

# STATE OF MAINE DEPARTMENT OF TRANSPORTATION



**SPECIFICATIONS**

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Eighth Edition, 2017.

**MATERIALS**

Structural Steel:  
 All Material ..... ASTM A709, Grade 50 (galvanized)  
 High Strength Bolts ..... ASTM F3125, Grade A325, Type 1 (galvanized)

**BASIC DESIGN STRESSES**

ASTM A709, Grade 50 ..... Fy = 50,000 psi  
 ASTM F3125, Grade A325, Type 1 ..... Fu = 120,000 psi

**LIST OF DRAWINGS**

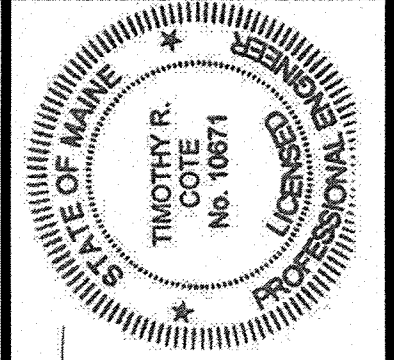
Title Sheet .....	1
Plan View and Transverse Section .....	2
Joint Modification Details .....	3-4
Concrete Transition Barriers .....	5
Bridge Phasing .....	6

## SOUTH PORTLAND CUMBERLAND COUNTY INTERSTATE 295 SOUTHBOUND OVER STATE ROUTE 703 STATE PROJECT NO. 023615.05 PROJECT LENGTH 0.04 mi. BRIDGE NO. 1513

WIN 023615.05

<b>PROJECT LOCATION:</b>	I-295 SB over State Route 703
<b>PROGRAM AREA:</b>	Bridge Preservation
<b>OUTLINE OF WORK:</b>	Joint Modifications - Materials Only

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
COMMISSIONER: <i>[Signature]</i>	<i>[Signature]</i>	6/10/2020
CHIEF ENGINEER: <i>[Signature]</i>	<i>[Signature]</i>	6/10/2020



*[Signature]*  
 SIGNATURE  
 10671  
 P.E. NUMBER  
 06/08/2020  
 DATE

PROJECT INFORMATION	
PROGRAM	Bridge
PROJECT MANAGER	Mackenzie Kersbergen
DESIGNER	Tim Cote
CONSULTANT	HNTB
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

SOUTH PORTLAND  
CUMBERLAND COUNTY  
**TITLE SHEET**

SHEET NUMBER  
**1**  
OF 6



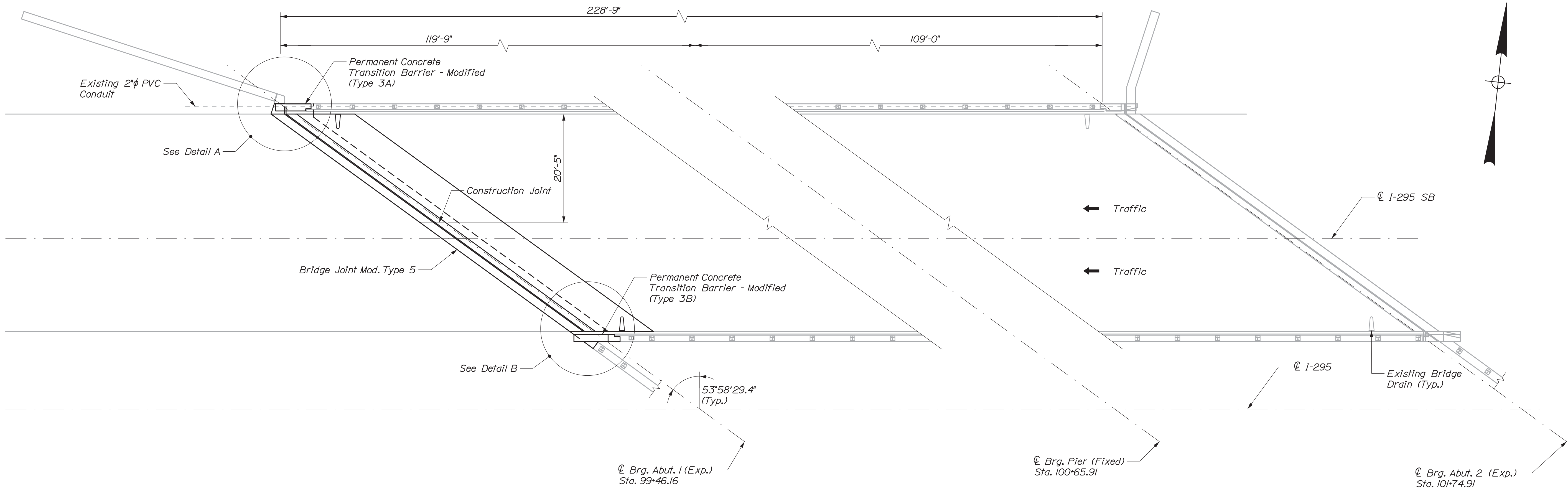
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Division:  
Filename: 01\_Title Sheet - 703.dgn

Date: 6/8/2020

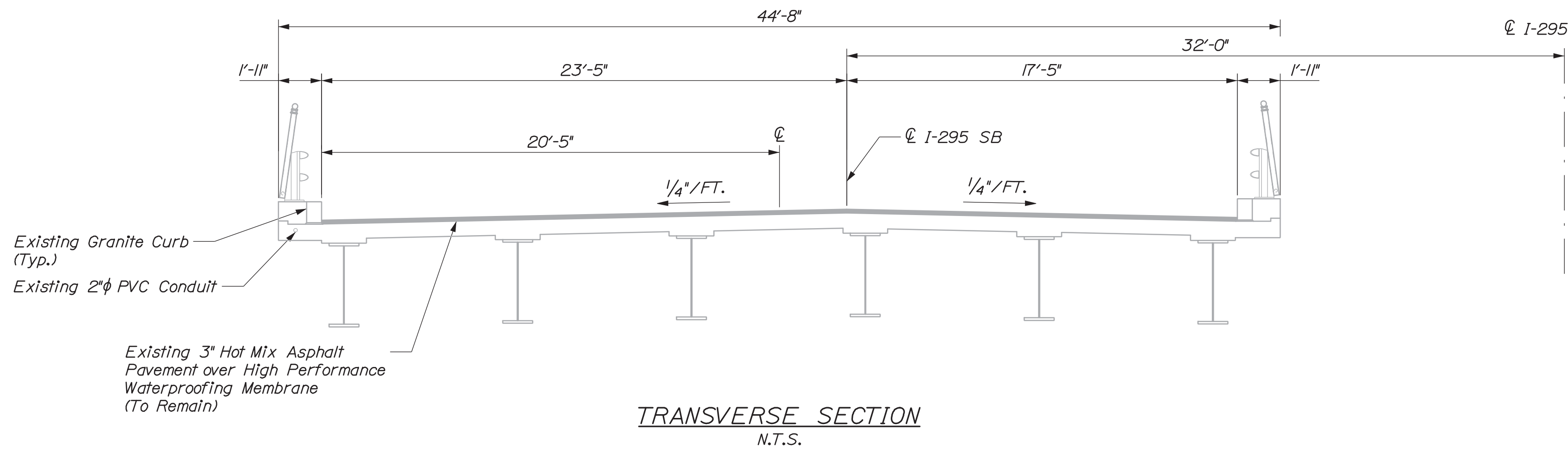
Username:

