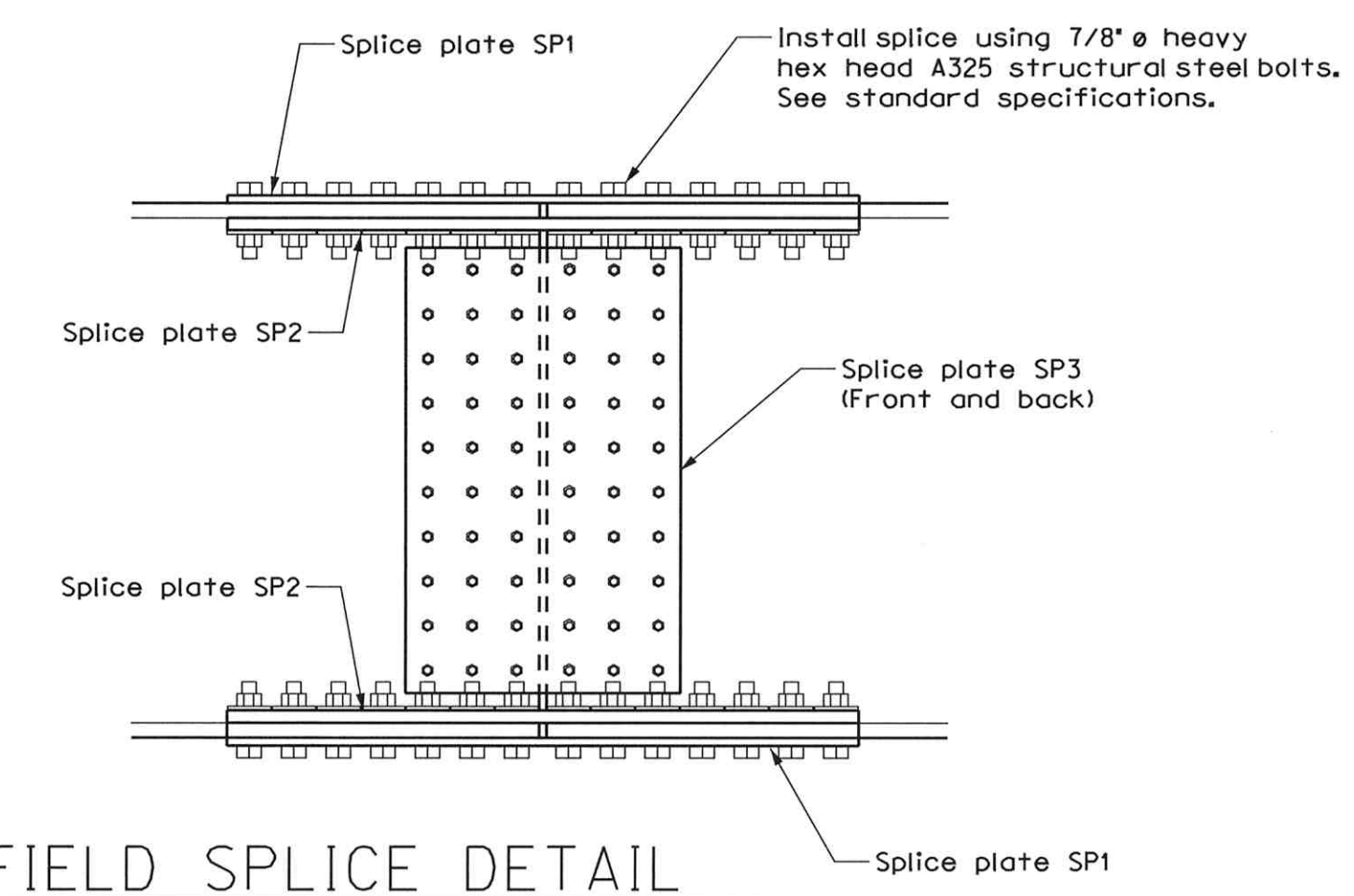
