

STATE OF MAINE DEPARTMENT OF TRANSPORTATION



SPECIFICATIONS

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

DESIGN LOADING

Live Load State Legal Loads

TRAFFIC DATA

Current (2020) AADT.....	2910
Future (2040) AADT.....	3200
DHV - % of AADT.....	10%
Design Hour Volume.....	320
Heavy Trucks (% of AADT).....	10%
Heavy Trucks (% of DHV).....	6%
Directional Distribution (% of DHV).....	55%
18 kip Equivalent P 2.0.....	212
18 kip Equivalent P 2.5.....	202
Design Speed (mph).....	45

MATERIALS

Concrete:
 Curbs Class "LP"
 All Other Class "A"

Reinforcing Steel:
 Plain Reinforcing Steel ASTM A 615, Grade 60
 Stainless Steel ASTM A 955, Grade 75

BASIC DESIGN STRESSES

Concrete:
 Concrete Class "A" f 'c = 4000 psi
 Concrete Class "LP" f 'c = 5000 psi

Reinforcing Steel:
 Plain Reinforcing Steel f y = 60,000 psi
 Stainless Steel f y = 75,000 psi

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OLD TOWN PENOBSCOT COUNTY ROUTE 43 BRIDGE OVER INTERSTATE 95

FEDERAL AID PROJECT NO. 2234000
PROJECT LENGTH 0.100 mi.
BRIDGE NO. 6061

UTILITIES

Versant Power
 FirstLight
 Charter Communications
 Consolidated Communications

MAINTENANCE OF TRAFFIC

Maintain one lane of alternating one - way traffic using temporary traffic signals.

<u>PROJECT LOCATION</u>	Route 43 Bridge over Interstate 95 Located 0.61 miles northwest of Route 16 Lat./Long. 44°57'33.53" N 68°42'26.30" W
<u>PROGRAM AREA</u>	Bridge
<u>OUTLINE OF WORK</u>	Bridge Deck Replacement

Bridge Deck Replacement

WIN 022340.00

2234000

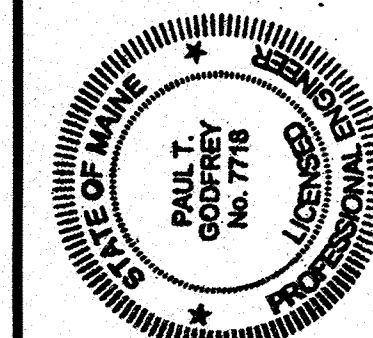
OLD TOWN
 ROUTE 43 BRIDGE
 TITLE SHEET

SHEET NUMBER

1

OF 27

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 APPROVED
 COMMISSIONER: [Signature]
 CHIEF ENGINEER: [Signature]



SIGNATURE: [Signature]
 P.E. NUMBER: 615120
 DATE: 6/15/20

PROGRAM	Bridge
PROJECT MANAGER	Mark Porfirio
DESIGNER	Lori Discoll, P.E.
CONSULTANT	HNTB
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	



Date: 6/15/2020

Username:

Division:

Filename: 601_Title.dgn

Date: 5/27/2020

Username:

Division:

Filename: 002_Estimated Quantities.dgn

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.10	Removing Existing Superstructure Property of Contractor (470 CY)	1	LS
202.12	Remove Existing Structural Concrete	34	CY
202.13	Remove Existing Railings Retained by Department	952	LF
202.202	Removing Pavement Surface	370	SY
203.20	Common Excavation	580	CY
304.10	Aggregate Subbase Course - Gravel	420	CY
403.2081	Hot Mix Asphalt - 12.5 mm Nominal Maximum Size (Polymer Modified)	220	TON
403.213	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base Course)	90	TON
403.2131	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base Course, Polymer Modified)	200	TON
409.15	Bituminous Tack Coat, Applied	120	GAL
502.21	Structural Concrete, Abutments and Retaining Walls	17	CY
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges (380 CY)	1	LS
502.49	Structural Concrete Curbs and Sidewalks (61 CY)	1	LS
502.77	FRP Bridge Drain - Type E	8	EA
503.12	Reinforcing Steel, Fabricated and Delivered	100	LB
503.13	Reinforcing Steel, Placing	150	LB
503.17	Mechanical/Welded Splice	8	EA
503.26	Stainless Steel Reinforcement, Fabricated and Delivered	2800	LB
503.27	Stainless Steel Reinforcement, Placing	2800	LB
505.08	Shear Connectors (5640 EA)	1	LS
507.0821	Steel Bridge Railing, 3 Bar (999 LF)	1	LS
508.14	High Performance Waterproofing Membrane (1520 SY)	1	LS
515.21	Protective Coating for Concrete Surfaces (1200 SY)	1	LS
518.60	Repair of Vertical Surfaces < 8"	100	SF
520.21	Expansion Device - Gland Seal	2	EA
524.301	Temporary Structural Support	1	LS
524.40	Protective Shield - Steel Girders (670 SY)	1	LS
526.301	Temporary Concrete Barrier, Type I (140 LF)	1	LS
526.305	Temporary Concrete Barrier, Braced Type I (454 LF)	1	LS
527.33	Truck Mounted Attenuator	2	EA
527.34	Work Zone Crash Cushions	2	UNIT
606.1301	3" W-Beam Guardrail - Mid-Way Splice (Steel Post, 8" Offset Blocks, Single Faced)	38	LF
606.1305	3" W-Beam Guardrail - Mid-Way Splice Flared Terminal	4	EA
606.1721	Bridge Transition - Type I	4	EA
606.353	Reflectorized Flexible Guardrail Marker	8	EA
607.183	Chain Link Snow Fence 33" (224 LF)	1	LS
609.38	Reset Curb Type I	510	LF
615.07	Loom	24	CY
618.14	Seeding Method Number 2	4	UNIT
619.12	Mulch	4	UNIT
619.14	Erosion Control Mix	10	CY
627.733	4" White or Yellow Painted Pavement Marking Line	2250	LF
627.77	Removing Existing Pavement Markings	370	SF
627.78	Temporary 4" Painted Pavement Marking Line, White or Yellow	2950	LF
629.05	Hand Labor, Straight Time	10	HR
631.10	Air Compressor (including operator)	10	HR
631.11	Air Tool (including operator)	10	HR
631.12	All Purpose Excavator (including operator)	10	HR
631.172	Truck-large (including operator)	10	HR
631.21	Road Broom	10	HR
639.19	Field Office, Type B	1	EA
643.72	Temporary Traffic Signal: Route 43	1	LS
652.30	Flashing Arrow	2	EA
652.312	Type III Barricades	4	EA
652.33	Drum	62	EA
652.34	Cone	62	EA
652.35	Construction Signs	990	SF
652.361	Maintenance of Traffic Control Devices	1	LS
652.38	Flaggers	240	HR
652.41	Portable Changeable Message Sign	2	EA
656.75	Temporary Soil Erosion and Water Pollution Control	1	LS
659.10	Mobilization	1	LS

ROUTE 43 BRIDGE INTERSTATE 95 PENOBSCOT COUNTY OLD TOWN ESTIMATED QUANTITIES	STATE OF MAINE DEPARTMENT OF TRANSPORTATION 022340.00 WIN 022340.00 BRIDGE NO. 8061 BRIDGE PLANS																																										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>PROJ. MANAGER</th> <th>DESIGN-DETAILED</th> <th>CHECKED-REVIEWED</th> <th>DESIGN-DETAILED</th> <th>REVISIONS 1</th> <th>REVISIONS 2</th> <th>REVISIONS 3</th> <th>REVISIONS 4</th> <th>FIELD CHANGES</th> </tr> <tr> <td></td> <td>K. Bravley</td> <td>E. White</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>L. Driscoll</td> <td>L. Driscoll</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	PROJ. MANAGER	DESIGN-DETAILED	CHECKED-REVIEWED	DESIGN-DETAILED	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES		K. Bravley	E. White								L. Driscoll	L. Driscoll							<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>BY</th> <th>DATE</th> <th>SIGNATURE</th> <th>P.E. NUMBER</th> <th>DATE</th> </tr> <tr> <td></td> <td>05/20</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>05/20</td> <td></td> <td></td> <td></td> </tr> </table>	BY	DATE	SIGNATURE	P.E. NUMBER	DATE		05/20					05/20			
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GENERAL NOTES

1. The clearing limits as shown on the plans are approximate. The exact limits will be established in the field by the Resident. Payment for clearing will be considered incidental to Contract items.

2. All utility facilities shall be adjusted by the respective utilities unless otherwise noted.

3. Place loam 2" deep on all new or reconstructed side slopes or as directed by the Resident.

4. Protective Coating for Concrete Surfaces shall be applied to the following areas and paid under 515.21:

- All exposed surfaces of concrete curbs,
- Fascias down to the drip notch,
- Exposed surfaces of piers,
- Top of abutment backwalls and one foot below the top of backwalls on the back side,
- Exposed surfaces of abutment backwall, seat, and breastwall,
- Wingwalls top face and roadway face to one foot below roadway grade.

5. Project Info referred to below may be accessed at the following MaineDOT web address: <http://www.maine.gov/contractors/>

6. 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.

7. Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid amount, with no addition or reduction. In payment to the Contractor if the actual final quantities are different from the MaineDOT provided estimated quantities, except as follows:

- a. If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.
- b. If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.
- c. If a design change results in changes to estimated quantities for Lump Sum pay items, price adjustments will be made in accordance with Standard Specifications Section 109.7, Equitable Adjustments to Compensation.

8. The Contractor shall submit a Bridge Deck Removal 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 deck. No work related to the removal of the bridge deck shall be undertaken by the Contractor until MaineDOT has reviewed the Bridge Deck Removal 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 deck removal pay items.

9. Steel portions of the existing bridge shall be assumed to be coated with a lead based paint system unless Contractor testing proves otherwise. The Contractor is responsible for the containment, proper management and disposal of all lead-containment hazardous waste generated by their work. The Contractor is responsible for implementing appropriate OSHA mandated personal protection standards related to this process. Payment for this work will not be made separately, but will be considered incidental to related Contract items.

10. The Contractor shall plan and conduct the work accordingly so that upon final completion of the project there is no drop-off from the edge of shoulder pavement. All remaining or disturbed material on slopes or in ditches on the project shall be capable of attaining a growth of grass that is acceptable according to Standard Specification 618.10. No separate payment will be made for this work.

11. No existing drainage shall be abandoned, removed, or plugged without prior approval of the Resident.

12. Erosion Control Mix may be substituted in those areas normally receiving loam and seed as directed by the Resident. Placement shall be in accordance with Standard Specification Section 619, Mulch. Payment will be made under Item No. 619.14, Erosion Control Mix.

13. Extended use Erosion Control Blanket, seeded gutters, riprap downspouts and other gutters lined with Stone Ditch Protection shall be constructed after paving and shoulder work is completed where it is apparent that runoff will cause continual erosion. Payment will be made under the appropriate Contract items.

14. Where new pavement joins existing pavement, the existing pavement shall be saw cut along a smooth line to a neat, even, vertical joint, as directed by the Resident. Broken or raveled edges will not be permitted. All work necessary for the preparation of this joint will be considered incidental to the related Contract items.

15. When removing existing bridge drains, the Contractor shall remove the support plate 2" from the girder web. Removal of bridge drains and drain supports, including the connection to the existing girders, are incidental to Item 202.10. Cut ends of existing drain support plates shall be coated with a cold galvanizing compound approved by the Resident. The work shall be incidental to Item 202.10.

16. The Contractor shall coordinate traffic control, paving operations, limit of work on Interstate 95 and the limit of work on the ramps with MaineDOT paving contract work that will be happening in the area concurrently. The contact for the I-95 project will be:

Shawn Smith
MaineDOT Project Manager
(207) 557-1663
shawn.smith@maine.gov

17. Remove and reset and remove and dispose of signs shall be performed in accordance with Standard Specification Section 645 - Highway Signing and as directed by the Resident. Payment will be incidental to related contract items.

18. Prior to demolition at the west abutment, the contractor shall coordinate the removal and resetting of the survey control marker with the Resident and Department's Property Office. Payment will be incidental to the Contract.

Date: 5/27/2020

Username:

Division:

Filename: 003_General Notes.dgn

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		022340.00		WIN		022340.00		BRIDGE NO. 6061		BRIDGE PLANS	
ROUTE 43 BRIDGE		INTERSTATE 95		PENOBSCOT COUNTY		GENERAL NOTES		SHEET NUMBER		3		OF 27	
PROJ. MANAGER	DESIGN-DETAILED	CHECKED-REVIEWED	DESIGN-DETAILED	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
	K. Bravley	E. White	L. Driscoll										
	B. Greiner												

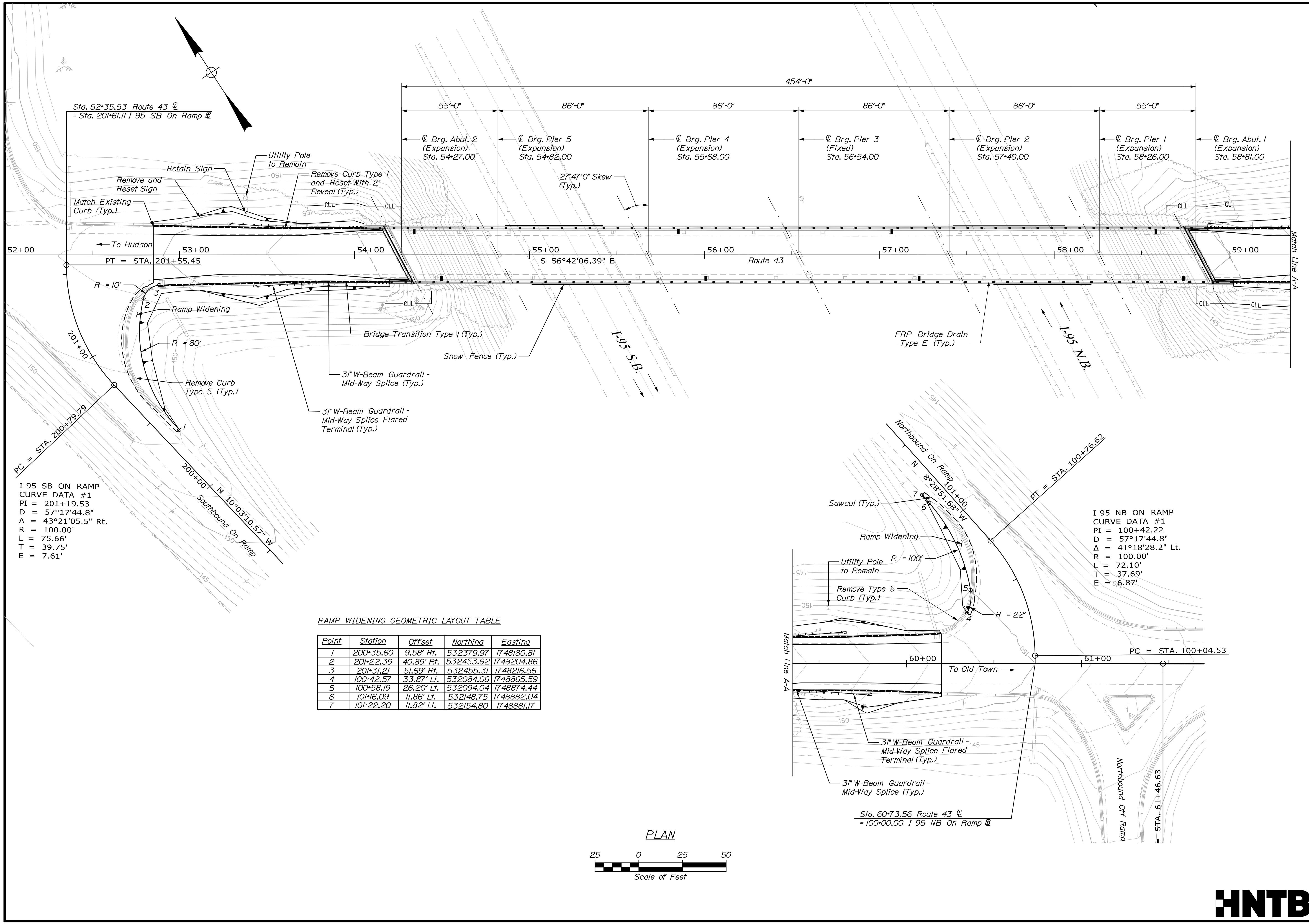


Date: 5/27/2020

Username:

Division:

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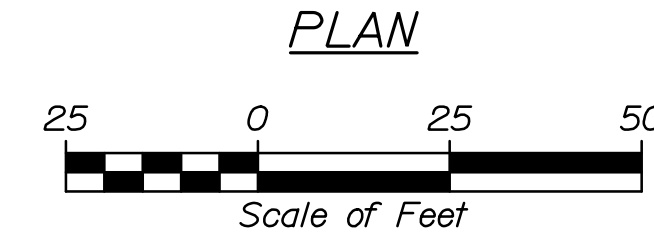


I 95 SB ON RAMP
 CURVE DATA #1
 PI = 201+19.53
 D = 57°17'44.8"
 Δ = 43°21'05.5" Rt.
 R = 100.00'
 L = 75.66'
 T = 39.75'
 E = 7.61'

I 95 NB ON RAMP
 CURVE DATA #1
 PI = 100+42.22
 D = 57°17'44.8"
 Δ = 41°18'28.2" Lt.
 R = 100.00'
 L = 72.10'
 T = 37.69'
 E = -6.87'

RAMP WIDENING GEOMETRIC LAYOUT TABLE

Point	Station	Offset	Northing	Easting
1	200+35.60	9.58' Rt.	532379.97	1748180.81
2	201+22.39	40.89' Rt.	532453.92	1748204.86
3	201+31.21	51.69' Rt.	532455.31	1748216.56
4	100+42.57	33.87' Lt.	532084.06	1748865.59
5	100+58.19	26.20' Lt.	532094.04	1748874.44
6	101+16.09	11.86' Lt.	532148.75	1748882.04
7	101+22.20	11.82' Lt.	532154.80	1748881.17



STATE OF MAINE DEPARTMENT OF TRANSPORTATION		022340.00	WIN 022340.00	BRIDGE NO. 6061 BRIDGE PLANS
ROUTE 43 BRIDGE INTERSTATE 95 PENOBSCOT COUNTY OLD TOWN		GENERAL PLAN		
SHEET NUMBER		4		
OF 27				

PROJ. MANAGER	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED C. Helmick	C. Helmick	05/20			
CHECKED-REVIEWED L. Driscoll	A. Sweet	05/20			
DESIGN-DETAILED					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

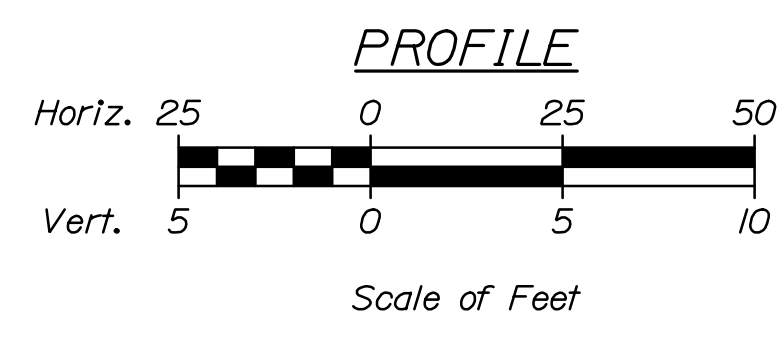
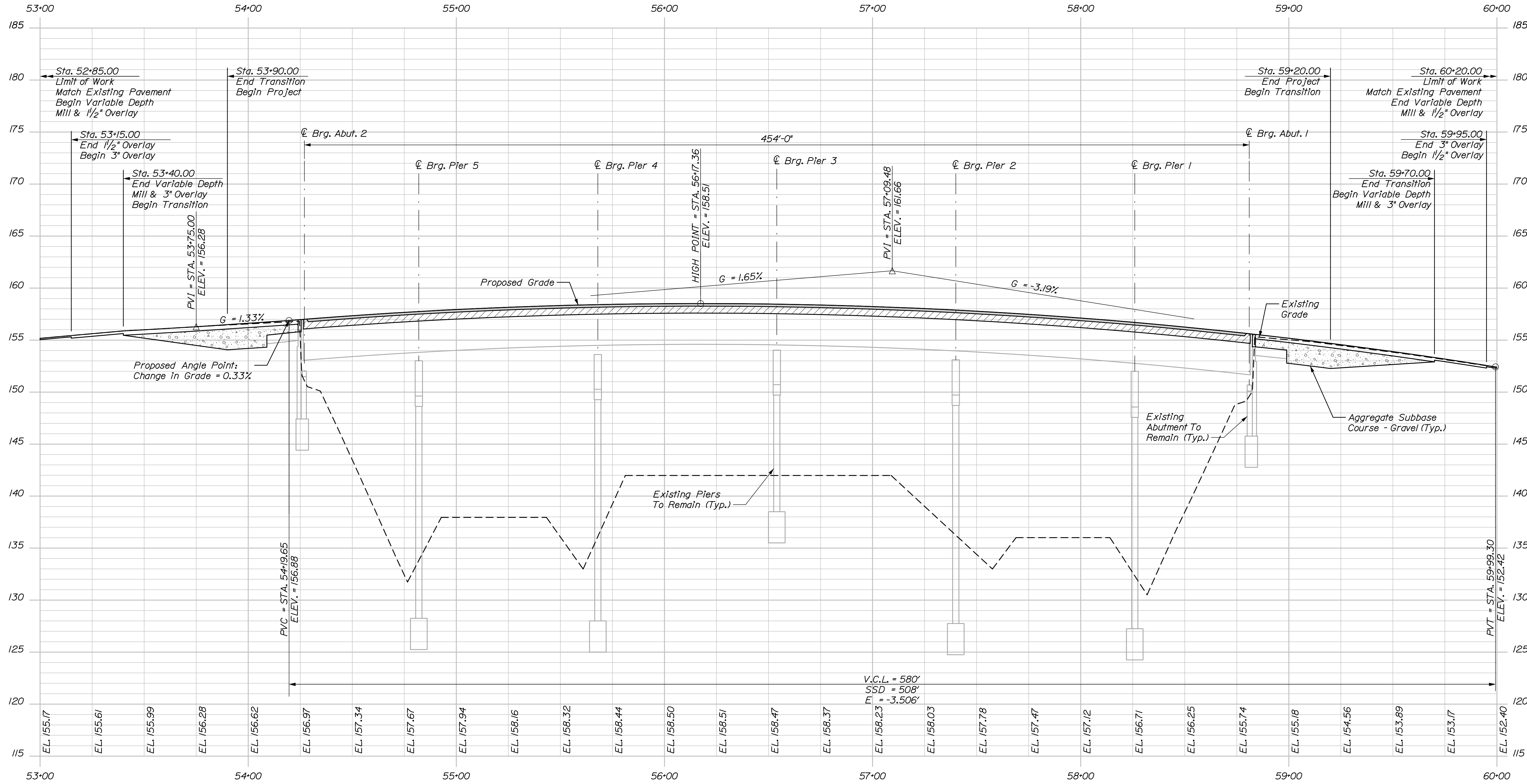


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Division:

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ROUTE 43 BRIDGE INTERSTATE 95 PENOBSCOT COUNTY		BRIDGE NO. 8081	
OLD TOWN		WIN 022340.00	
PROFILE		BRIDGE PLANS	
PROJ. MANAGER	BY	DATE	SIGNATURE
DESIGN-DETAILED C. Helmick	E. White	05/20	
CHECKED-REVIEWED L. Driscoll	A. Sweet	05/20	
DESIGN-DETAILED			P.E. NUMBER
REVISIONS 1			DATE
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
SHEET NUMBER		5	
		OF 27	

