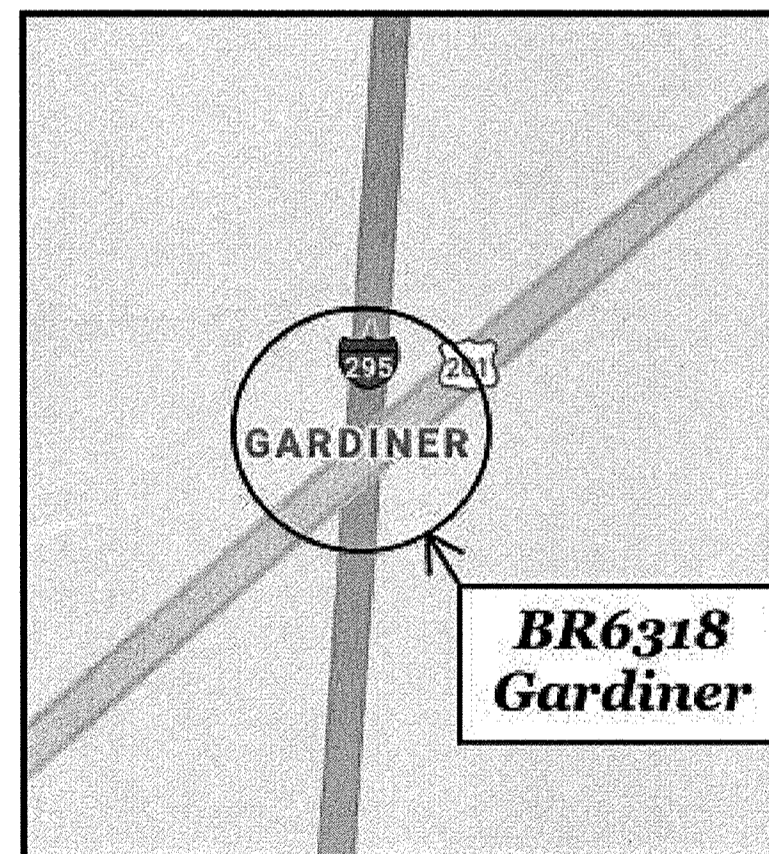


STATE OF MAINE DEPARTMENT OF TRANSPORTATION



GARDINER KENNEBEC COUNTY US 201/ I295 NB BRIDGE OVER INTERSTATE 295 NORTHBOUND BRIDGE NO. 6318 BRIDGE REHABILITATION WR ~ 39830 WIN ~ 26311.00



SPECIFICATIONS

2014 MaineDOT Standard Specifications with updates, the 2014 MaineDOT Standard Details with Updates, and the MaineDOT Bridge Maintenance Manual with 2018 Updates.

TRAFFIC DATA

Current (2017) AADT 4,184

MATERIALS

Concrete:
All concrete Class "LP"

Reinforcing Steel ASTM A 615/A 615M, Grade 60

Structural Steel:
All Material (except as noted) AASHTO M 270M/M 270 Grade 36
High Strength Bolts ASTM F3125, Grade 325, Type 3

BASIC DESIGN STRESSES

Concrete $f'c = 5000$ psi

Reinforcing Steel $f_y = 60,000$ psi

Structural Steel:
AASHTO M 270M/M 270 Grade 36 $F_y = 36,000$ psi
ASTM F3125, Grade A325, Type 3 $F_u = 120,000$ psi

LIST OF DRAWINGS

Title Sheet	1
Armored Joint Plans	2
Joint Sections	3
Maine Joint Layout	4
Steel Details	5

MAINTENANCE OF TRAFFIC

Traffic Control Plan to be determined by Regional Traffic Engineer.

<u>PROJECT LOCATION</u>	US Rte 201 Bridge over I-95 Northbound in Gardiner. Lat./Long. 44°10'43.03" N 69°49'59.17" W
<u>PROGRAM AREA</u>	Bridge and Structure Maintenance
<u>OUTLINE OF WORK</u>	Bridge Rehabilitation.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
APPROVED: *[Signature]*
COMMISSIONER: *[Signature]*
DATE: 6-20-2020
CHIEF ENGINEER: *[Signature]*
DATE: 6-21-2020



SIGNATURE: *[Signature]*
13280
P.E. NUMBER
3/20/2020
DATE

PROGRAM	Bridge & Structure Maintenance
PROJECT MANAGER	Cy Adams
DESIGNER	G. Libby
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