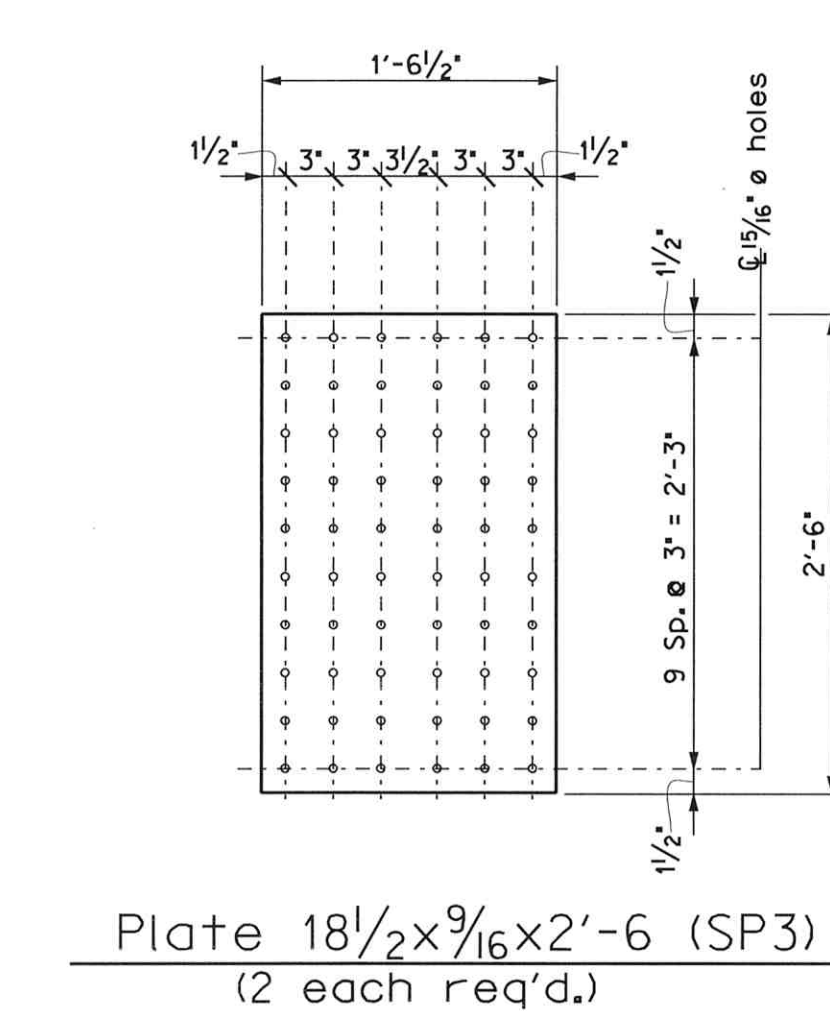