Division:

Filename: 002\_PlanSect - Route 703 - SB.dgn



**INTERSTATE 295 SOUTHBOUND OVER STATE ROUTE 703**  
South Portland ~ Bridge No. 1513



**NOTES:**  
1. For Details A and B see "Concrete Transition Barrier Details I"



STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 1513  
WIN  
023615.05  
BRIDGE PLANS

PROJ. MANAGER	BY	DATE	SIGNATURE
M. Kersting	E. Brunsell	06/20	
DESIGN DETAILED	G. Standley	06/20	
CHECKED/REVIEWED	A. Stephens		
DESIGN DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

INTERSTATE 295 SOUTHBOUND  
SOUTH PORTLAND  
CUMBERLAND COUNTY  
**PLAN AND SECTION  
STATE ROUTE 703**

SHEET NUMBER

2

OF 6

**BRIDGE JOINT MODIFICATION TYPE 5 NOTES:**

- Each joint consists of one backwall element and one superstructure element with expansion dams as required.
- Refer to superstructure plan and transverse section for dimensions, slopes, skew and other information necessary to fabricate each expansion device.
- Submit the selected seal to the Department with the shop drawings.
- See "Joint Modification Details I" for Detail A.

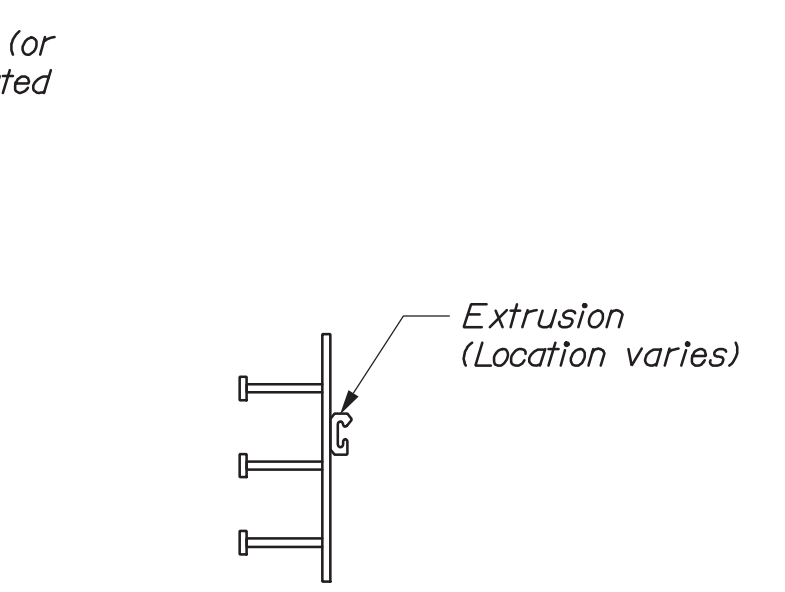
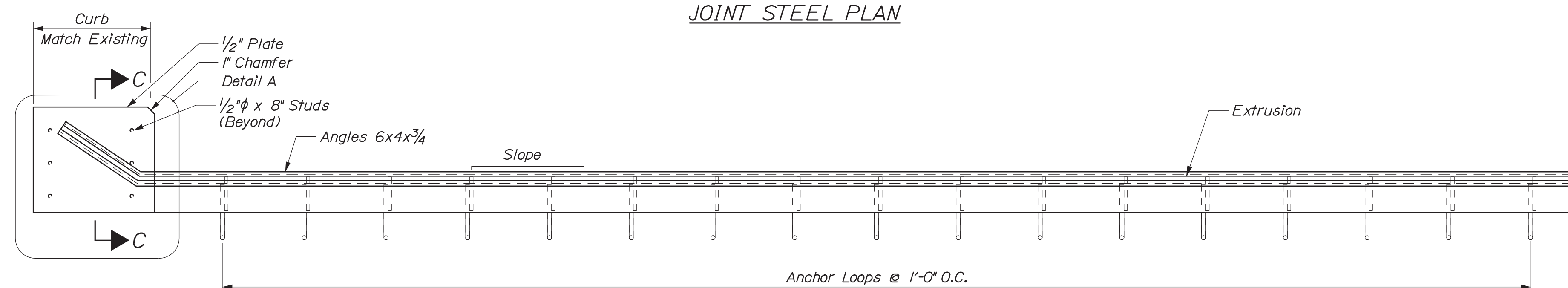
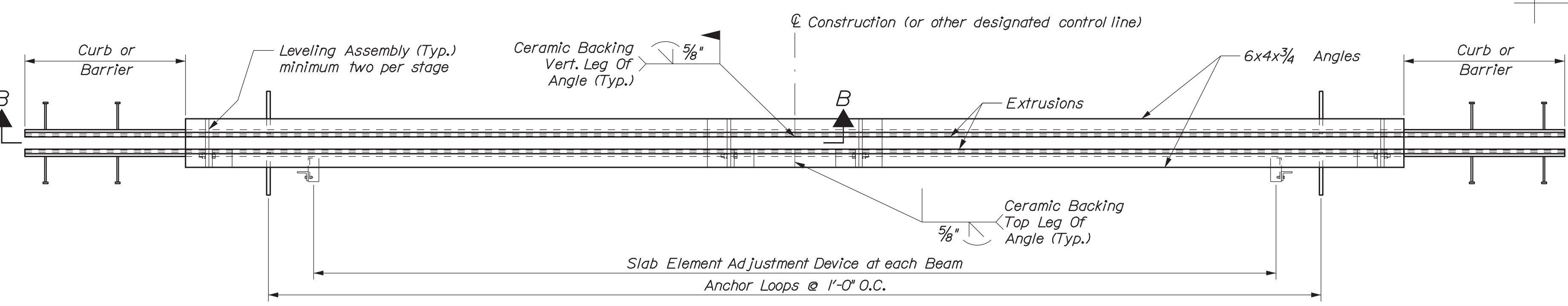
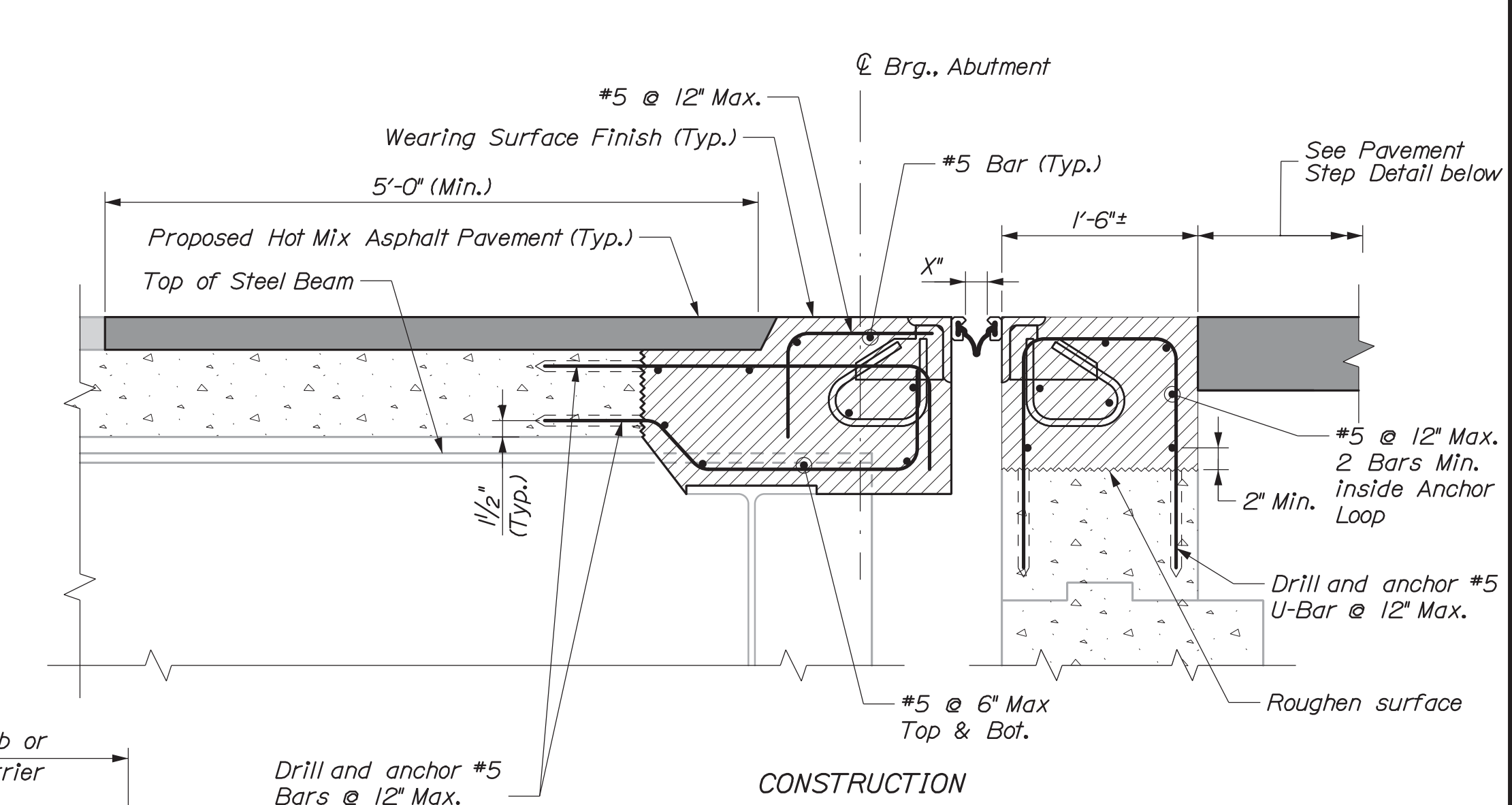
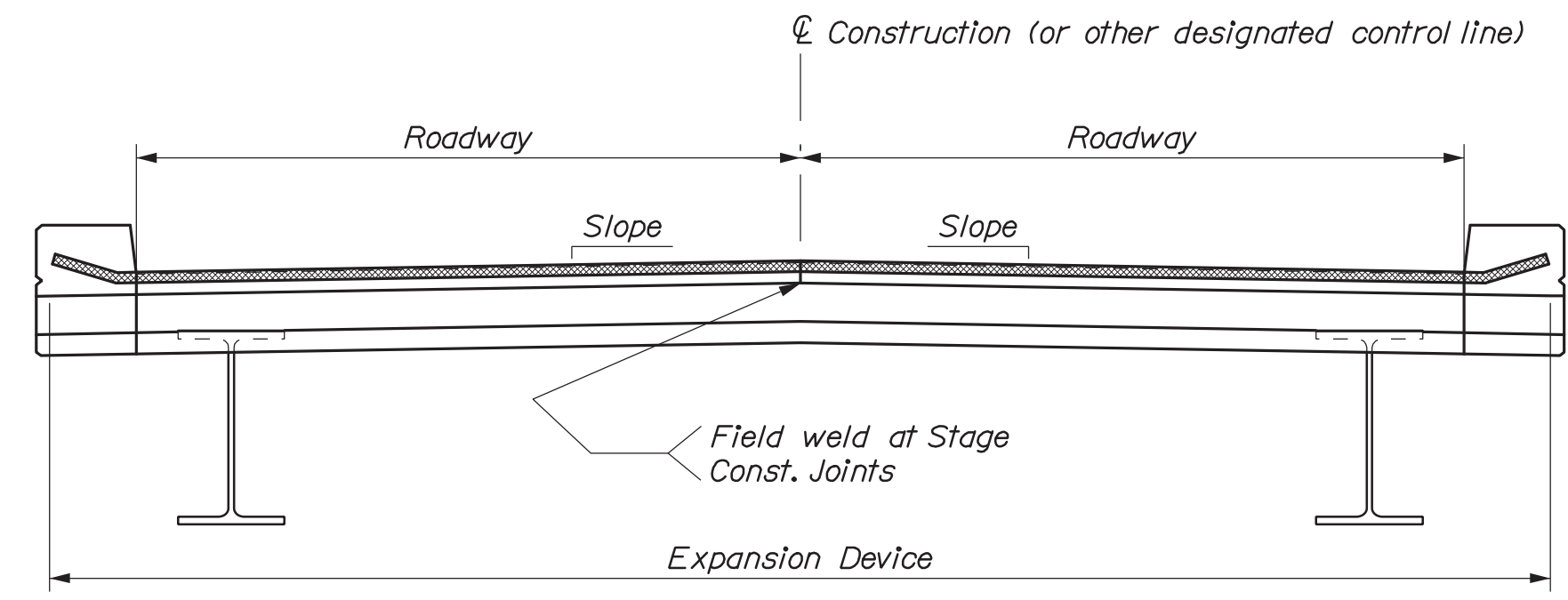
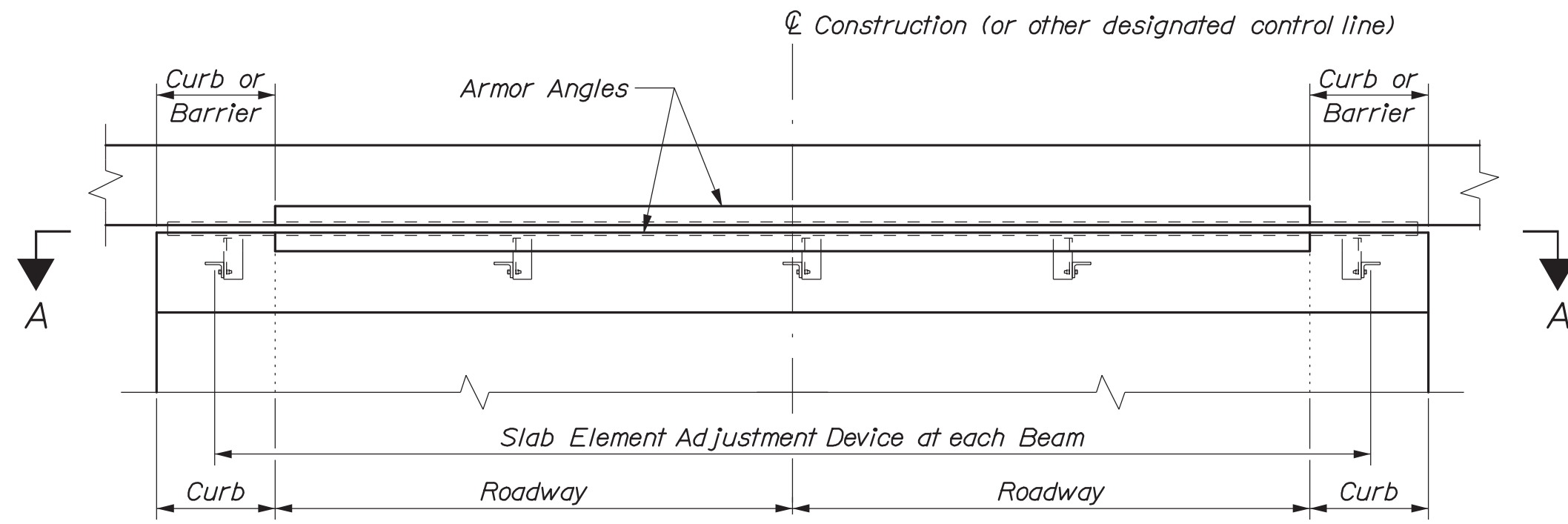
**JOINT OPENING**