WIN 26311.00
GARDINER
Route 201 BRIDGE
TITLE SHEET

SHEET NUMBER
1
OF 5

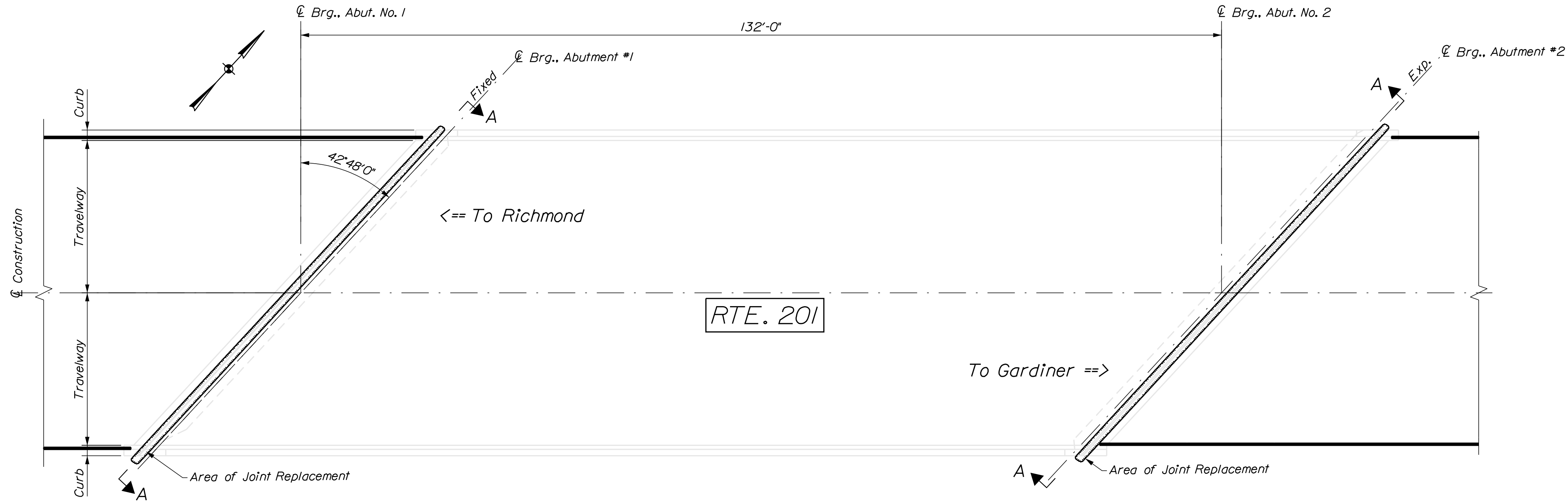
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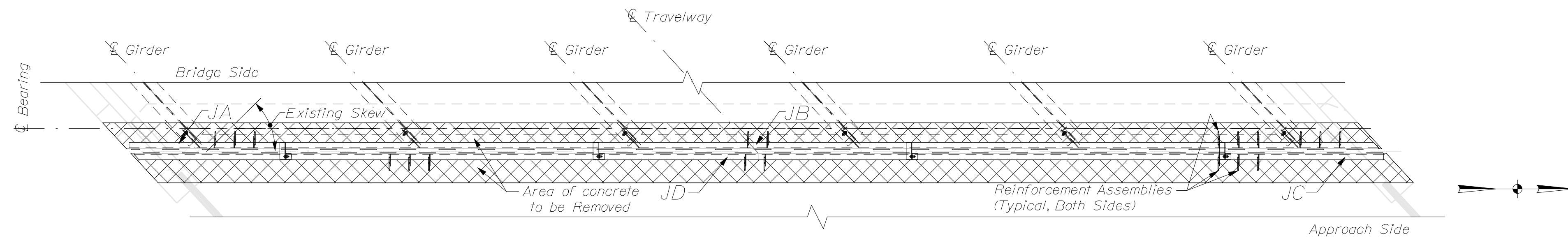
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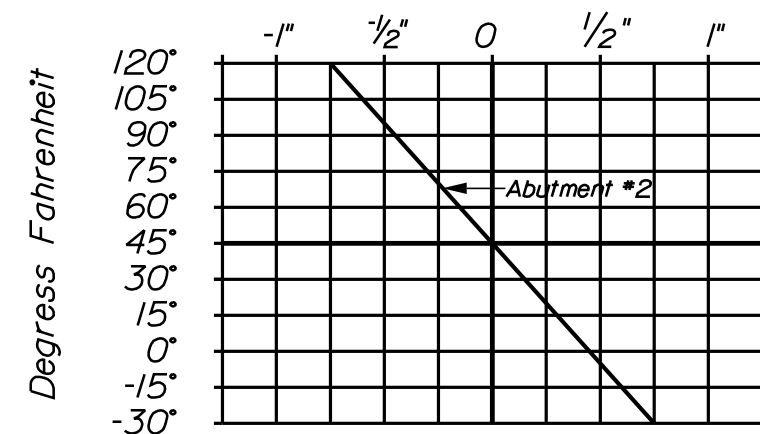
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ARMORED JOINT REPLACEMENT PLAN
 (Bridge #6318 - Route 201 over I-95 Northbound)



ARMORED JOINT REPLACEMENT PLAN
 (Joint at AB #2 (Easterly) Shown: Joint at AB#1 (Westerly), Opposite Hand)



SEAL ADJUSTMENT CHART - AB #2

Notes:

- ~ This joint was designed for 2" opening at 45°
- ~ Abutment #1 Expansion Joint will remain at Fabrication shop setting and no field adjustment will be necessary.

JOINT OPENING NOTES:

The Expansion Device shall be set to an opening of 2" inches in the Fabrication Shop. The joint opening shall be adjusted for temperature in the field at the time of installation by using the Seal Adjustment Chart or the following formula:

$$0.00008 \times "D" \times "\Delta T" = \text{Adjustment (in inches)}$$

"D" is the distance in feet between the backwall and the nearest fixed bearing (for joints at abutments) or between the fixed bearings at either side of the expansion joint (for joints or piers).

"ΔT" is the difference between the temperature of the bridge girders and 45°F.

A structure temperature above 45°F will result in a smaller joint opening.

SCOPE OF WORK:

Replace expansion joint armor, concrete headers, and joint seals at Abutment #1 and Abutment #2. Joint armor to be fabricated and supplied by others. All other work to be furnished and completed by the Department. New joint seals shall be Emseal BEJS - 0250. Install seals in accordance with manufacturer's recommendations.

Project Manager - Region 2 Bridge Transportation Operation Manager (TOM): Cy Adams

GENERAL CONSTRUCTION NOTES:

- The existing bridge plans may be accessed at the following MaineDOT web address:
<http://www.maine.gov/mdot/contractors/>
The plans are reproductions of the original drawings as prepared for construction of the bridge. It is very unlikely that the plans will show any construction field change or any alterations which may have been made to the bridge during its life span.
- Dimensions shown are from existing plans and may differ from actual field dimensions. Field verify all dimensions prior to installation.
- Any necessary reconstruction of the existing bridge rail and the removal and replacement of curb concrete shall be as approved by the Region Bridge TOM.
- Existing Concrete curb which requires removal in order to install the armored joints and seal shall be carefully and neatly cut off and removed to sound concrete as required. Concrete shall be placed to the limits shown on the plans.
- Fabricate and deliver the expansion joint to Region 2, West Gardiner Bridge Maintenance Lot at 420 Lewiston Rd., West Gardiner, Maine, 04345. Contact for delivery arrangements is Cy Adams at 207-624-8222 or cy.a.adams@maine.gov.
- Seal existing and new concrete surfaces in accordance with the Bridge Maintenance Manual. The coating limits are to be at the discretion of the Region Bridge TOM.

CONCRETE SLAB NOTES

- The existing concrete shall be removed so as not to damage existing vertical and horizontal steel in the parapets or the longitudinal and transverse reinforcing steel in the superstructure. Any damaged reinforcing steel shall be replaced as directed by the Bridge TOM.
- Existing reinforcing steel to remain shall be cleaned as directed by the Region Bridge TOM prior to placing new concrete.
- All rebar splices shall be 18" minimum.
- Reinforcing steel shall have a minimum 2" of cover unless otherwise noted.
- All adjustment angles shall be welded after final position adjustments are made.
- Concrete removal limits depend on the existing bridge and may not match what is shown here. Refer to existing bridge plans and field measurements. Limits may be reduced with the approval of the Region Bridge TOM.