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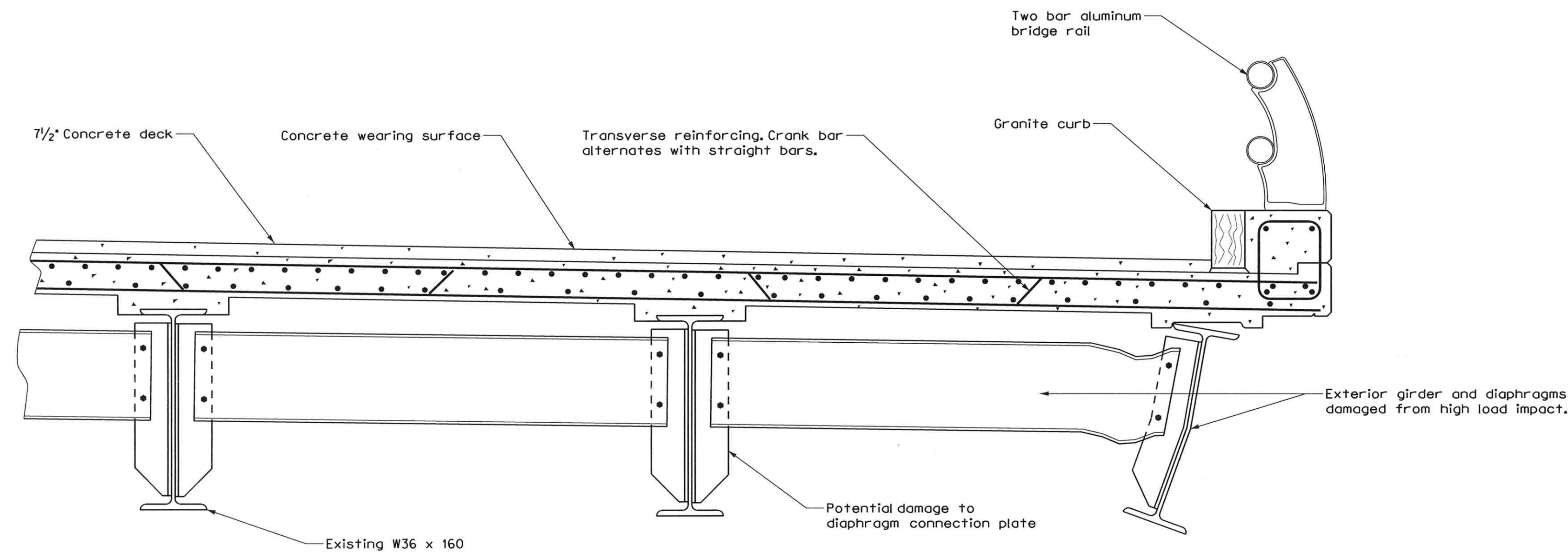