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 using the following formula:

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

"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 at piers). " $\Delta T$ " 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.



BRIDGE JOINT MODIFICATION TYPE 5

Date: 6/8/2020

Username:

Division:

Filename: 003\_Joint Modification Details 3.dgn

PROJ. MANAGER	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
M. Kerstetter	E. Bruns	06/20			
DESIGN DETAILED	G. Standley	06/20			
CHECKED/REVIEWED	A. Stephens	06/20			
DESIGN DETAILED	T. Cole				
REVISIONS					
1					
2					
3					
4					
FIELD CHANGES					

INTERSTATE 295 SOUTHBOUND  
SOUTH PORTLAND  
CUMBERLAND COUNTY  
JOINT MODIFICATION  
DETAILS I (TYPE 5)

SHEET NUMBER

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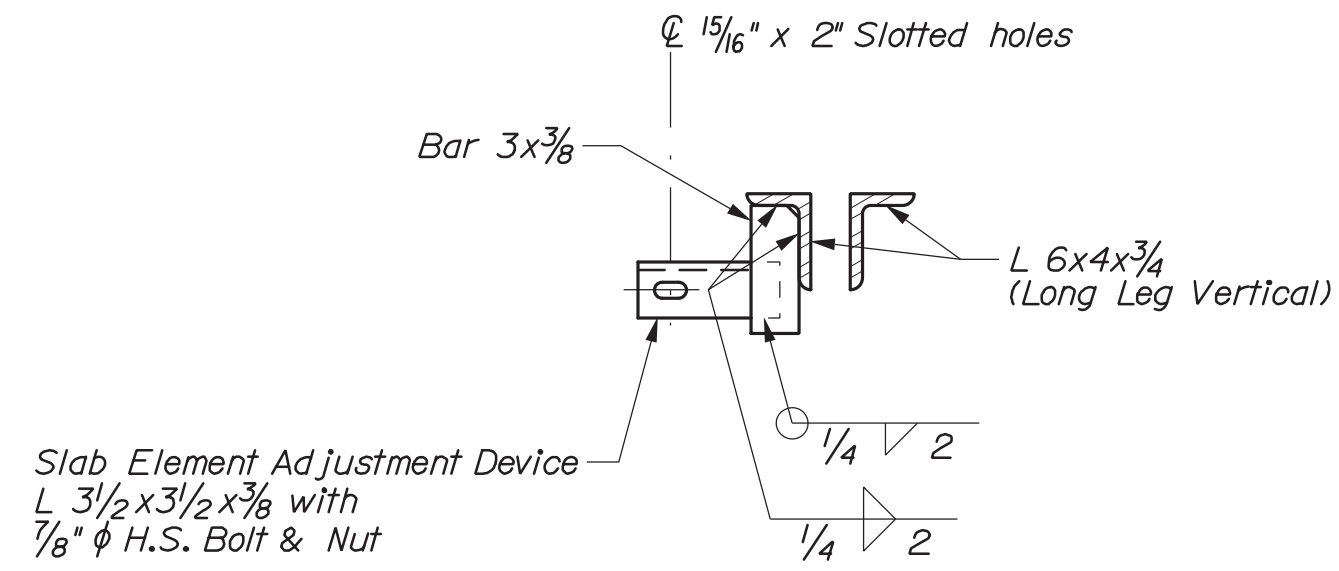
OF 6



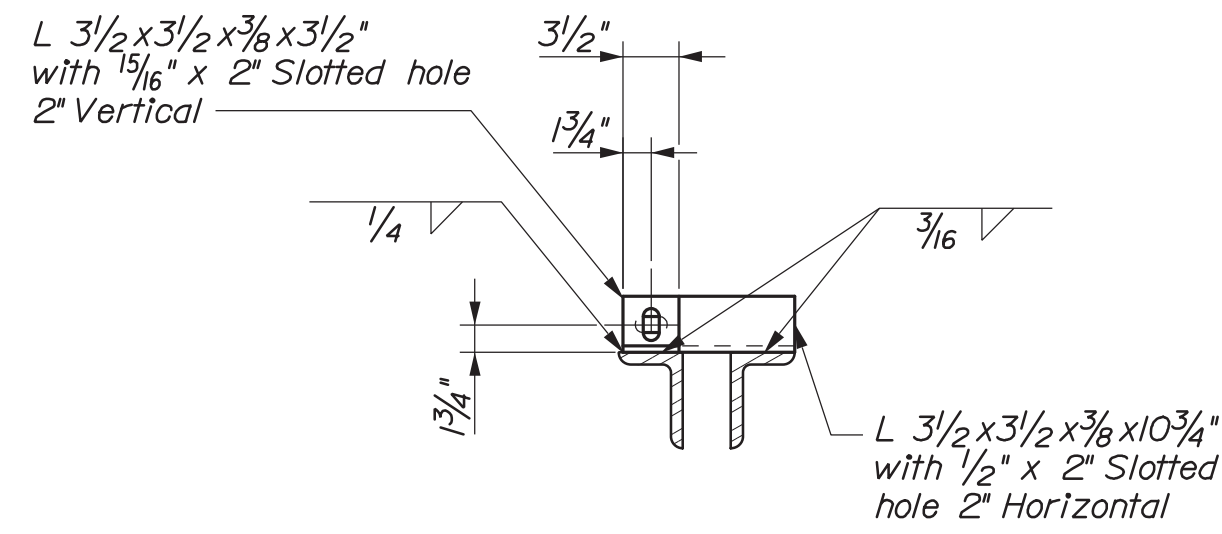
Date: 6/8/2020

Username:

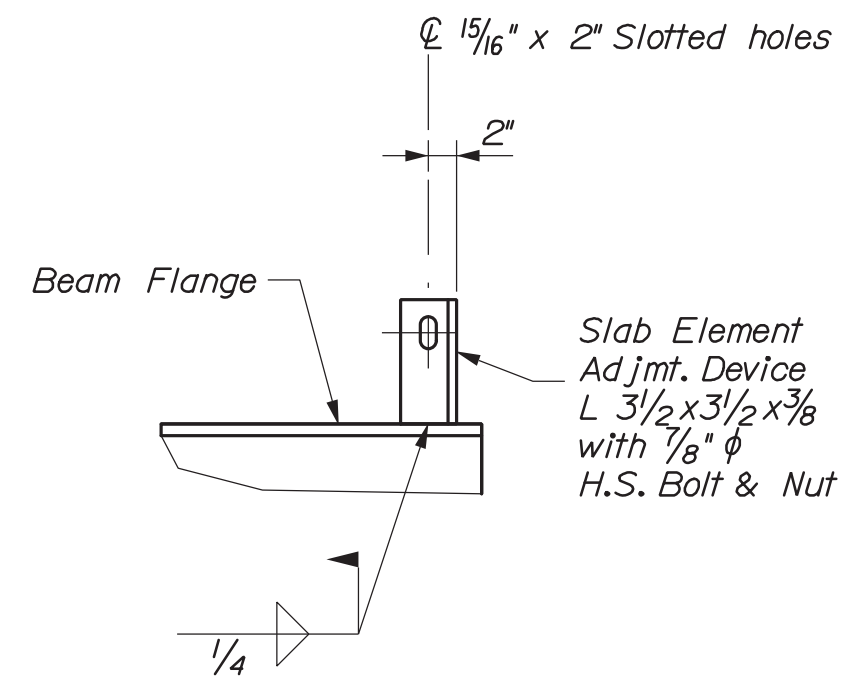
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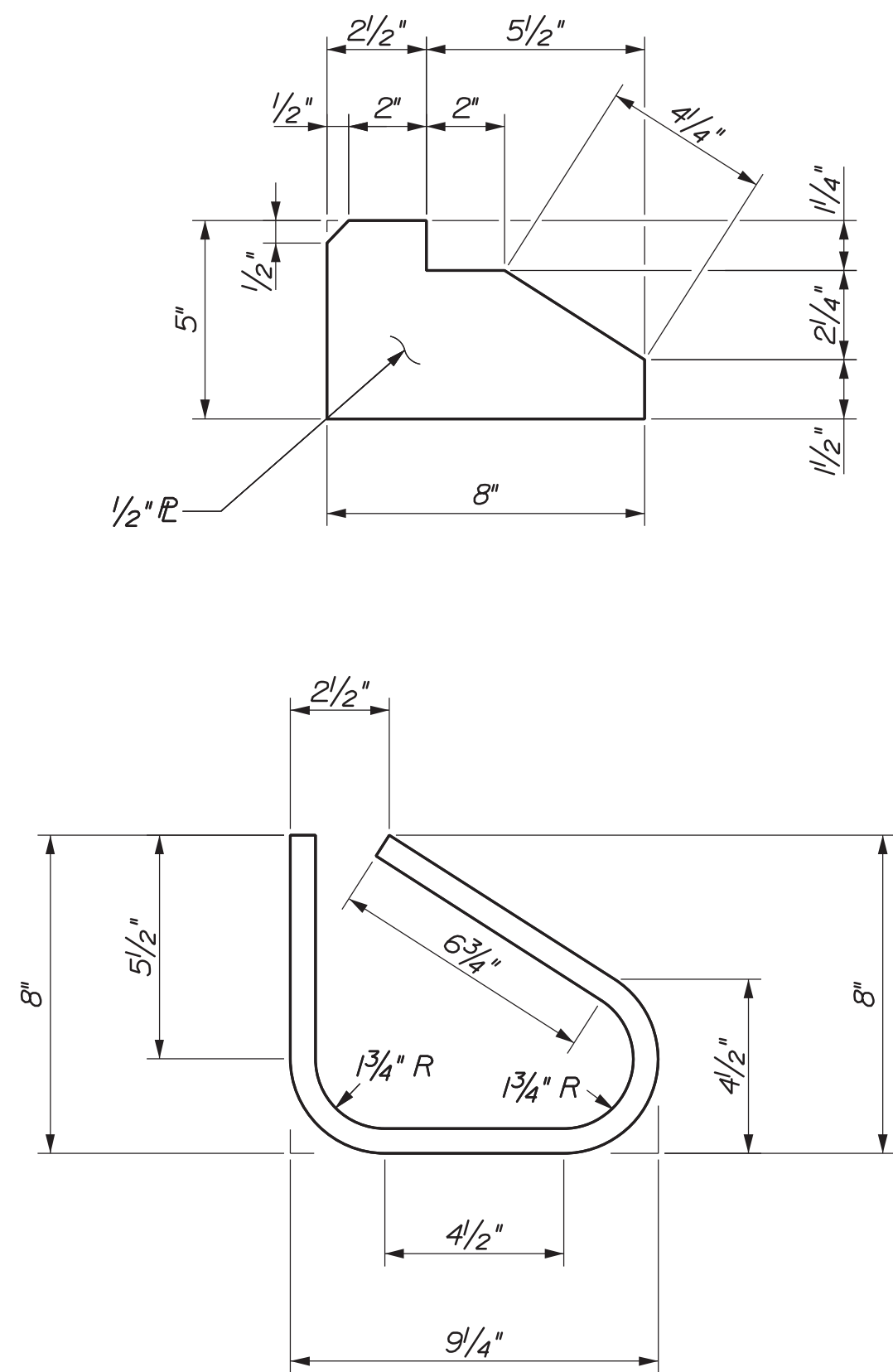
SLAB ELEMENT ADJUSTMENT DEVICE