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 ARMORED JOINT PLANS

PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
C. ADAMS	Feb 2020	G. LIBBY	Feb 2020			
CHECKED-DETAILED		G. LIBBY				
CHECKED-REVIEWED		J. VAILLEUX				
DESIGNS DET AILED		J. VAILLEUX				
DESIGNS DET AILED						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

ROUTE 201 BRIDGE
 OVER INTERSTATE 95 NORTHBOUND
 GARDINER
 KENNEBEC COUNTY
 ARMORED JOINT PLANS

SHEET NUMBER
 2
 OF 5

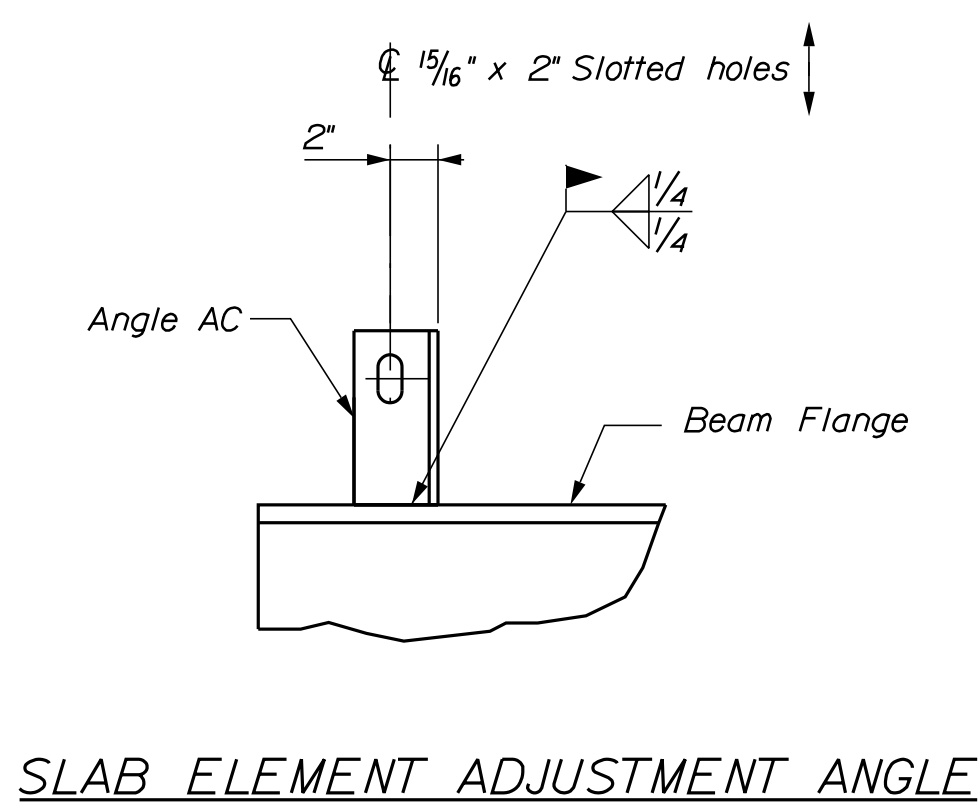
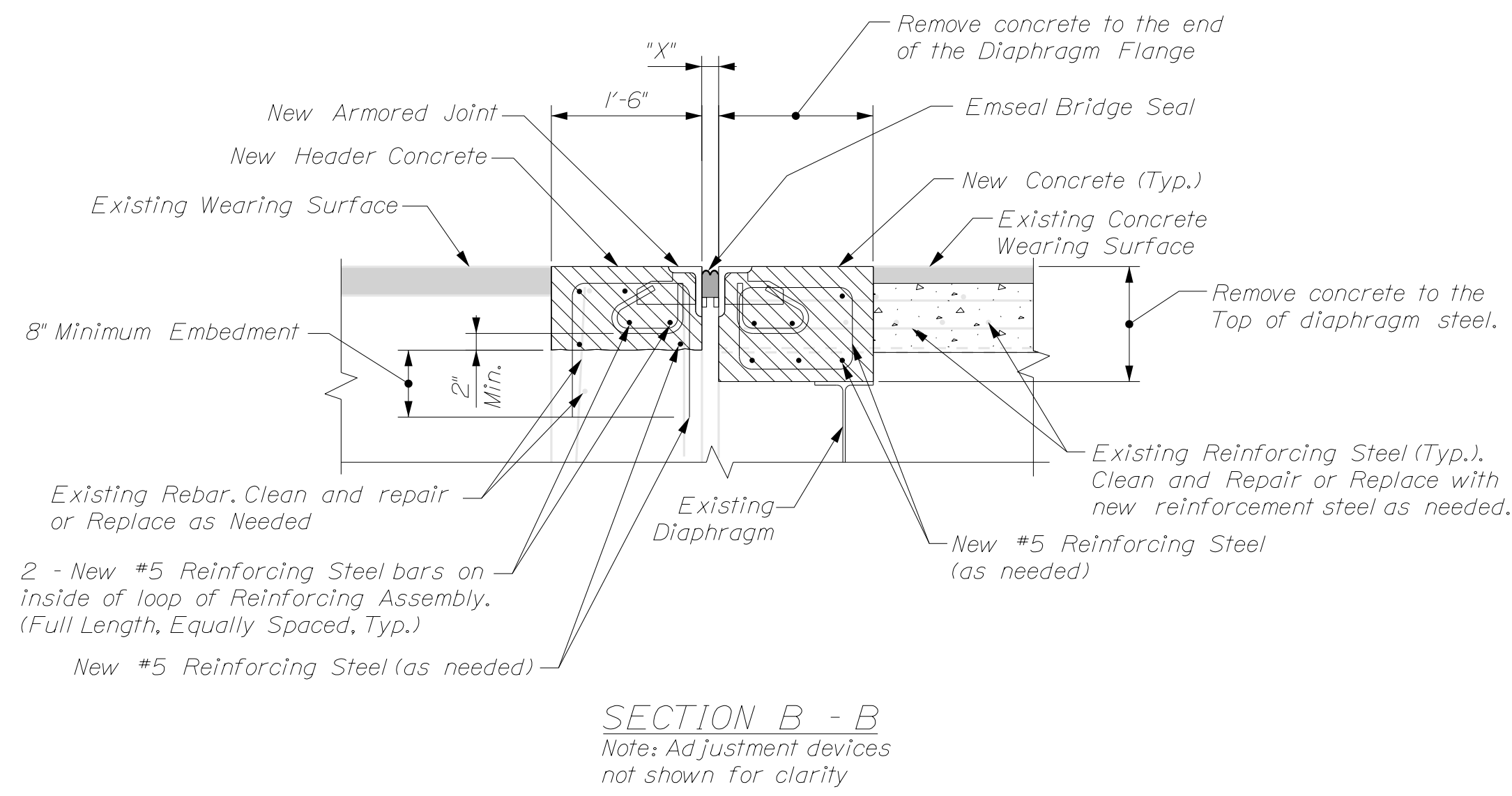
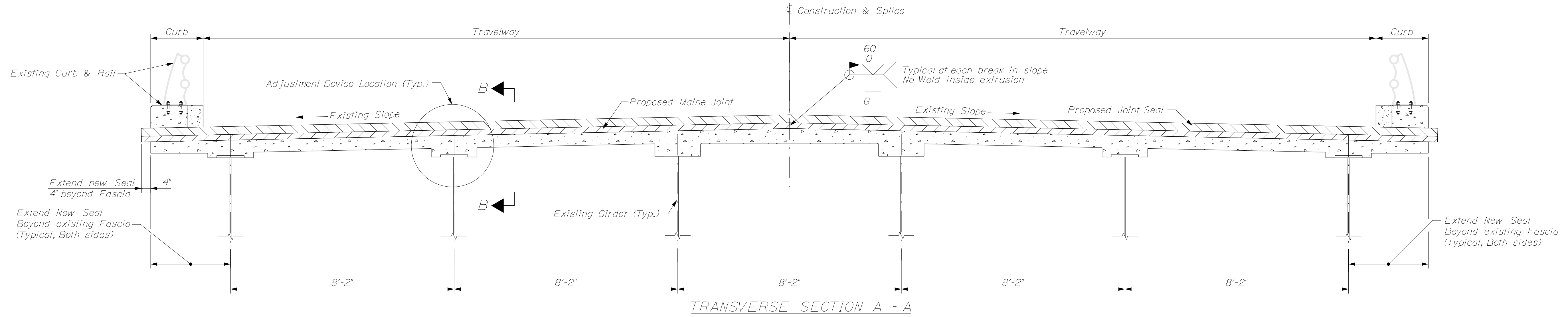
BRIDGE NO. 6318
 WIN 26311.00
 BRIDGE PLANS