DIAPHRAGM DB&DD
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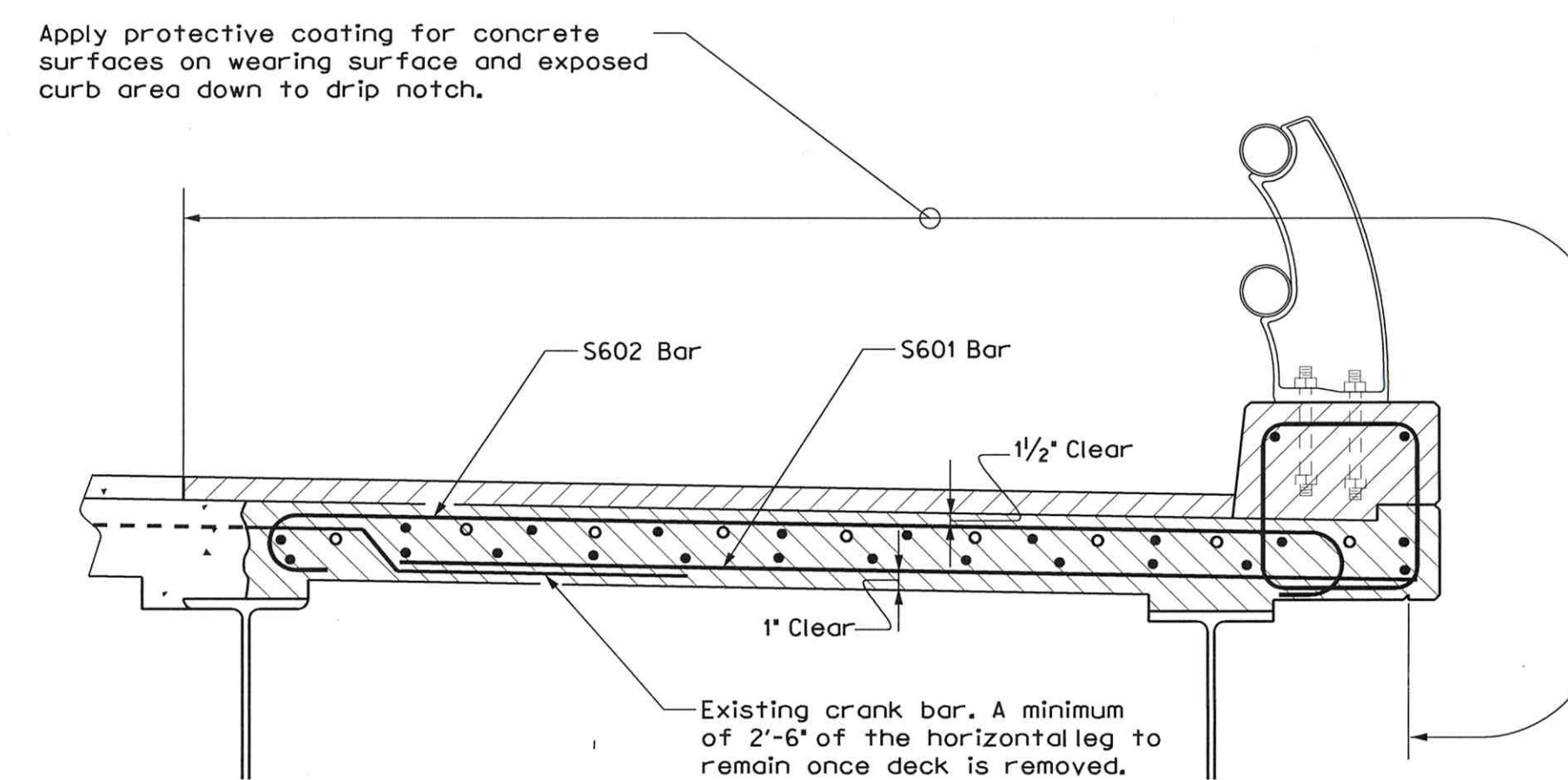
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PROJECT MANAGER	CHECKED	LSB			
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DESIGNED	DETAILS				
DESIGNED	DETAILS				
REVISIONS	1				
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REVISIONS	3				
REVISIONS	4				
FIELD CHANGES					
SHEET NUMBER		4		OF 7	