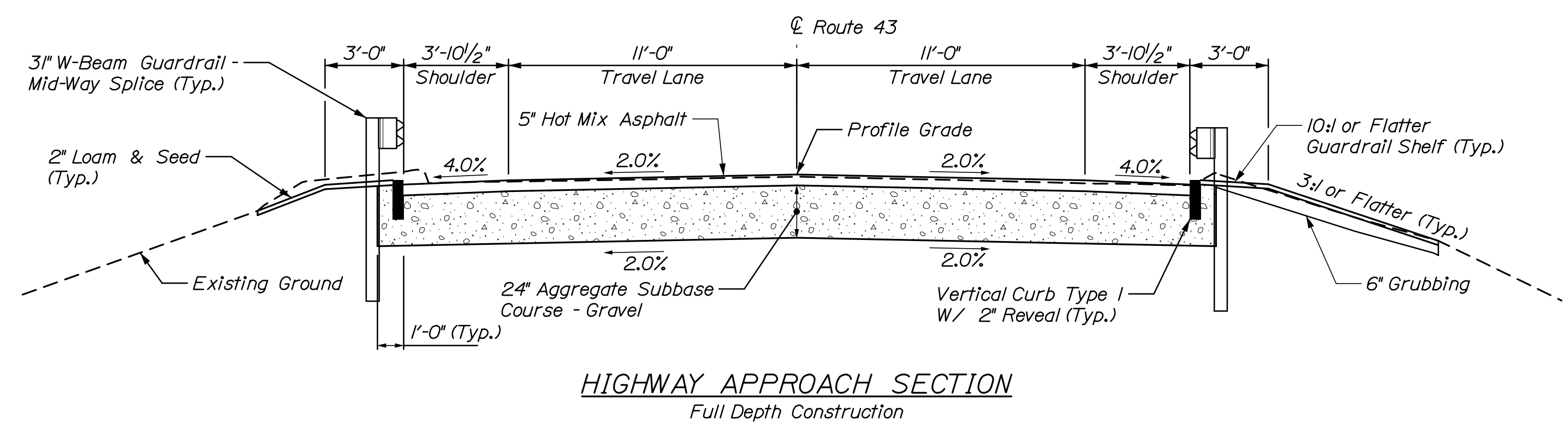


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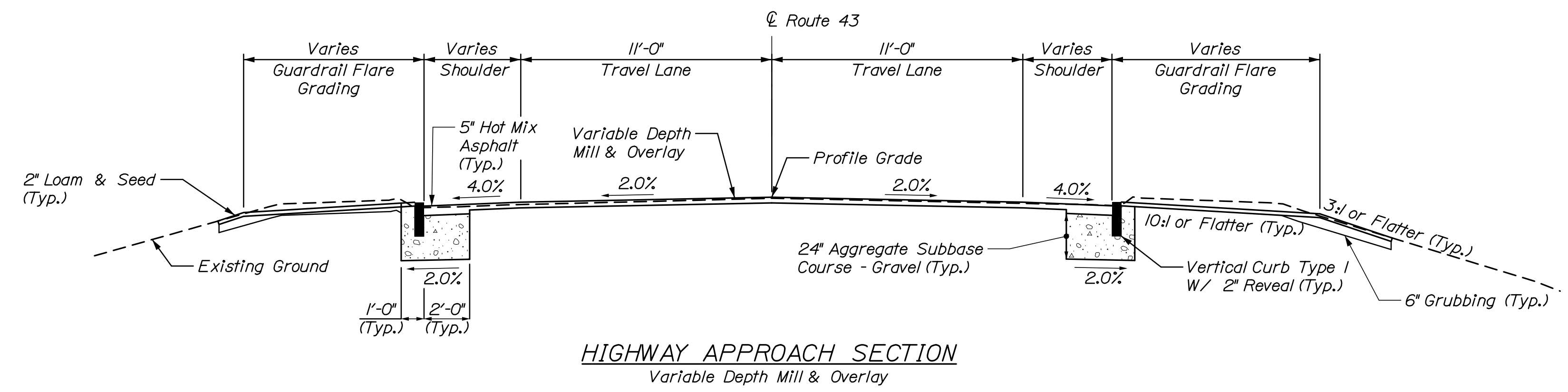
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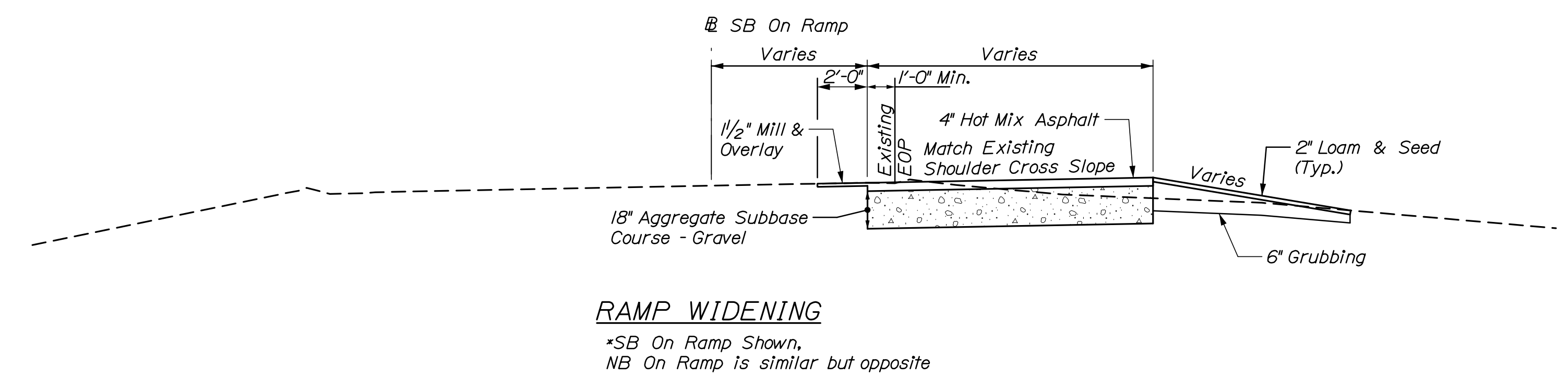
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HIGHWAY APPROACH SECTION
Full Depth Construction



HIGHWAY APPROACH SECTION
Variable Depth Mill & Overlay



RAMP WIDENING
*SB On Ramp Shown,
NB On Ramp is similar but opposite

- NOTES:**
- The pavement, base and subbase depths as shown on the plans are intended to be nominal.
 - Crowns for both normal and superelevation sections for all courses of subbase and pavement shall be straight, unless otherwise noted on the plans.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION		022340.00		WIN 022340.00		BRIDGE NO. 6061		BRIDGE PLANS	
ROUTE 43 BRIDGE INTERSTATE 95 PENOBSCOT COUNTY OLD TOWN		TYPICAL SECTIONS		SHEET NUMBER		6		OF 27	
PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE			
DESIGN-DETAILED C. Helmick	05/20	C. Helmick	05/20						
CHECKED-REVIEWED L. Driscoll		A. Sweet							
DESIGN-DETAILED									
REVISIONS 1									
REVISIONS 2									
REVISIONS 3									
REVISIONS 4									
FIELD CHANGES									

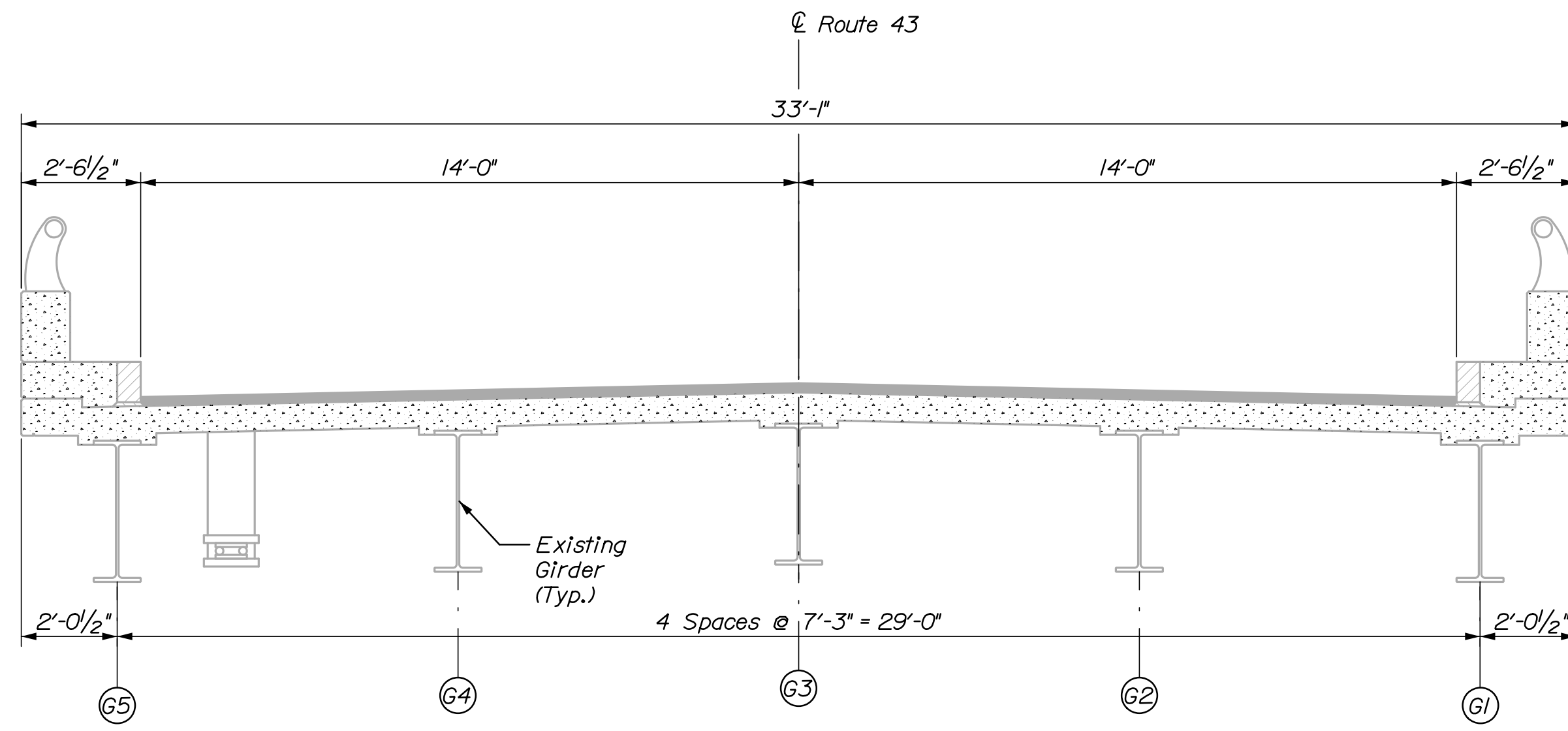


Date: 5/27/2020

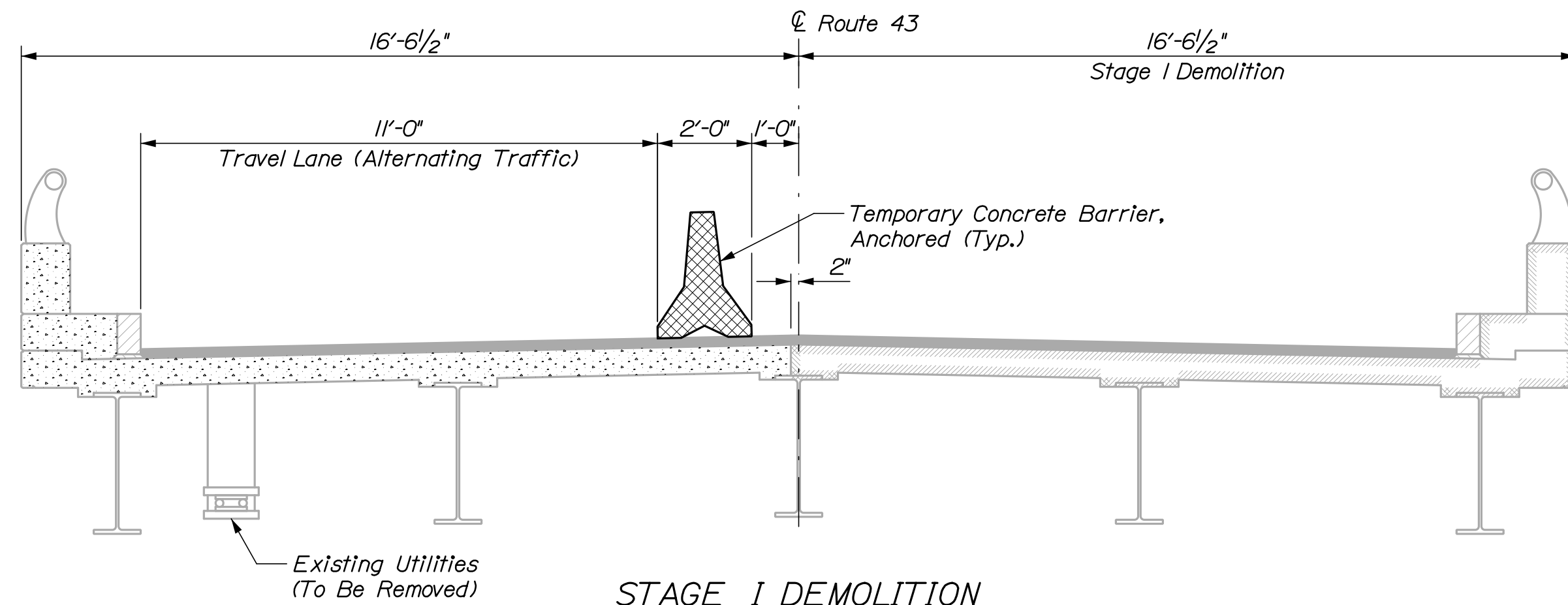
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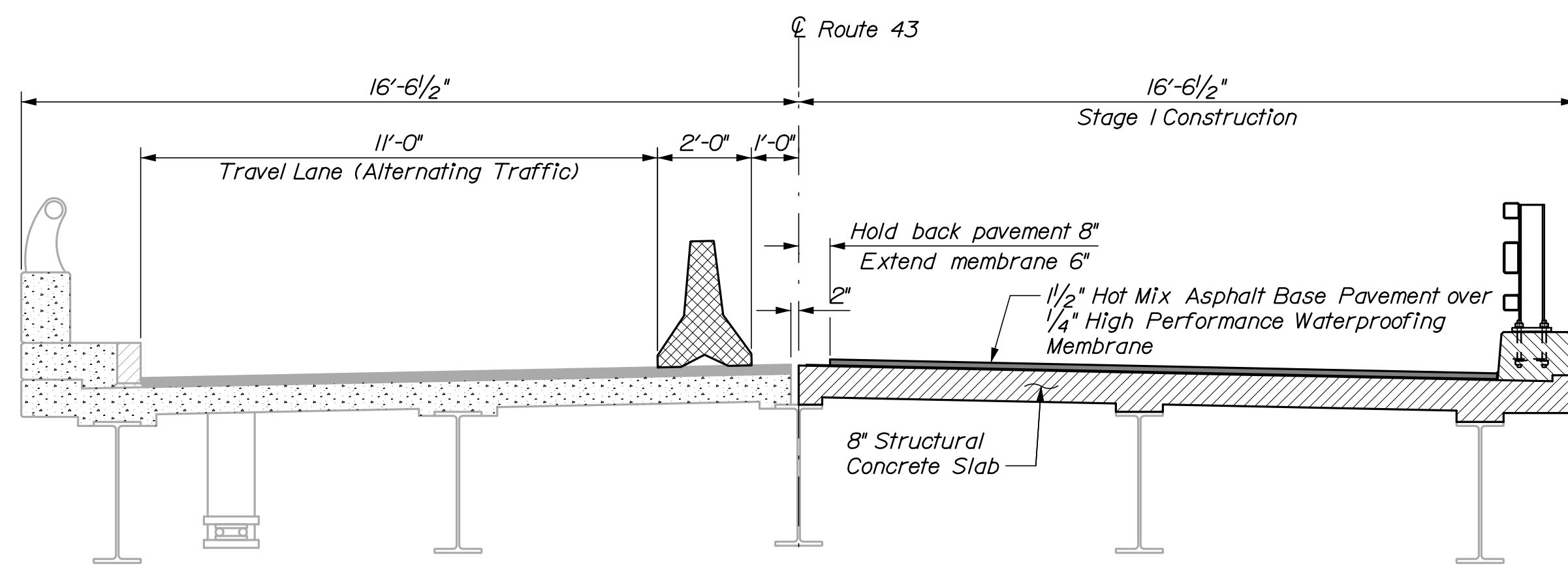
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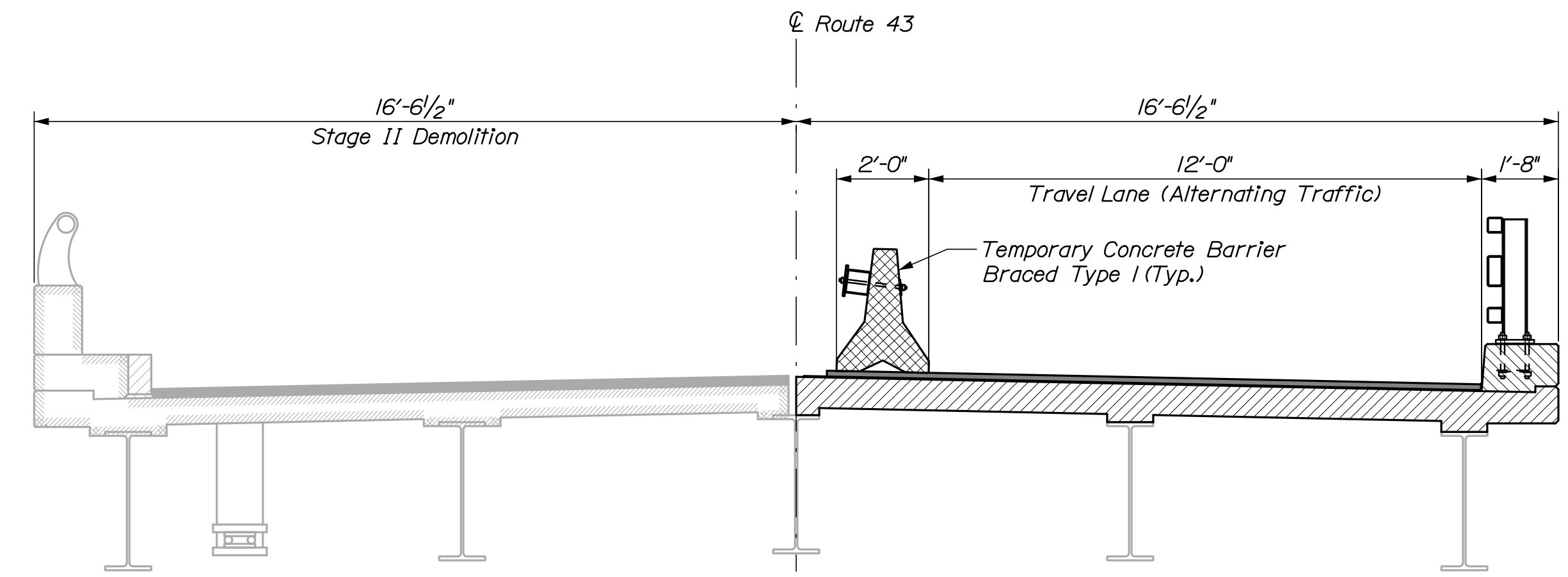
EXISTING SECTION



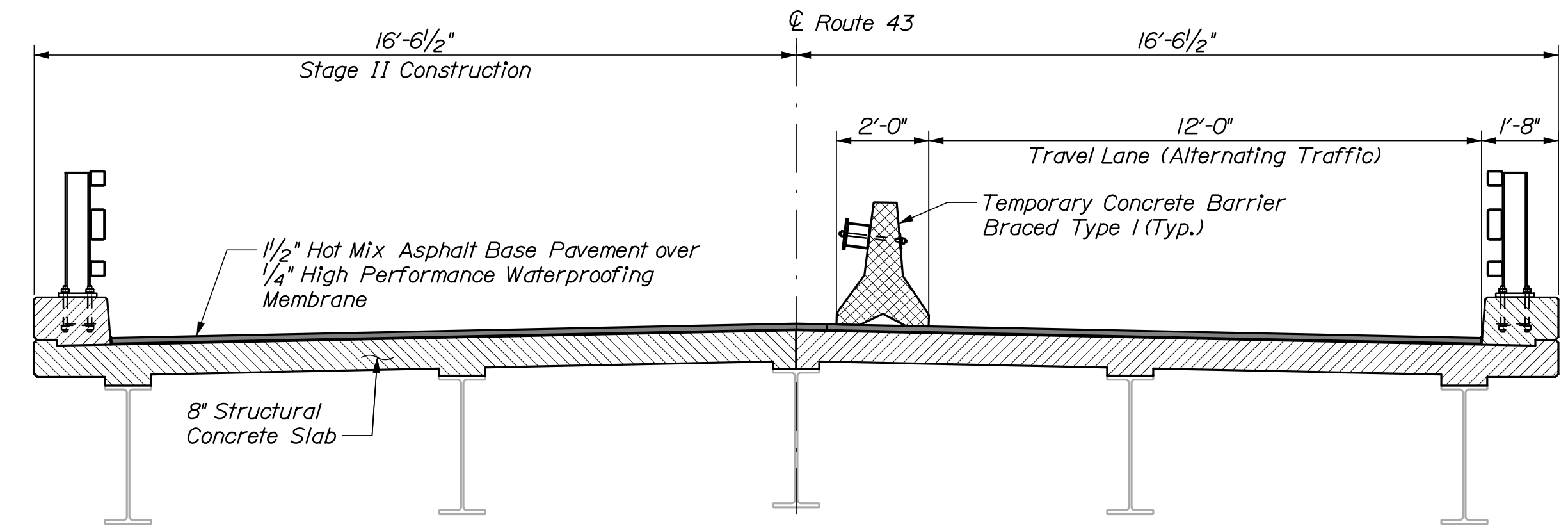
STAGE I DEMOLITION



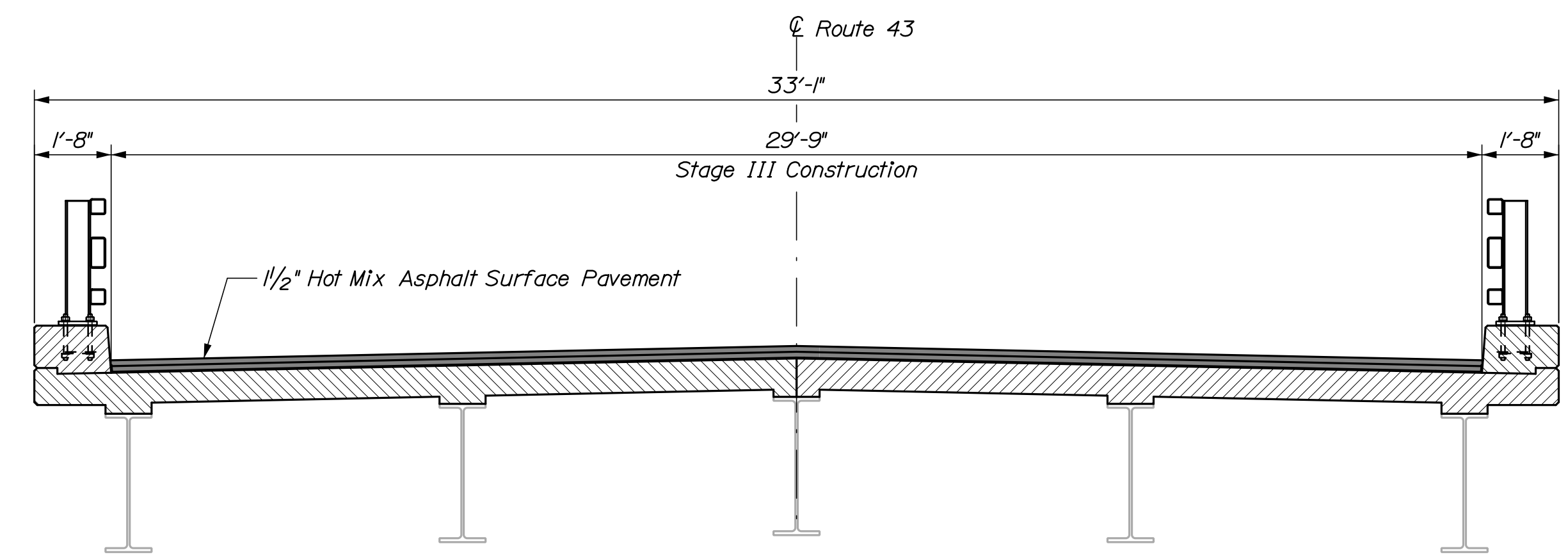
STAGE I CONSTRUCTION



STAGE II DEMOLITION



STAGE II CONSTRUCTION



STAGE III CONSTRUCTION

NOTES:

1. Bridge drains are not shown for clarity. Refer to sheet 23 for Bridge Drain Details.
2. Temporary Concrete Barrier, "Braced Type I" or "Anchored" shall be in accordance with Special Provision 526.
3. All surface paving shall be completed in a single operation. The Contractor shall install temporary pavement tapers around bridge drains and deck joints as directed by Resident before allowing traffic on the base pavement. Taper length shall be 4 feet per inch of transition depth. Temporary pavement shall be incidental to Item 403.2131.
4. Bridge transverse sections are looking upstation.