Date: 2/26/2020

Username: common

Division: HIGHWAY

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NOTE:
Installation Details for MaineDOT Crew Personnel

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		ARMORED JOINT PLANS	
ROUTE 201 BRIDGE		OVER INTERSTATE 95 NORTHBOUND		KENNEBEC COUNTY	
GARDINER		SHEET NUMBER		BRIDGE NO. 6318	
		3		WIN 26311.00	
		OF 5		BRIDGE PLANS	

PROJ. MANAGER	C. ADAMS	BY	DATE
DESIGN/DETAILED	G. LIBBY	G. LIBBY	Feb 2020
CHECKED/REVIEWED	J. VAILLEUX	J. VAILLEUX	Feb 2020
DESIGN/DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

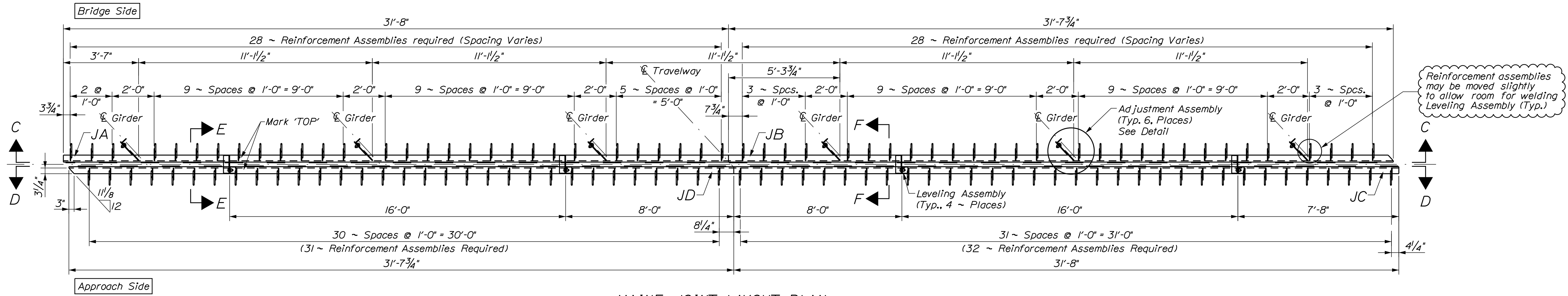
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Date: 2/26/2020