SHEET NUMBER		OAKFIELD I-95 NB/OAKFIELD-SMYRNA RD.		PROJ. MANAGER \$	BY	DATE
5	OF 7	STEEL DETAILS	DESIGN-DETAILED	1	LSBanner	6/15
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			DESIGN3-DETAILED3			P.E. NUMBER
			REVISIONS 1			DATE
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			STATE OF MAINE DEPARTMENT OF TRANSPORTATION PIN 21475.00			



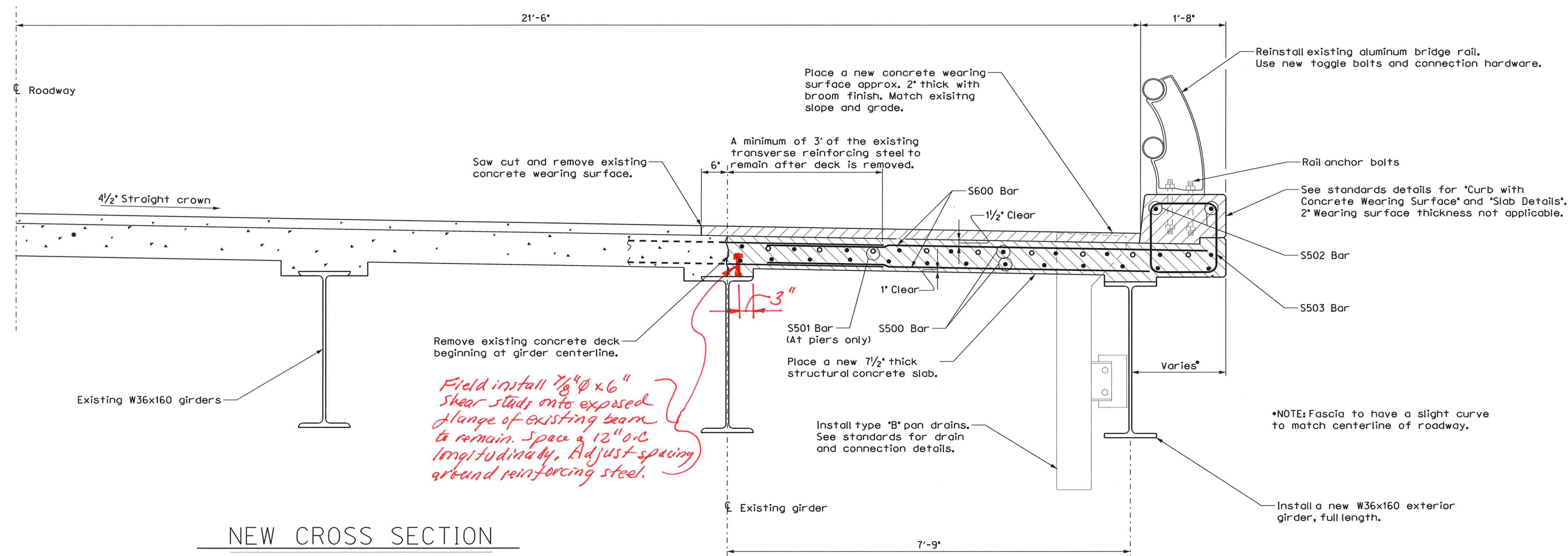
EXISTING CROSS SECTION



NEW CROSS SECTION AT CRANK BARS

SUPERSTRUCTURE NOTES

- 1.) Contractor may use a mechanical splice rather than a lap splice. Exposed length of reinforcing steel may be adjusted accordingly.
- 2.) The superstructure slab shall be placed in one continuous operation and shall be kept plastic until the entire placement has been made.
- 3.) The Contractor shall install Transition Barrier vertical closed stirrups, as shown in Standard Details Section 526, prior to placement of the curb.
- 4.) The theoretical blocking used shall be 1' at the abutments and 1/4' at the splice.
- 5.) All reinforcing steel to have 2" of cover unless noted otherwise.
- 6.) Existing deck reinforcing steel to remain once deck is removed, shall be cleaned of concrete.



NEW CROSS SECTION

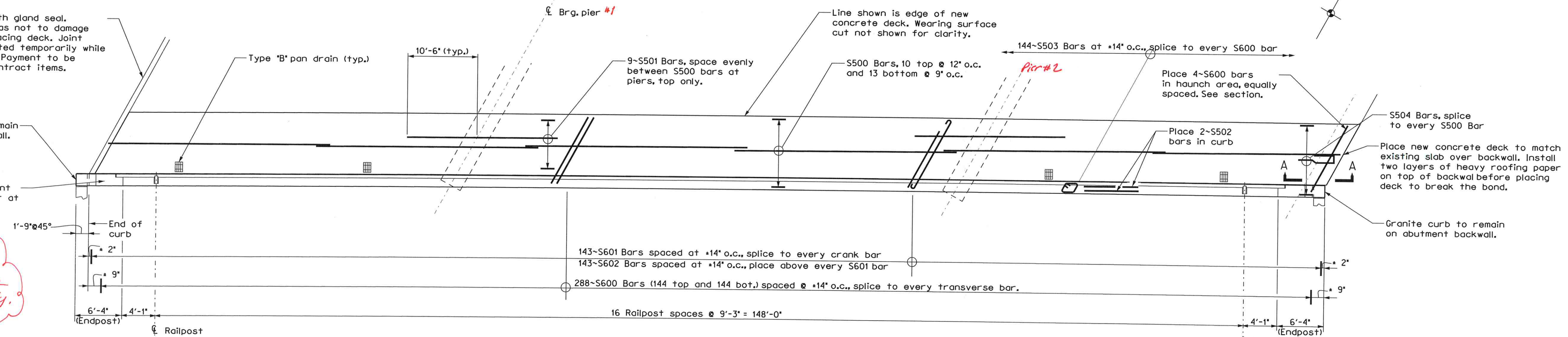
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DESIGN3-DETAILED3					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

Existing finger joint with gland seal. Care shall be taken so as not to damage seal while removing/replacing deck. Joint may have to be supported temporarily while deck is being replaced. Payment to be incidental to related contract items.

Granite curb to remain on abutment backwall.