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
022340.00
WIN
022340.00
BRIDGE NO. 8061
BRIDGE PLANS

PROJ. MANAGER	BY	DATE
DESIGN-DETAILED: K. Bravley	E. White	05/20
CHECKED-REVIEWED: B. Greiner	L. Driscoll	05/20
DESIGN-DETAILED:		
REVISIONS 1:		
REVISIONS 2:		
REVISIONS 3:		
REVISIONS 4:		
FIELD CHANGES:		

ROUTE 43 BRIDGE
INTERSTATE 95
PENOBSCOT COUNTY
STAGED CONSTRUCTION
OLD TOWN

SHEET NUMBER

7

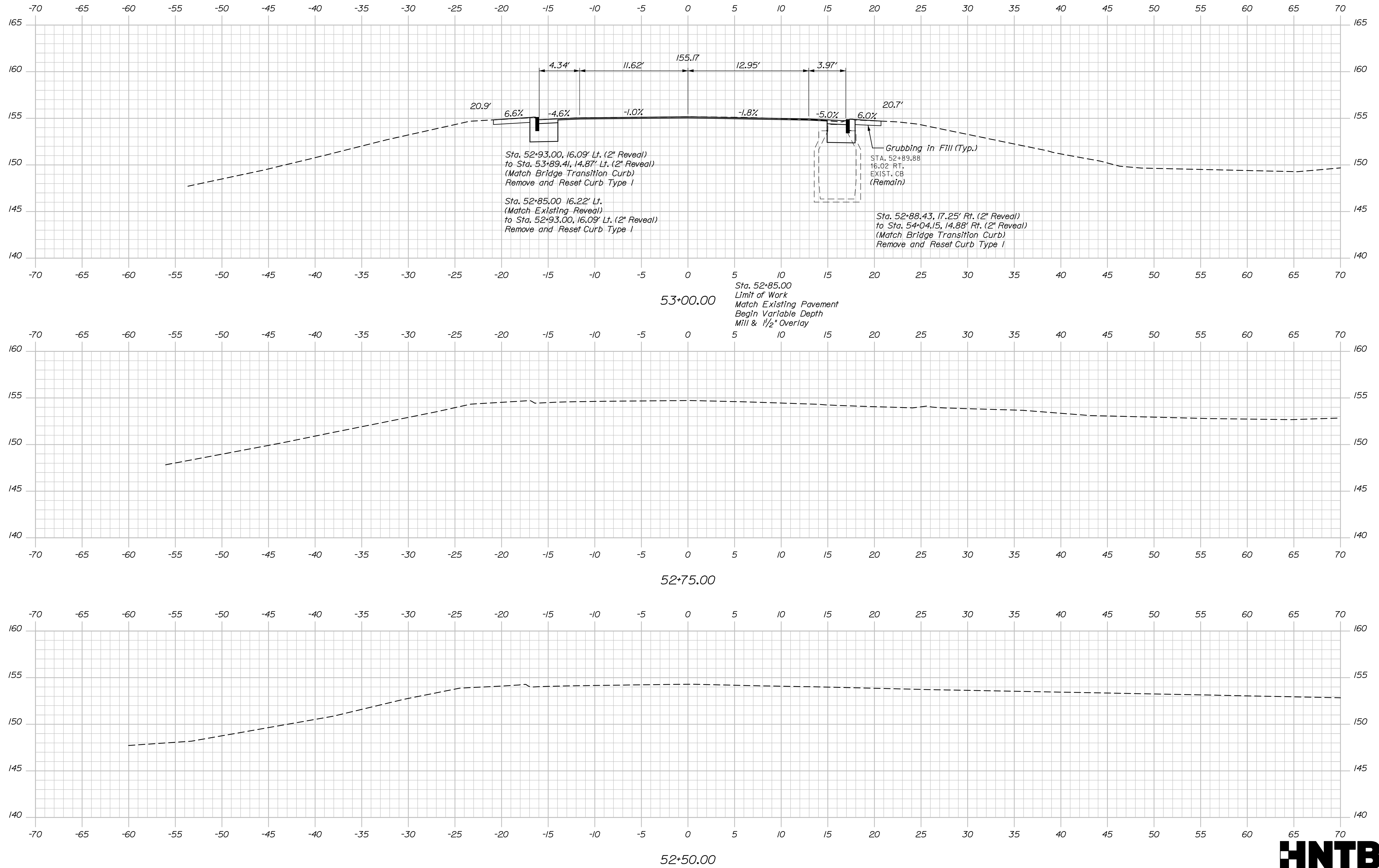
OF 27

Date: 5/27/2020

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Division:

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

022340.00

WIN 022340.00
BRIDGE NO. 8061

BRIDGE PLANS

DATE 05/20
SIGNATURE

P.E. NUMBER

DATE

BY C. Helmick
A. Sweet

PROJ. MANAGER C. Helmick
L. Driscoll

DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

ROUTE 43 BRIDGE
INTERSTATE 95
PENOBSCOT COUNTY
OLD TOWN

ROUTE 43
CROSS SECTIONS

SHEET NUMBER

8

OF 27



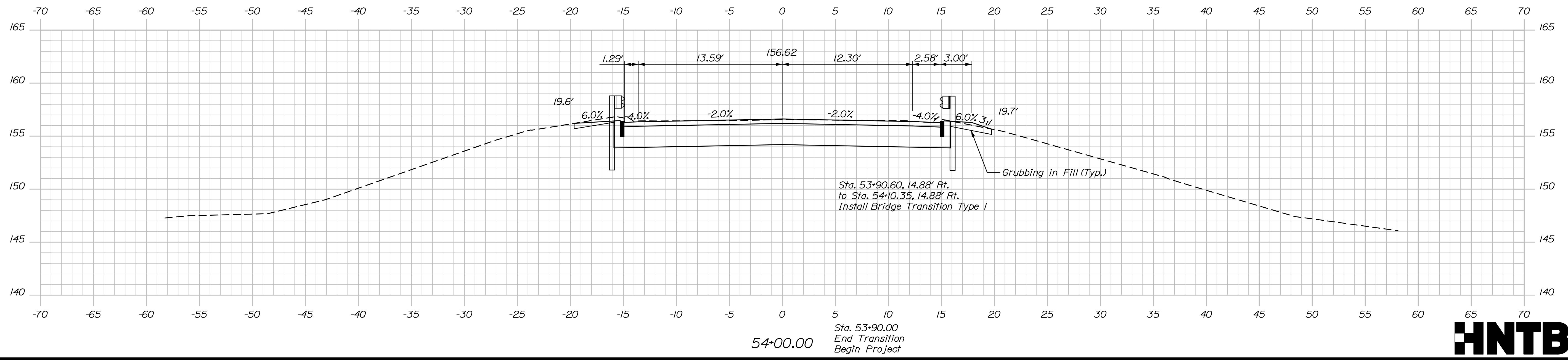
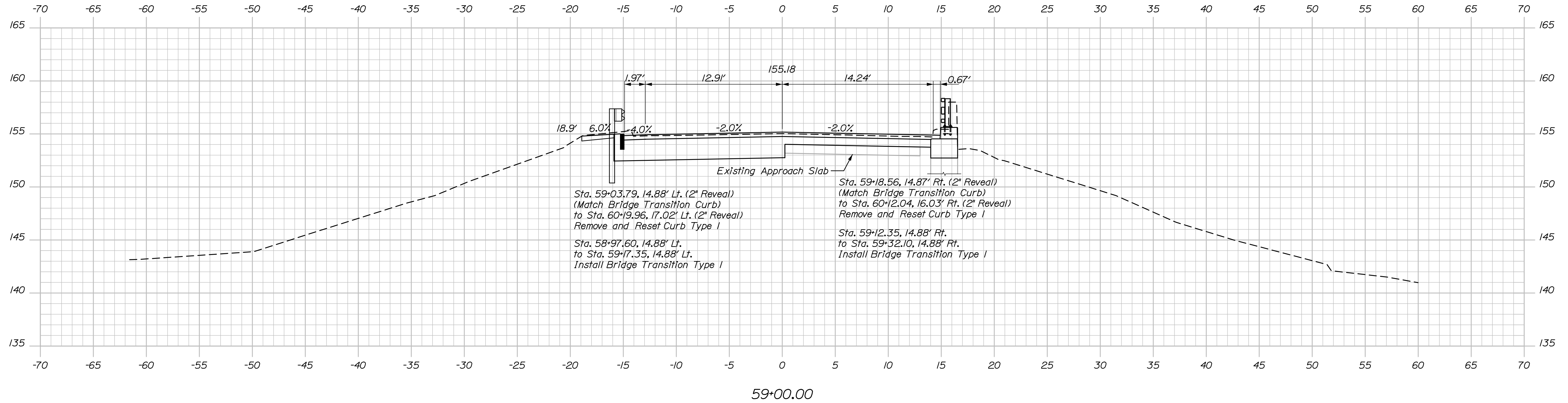
Sta. 52+50.00 to Sta. 53+00.00

Date: 5/27/2020

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Division:

Filename: Xsect.dgn



Sta. 54+00.00 & Sta. 59+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
022340.00
WIN
022340.00
BRIDGE NO. 6061
BRIDGE PLANS

PROJ. MANAGER
DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

BY
C. Helmick
A. Sweet

DATE
05/20
05/20

SIGNATURE
P.E. NUMBER
DATE

ROUTE 43 BRIDGE
INTERSTATE 95
PENOBSCOT COUNTY
OLD TOWN
ROUTE 43
CROSS SECTIONS

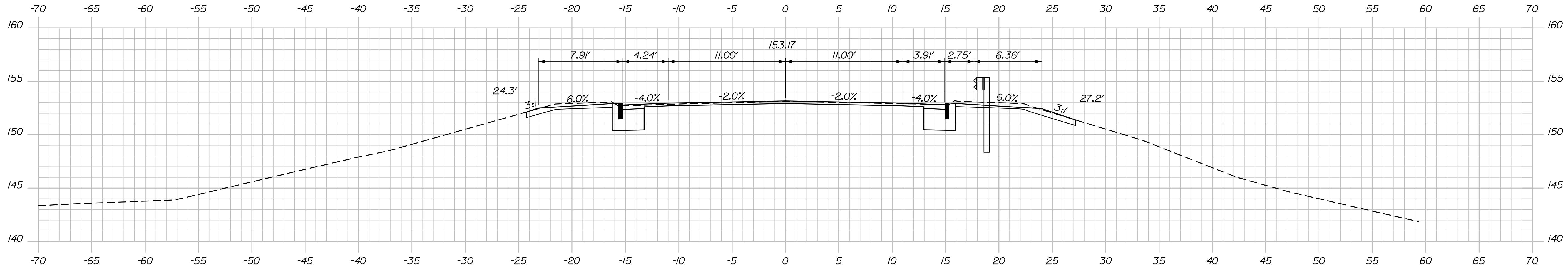
SHEET NUMBER
10
OF 27

Date: 5/27/2020

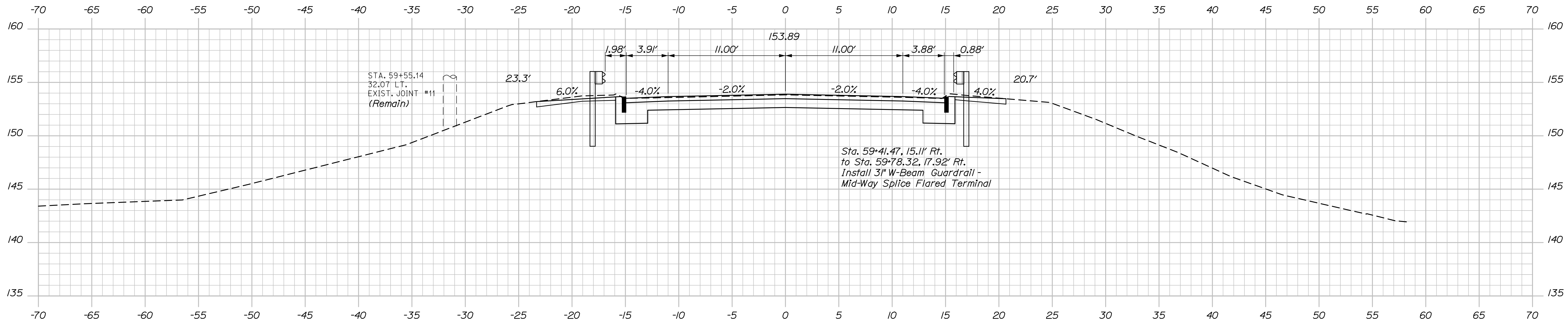
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Division:

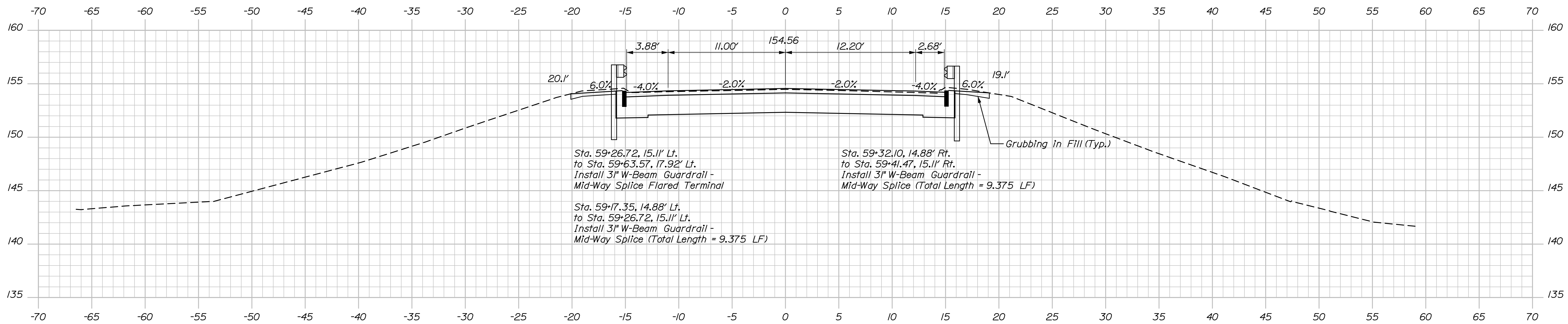
Filename: Xsect.dgn



59+75.00
 Sta. 59+70.00
 End Transition
 Begin Variable Depth
 Mill & 3" Overlay



59+50.00



59+25.00
 Sta. 59+20.00
 End Project
 Begin Transition

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 022340.00
 WIN
 022340.00
 BRIDGE NO. 6061
 BRIDGE PLANS

PROJ. MANAGER	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
C. Helmick L. Driscoll	C. Helmick A. Sweet	05/20 05/20			
DESIGN-DETAILED	CHECKED-REVIEWED	DESIGN-DETAILED	REVISIONS 1	REVISIONS 2	REVISIONS 3
			REVISIONS 4	FIELD CHANGES	

ROUTE 43 BRIDGE
 INTERSTATE 95
 PENOBSCOT COUNTY
 OLD TOWN
 ROUTE 43
 CROSS SECTIONS

SHEET NUMBER

11

OF 27



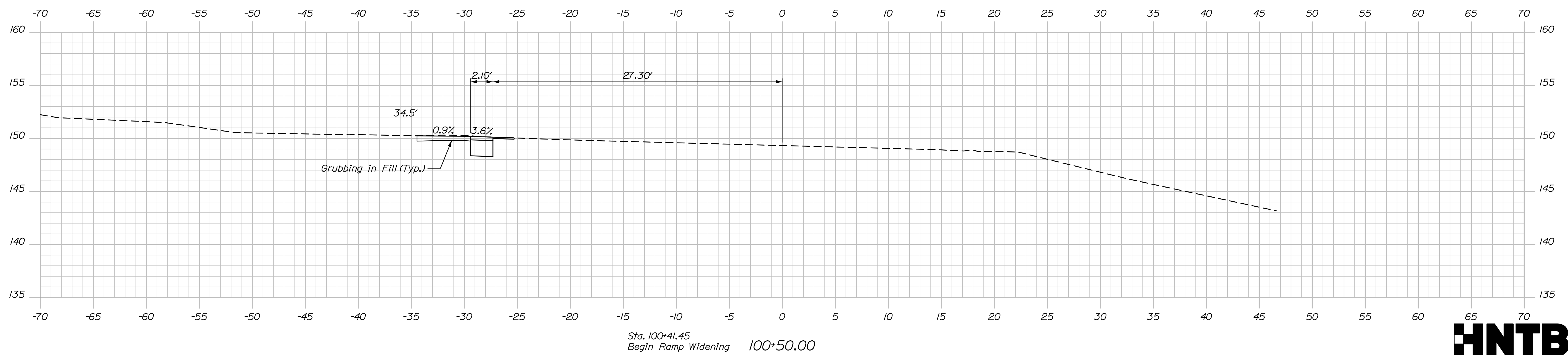
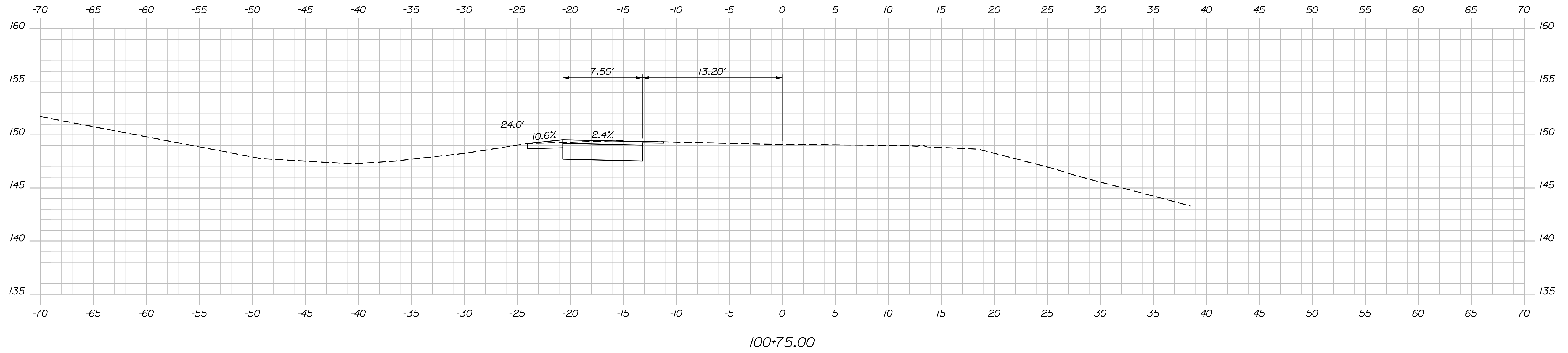
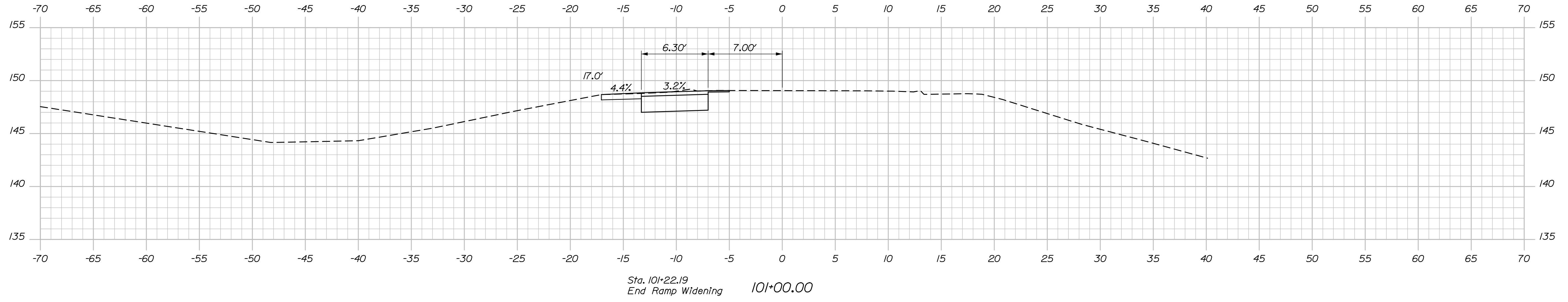
Sta. 59+25.00 to Sta. 59+75.00

Date: 5/27/2020

Username:

Division:

Filename: Xsect.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

022340.00

BRIDGE NO. 8081
WIN 022340.00
BRIDGE PLANS

PROJ. MANAGER

DATE

BY

CHEKED-REVIEWED

DESIGN-DETAILED

DESIGN-DETAILED

REVISIONS 1

REVISIONS 2

REVISIONS 3

REVISIONS 4

FIELD CHANGES

SIGNATURE

P.E. NUMBER

DATE

C. Helmick

L. Driscoll

A. Sweet

05/20

05/20

05/20

05/20

05/20

05/20

05/20

05/20

ROUTE 43 BRIDGE
INTERSTATE 95
PENOBSCOT COUNTY
OLD TOWN
I 95 NB ON RAMP
CROSS SECTIONS

SHEET NUMBER

14

OF 27



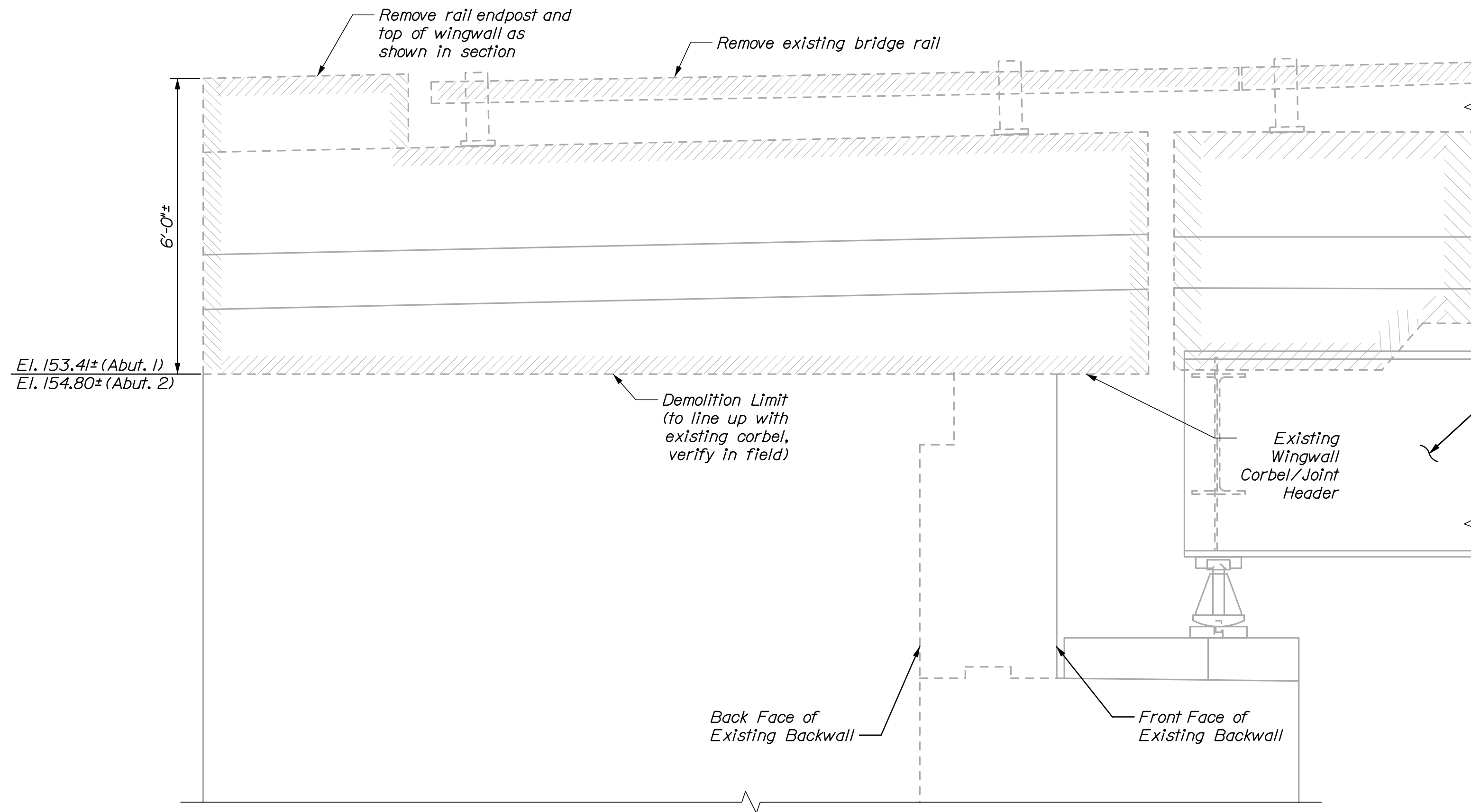
Sta. 100+50.00 to Sta. 101+00.00

Date: 5/27/2020

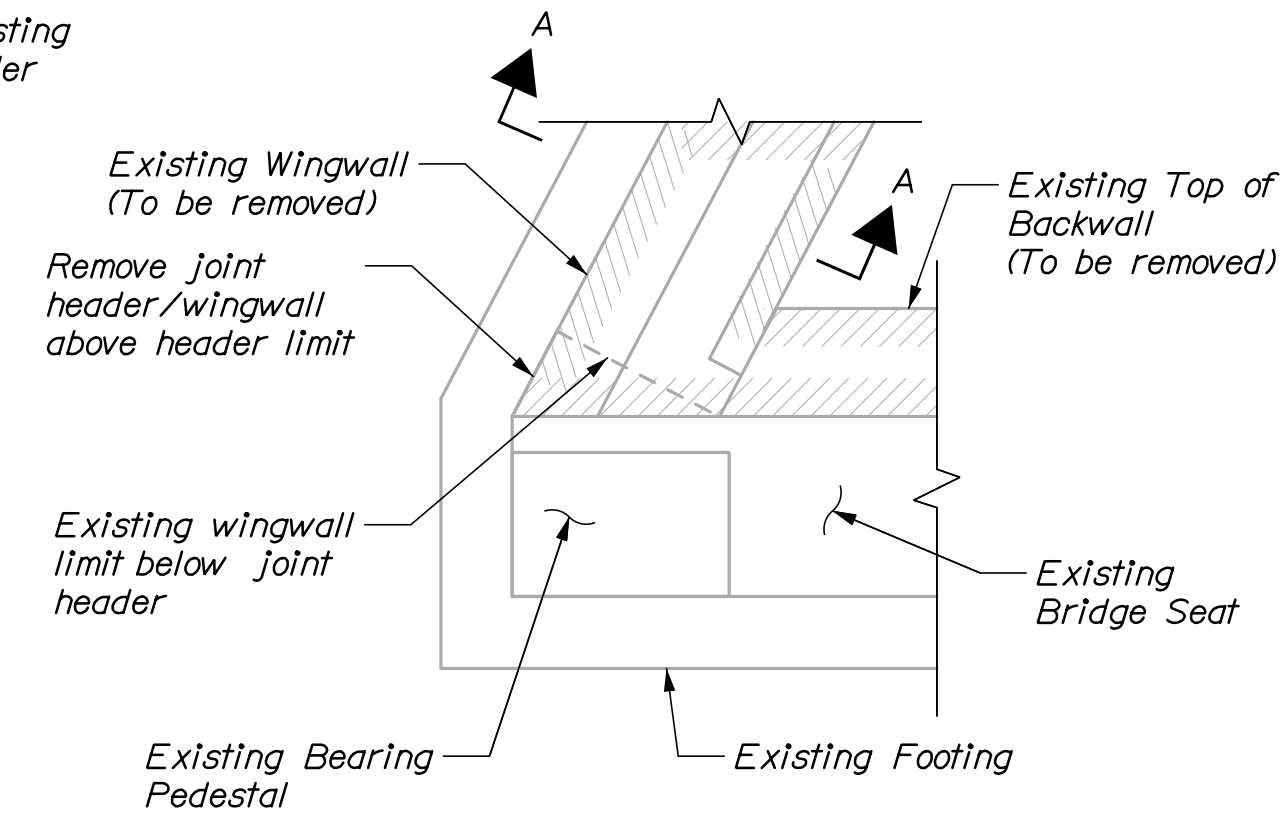
Username:

Division:

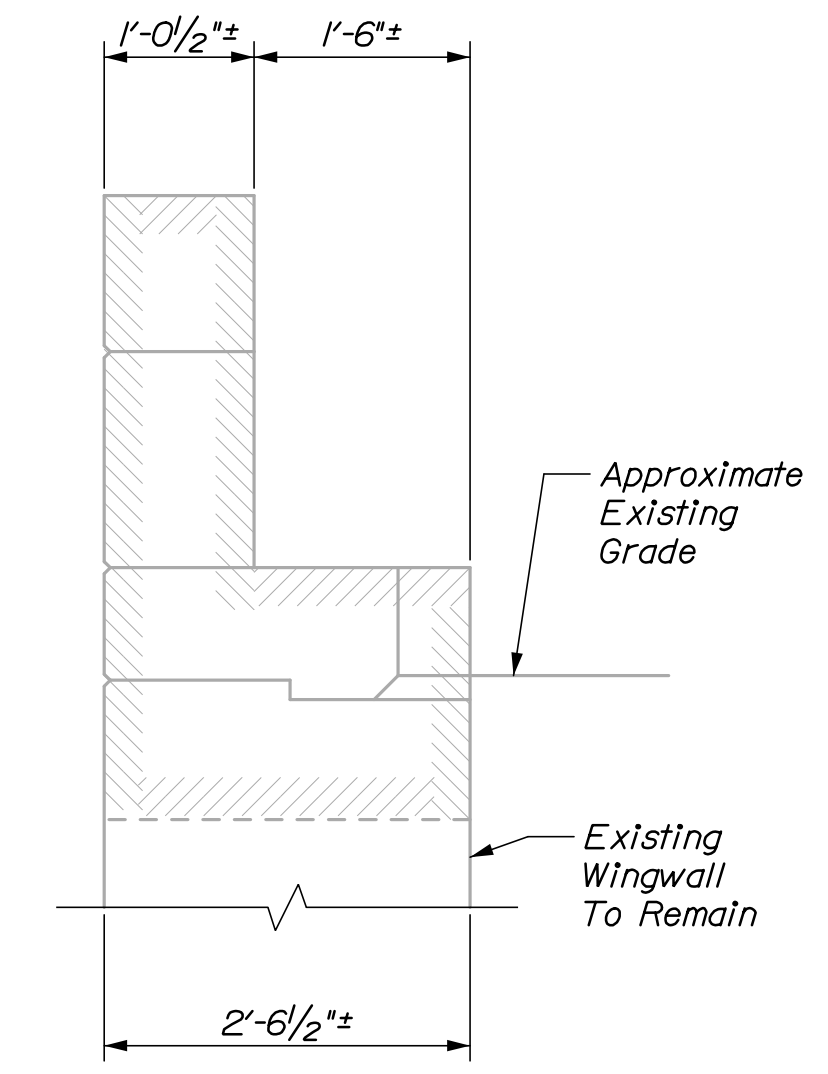
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NORTHEAST & SOUTHWEST WINGWALL DEMOLITION ELEVATION