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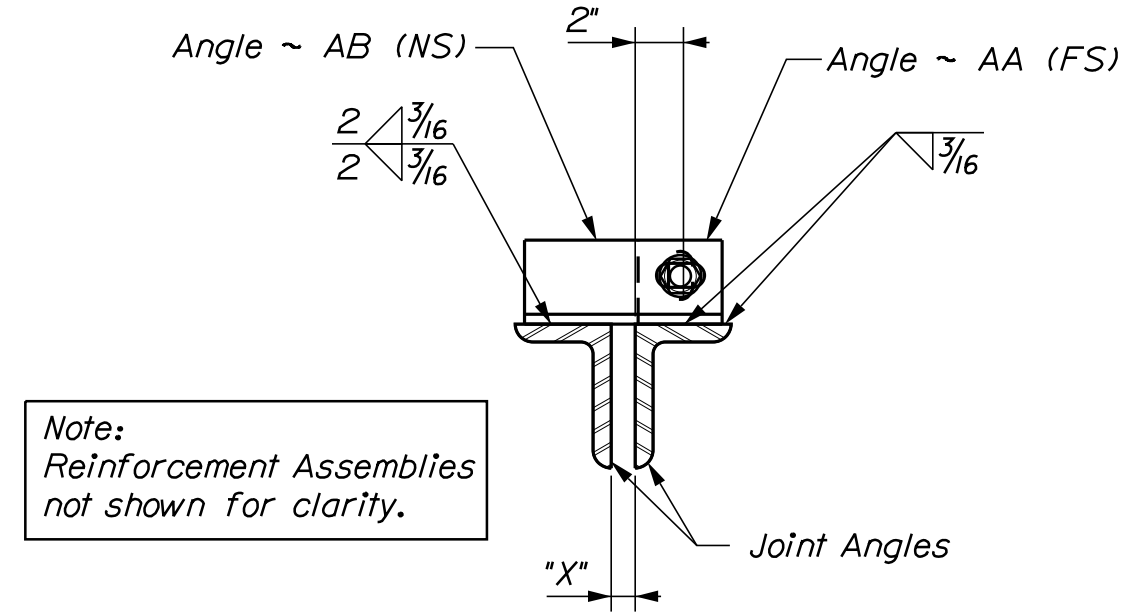
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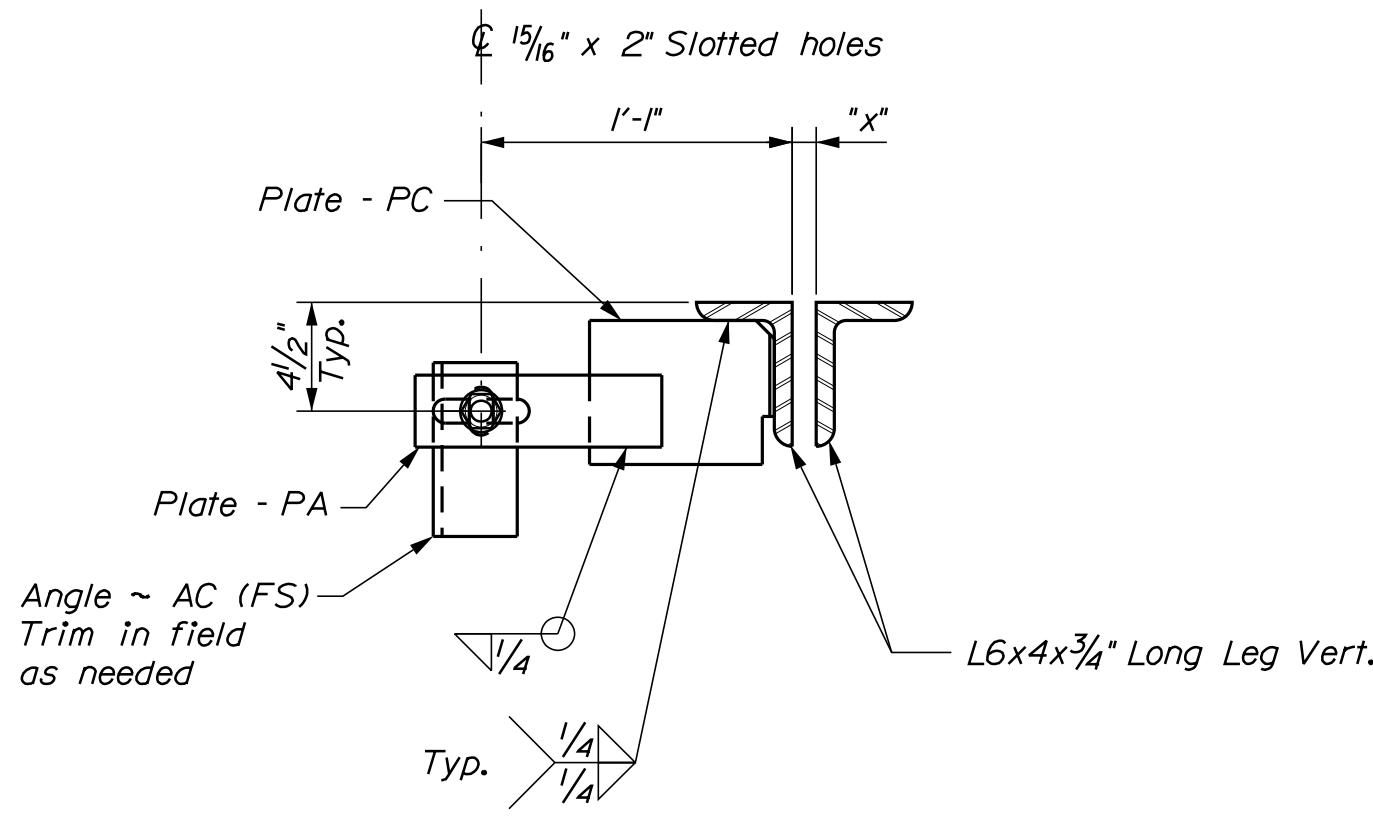


Reinforcement assemblies may be moved slightly to allow room for welding Leveling Assembly (Typ.)

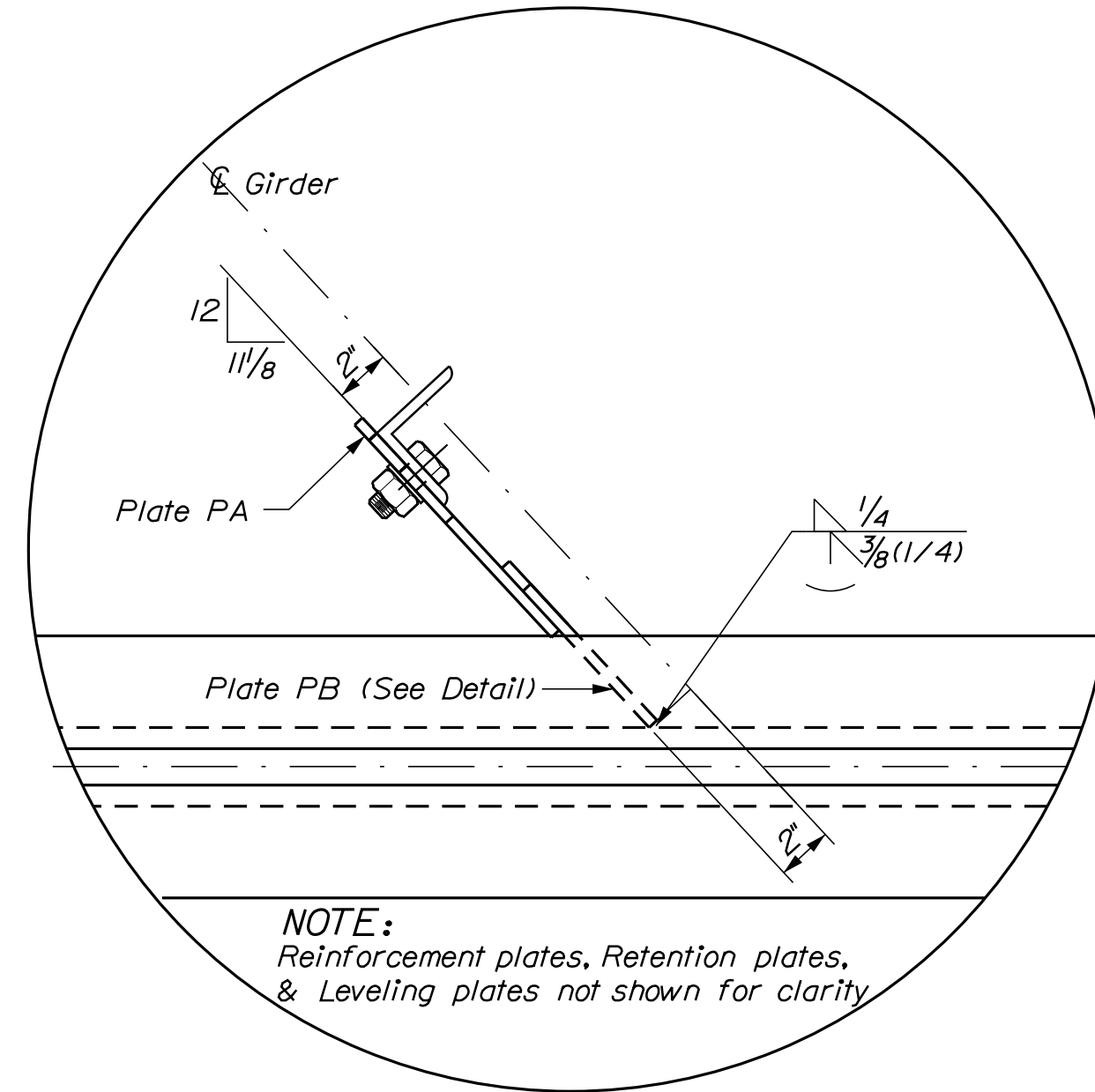
MAINE JOINT LAYOUT PLAN
 For Abutment #2 ~ As Drawn
 For Abutment #1 ~ Rotate 180°