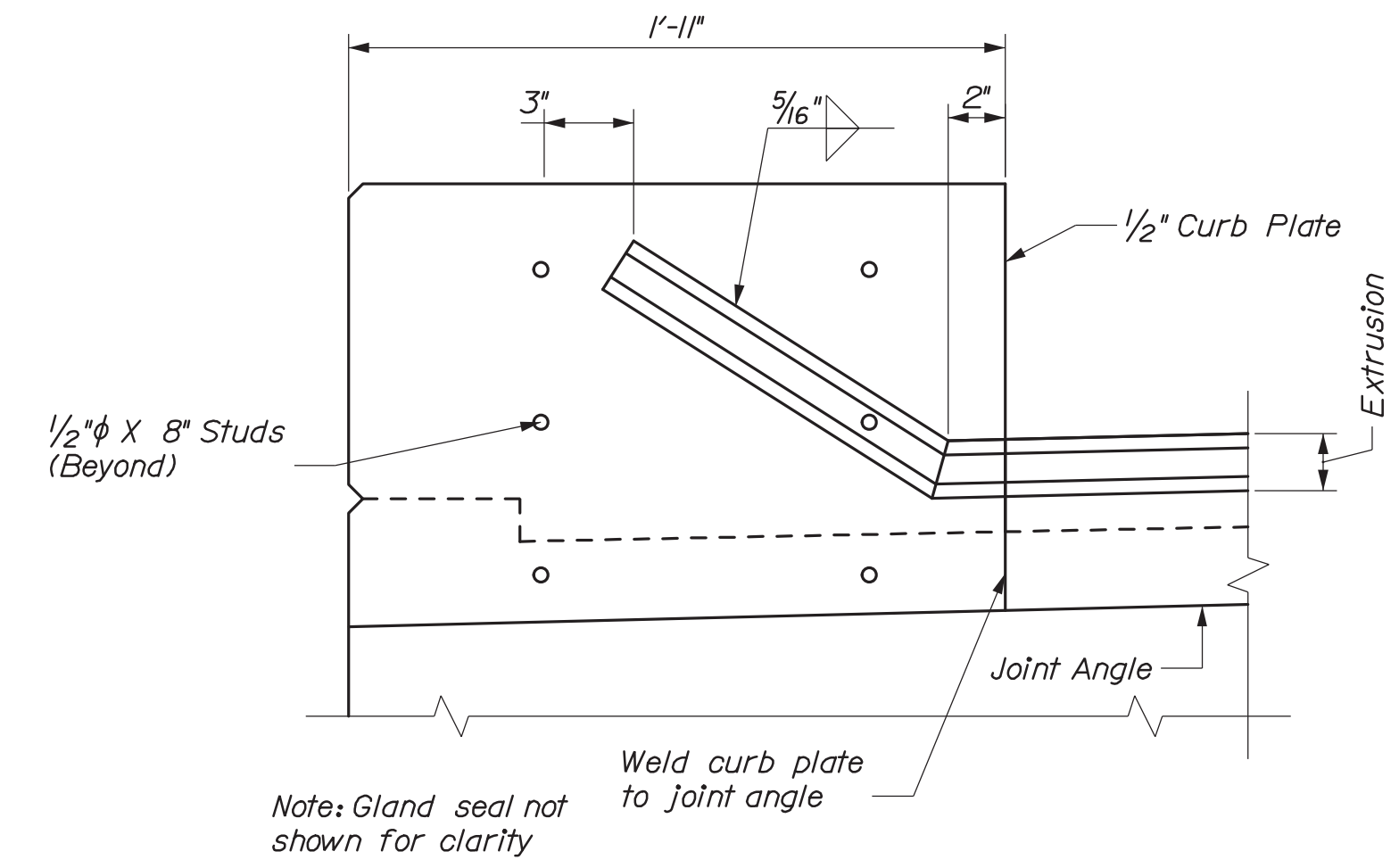
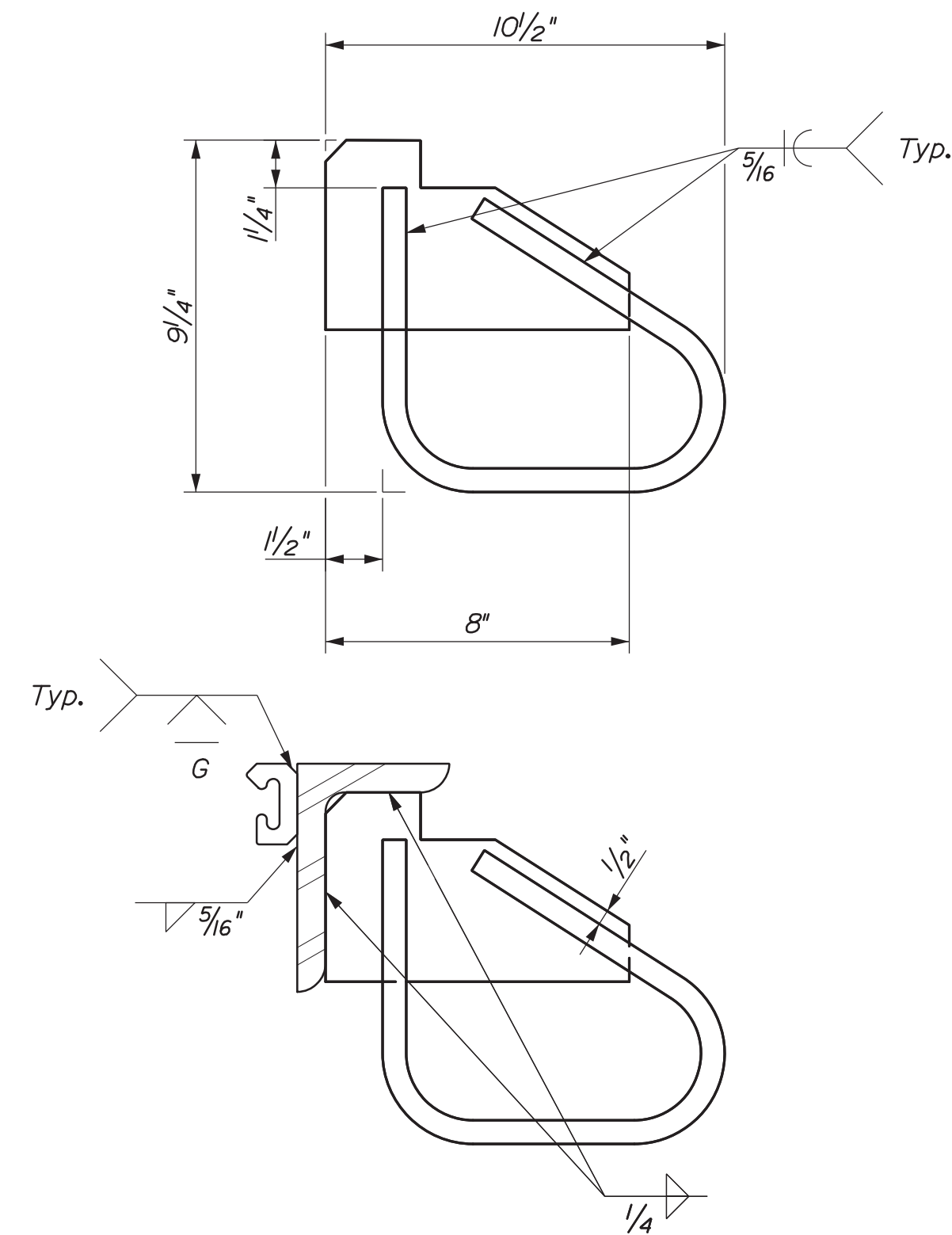
LEVELING ASSEMBLY



SLAB ADJUSTMENT DEVICE ATTACHMENT



ANCHOR LOOP DETAILS



DETAIL A

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

SIGNATURE  
P.E. NUMBER  
DATE

PROJ. MANAGER	M. Kerstner/gen	BY	DATE
DESIGN/DETAILED	G. Standley	E. Brunsfeld	06/20
CHECKED/REVIEWED	A. Stephens	T. Cole	06/20
DESIGN/DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

INTERSTATE 295 SOUTHBOUND  
SOUTH PORTLAND  
CUMBERLAND COUNTY

JOINT MODIFICATION  
DETAILS II (TYPE 5)