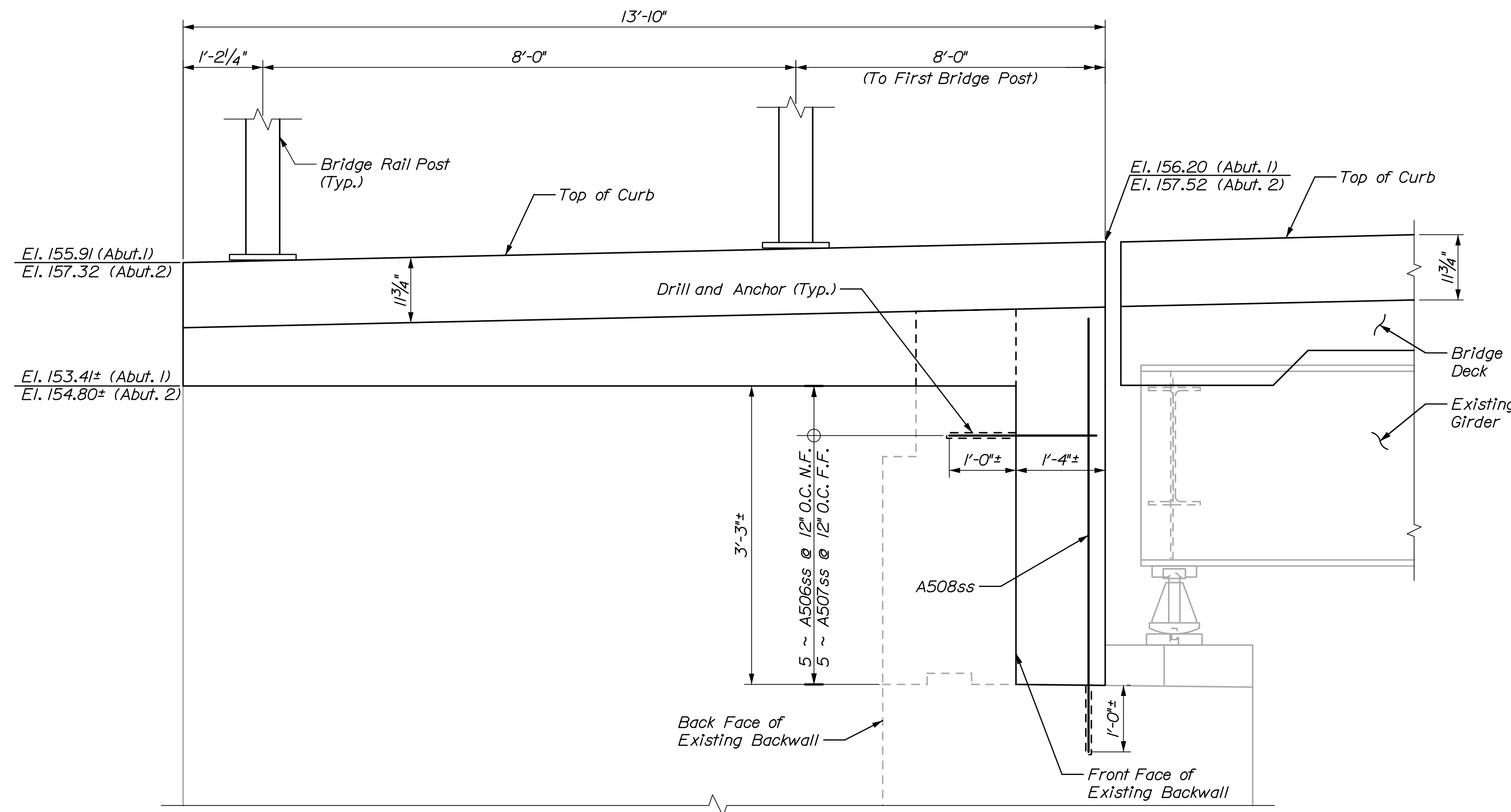


DETAIL A

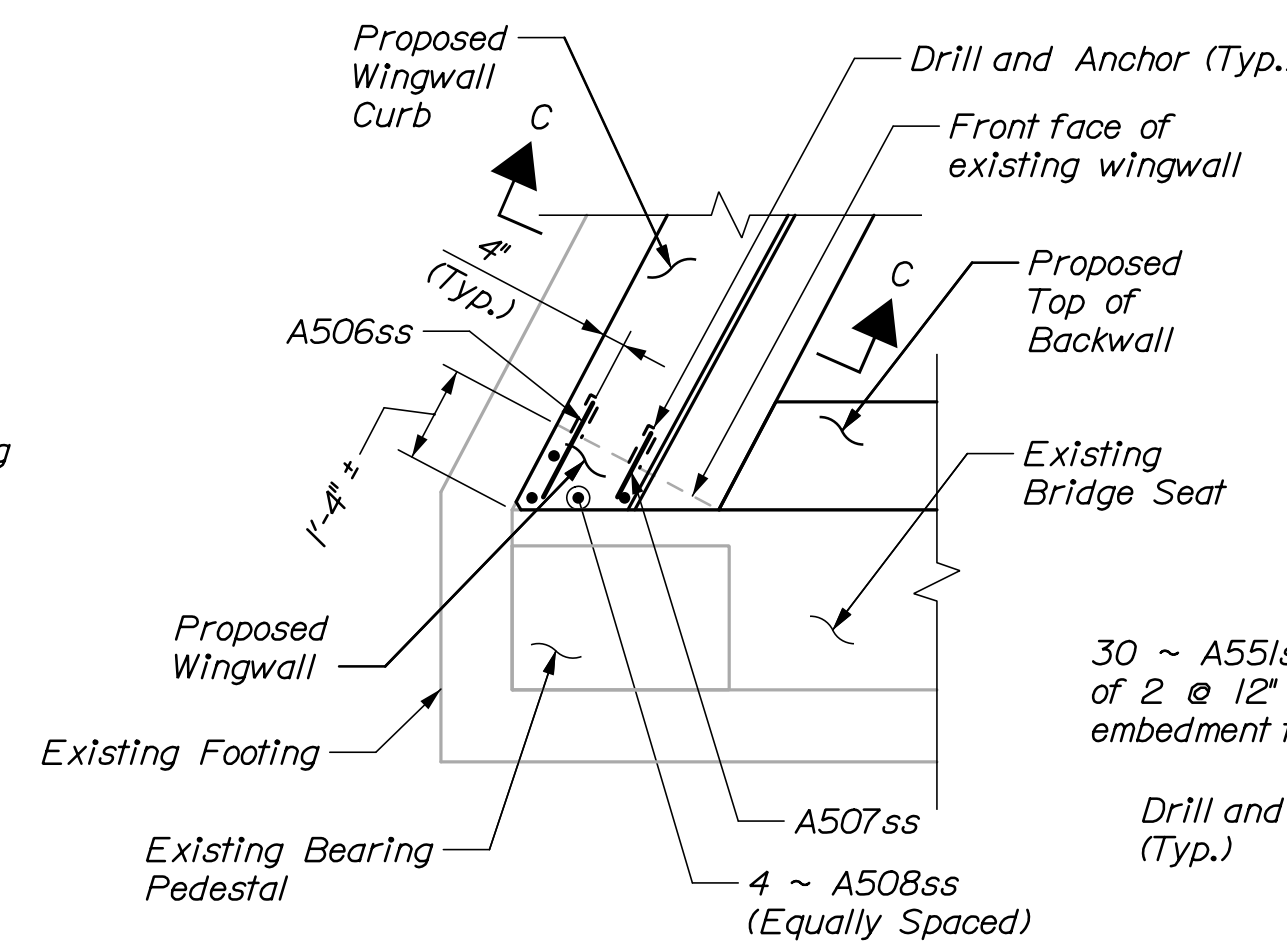


SECTION A-A

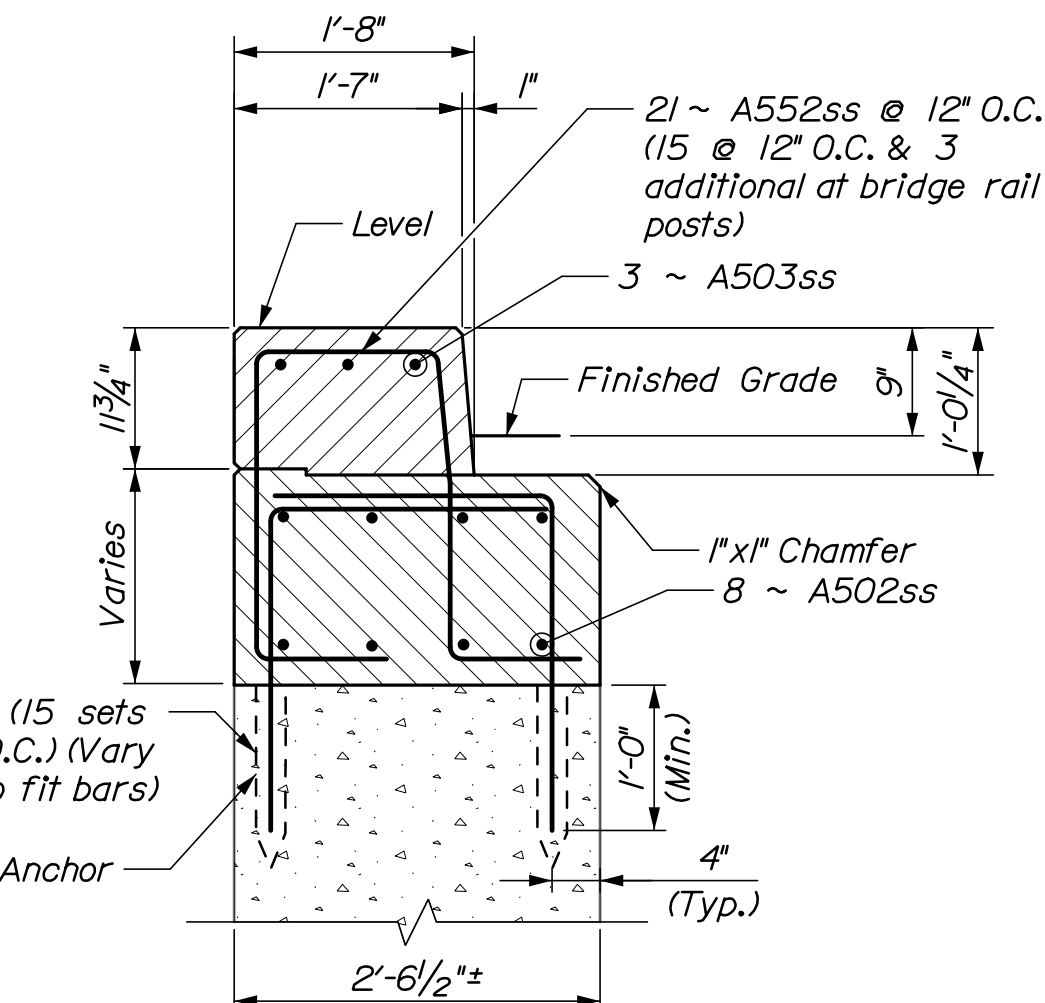
WINGWALL DEMOLITION



NORTHEAST & SOUTHWEST WINGWALL CONSTRUCTION ELEVATION



DETAIL C



SECTION C-C

WINGWALL CONSTRUCTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
022340.00
WIN
022340.00
BRIDGE NO. 8061
BRIDGE PLANS

PROJ. MANAGER
DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

BY	DATE	SIGNATURE	P.E. NUMBER	DATE
E. White	05/20			
L. Driscoll	05/20			

ROUTE 43 BRIDGE
INTERSTATE 95
PENOBSCOT COUNTY
OLD TOWN
ABUTMENT MODIFICATIONS II

SHEET NUMBER

16

OF 27

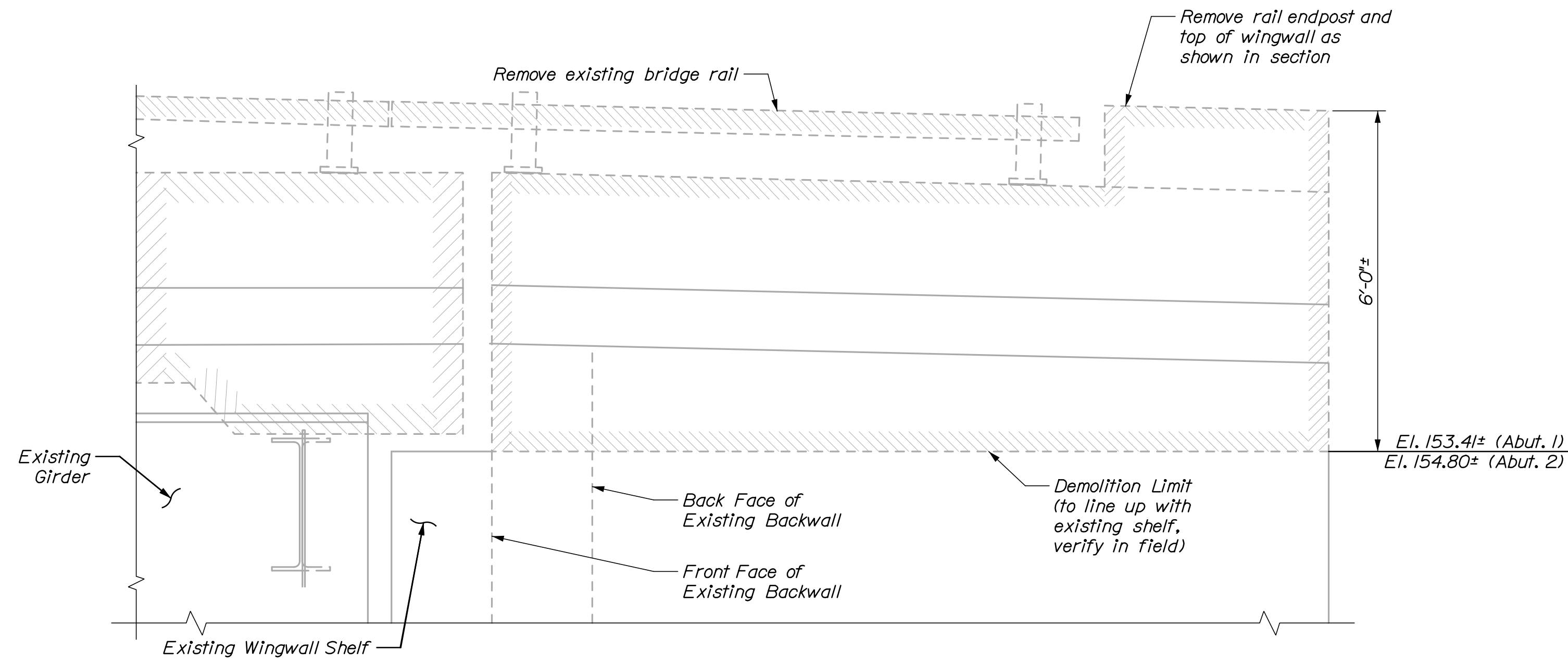


Date: 5/27/2020

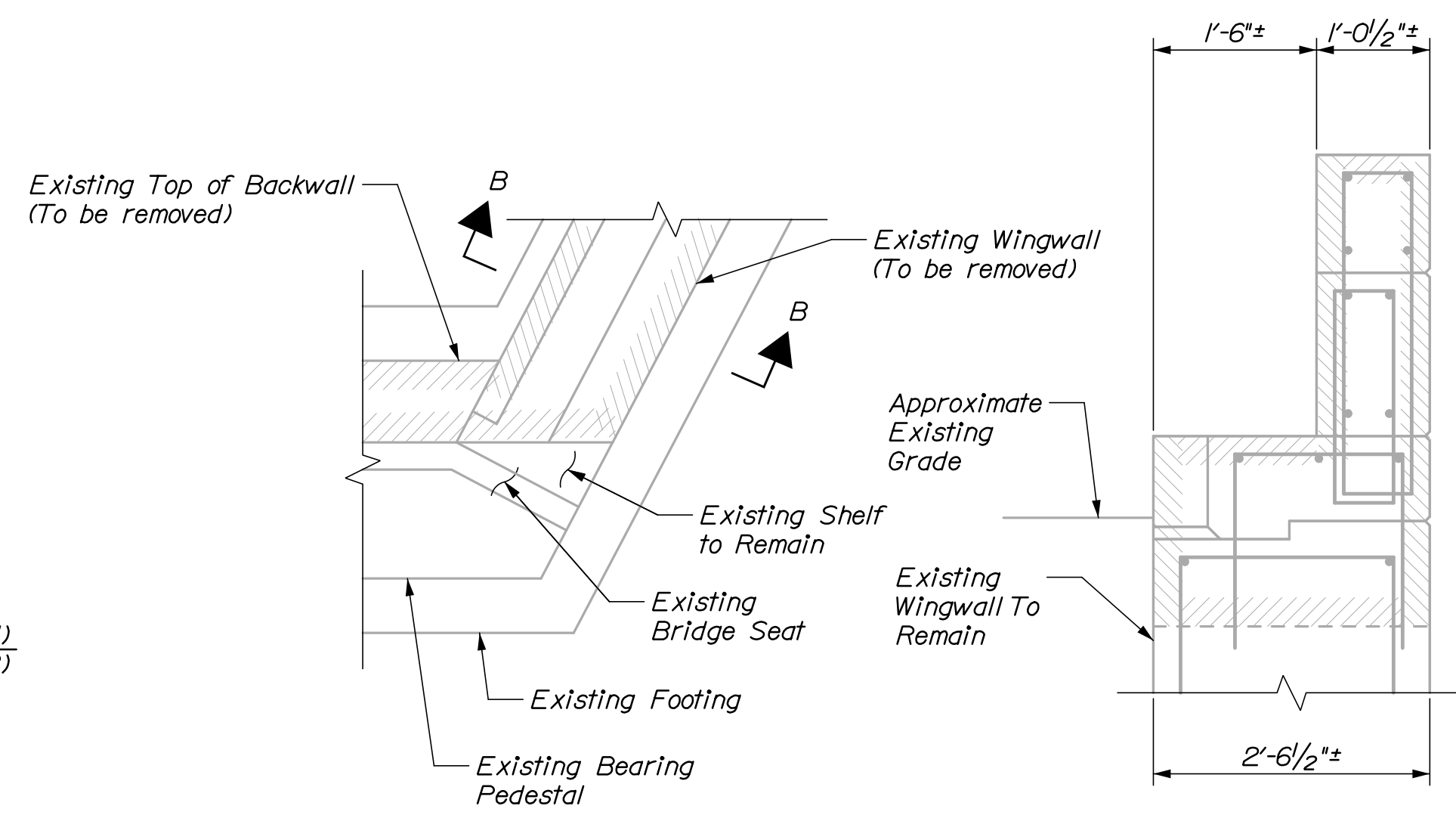
Username:

Division:

Filename: 017_Abument Modifications III.dgn



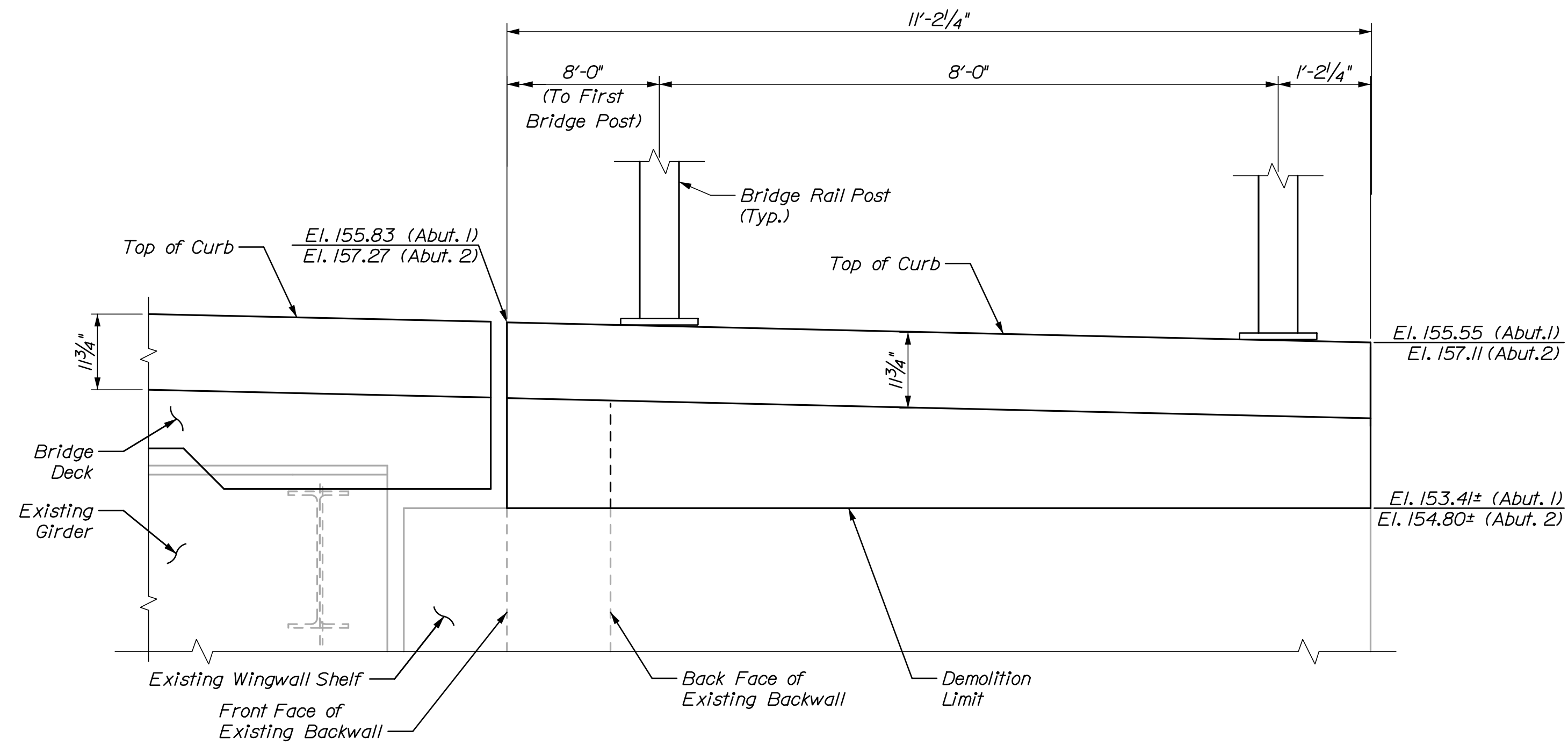
NORTHWEST & SOUTHEAST WINGWALL DEMOLITION ELEVATION



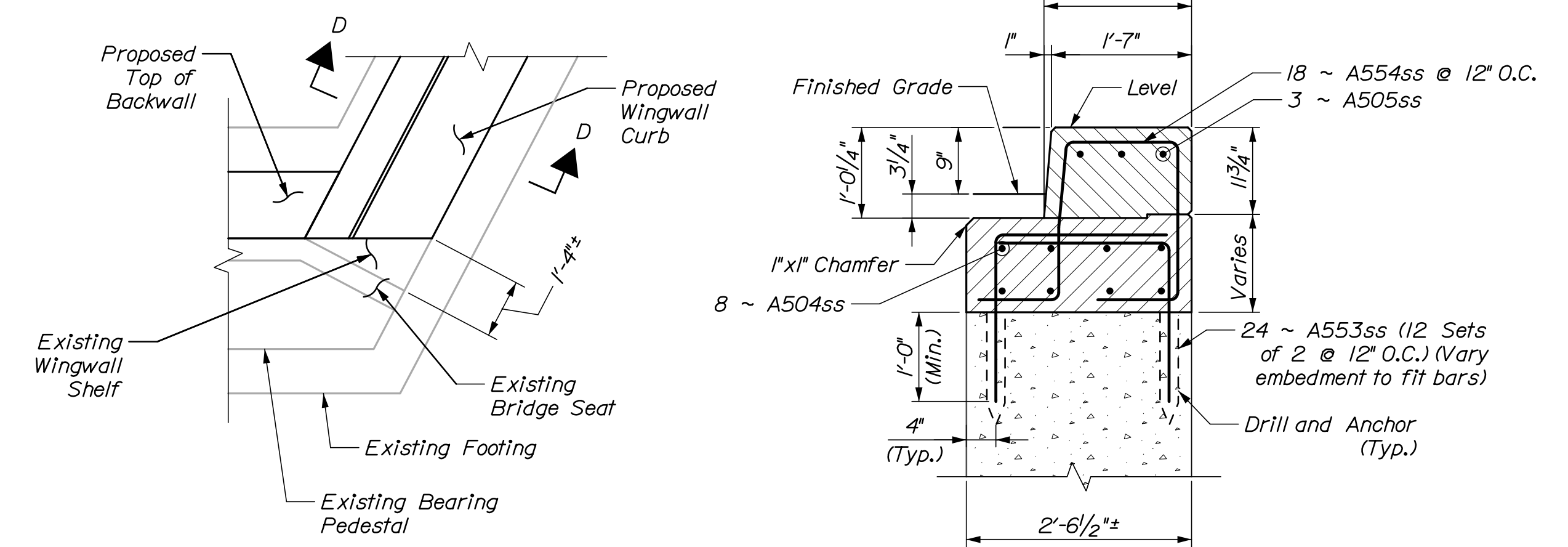
DETAIL B

SECTION B-B

WINGWALL DEMOLITION



NORTHWEST & SOUTHEAST WINGWALL CONSTRUCTION ELEVATION



DETAIL D

SECTION D-D

NOTE: Maintain top cover of A554ss reinforcing, bottom cover will vary.