SECTION E - E
 (Typical Leveling Assembly)



SECTION F - F
 (Reinforcement Assembly Not Shown for Clarity)



ADJUSTMENT ASSEMBLY DETAIL

HEAVY DUTY JOINT NOTES

1. The Expansion Device shall be fabricated to be installed normal to grade.
2. Prior to the installation of the seal the steel surfaces to receive the adhesive shall be blasted clean and solvent washed per the seal manufacturer's instructions.
3. The Joint Armor shall be furnished and installed ungalvanized.

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		ARMORED JOINT PLANS	
ROUTE 201 BRIDGE		OVER INTERSTATE 95 NORTHBOUND		KENNEBEC COUNTY	
GARDINER		MAINE JOINT LAYOUT		SHEET NUMBER	
BRIDGE NO. 6318		WIN 26311.00		BRIDGE PLANS	
PROJ. MANAGER	C. ADAMS	BY	G. LIBBY	DATE	FEB 2020
DESIGN/DETAILED	G. LIBBY	CHECKED/REVIEWED	J. VEILLEUX	DATE	FEB 2020
DESIGNS/DETAILED	J. VEILLEUX	DESIGNS/DETAILED	J. VEILLEUX	SIGNATURE	
REVISIONS 1		REVISIONS 1		P.E. NUMBER	
REVISIONS 2		REVISIONS 2		DATE	
REVISIONS 3		REVISIONS 3			
REVISIONS 4		REVISIONS 4			
FIELD CHANGES					

4

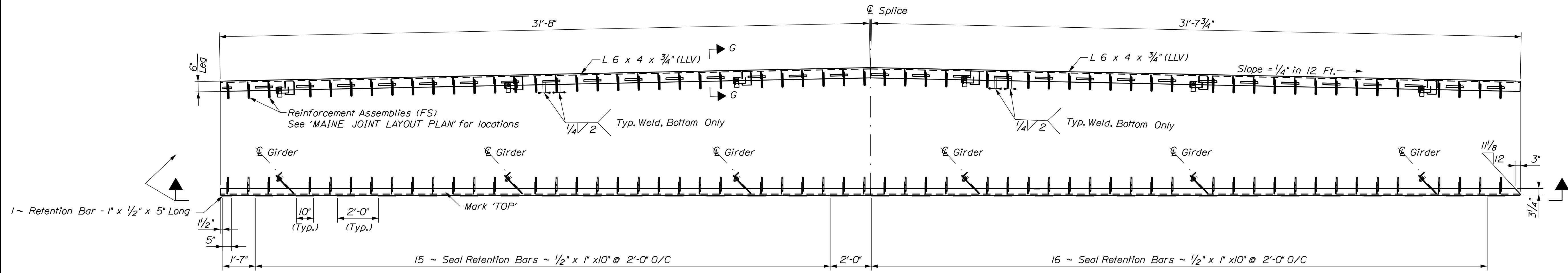
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Date: 2/26/2020

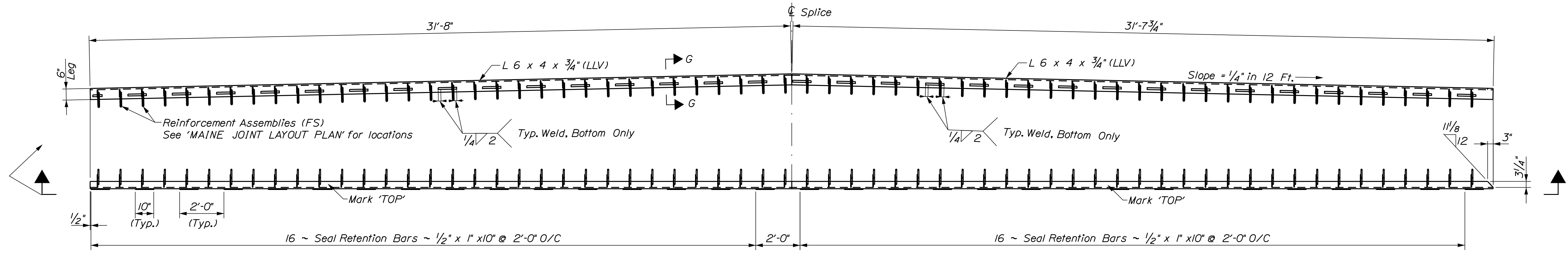
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Division: HIGHWAY