SHEET NUMBER

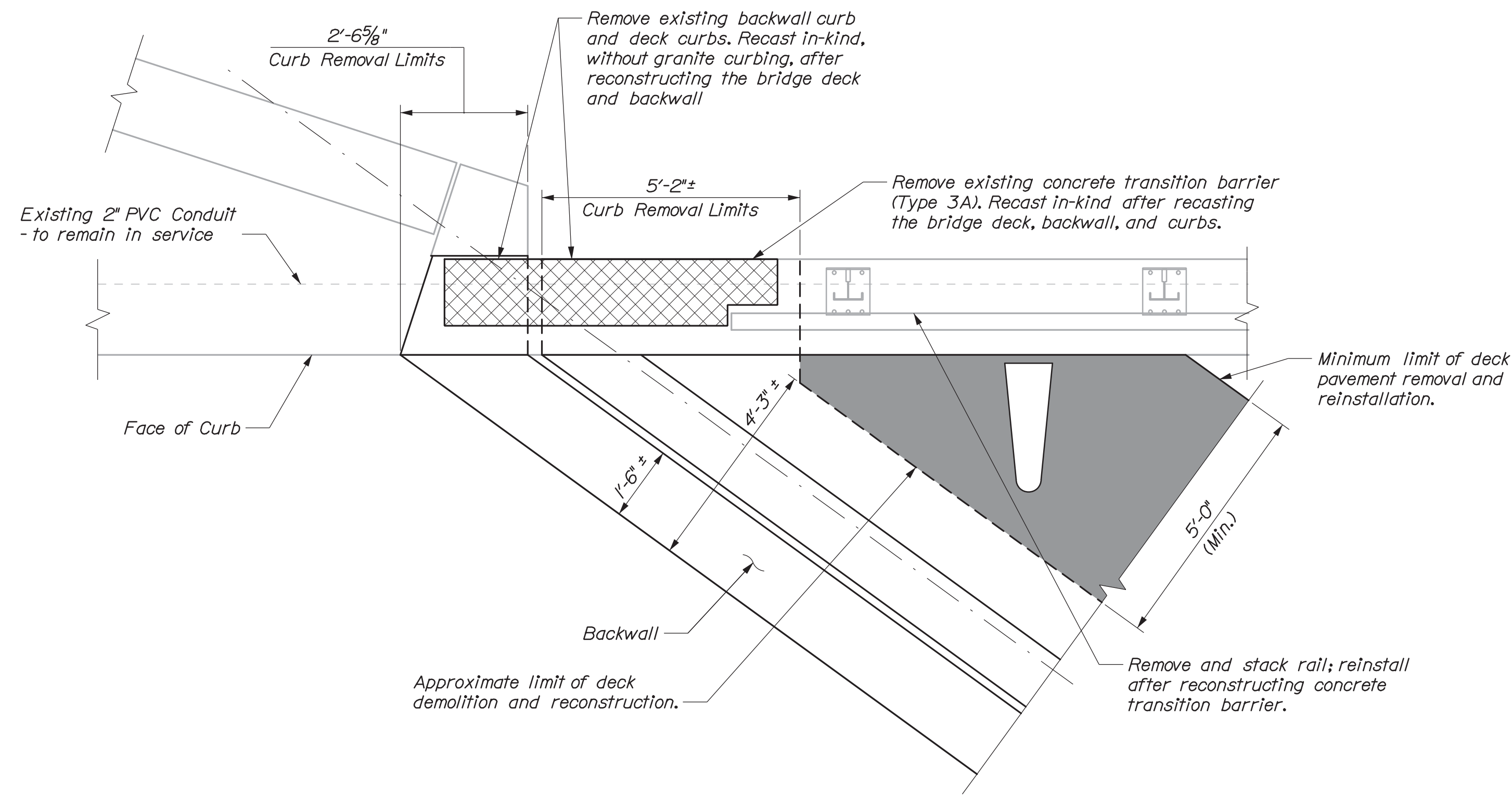
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OF 6

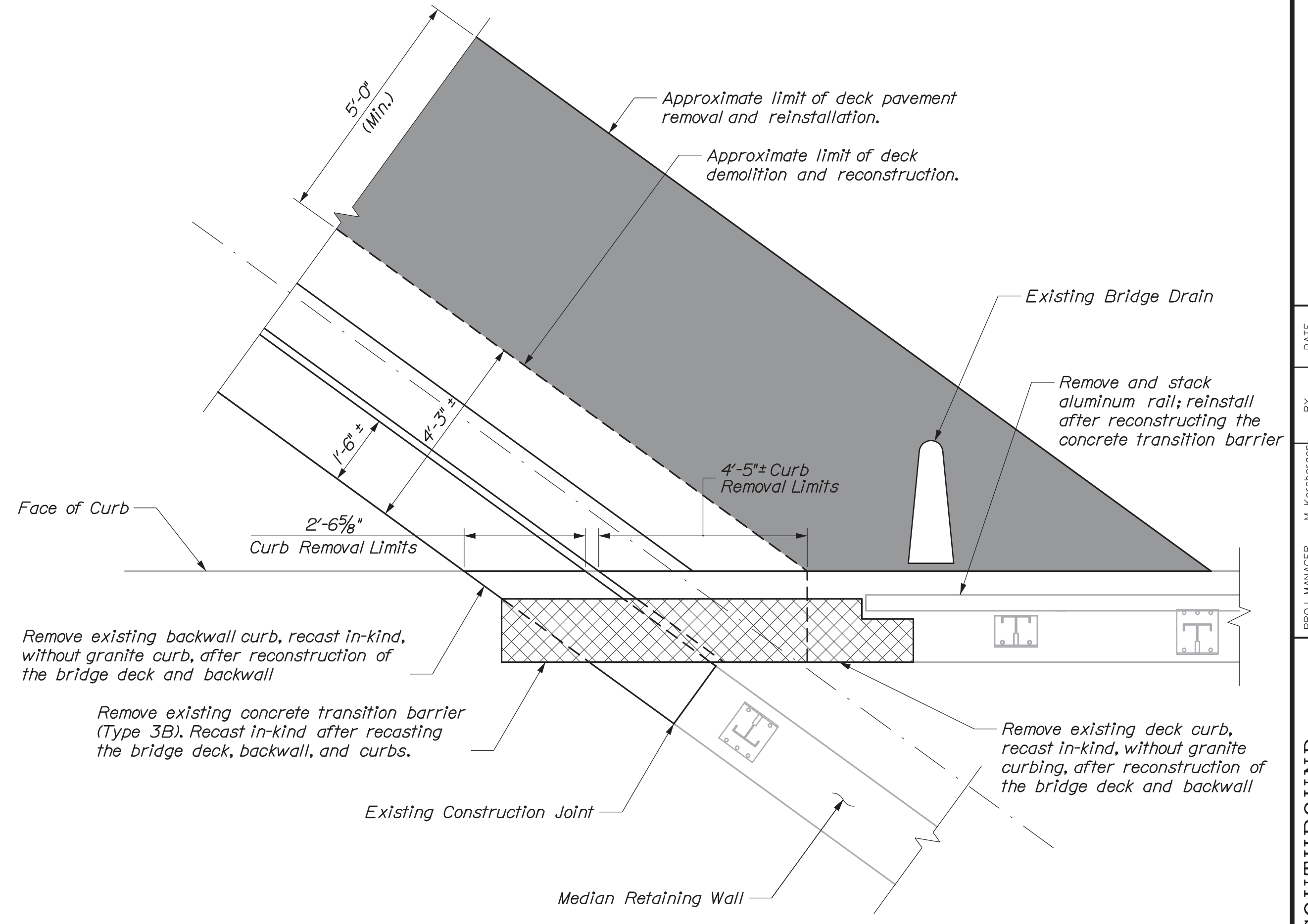
BRIDGE PLANS

WIN  
023615.05





DETAIL A



DETAIL B

PROJ. MANAGER	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
M. Kersting	E. Beausoleil	06/20			
DESIGN DETAILED	G. Standley	06/20			
CHECKED/REVIEWED	A. Stephens	06/20			
DESIGN DETAILED					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