WINGWALL CONSTRUCTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

022340.00
WIN
022340.00

BRIDGE NO. 6061
BRIDGE PLANS

DATE
05/20
05/20

SIGNATURE
P.E. NUMBER
DATE

PROJ. MANAGER
DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

BY
E. White
L. Driscoll

ROUTE 43 BRIDGE
INTERSTATE 95
PENOBSCOT COUNTY
OLD TOWN

ABUTMENT MODIFICATIONS III

SHEET NUMBER

17

OF 27

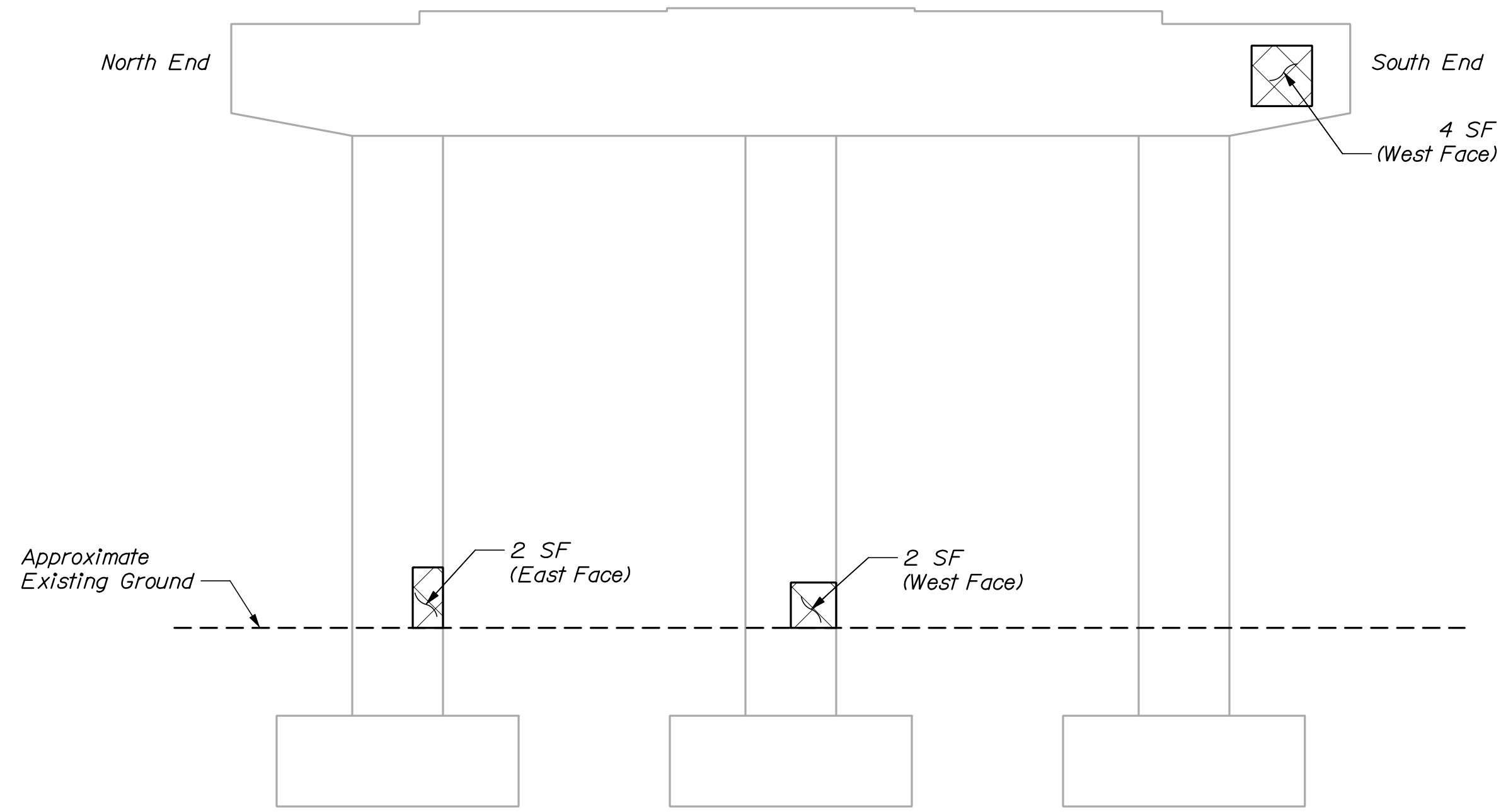


Date: 5/27/2020

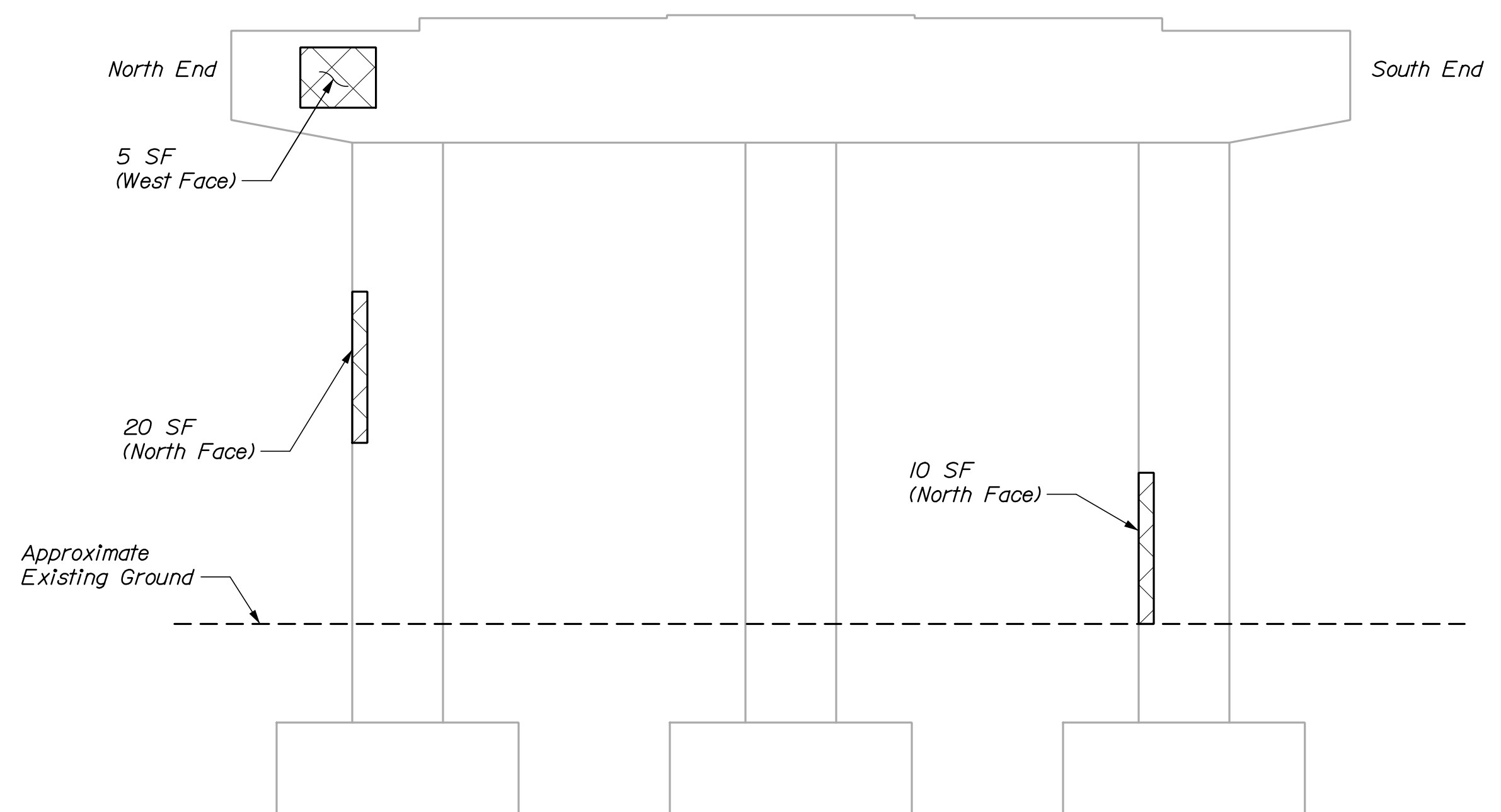
Username:

Division:

Filename: 018_Pier 4 Repairs.dgn



PIER 2 ELEVATION
 (Location/Face noted per repair location)



PIER 4 ELEVATION
 (Location/Face noted per repair location)

CONCRETE REPAIR NOTES:

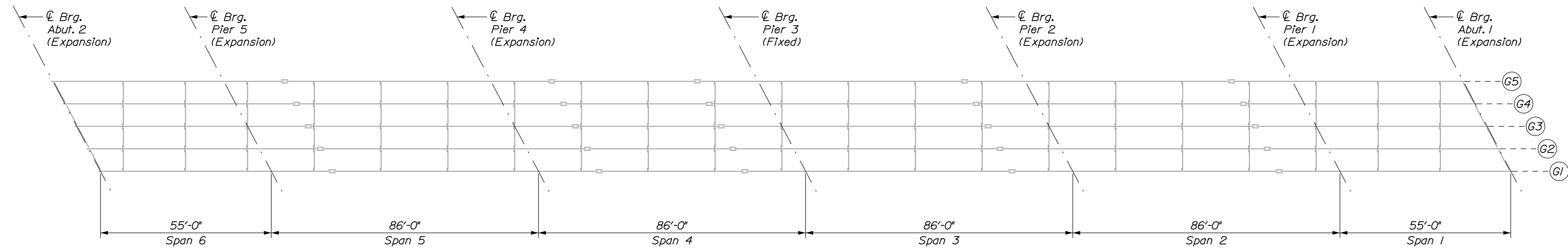
1. The quantities of pier and abutment repairs noted on these drawings are based on a visual inspection. If differences are experienced, the Resident shall be notified and quantities shall be adjusted accordingly. Actual repair areas will be determined and agreed on by the Contractor and the Resident during construction.
2. No repairs are anticipated for piers 1, 3, and 5. The Contractor and Resident shall verify that no work is required.
3. The Department must approve changes in quantity beyond what is shown or assumed.
4. All broken or corroded reinforcing bars shall be supplemented in accordance with Standard Specification Section 518.04. Supplemental reinforcing shall maintain a clear cover of 2" minimum. Payment for supplemental bars shall be included in items 503.12 and 503.13.

LEGEND

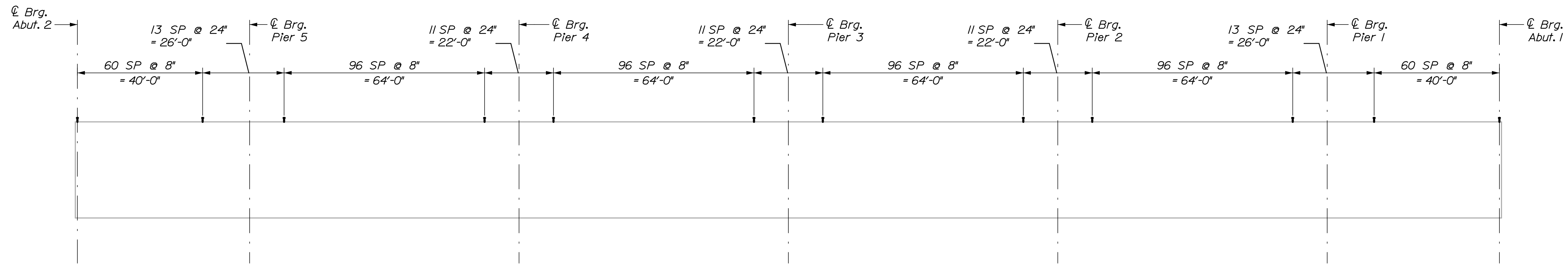
 Concrete Repair Area (SF)

STATE OF MAINE DEPARTMENT OF TRANSPORTATION		022340.00	WIN 022340.00	BRIDGE NO. 6061 BRIDGE PLANS
ROUTE 43 BRIDGE INTERSTATE 95 PENOBSCOT COUNTY		PIER REPAIRS		
OLD TOWN		SHEET NUMBER		
18		OF 27		
PROJ. MANAGER	BY	DATE	SIGNATURE	P.E. NUMBER
DESIGN-DETAILED	E. White	05/20		
CHECKED-REVIEWED	L. Driscoll	05/20		
DESIGN-DETAILED				
REVISIONS 1				
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				





FRAMING PLAN



SHEAR CONNECTOR LAYOUT
(1128 Studs Per Girder, 5640 Studs Total)

Girder Number	Bottom of Slab Elevation Table																														
	Span 6								Span 5								Span 4														
	℄ Brg. 2	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L	℄ Pier 5	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L	℄ Pier 4	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L	℄ Pier 3
G5	155.65	155.74	155.84	155.92	156.01	156.08	156.16	156.23	156.29	156.36	156.43	156.54	156.65	156.76	156.85	156.93	156.99	157.04	157.08	157.11	157.15	157.19	157.23	157.27	157.30	157.32	157.33	157.32	157.30	157.27	157.25
G4	155.85	155.95	156.04	156.13	156.21	156.29	156.36	156.42	156.49	156.55	156.62	156.73	156.84	156.94	157.03	157.11	157.17	157.21	157.25	157.28	157.31	157.35	157.39	157.43	157.46	157.48	157.48	157.46	157.44	157.41	157.39
G3	156.06	156.16	156.25	156.33	156.41	156.48	156.55	156.62	156.68	156.74	156.81	156.92	157.02	157.12	157.21	157.28	157.34	157.38	157.41	157.44	157.47	157.51	157.55	157.58	157.61	157.62	157.62	157.61	157.58	157.55	157.52
G2	155.98	156.07	156.16	156.24	156.32	156.39	156.46	156.52	156.58	156.64	156.71	156.81	156.92	157.01	157.10	157.17	157.22	157.26	157.29	157.32	157.34	157.38	157.40	157.44	157.47	157.48	157.48	157.46	157.43	157.40	157.36
G1	155.89	155.98	156.07	156.15	156.22	156.29	156.36	156.42	156.48	156.54	156.60	156.70	156.80	156.90	156.98	157.04	157.10	157.13	157.16	157.19	157.21	157.24	157.27	157.30	157.32	157.32	157.30	157.27	157.24	157.20	
Girder Number	Span 3								Span 2								Span 1														
	℄ Pier 3	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L	℄ Pier 2	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L	℄ Pier 1	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L	℄ Brg. 1
	G5	157.25	157.23	157.21	157.19	157.16	157.11	157.06	156.98	156.90	156.82	156.73	156.66	156.58	156.50	156.41	156.30	156.19	156.05	155.91	155.76	155.60	155.51	155.41	155.32	155.22	155.12	155.02	154.91	154.80	154.68
G4	157.39	157.37	157.35	157.32	157.29	157.24	157.18	157.10	157.02	156.93	156.84	156.76	156.68	156.60	156.51	156.41	156.28	156.15	156.00	155.84	155.68	155.59	155.49	155.40	155.30	155.20	155.09	154.98	154.86	154.74	154.62
G3	157.52	157.50	157.47	157.45	157.41	157.36	157.30	157.22	157.13	157.04	156.95	156.87	156.79	156.70	156.61	156.50	156.37	156.23	156.08	155.92	155.76	155.66	155.57	155.47	155.37	155.27	155.16	155.05	154.93	154.81	154.68
G2	157.36	157.34	157.31	157.28	157.24	157.19	157.12	157.04	156.95	156.86	156.76	156.68	156.60	156.51	156.41	156.30	156.17	156.03	155.87	155.71	155.55	155.45	155.35	155.25	155.15	155.05	154.94	154.82	154.70	154.58	154.45
G1	157.20	157.17	157.15	157.11	157.07	157.01	156.94	156.86	156.77	156.67	156.58	156.49	156.40	156.31	156.21	156.09	155.96	155.82	155.66	155.50	155.34	155.23	155.13	155.03	154.93	154.82	154.71	154.59	154.47	154.35	154.22

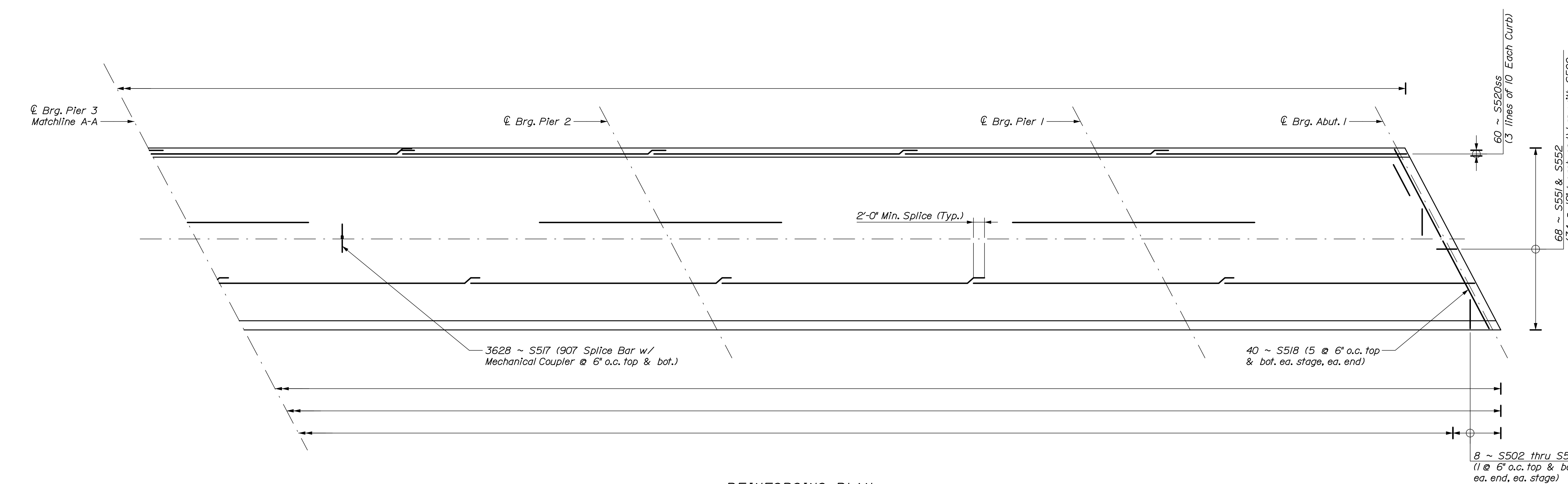
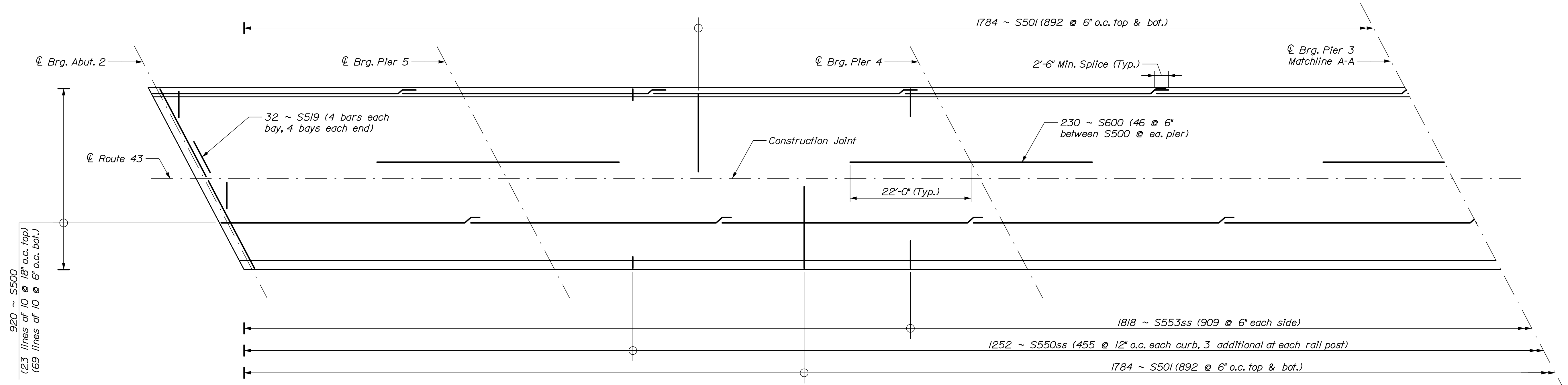
NOTES:

- Prior to installing the proposed shear studs, the contractor shall clean the top flange so that it is free of debris, rust, scale, oil, and other contaminants that would adversely affect the welding operation. Payment for cleaning the top flange for installation of proposed shear studs shall be incidental to Item 505.08, Shear Connectors. If lead paint is encountered while cleaning top flanges, the Contractor is responsible for the containment, proper management and disposal of all lead-contaminated hazardous waste. See note 9 on the general notes sheet for more information.
- Span locations provided are based on the centerline of bearing to centerline of bearing length "L" for each girder.
- The theoretical blocking used for design of the structure is 1" at the centerline of bearing of the abutments and 1 3/4" at the centerline of bearing of the piers.

Date: 5/27/2020

Username:

Filename: 021_Superstructure Reinforcing Plan.dgn Division:



REINFORCING PLAN

NOTES:
 Stainless Steel Reinforcing and mechanical/welded splices in the structural concrete slab are incidental to Item 502.26

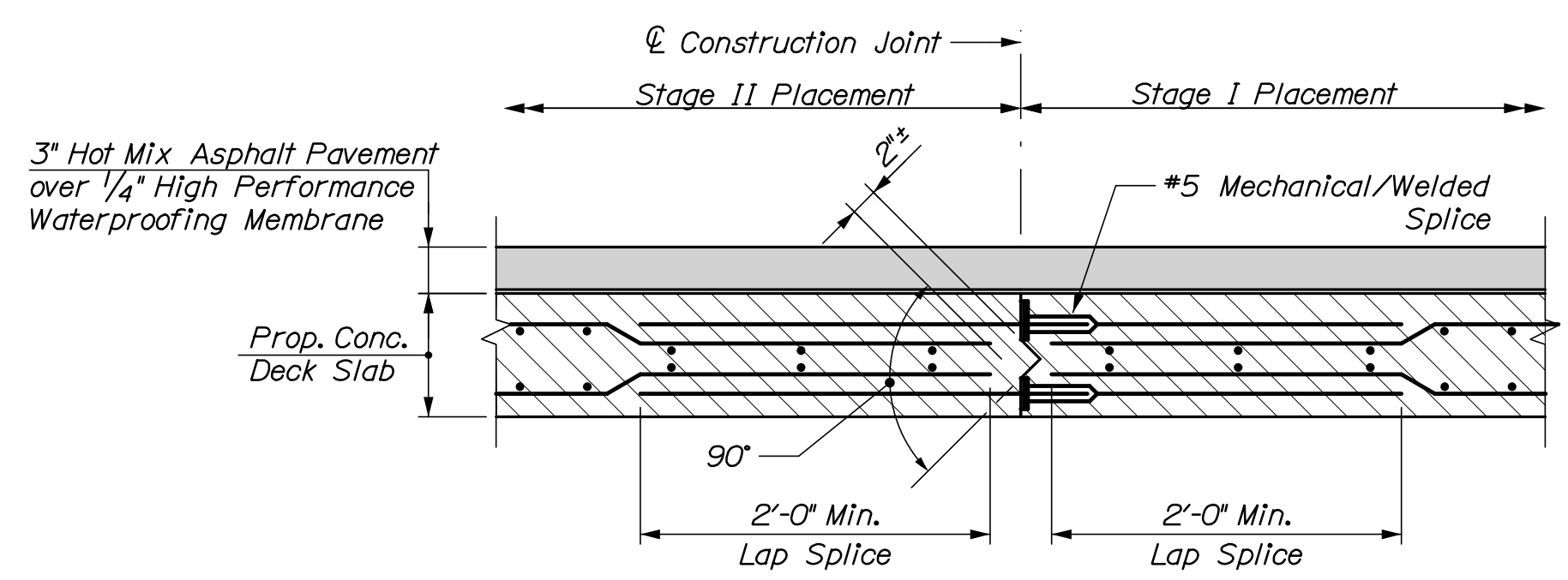
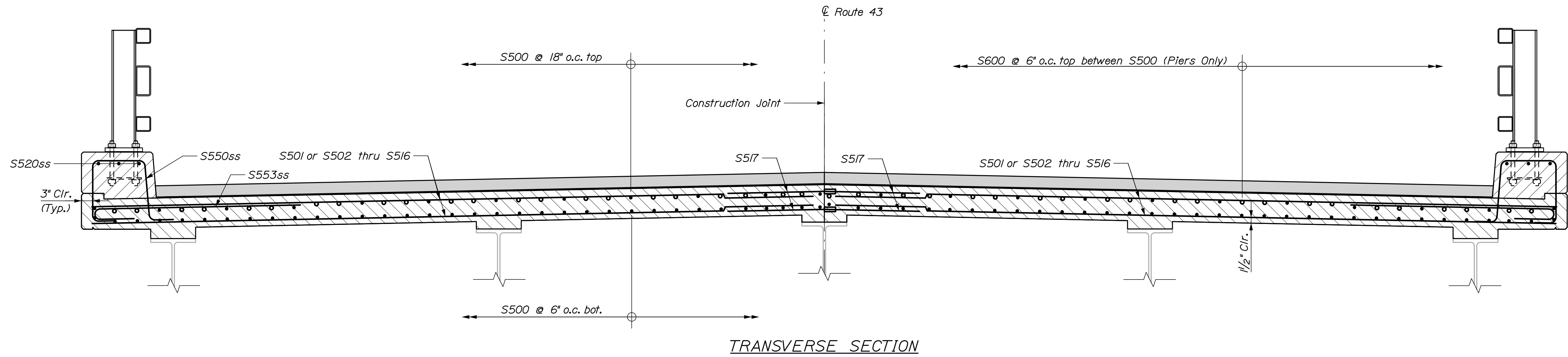
STATE OF MAINE DEPARTMENT OF TRANSPORTATION		022340.00	
BRIDGE NO. 6061		WIN 022340.00	
BRIDGE PLANS			
PROJ. MANAGER	BY	DATE	SIGNATURE
DESIGN-DETAILED: K. Bravley	E. White	05/20	
CHECKED-REVIEWED: B. Greiner	L. Driscoll	05/20	
DESIGN-DETAILED:			P.E. NUMBER
REVISIONS 1:			DATE
REVISIONS 2:			
REVISIONS 3:			
REVISIONS 4:			
FIELD CHANGES:			
ROUTE 43 BRIDGE INTERSTATE 95 PENOBSCOT COUNTY OLD TOWN			
SUPERSTRUCTURE REINFORCING PLAN			
SHEET NUMBER			
21			
OF 27			