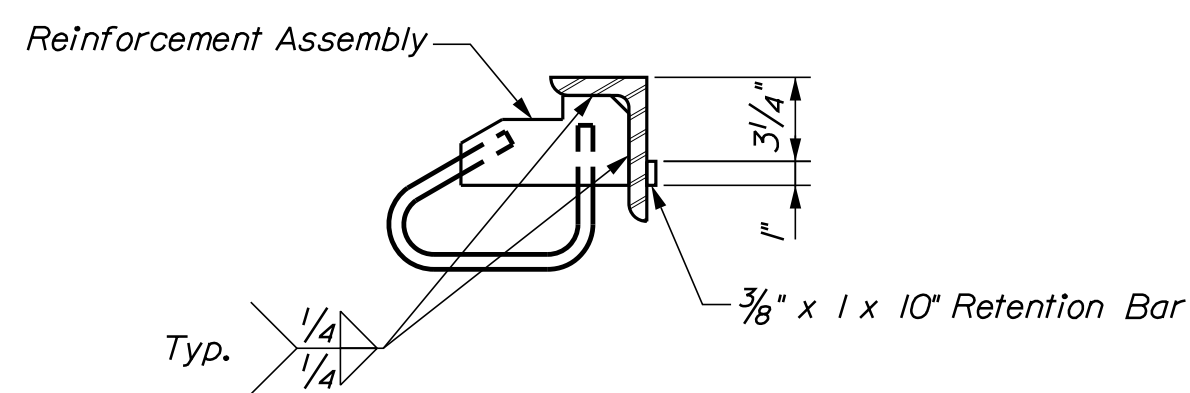
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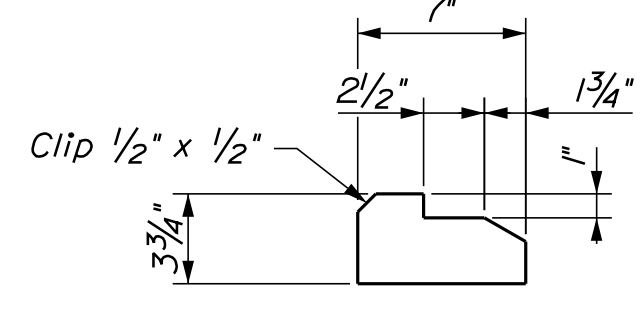
SECTION C - C



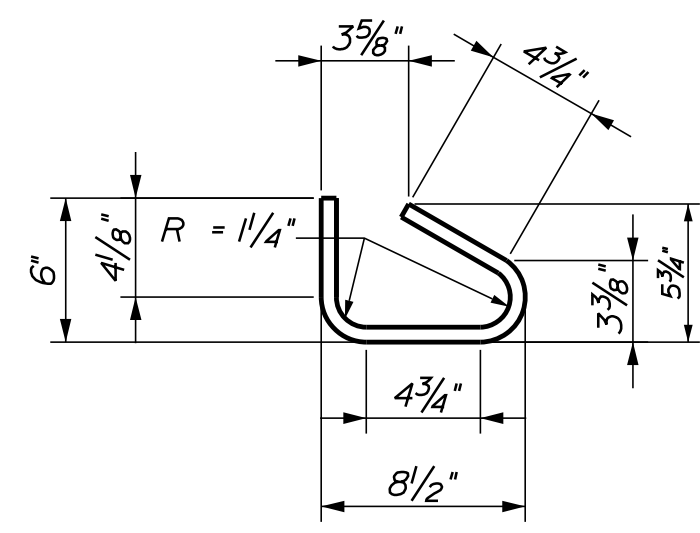
SECTION D - D



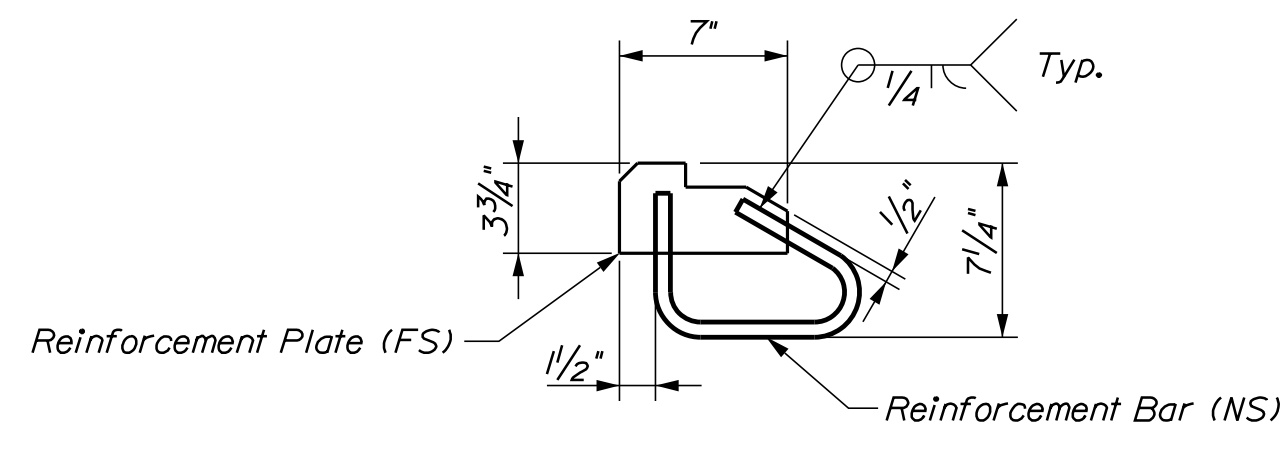
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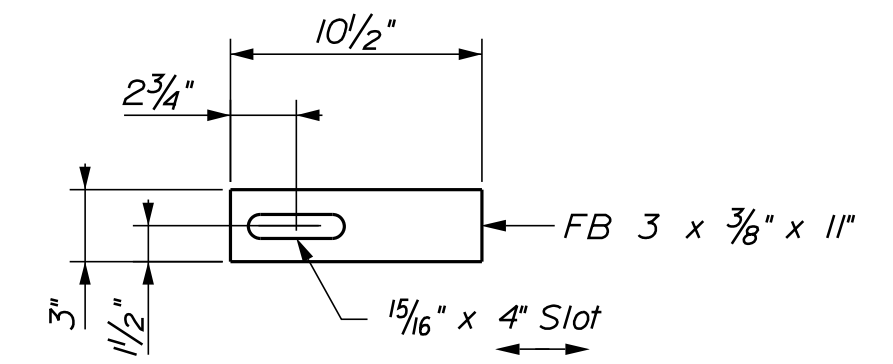
Detail of Reinforcement Plate
(240 ~ Required)