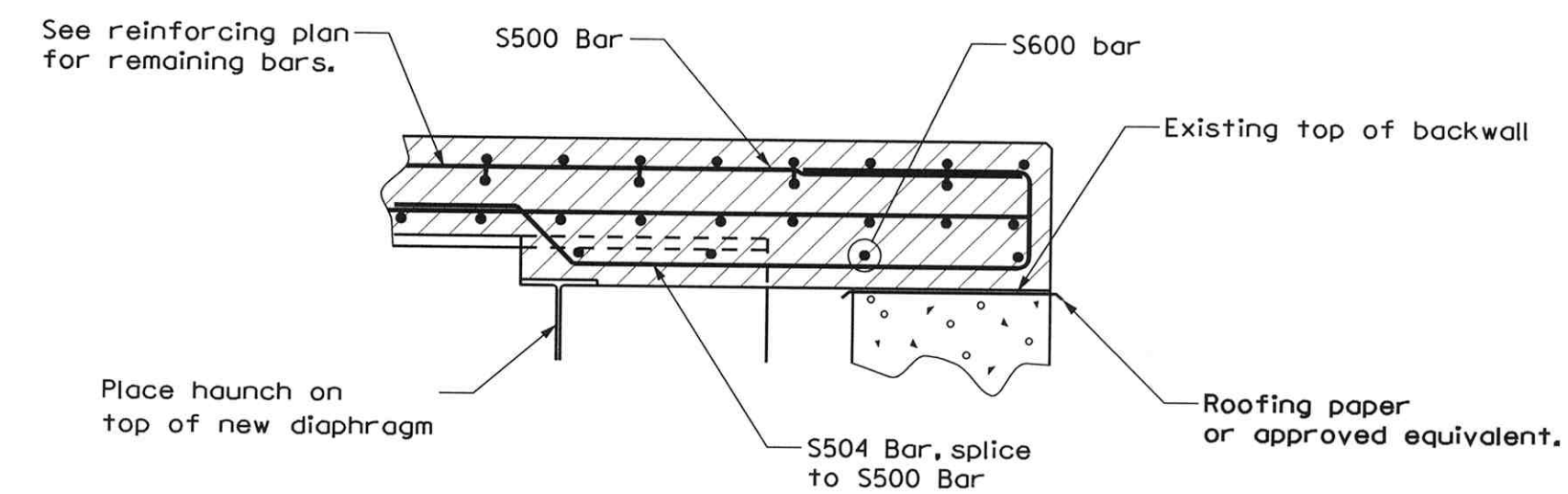
Install a new 2-bar permanent concrete transition barrier at each end of bridge. See standard details.

Adjust height to match existing bridge rail. Reinforcing steel to be adjusted accordingly.