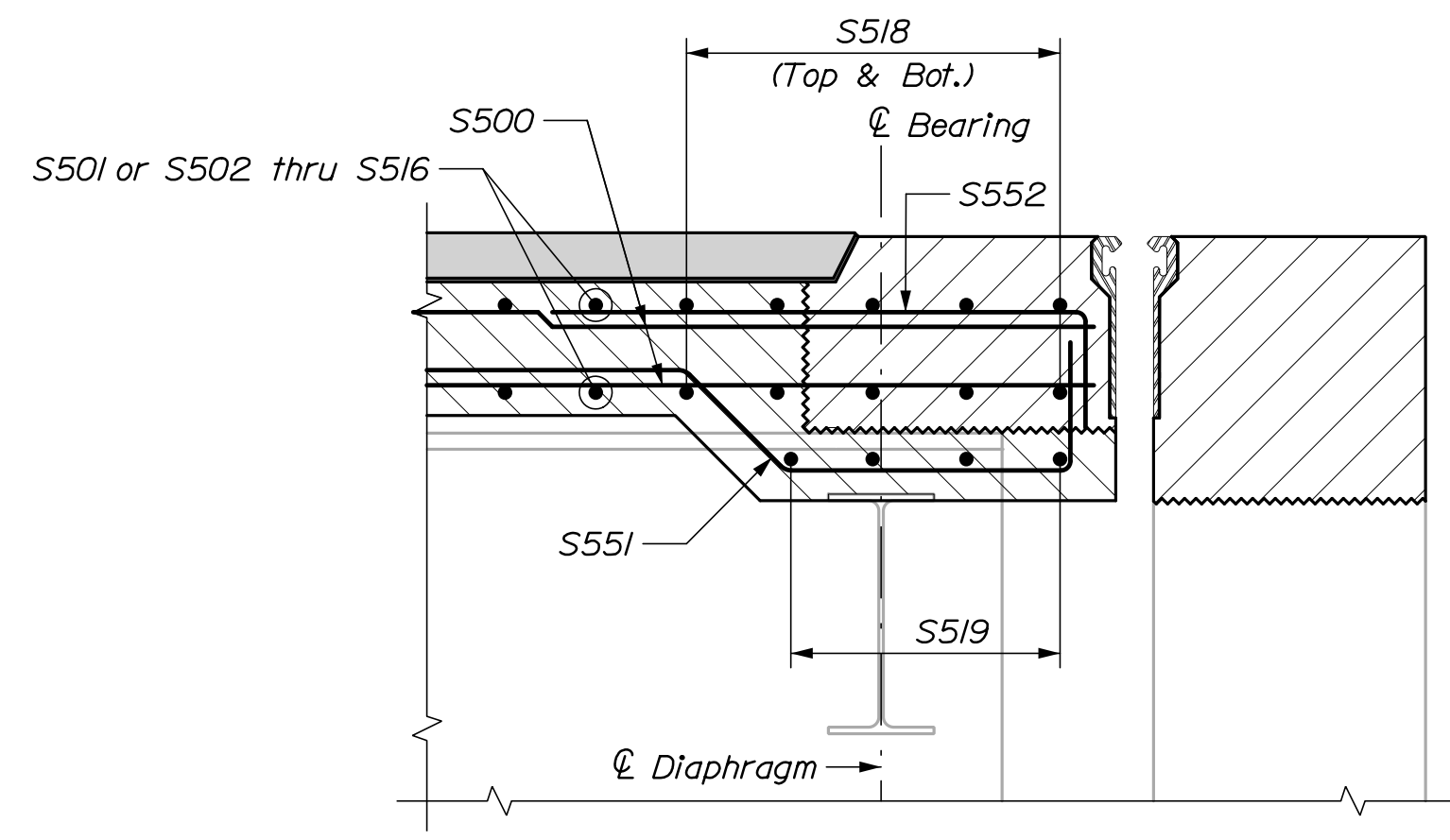
Date: 5/27/2020

Username:

Filename: 022_Superstructure Reinforcing Detail.dwg



LONGITUDINAL CONSTRUCTION JOINT DETAIL
(Not To Scale)



THICKENED END SLAB DETAIL

STATE OF MAINE DEPARTMENT OF TRANSPORTATION		022340.00	
BRIDGE NO. 6061		WIN 022340.00	
BRIDGE PLANS			
PROJ. MANAGER	BY	DATE	SIGNATURE
DESIGN-DETAILED K. Bravley	E. White	05/20	
CHECKED-REVIEWED B. Greiner	L. Driscoll	05/20	
DESIGN-DETAILED			P.E. NUMBER
REVISIONS 1			DATE
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
ROUTE 43 BRIDGE INTERSTATE 95 PENOBSCOT COUNTY OLD TOWN		SUPERSTRUCTURE REINFORCING DETAILS	
SHEET NUMBER		22	
		OF 27	



Date: 5/28/2020

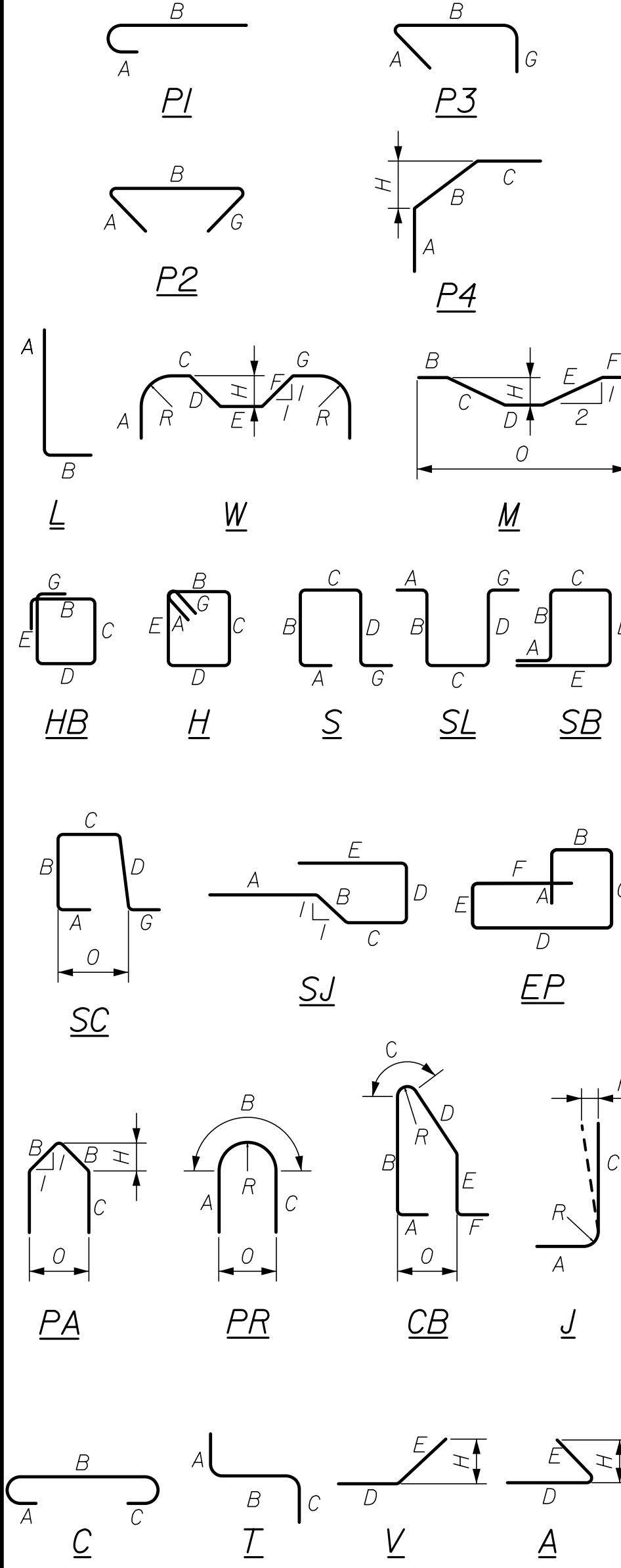
Username:

Division:

Filename: 024_Reinforcing Schedule.dgn

STRAIGHT BARS				BENT BARS																		
MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
<i>Abutment 1</i>				<i>Abutment 1</i>																		
A500ss	8	18'-4"	Backwall Longitudinal	A550ss	76	4'-2"	L	3'-0"	1'-2"													Backwall Stirrups
A501ss	8	3'-6"	Backwall Longitudinal Splice	A551ss	30	4'-10"	L	2'-8"	2'-2"									10"			1'-3"	Wingwall Stirrups
A502ss	8	13'-6"	Wingwall Longitudinal	A552ss	21	6'-6"	SC	10"	2'-0"	1'-2"	2'-0"											Wingwall Curb Stirrup
A503ss	3	13'-6"	Wingwall Curb Longitudinal	A553ss	24	4'-10"	L	2'-8"	2'-2"													Wingwall Stirrups
A504ss	8	10'-10"	Wingwall Longitudinal	A554ss	18	6'-6"	SC	10"	2'-0"	1'-2"	2'-0"							10"			1'-3"	Wingwall Curb Stirrup
A505ss	3	10'-10"	Wingwall Curb Longitudinal	<i>Abutment 2</i>																		
A506ss	5	2'-1"	Wingwall Extension Dowels	B550ss	76	4'-2"	L	3'-0"	1'-2"													Backwall Stirrups
A507ss	5	1'-6"	Wingwall Extension Dowels	B551ss	30	4'-10"	L	2'-8"	2'-2"													Wingwall Stirrups
A508ss	4	6'-0"	Wingwall Extension Vertical	B552ss	21	6'-6"	SC	10"	2'-0"	1'-2"	2'-0"							10"			1'-3"	Wingwall Curb Stirrup
<i>Abutment 2</i>				B553ss	24	4'-10"	L	2'-8"	2'-2"													Wingwall Stirrups
B500ss	8	18'-4"	Backwall Longitudinal	B554ss	18	6'-6"	SC	10"	2'-0"	1'-2"	2'-0"							10"			1'-3"	Wingwall Curb Stirrup
B501ss	8	3'-6"	Backwall Longitudinal Splice	<i>Deck Slab and Curb</i>																		
B502ss	8	13'-6"	Wingwall Longitudinal	S550ss*	1252	5'-6"	SC	10"	1'-4"	1'-2"	1'-4"							10"			1'-3"	Curb Stirrup
B503ss	3	13'-6"	Wingwall Curb Longitudinal	S551*	68	5'-0"	SJ	2'-0"	5"	1'-11"	8"											Deck End Stirrup Bot.
B504ss	8	10'-10"	Wingwall Longitudinal	S552*	68	2'-7"	L	2'-0"	7"													Deck End Stirrup Top
B505ss	3	10'-10"	Wingwall Curb Longitudinal	S553ss*	1818	6'-1"	C	7"	5'-6"													Deck Overhang Transverse
B506ss	5	2'-1"	Wingwall Extension Dowels																			
B507ss	5	1'-6"	Wingwall Extension Dowels																			
B508ss	4	6'-0"	Wingwall Extension Vertical																			
<i>Deck Slab and Curb</i>																						
S500*	920	48'-6"	Top & Bot Longitudinal																			
S501*	3568	16'-2"	Top & Bot Transverse																			
S502*	8	15'-3"	Top & Bot Transverse (skewed end)																			
S503*	8	14'-3"	Top & Bot Transverse (skewed end)																			
S504*	8	13'-4"	Top & Bot Transverse (skewed end)																			
S505*	8	12'-4"	Top & Bot Transverse (skewed end)																			
S506*	8	11'-5"	Top & Bot Transverse (skewed end)																			
S507*	8	10'-5"	Top & Bot Transverse (skewed end)																			
S508*	8	9'-6"	Top & Bot Transverse (skewed end)																			
S509*	8	8'-6"	Top & Bot Transverse (skewed end)																			
S510*	8	7'-7"	Top & Bot Transverse (skewed end)																			
S511*	8	6'-7"	Top & Bot Transverse (skewed end)																			
S512*	8	5'-8"	Top & Bot Transverse (skewed end)																			
S513*	8	4'-8"	Top & Bot Transverse (skewed end)																			
S514*	8	3'-9"	Top & Bot Transverse (skewed end)																			
S515*	8	2'-9"	Top & Bot Transverse (skewed end)																			
S516*	8	1'-10"	Top & Bot Transverse (skewed end)																			
S517*	3628	2'-6"	Longitudinal C.J. Splice																			
S518*	40	18'-3"	Deck End Transverse																			
S519*	32	7'-9"	Deck End Transverse																			
S520ss*	60	48'-6"	Curb Longitudinal																			
S600*	230	44'-0"	Deck Longitudinal over Pier																			

TYPE - BENDING DIAGRAMS



* Bar is incidental to related concrete pay item
 All dimensions are out-to-out of bar.
 Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 315 and ACI Standard 318.
 Reinforcing Bar: ASTM A615/A615M, Grade 60
 ASTM A955, GRADE 75

GENERAL NOTES

- The first two digits following the letter(s) of the mark indicate the size of the bar:
 Mark "A502" = bar size #5
 Mark "P805" = bar size #8
 Mark "S650" = bar size #6
 Mark "S650ss" = bar size #6 Stainless Steel
- Each crank bar, Type B, may be replaced by two (2) straight bars (one top and one bottom) of the same bar size as the crank bar. Payment in either case shall be based on crank bars as schedule on the plans.
- Bar marks ending with 'G' indicate GFRP. Bar marks ending with 'ss' indicate stainless steel. All other bars are plain (uncoated).



STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 022340.00
 BRIDGE NO. 6061
 022340.00
 BRIDGE PLANS

PROJ. MANAGER	DATE	BY
DESIGN-DETAILED	05/20	P. Bishop
CHECKED-REVIEWED	05/20	L. Driscoll
DESIGN-DETAILED		
DESIGN-DETAILED		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

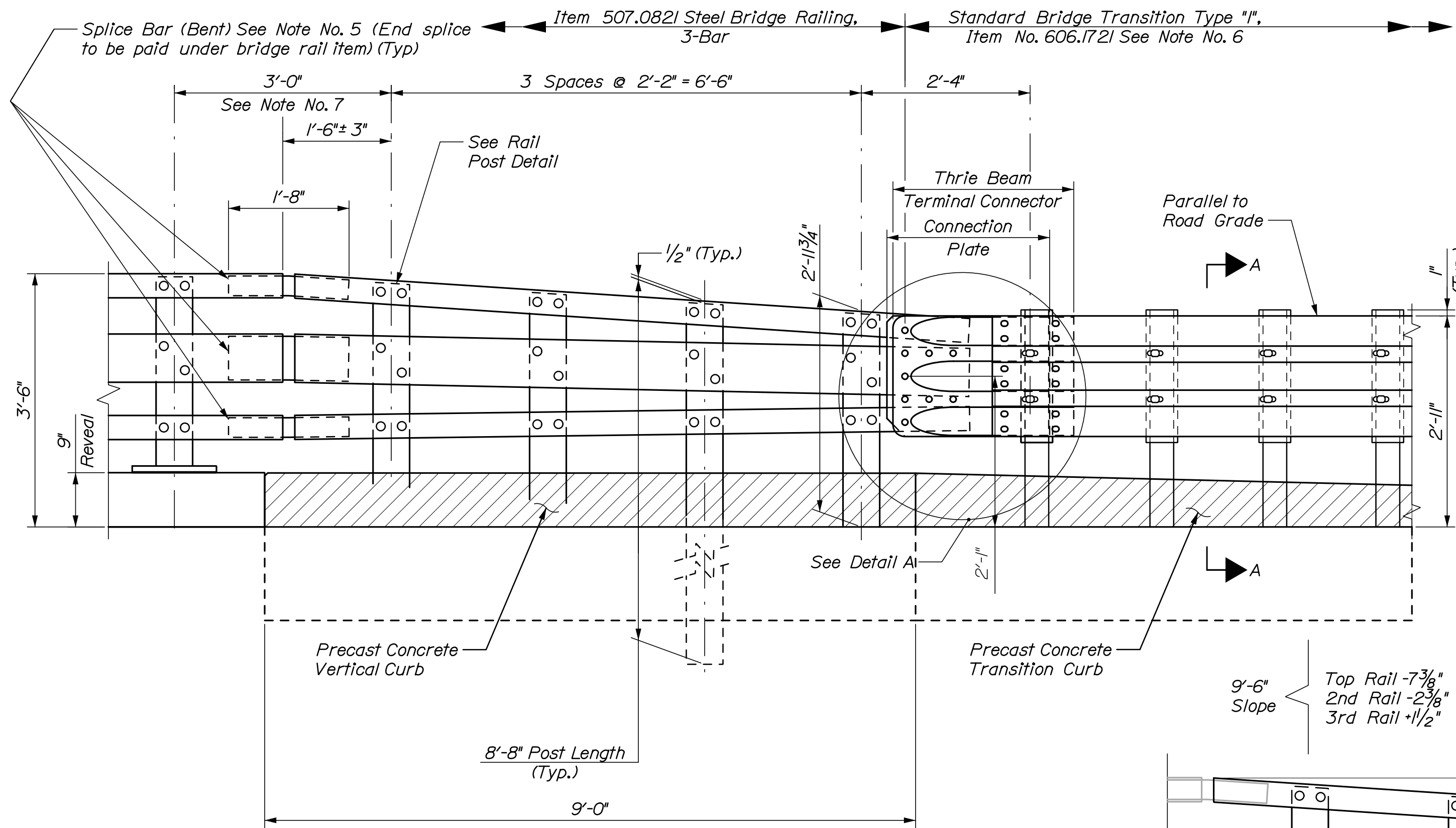
ROUTE 43 BRIDGE
 INTERSTATE 95
 PENOBSCOT COUNTY
 OLD TOWN
 SHEET NUMBER
 24
 OF 27

Date: 5/27/2020

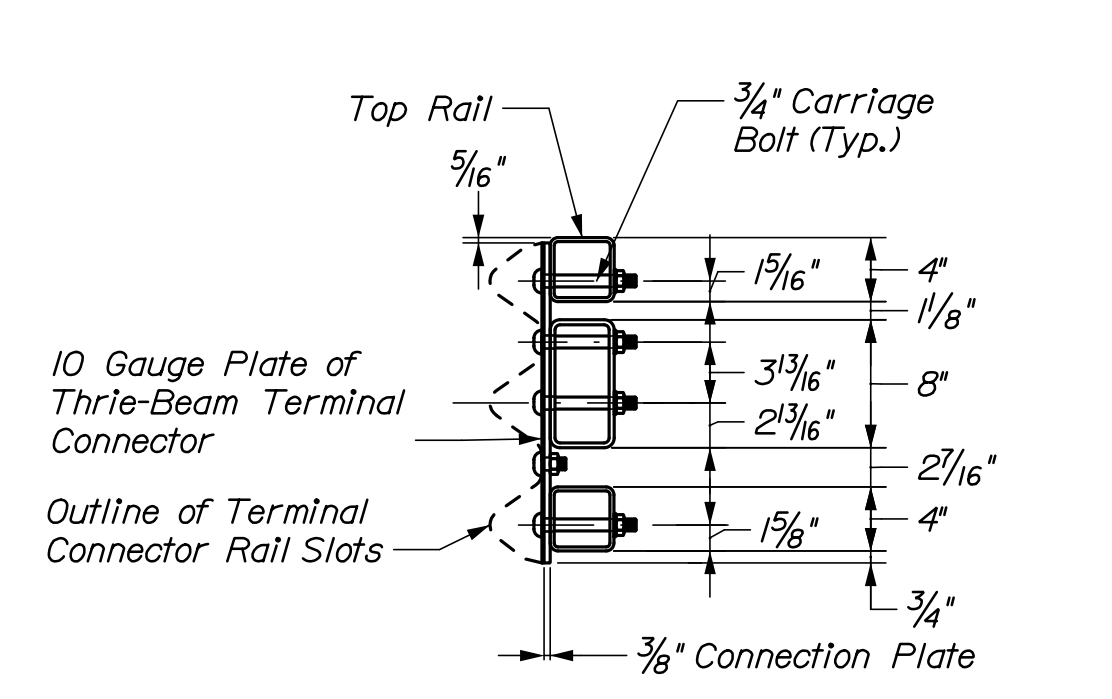
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Division:

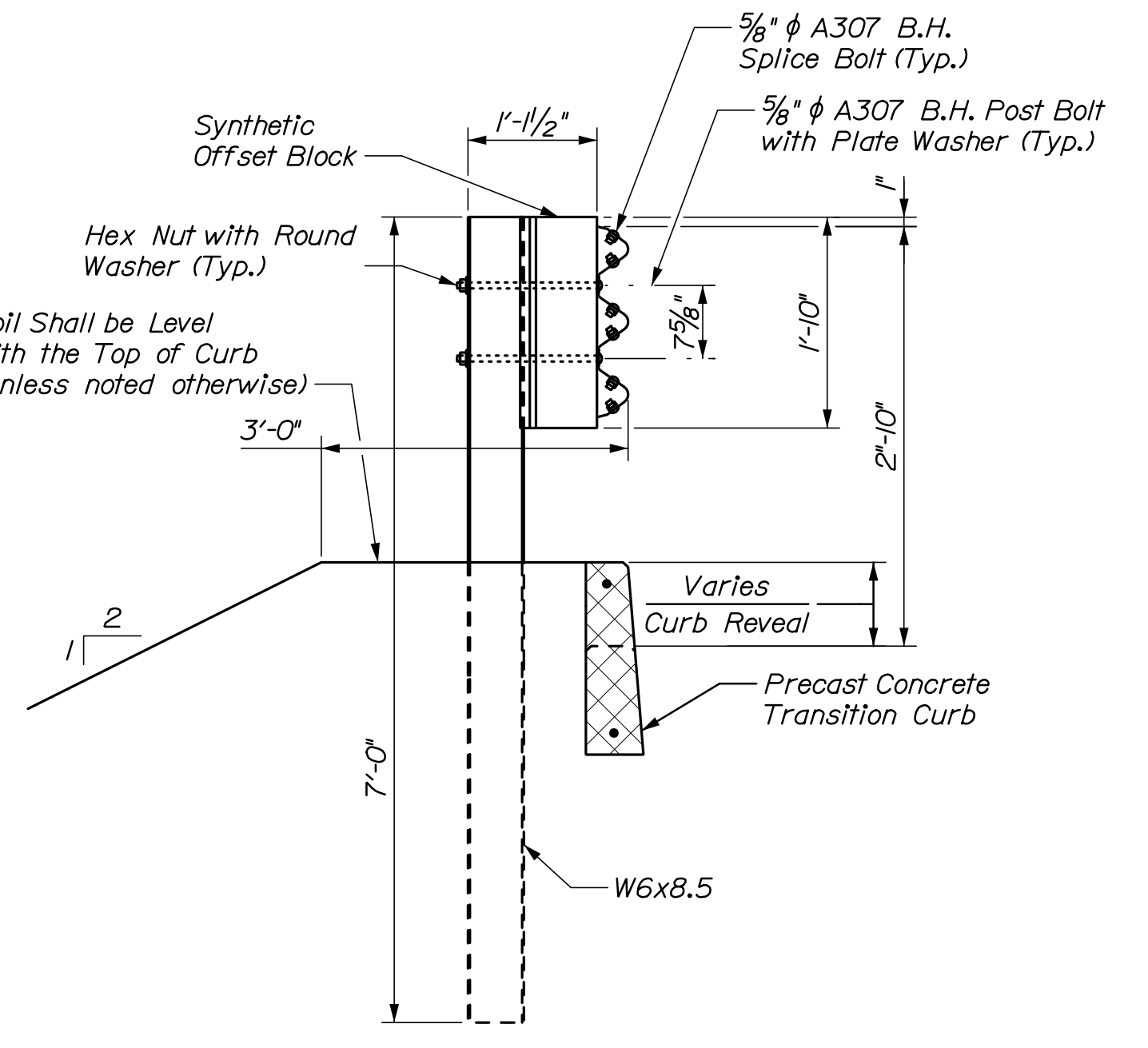
Filename: 025_Steel Approach Rail 3-Bar.dgn



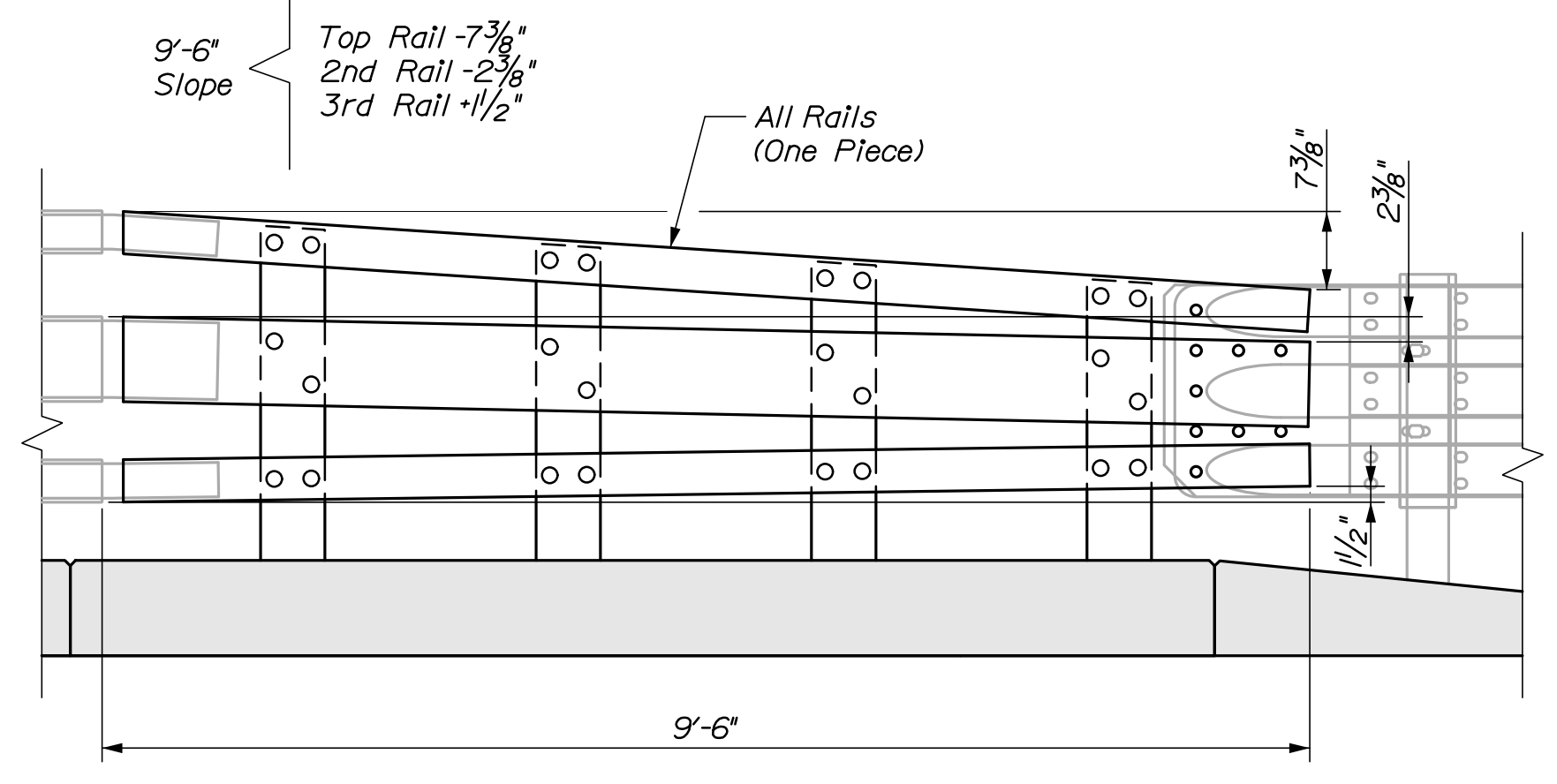
ELEVATION - STEEL APPROACH RAILING, 3 BAR