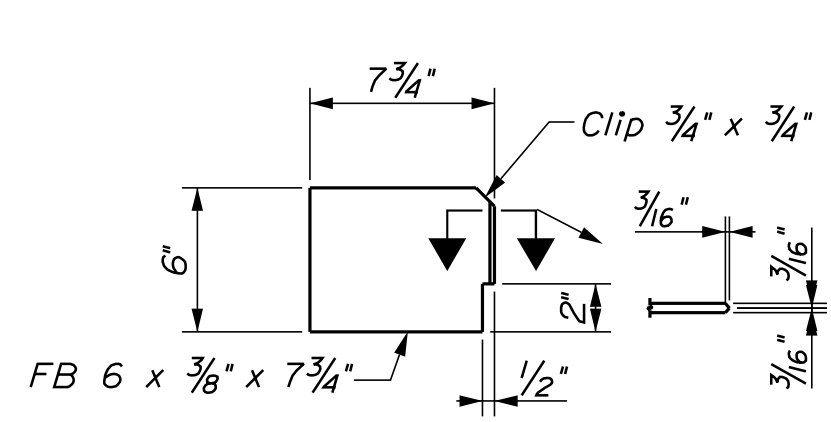
Detail of Reinforcement Bar
NOTE: #5 Reinforcement Bar
(240 ~ Required)



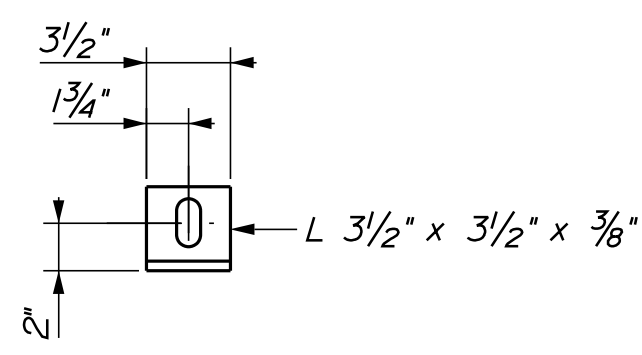
Typical Reinforcing Assembly Detail



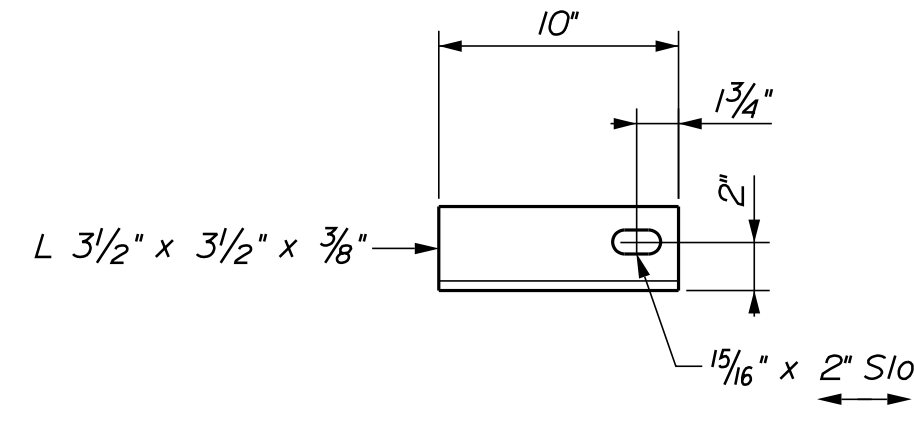
12 - Plates Mkd ~ PA



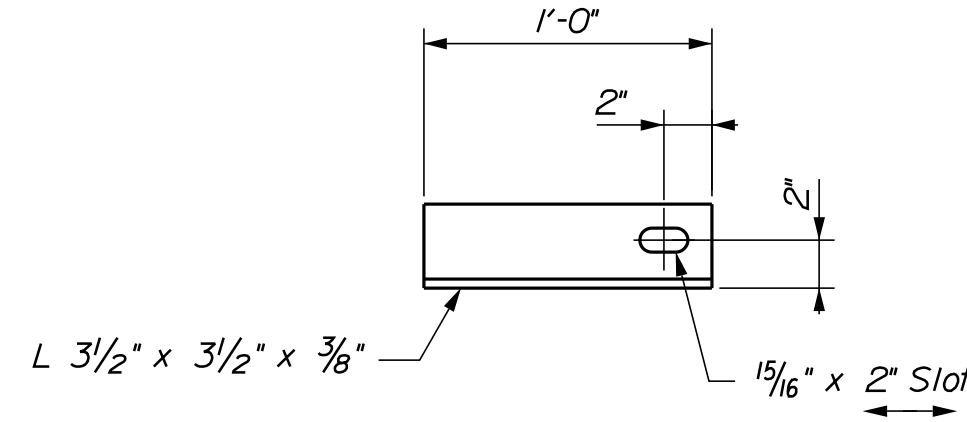
12 - Plates Mkd ~ PB



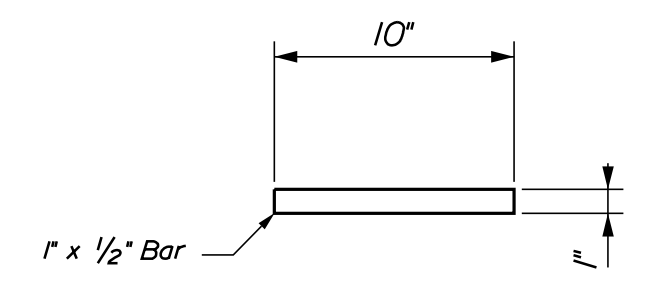
8 - Angles Mkd ~ AA



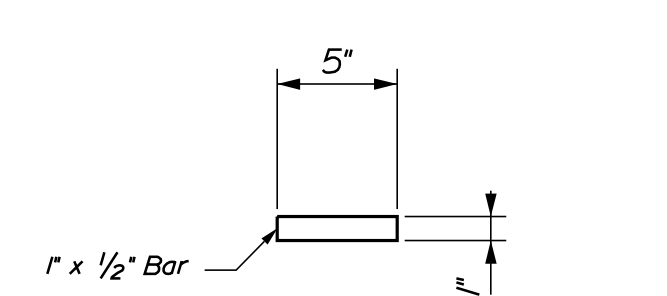
8 - Angles Mkd ~ AB



12 - Angles Mkd ~ AC



Detail of 10" Retention Bars
(126 ~ Required)



Detail of 5" Retention Bars
(2 ~ Required)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
ARMORED JOINT PLANS
BRIDGE NO. 6318
WIN 26311.00
BRIDGE PLANS

PROJ. MANAGER	C. ADAMS	BY	DATE
DESIGN DETAILED	G. LIBBY	G. LIBBY	Feb 2020
CHECKED/REVIEWED	J. VAILLUX	J. VAILLUX	Feb 2020
DESIGN DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

ROUTE 201 BRIDGE
OVER INTERSTATE 95 NORTHBOUND
GARDINER
KENNEBEC COUNTY
STEEL DETAILS

SHEET NUMBER
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