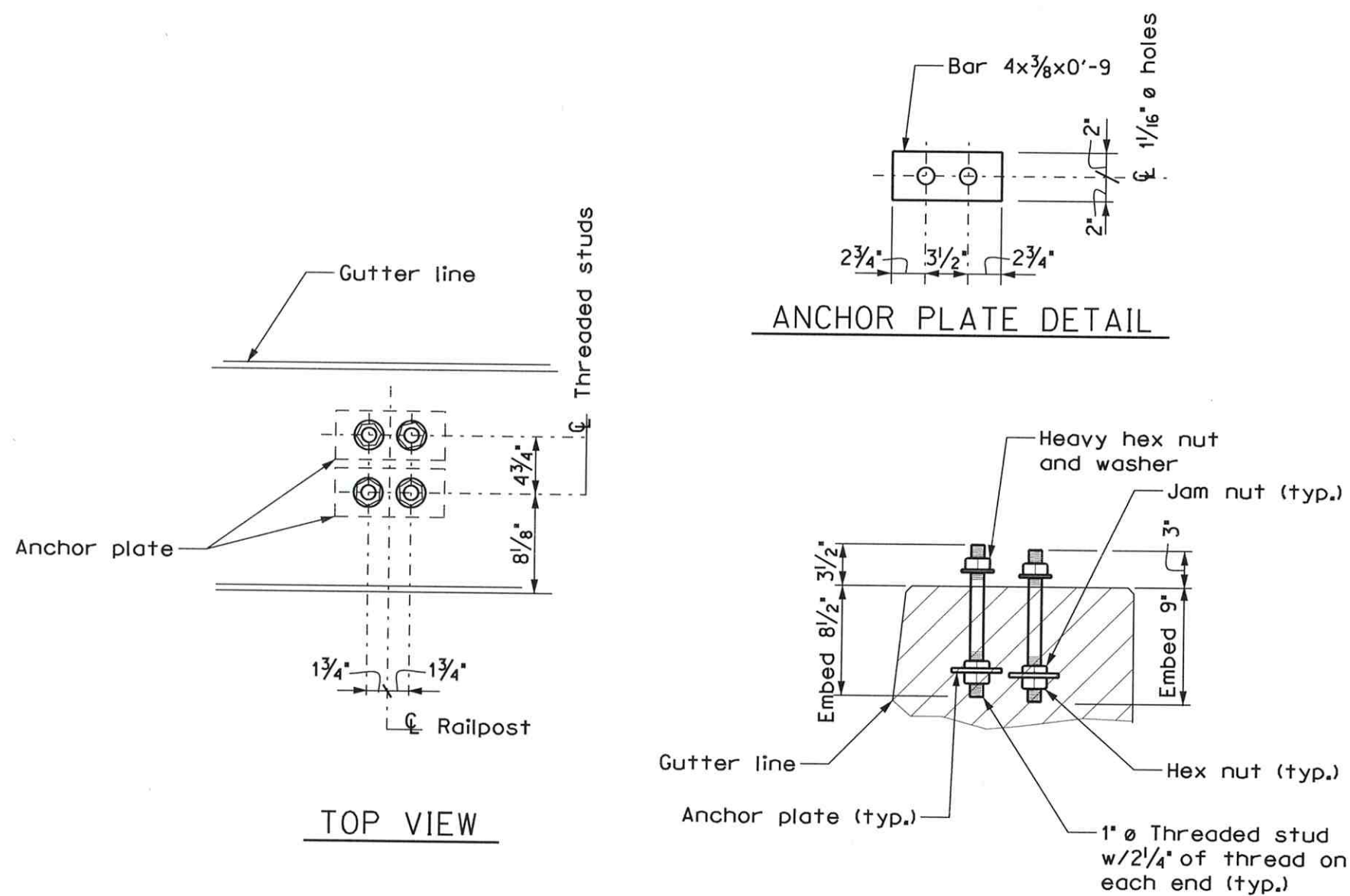


SLAB REINFORCING PLAN

Note: Deck thickness to be adjusted up to 2" to accommodate additional existing thickness between Pier #2 and abutment #2 only. So wearing surface profile matches existing approach roadway profile/grade.



SECTION A--A



ANCHOR PLATE DETAIL

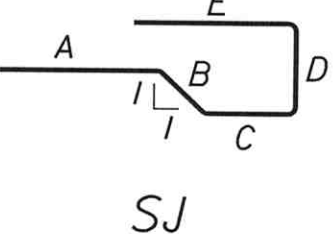
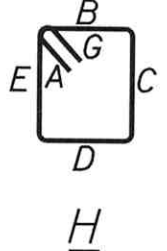
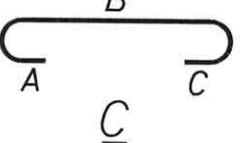
SECTION VIEW

RAILPOST ANCHORAGE

See standard details for additional information

REINFORCING STEEL SCHEDULE

STRAIGHT BARS			
MARK	QTY.	LENGTH	LOCATION
S500	138	30'-0"	Deck reinforcing, longitudinal
S501	18	21'-0"	Deck reinforcing, longitudinal
S502	12	30'-0"	Curb reinforcing, longitudinal
S600	292	9'-0"	Deck reinforcing, transverse
S601	143	7'-0"	Deck reinforcing, transverse



H SJ

BENT BARS										
MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	G	LOCATION
S503	144	6'-6"	H	6"	1'-5"	1'-4"	1'-5"	1'-4"	6"	Curb stirrup
S602	143	10'-0"	C	3"	8'-2"	3"				Deck reinforcing, transverse
S504	10	7'-11"	SJ	1'-8"	7"	3'-3"	9"	1'-8"		Haunch at end of superstructure

NOTE: See standard details for permanent concrete transition barrier reinforcing.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PIN 21475.00

PROJ. MANAGER	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	LSB/SPR	6/2015			
CHECKED-REVIEWED					
DESIGN-DETAILED					
DESIGN-DETAILED					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

OAKFIELD
I-95 NB/OAKFIELD-SMYRNA RD.

SUPERSTRUCTURE REINFORCING

SHEET NUMBER

7

OF 7