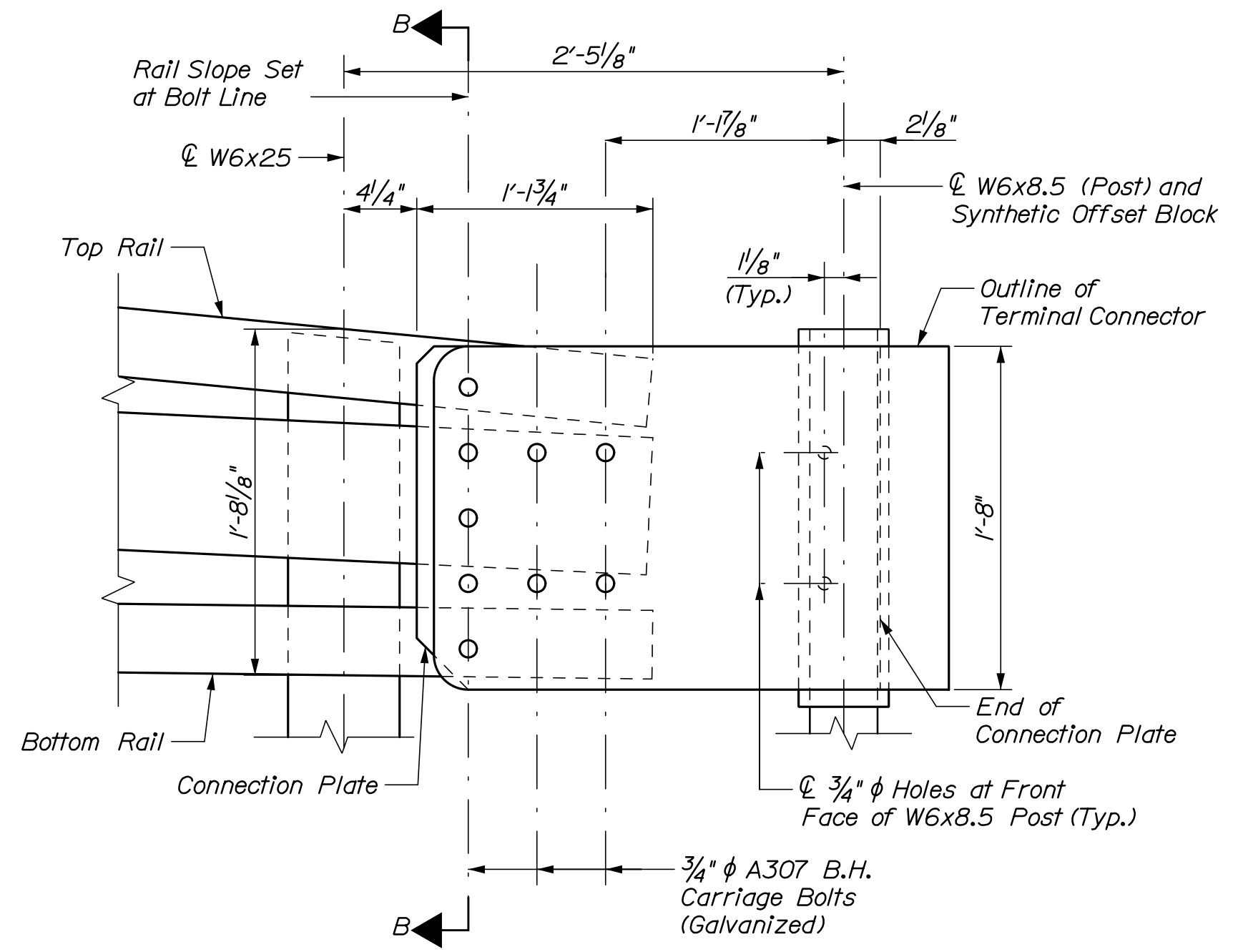
SECTION B-B (CONNECTION PLATE)



SECTION A-A (POST RAIL ASSEMBLY)

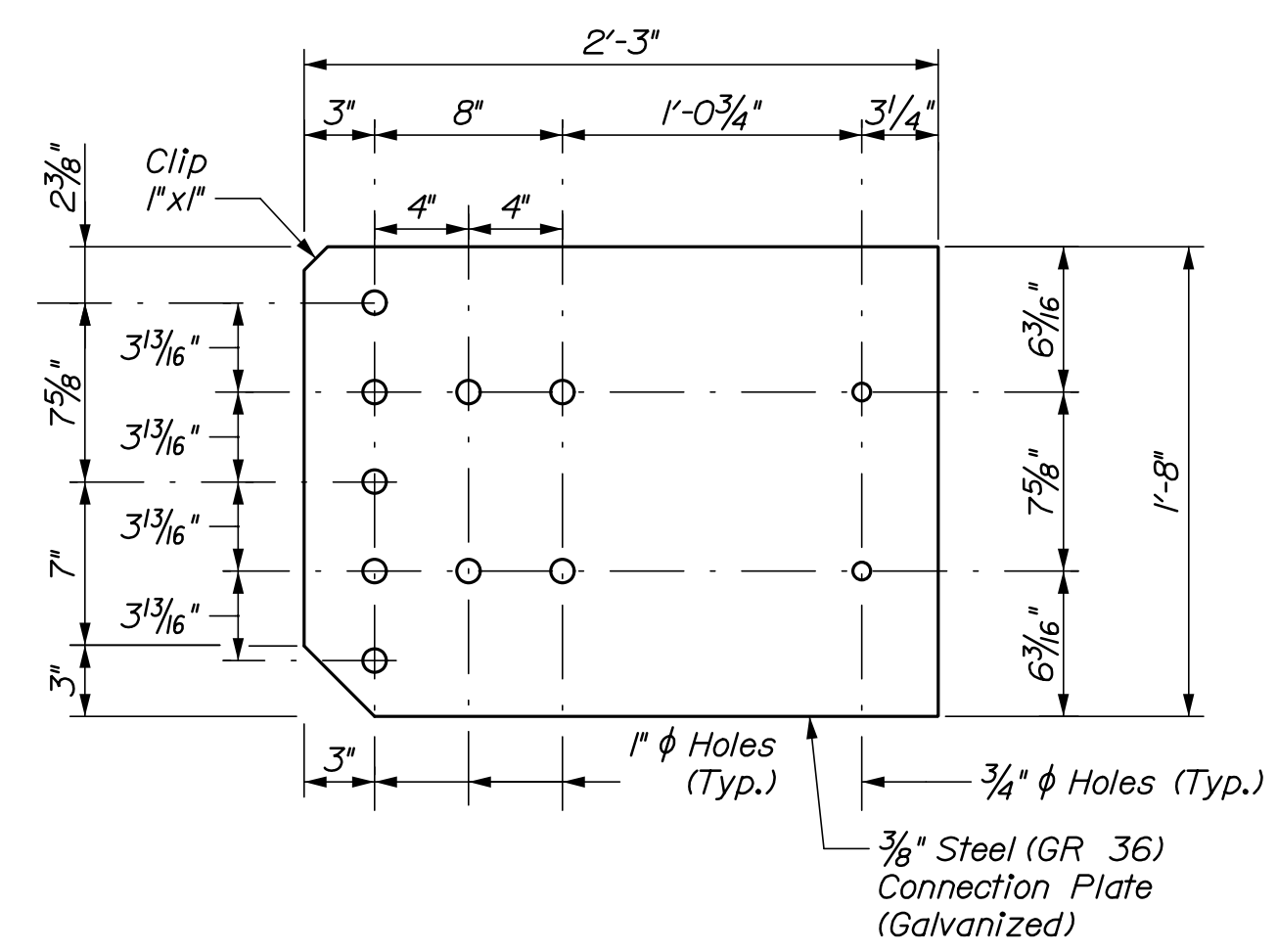


DETAIL - RAIL SLOPE

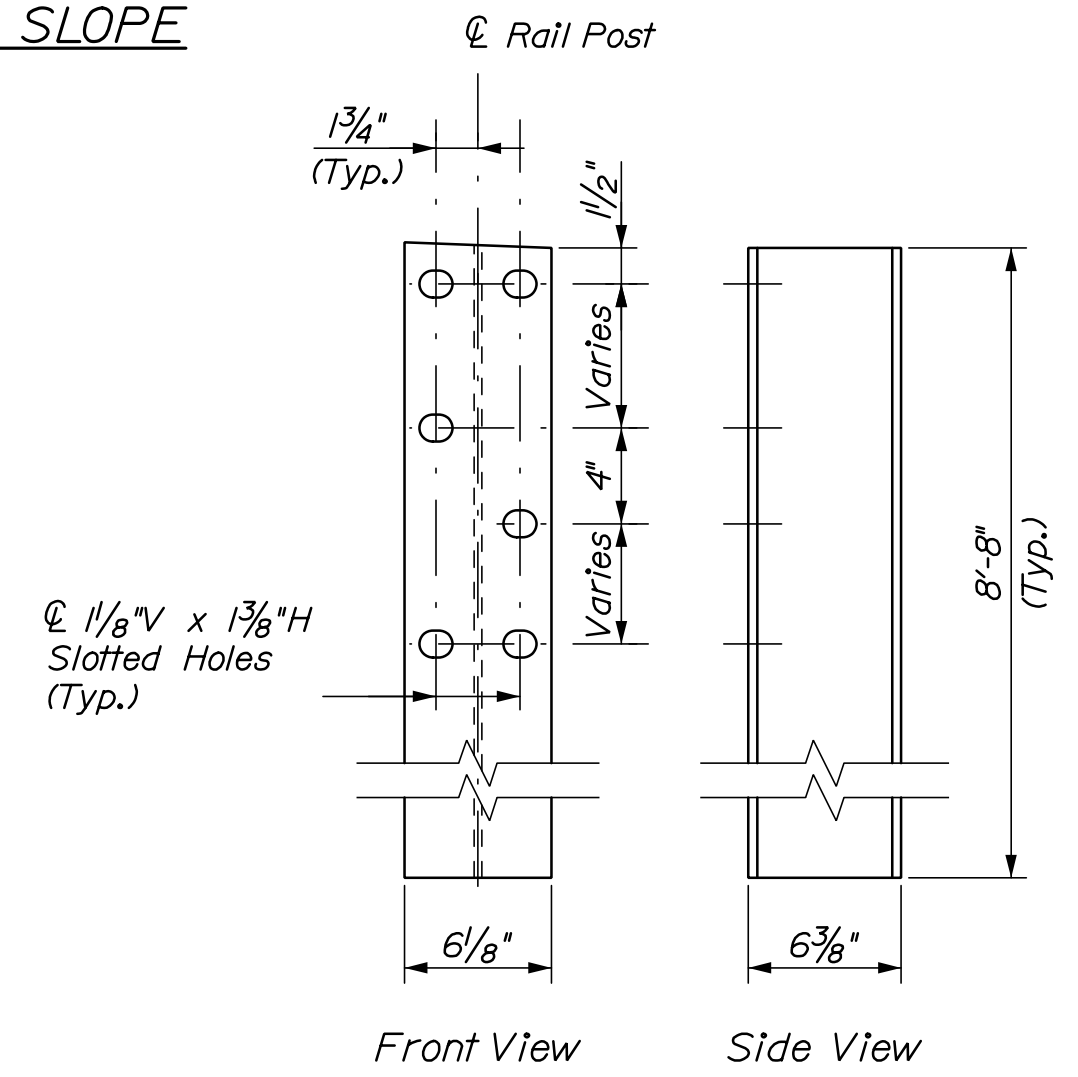


DETAIL A

(Overlapping of Double Nested Thrie-Beam not Shown for Clarity)



DETAIL - CONNECTION PLATE



RAIL POST (W6x25)

- NOTES: STEEL BRIDGE RAILING, 3-BAR**
1. Refer to Steel Bridge Railing Standard Details for additional details, notes and materials specifications.
 2. Rail bar welds shall have a minimum penetration of 80% as demonstrated by a test weld performed by the fabricator.
 3. The precast concrete vertical or transition curb shall meet the provisions of Section 609 - Curbing of the Standard Specifications. The bridge end of the curb shall be saw-cut in the field to fit flush against the backwall, as dictated by the bridge skew angle and the profile grade. Where curbing is specified on the adjacent highway, the transition shall be modified accordingly.
 4. After installation of the guard rail is complete, upset the threads on the anchor bolts in three (3) places around each bolt, at the junction of the nut and the exposed thread, with a center punch or similar tool.
 5. Weld splice bar to fit bend. Use complete joint penetration butt weld (B-U2)
 6. Standard Bridge Transition may require longer posts to account for higher rail height. No additional payment will be made for this modification.
 7. Three foot spacing to first post on bridge is standard. For longer expansion joints, the first post on the bridge may be located up to 5'-6" from the previous post in the approach.

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ROUTE 43 BRIDGE INTERSTATE 95		PENOBSCOT COUNTY		WIN		022340.00	
OLD TOWN		STEEL APPROACH RAILING 3-BAR		BRIDGE NO. 6061		DATE	
PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE	
DESIGN-DETAILED K. Brophy	05/20	E. White	05/20				
CHECKED-REVIEWED B. Greiner		L. Driscoll					
DESIGN-DETAILED							
REVISIONS 1							
REVISIONS 2							
REVISIONS 3							
REVISIONS 4							
FIELD CHANGES							
SHEET NUMBER		25					
		OF 27					

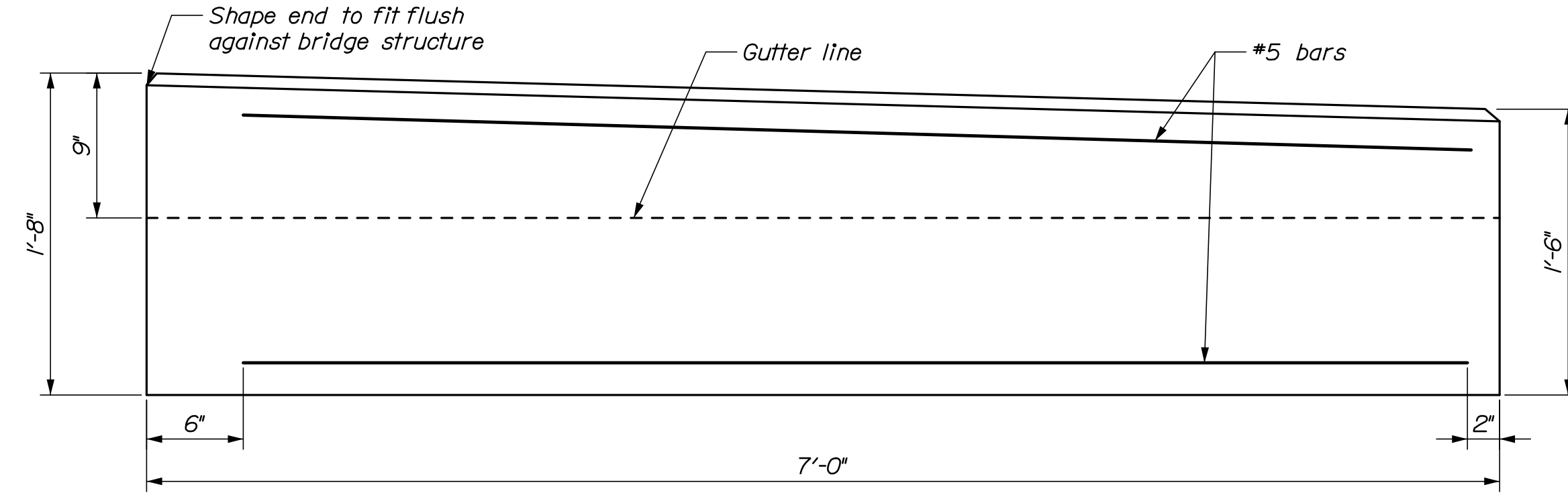


Date: 5/28/2020

Username:

Division:

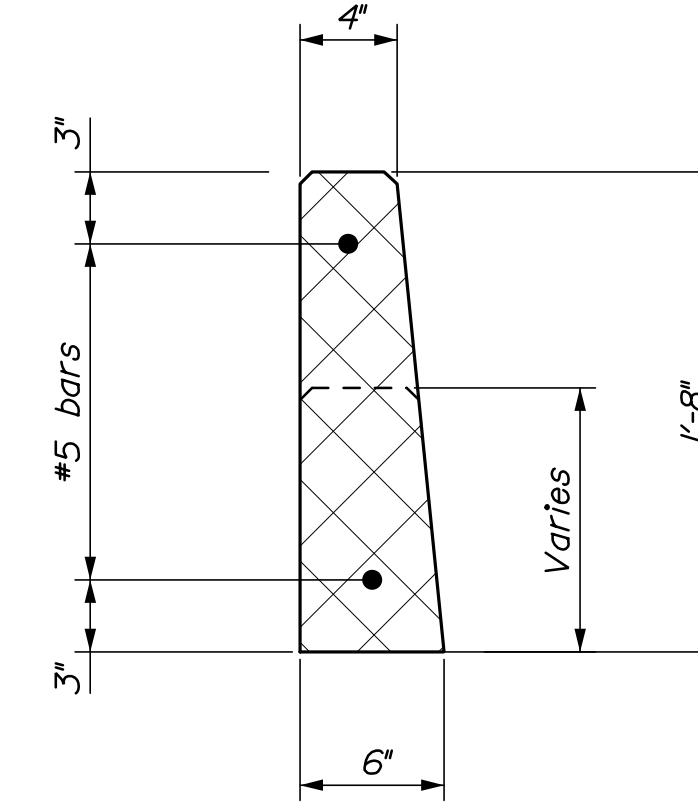
Filename: 026_Curb_Details.dgn



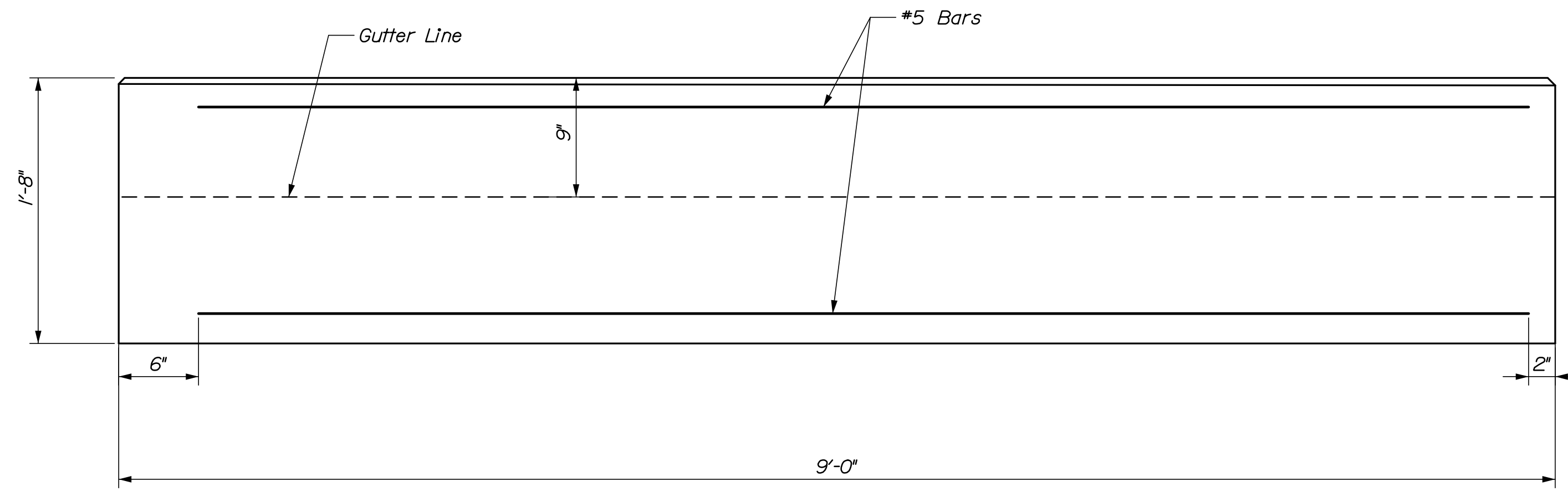
ELEVATION - PRECAST TRANSITION CURB SECTION

NOTES: PRECAST CONCRETE VERTICAL CURB

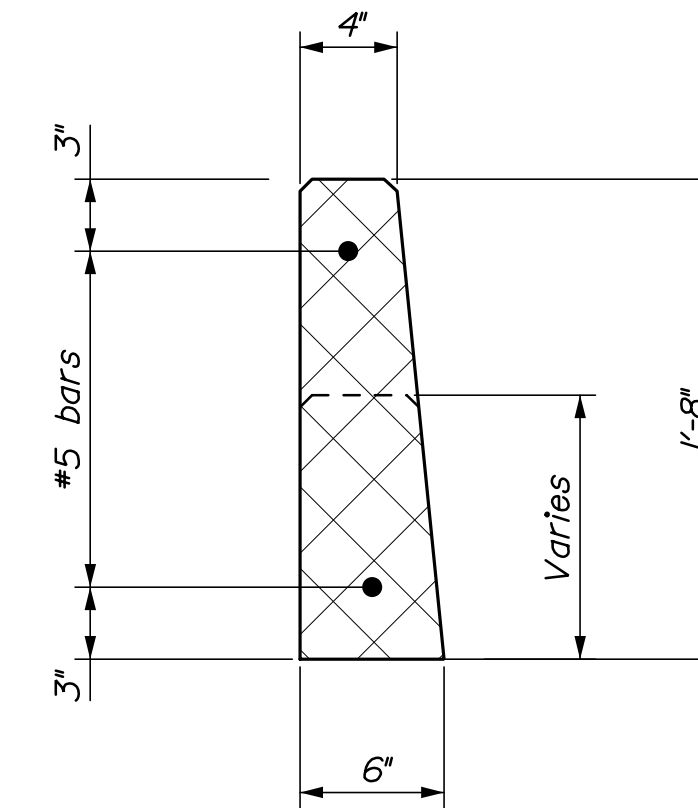
1. Precast Concrete Transition Curb shall meet the requirements of Standard Specifications Section 609 - Curb.
2. Dimensions shown are designed to accommodate a 9" reveal bridge curb with a battered face. Dimensions shall be adjusted to fit other situations as required.
3. Alternate transition curb sections may be used as approved by the Resident.
4. Unless otherwise indicated, payment for precast curbs will be included under the applicable Bridge Transition item. No separate payment will be made.