INTERSTATE 295 SOUTHBOUND  
SOUTH PORTLAND  
CUMBERLAND COUNTY  
CONCRETE TRANSITION  
BARRIER DETAILS I

SHEET NUMBER

5

OF 6

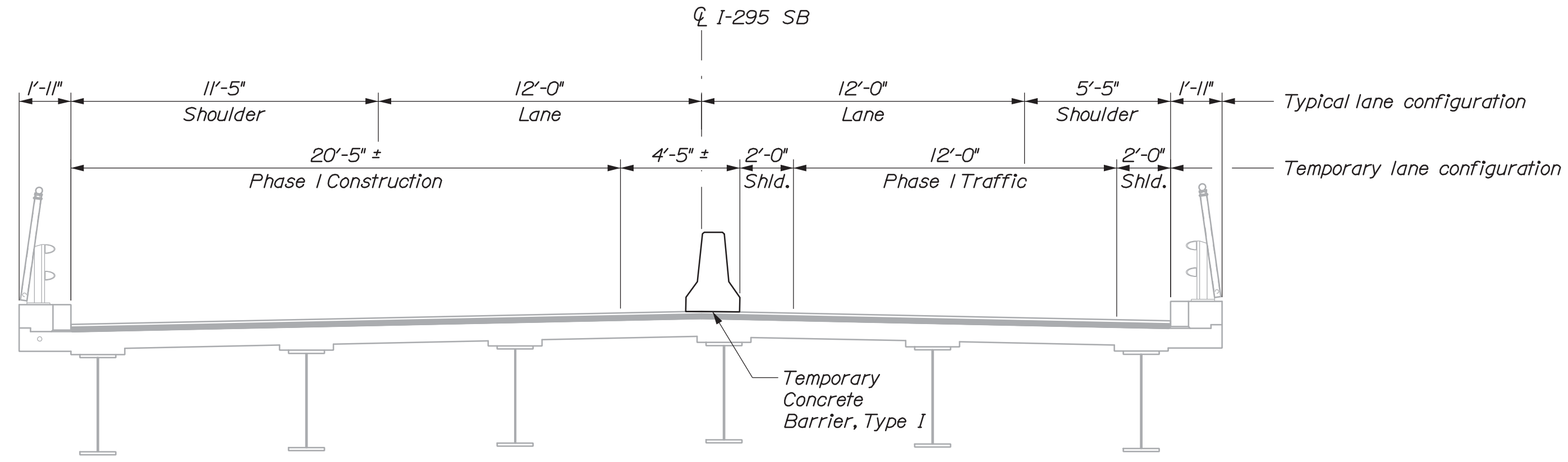


Date: 6/8/2020

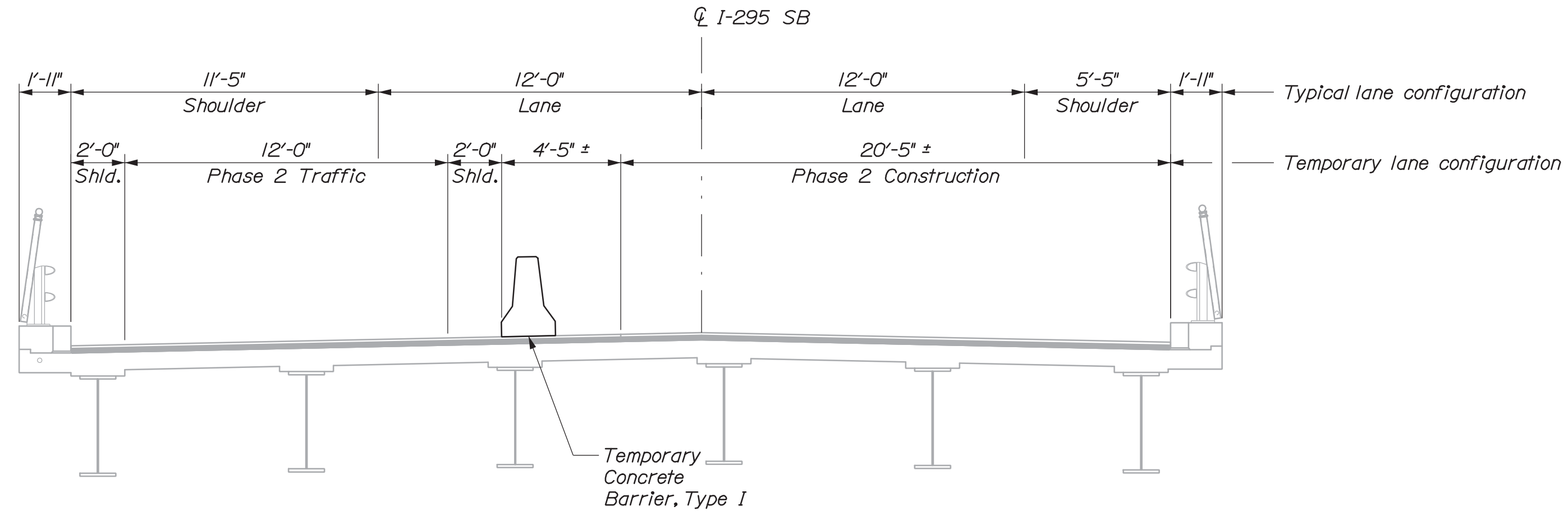
Username:

Division:

Filename: 006\_Route\_703-1\_SB.dgn



**PHASE 1**  
Interstate 295 over Route 703



**PHASE 2**  
Interstate 295 over Route 703

**NOTES:**  
1. Sections are shown looking northbound.

**HNTB**

SHEET NUMBER

6

OF 6

INTERSTATE 295 SOUTHBOUND  
SOUTH PORTLAND  
CUMBERLAND COUNTY  
BRIDGE PHASING  
ROUTE 703

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	WIN 023615.05	BRIDGE PLANS
PROJ. MANAGER M. Kershaugen	BY AJM TRC	DATE 12/19 12/19
DESIGN DETAILED JAS	CHECKED/REVIEWED JRH	SIGNATURE
DESIGN DETAILED JRH	DESIGN DETAILED JRH	P.E. NUMBER
DESIGN DETAILED JRH	DESIGN DETAILED JRH	DATE
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		