SECTION - PRECAST CONCRETE TRANSITION CURB



ELEVATION - PRECAST CONCRETE VERTICAL CURB



SECTION - PRECAST CONCRETE VERTICAL CURB

STATE OF MAINE
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022340.00
WIN
022340.00

BRIDGE NO. 6061
BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

DATE

05/20

05/20

BY

E. White

L. Driscoll

PROJ. MANAGER

K. Bravley

B. Greiner

DESIGN-DETAILED

CHECKED-REVIEWED

DESIGN-DETAILED

DESIGN-DETAILED

REVISIONS 1

REVISIONS 2

REVISIONS 3

REVISIONS 4

FIELD CHANGES

ROUTE 43 BRIDGE
INTERSTATE 95
PENOBSCOT COUNTY

OLD TOWN

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OF 27

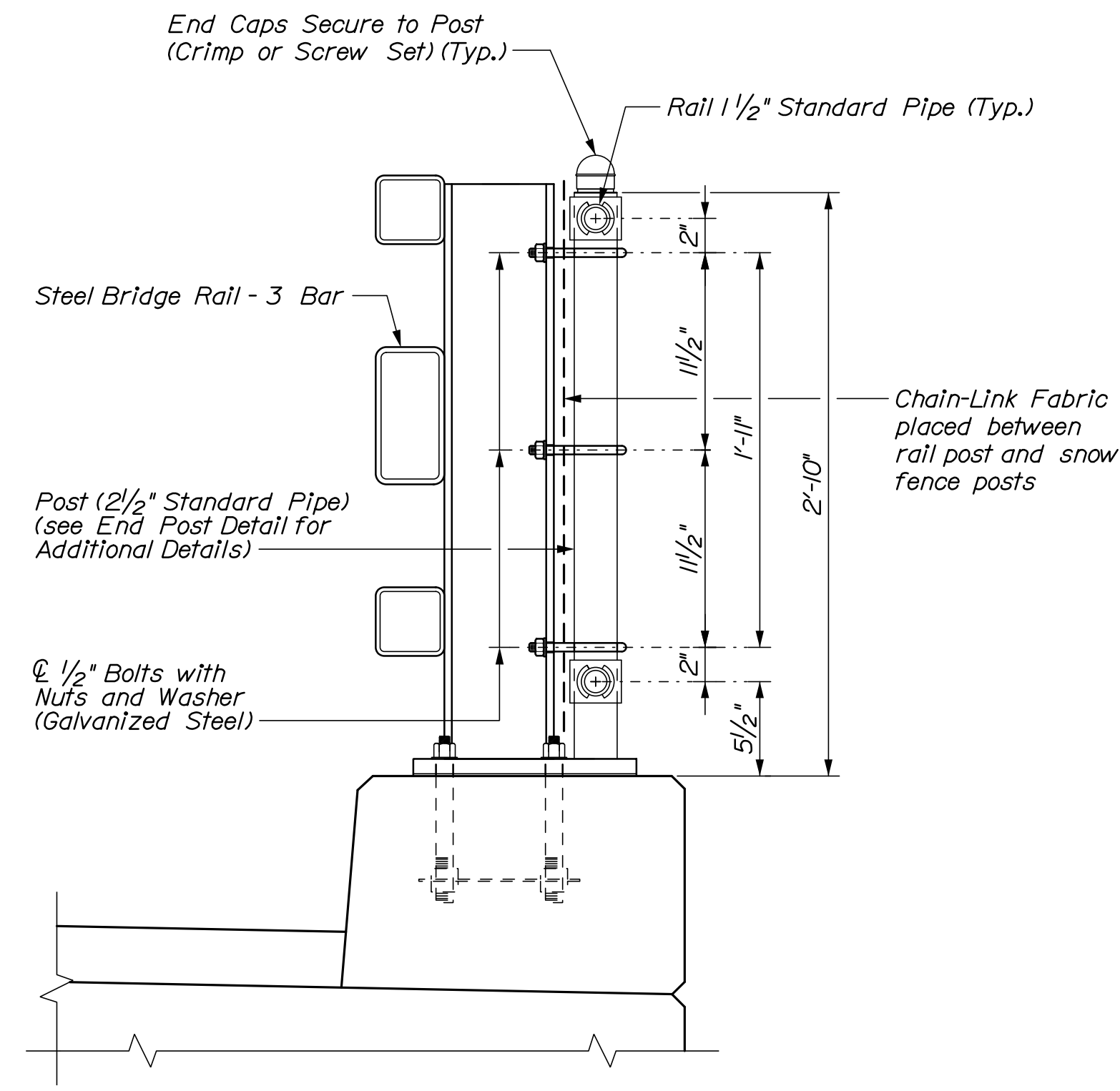
CURB DETAILS

Date: 5/27/2020

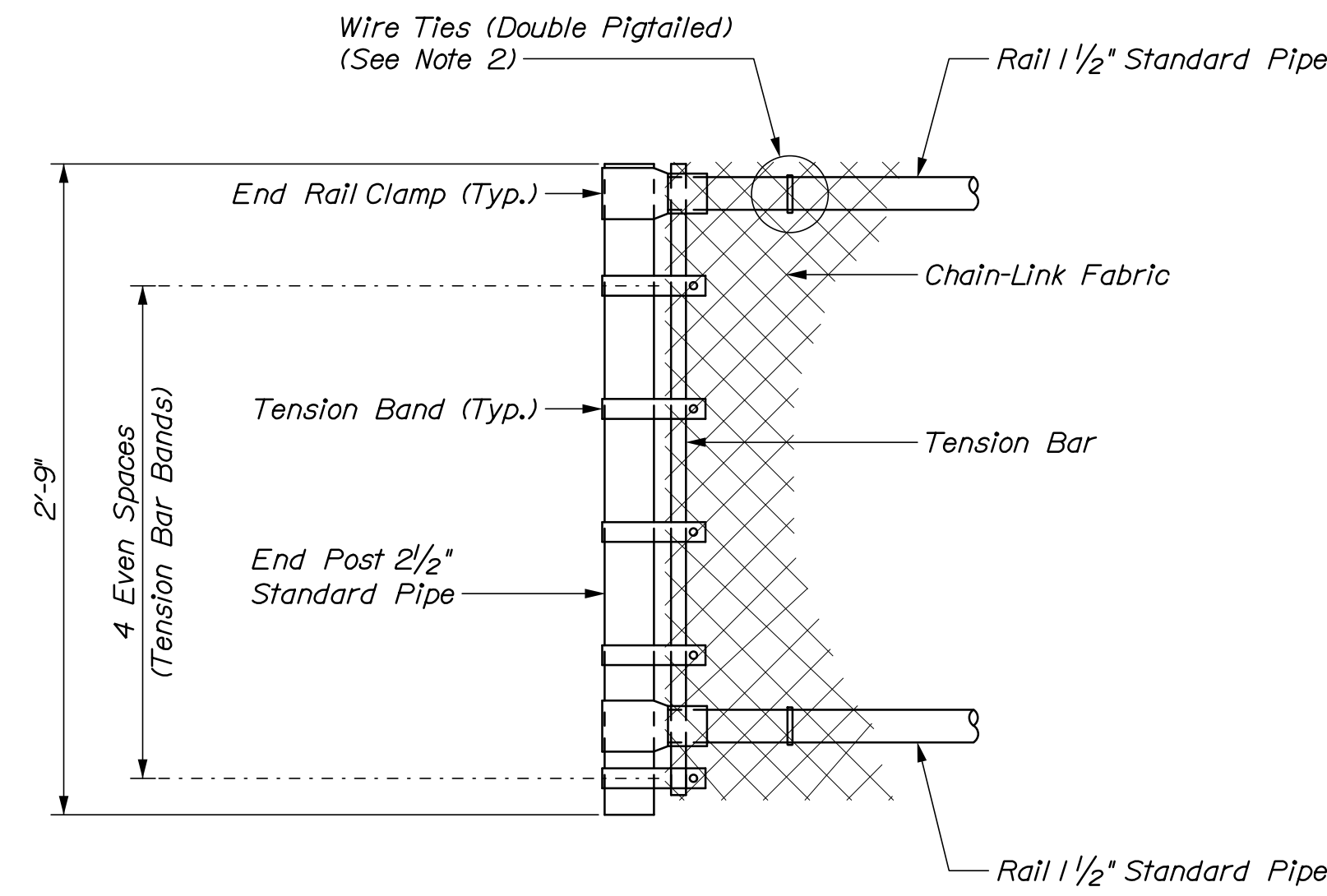
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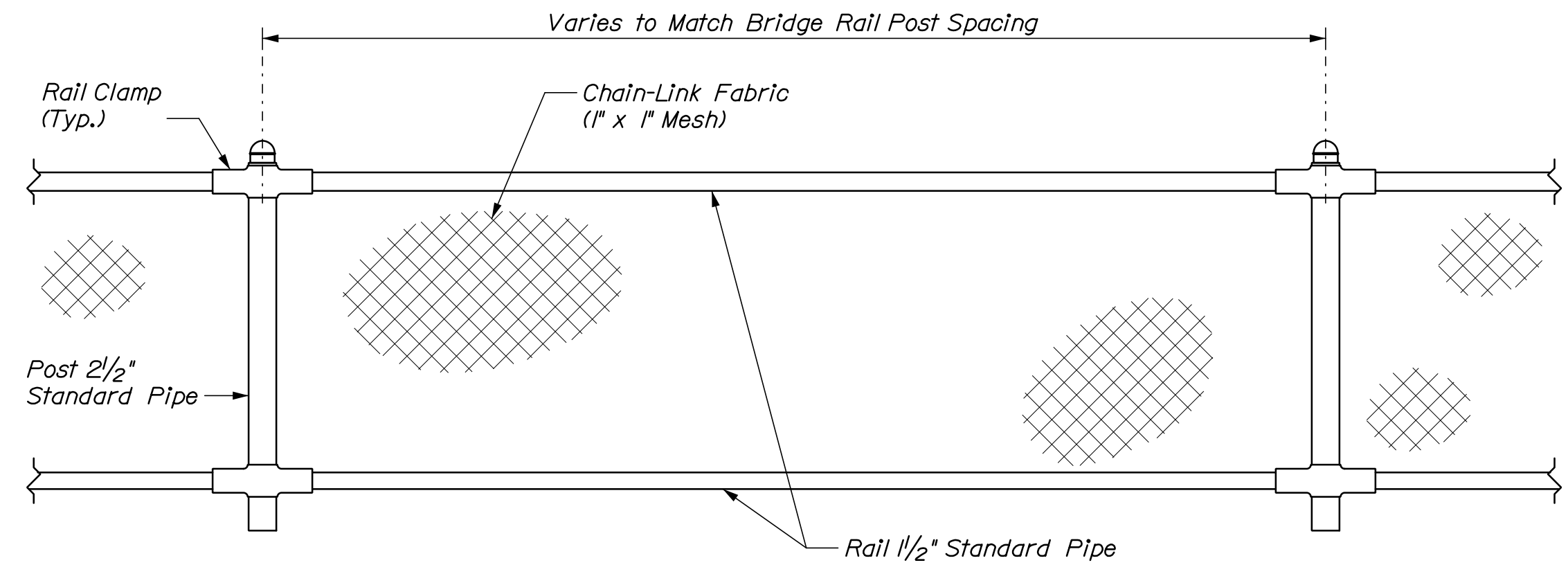
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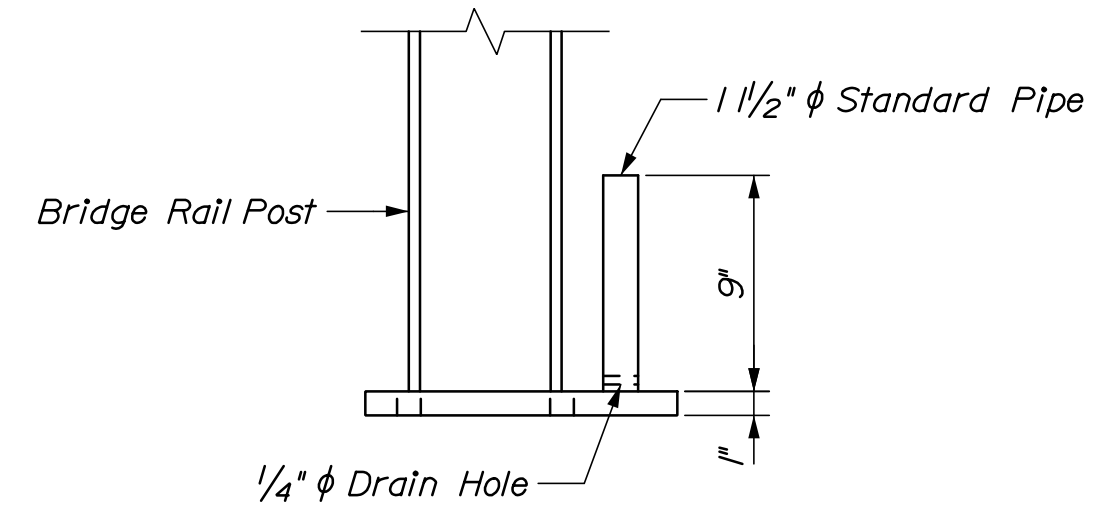
SNOW FENCE CONNECTION DETAIL



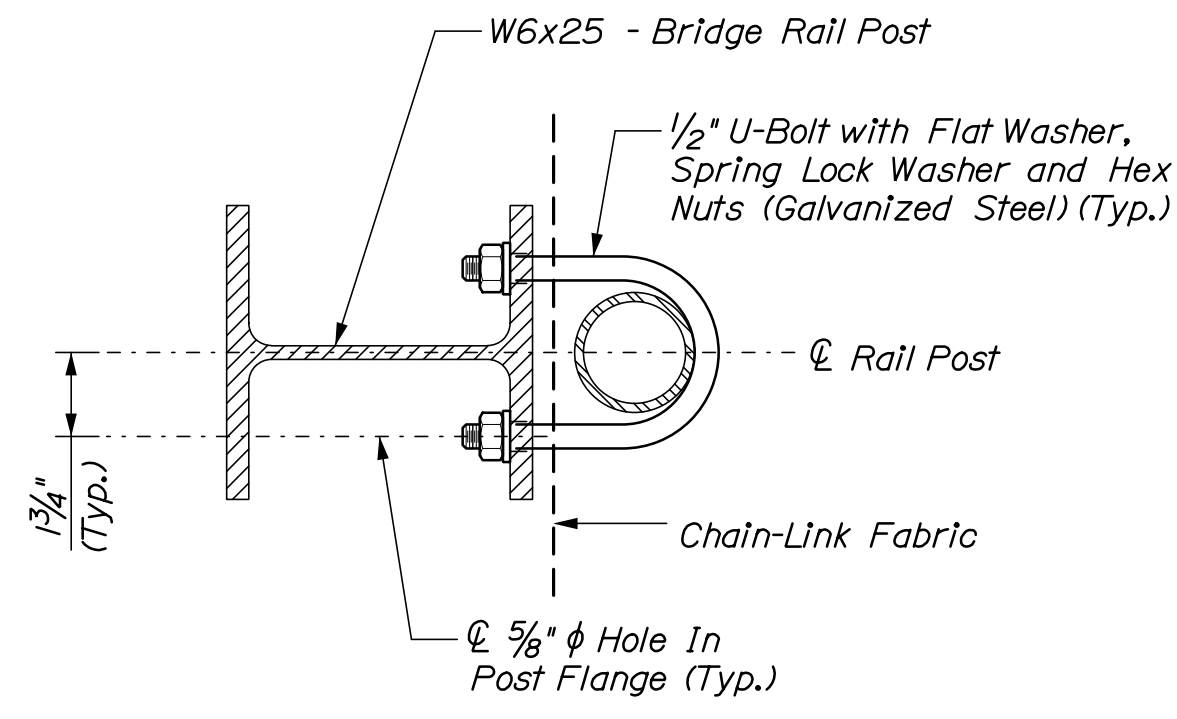
END POST DETAIL



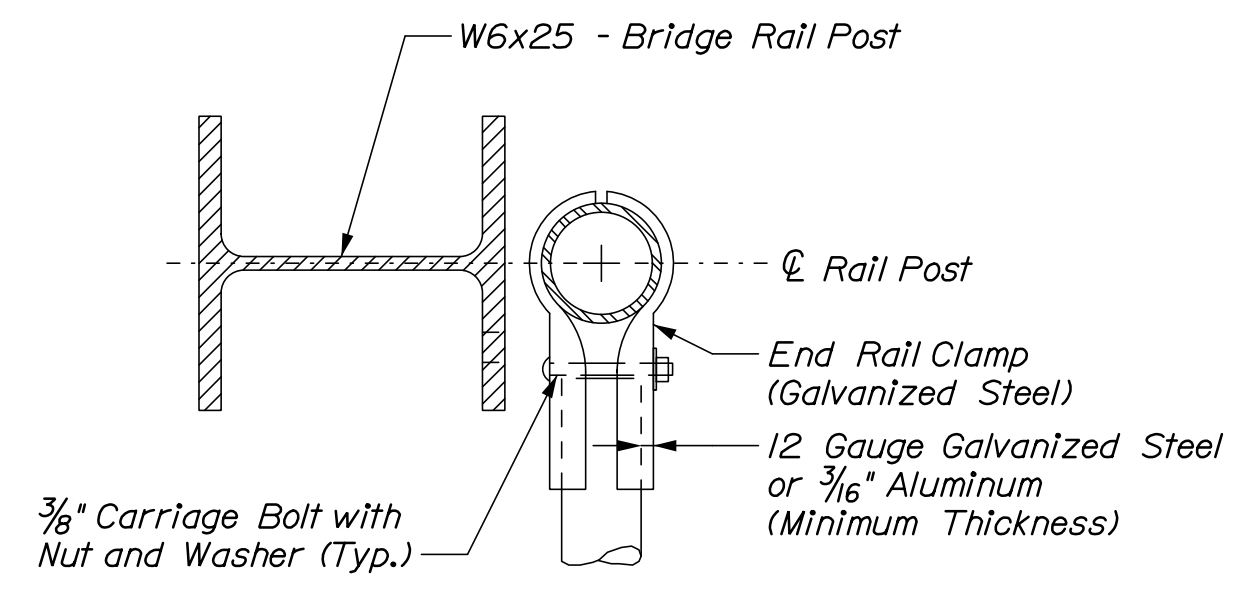
ELEVATION - SNOW FENCE



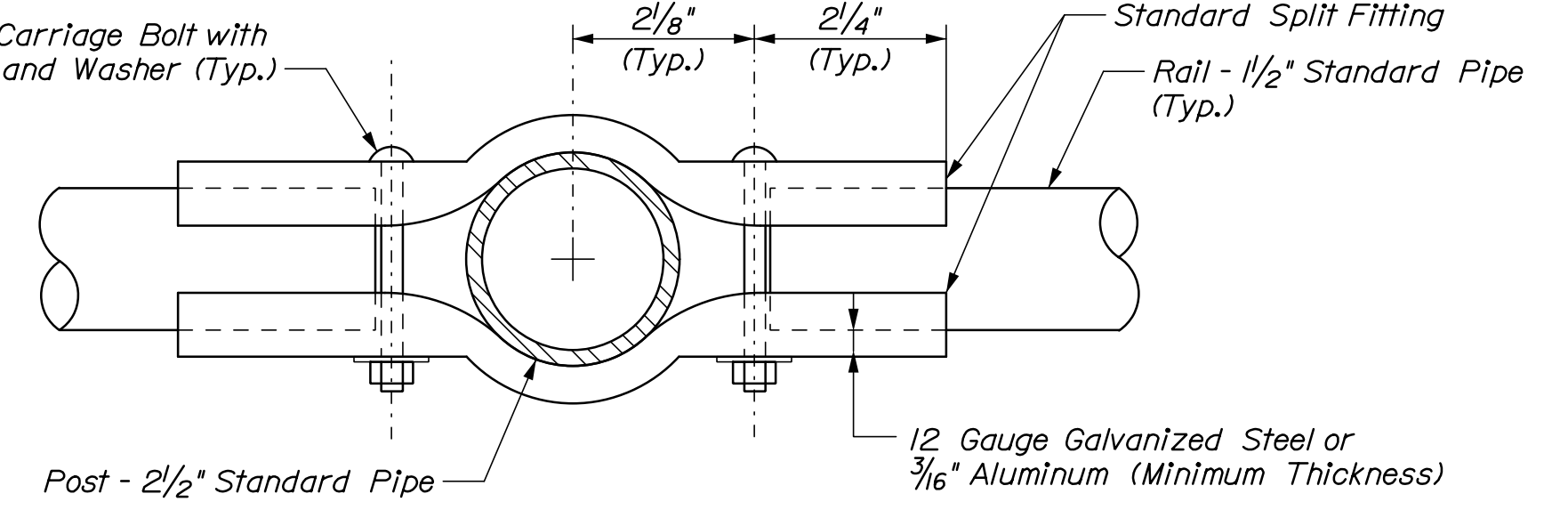
MODIFIED BASE PLATE ELEVATION



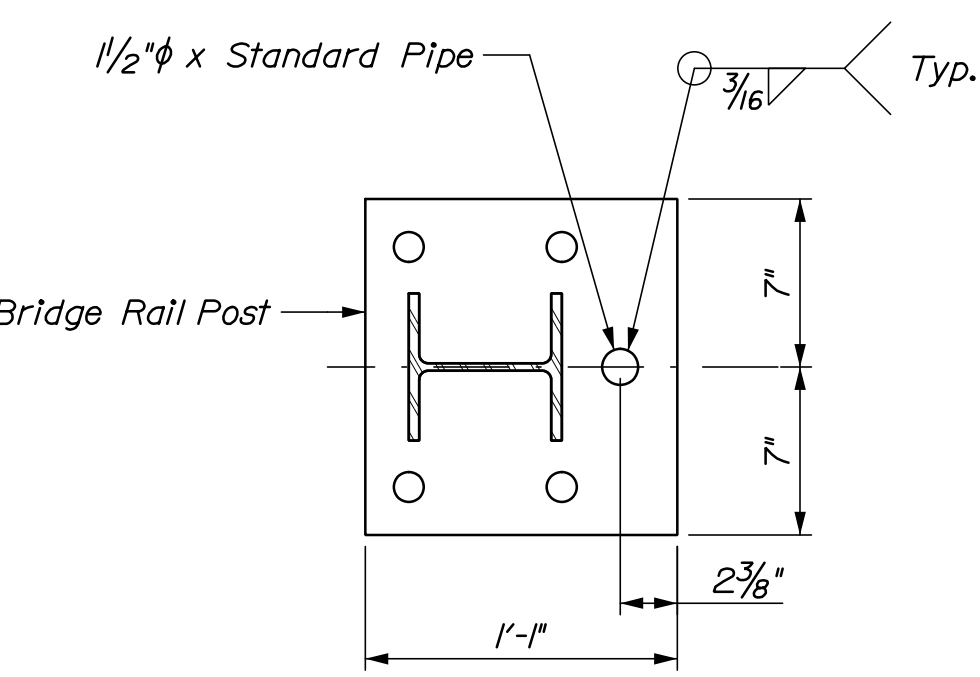
U-BOLT CONNECTION DETAIL (At Interior Post)



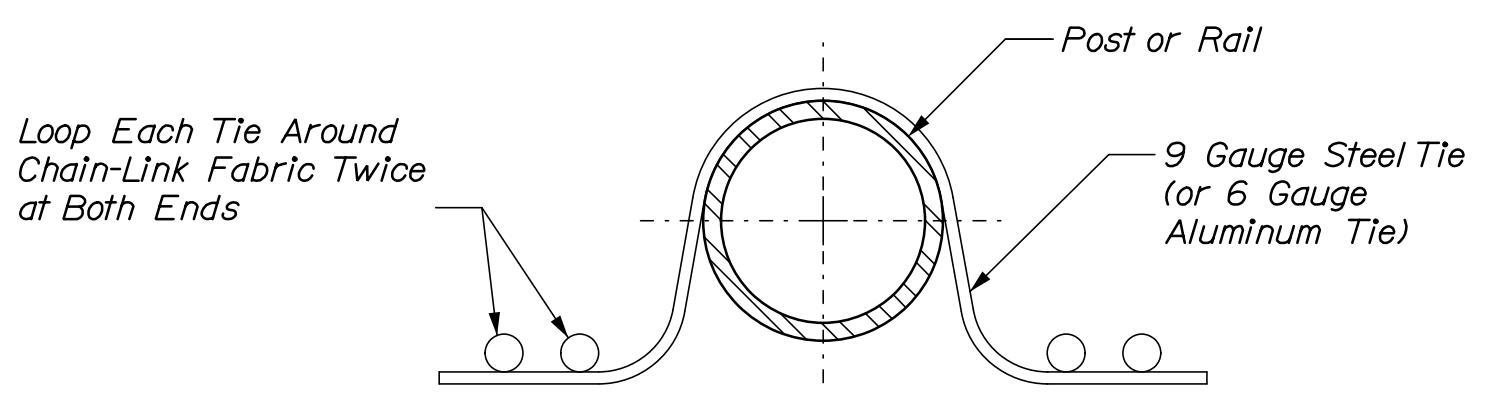
END POST DETAIL (U-Bolt Not Shown)



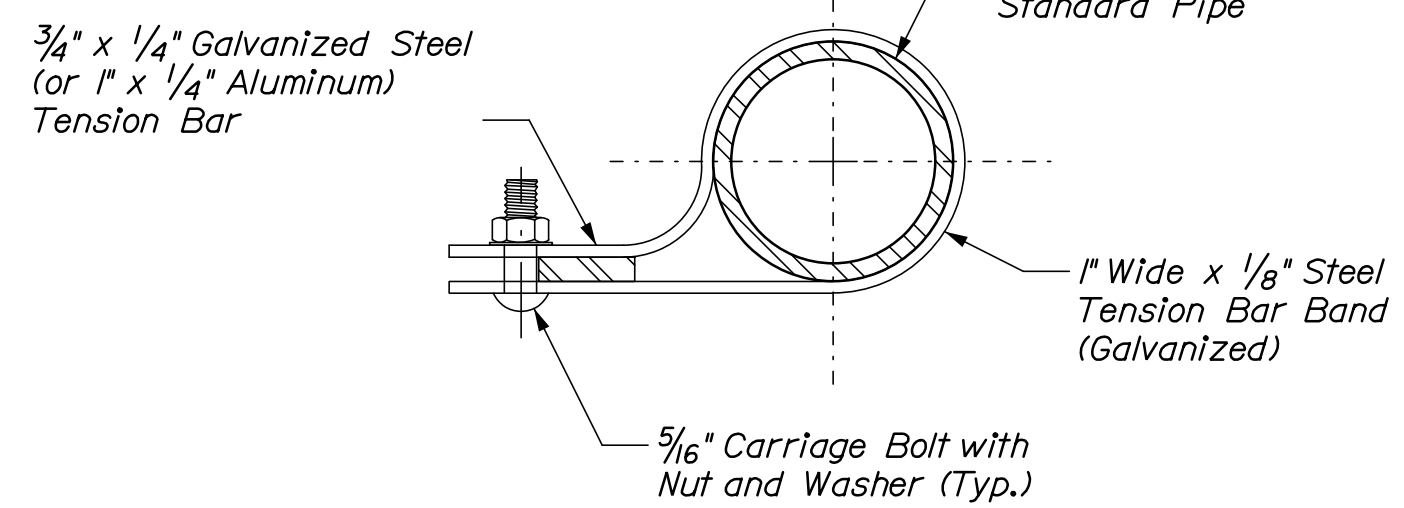
RAIL CLAMP DETAIL



MODIFIED BASE PLATE DETAIL



DOUBLE PIGTAILED TIE



TENSION BAND DETAIL

SNOW FENCE NOTES

- Chain-Link fence shall conform to Section 710.03 and Special Provision Section 607. The size of wire mesh (fabric) shall be 1".
- Wire ties shall be standard round 9 gauge zinc- or aluminum-coated steel or 6 gauge aluminum alloy conforming to ASTM F626. All ties shall be wrapped around chain-link fabric twice (double pigtailed) at both ends. Space ties @ 6" o.c. to bottom rail and @ 12" o.c. to all posts and other rails. Mechanical/Power fastened fence ties acceptable.
- Post and rail pipe shall be hot-dip galvanized. All pipe shall be schedule 40, standard weight. Nominal pipe sizes are shown.
- Tension bars, bar bands, boulevard and end rail clamps shall be steel or aluminum alloy conforming to AASHTO M181 (ASTM F626). Steel components shall be hot-dip galvanized in accordance with AASHTO M111 (ASTM A123) or AASHTO M232 (ASTM A153) as applicable.
- All bolts and nuts shall be steel conforming to ASTM A307 and ASTM A563 grade A respectively. Washers shall be hardened steel commercial type A plain and shall meet the dimensional requirements of ANSI B18.22. All bolts, nuts and washers shall be hot-dip galvanized in accordance with AASHTO M111 (ASTM A123) or AASHTO M232 (ASTM A153) as applicable.
- Rail may be field cut (sawn) to fit post spacing. Galvanized rail, cut or drilled as allowed.

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ROUTE 43 BRIDGE		INTERSTATE 95		PENOBSCOT COUNTY		SNOW FENCE DETAILS		SHEET NUMBER		27		OF 27	
PROJ. MANAGER	DESIGN-DETAILED	CHECKED-REVIEWED	DESIGNS-DETAILED	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES	DATE	SIGNATURE	P.E. NUMBER	DATE	
									05/20				

