

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



BENEDICTA
AROOSTOOK COUNTY
CASEY ROAD / I-95 BRIDGE
OVER
I-95

FEDERAL AID PROJECT NO. 2623800
BRIDGE NO. 6165

SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design
Specifications, Ninth Edition 2020.

DESIGN LOADING

Live Load _____ Maine Legal Loads

MATERIALS

Concrete: _____
Curbs _____ Class "LP"
All Other _____ Class "A"
Reinforcing: _____
Plain Reinforcing Steel _____ ASTM A615, Grade 60
Structural Steel: _____
All Material (except as noted) _____ ASTM A709, Grade 50
High Strength Bolts _____ ASTM F3125, Grade A325, Type 1

BASIC DESIGN STRESSES

Concrete: _____
Class "A" _____ $f'c = 4,000$ psi
Class "LP" _____ $f'c = 5,000$ psi
Reinforcing: _____
Plain Reinforcing Steel _____ $f_y = 60,000$ psi
Structural Steel: _____
ASTM A709, Grade 50 _____ $F_y = 50,000$ psi
ASTM F3125, Grade A325 _____ $F_u = 120,000$ psi

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UTILITIES

None

TRAFFIC DATA

Current (2022) AADT	160
Future (2042) AADT	180
DHV - % of AADT	12%
Design Hour Volume	22
Heavy Trucks (% of AADT)	16%
Heavy Trucks (% of DHV)	29%
Directional Distribution (% of DHV)	76%
18 kip Equivalent P 2.0	20
18 kip Equivalent P 2.5	19
Design Speed (mph)	45 MPH

MAINTENANCE OF TRAFFIC

Casey Road - Staged construction with alternating one-way traffic using temporary traffic signals.

I-95 - Single lane closures allowed for specific work activities.

Lat. 45°48'00.5" N Long. 68°25'37.7" W

PROJECT LOCATION	CASEY ROAD / I-95 BRIDGE (\$6165) OVER INTERSTATE 95 LOCATED 0.7 MILES WEST OF AROOSTOOK ROAD
OUTLINE OF WORK	BRIDGE DECK REPLACEMENT

WIN 26238.00

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
	COMMISSIONER: <i>[Signature]</i>	11-25-24
CHIEF ENGINEER: <i>[Signature]</i>		11-20-2024
<i>[Signature]</i> SIGNATURE 13046 P.E. NUMBER 11-0-24 DATE		
PROJECT INFORMATION		
PROGRAM	BRIDGE PROGRAM	PROJECT MANAGER
DESIGNER	DENVER SHALL	DESIGNER
CONSULTANT	MEABLAND JOHNSON INC.	CONSULTANT
PROJECT RESIDENT		PROJECT RESIDENT
CONTRACTOR		CONTRACTOR
PROJECT COMPLETION DATE		
CASEY ROAD / I-95 BRIDGE	AROOSTOOK COUNTY	TITLE SHEET
BENEDICTA		
SHEET NUMBER		
1		
OF 29		

ESTIMATED QUANTITIES				
ITEM NO.	ITEM DESCRIPTION		QUANTITY	UNIT
202.10	REMOVING EXISTING SUPERSTRUCTURE PROPERTY OF CONTRACTOR	(430 CY)	1	LS
202.121	REMOVING EXISTING CONCRETE	(54 CY)	1	LS
202.13	REMOVING EXISTING RAILINGS (RETAINED BY DEPARTMENT)		910	LF
202.202	REMOVING PAVEMENT SURFACE		1100	SY
203.20	COMMON EXCAVATION		250	CY
203.25	GRANULAR BORROW		55	CY
206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES, PLAN QUANTITY		73	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL		130	CY
403.208	HOT MIX ASPHALT 12.5 MM HMA SURFACE		110	T
403.213	HOT MIX ASPHALT 12.5 MM BASE		23	T
409.15	BITUMINOUS TACK COAT, APPLIED		71	G
502.219	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	(25 CY)	1	LS
502.26	STRUCTURAL CONCRETE ROADWAY AND SIDEWALK SLAB ON STEEL BRIDGES	(360 CY)	1	LS
502.291	SAW CUT GROOVING	(10500 SF)	1	LS
502.31	STRUCTURAL CONCRETE APPROACH SLAB	(18 CY)	1	LS
502.49	STRUCTURAL CONCRETE CURBS AND SIDEWALKS	(43 CY)	1	LS
502.77	FRP BRIDGE DRAIN, TYPE D		4	EA
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED		142100	LB
503.13	REINFORCING STEEL, PLACING		142100	LB
503.17	MECHANICAL/WELDED SPLICE		1850	EA
504.70	STRUCTURAL STEEL FABRICATED AND DELIVERED	(430 LB)	1	LS
504.71	STRUCTURAL STEEL ERECTION	(430 LB)	1	LS
505.08	SHEAR CONNECTORS	(6280 EA)	1	LS
506.1775	FIELD PAINTING, NEW AND EXISTING STEEL WITH ZINC RICH PAINT	(20 SF)	1	LS
507.0821	STEEL BRIDGE RAILING, 3 BAR	(920 LF)	1	LS
507.0822	STEEL APPROACH RAILING: 3-BAR		4	EA
507.131	TEMPORARY BRIDGE RAIL	(900 LF)	1	LS
508.13	SHEET WATERPROOFING MEMBRANE	(50 SY)	1	LS
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES	(2200 SY)	1	LS
520.21	EXPANSION DEVICE - GLAND SEAL		2	EA
523.52	BEARING INSTALLATION		8	EA
523.5402	LAMINATED ELASTOMERIC BEARINGS, EXPANSION		8	EA
524.301	TEMPORARY STRUCTURAL SUPPORT (BEARING REPLACEMENT)		1	LS
524.301	TEMPORARY STRUCTURAL SUPPORT (APPROACHES)		1	LS
524.301	TEMPORARY STRUCTURAL SUPPORT - TEMPORARY BRACING		1	LS
524.40	PROTECTIVE SHIELD		1	LS
526.301	PORTABLE CONCRETE BARRIER, TYPE I	(230 LF)	1	LS
526.305	TEMPORARY CONCRETE BARRIER, BRACED TYPE I	(100 LF)	1	LS
527.33	TRUCK MOUNTED ATTENUATOR		2	EA
527.34	WORK ZONE CRASH CUSHIONS		2	UN
606.1301	31" W-BEAM GUARDRAIL, MID-WAY SPLICE-SINGLE FACED		370	LF
606.1305	31" W-BEAM GUARDRAIL, MID-WAY SPLCE FLARED TERMINAL		3	EA
606.1721	BRIDGE TRANSITION - TYPE 1		4	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER		20	EA
607.183	CHAIN LINK SNOW FENCE 33 INCH	(260 LF)	1	LS
610.08	PLAIN RIPRAP		120	CY
613.319	EROSION CONTROL BLANKET		85	SY
615.07	LOAM		5	CY
618.14	SEEDING METHOD NUMBER 2		1	UN
619.12	MULCH		1	UN
619.14	EROSION CONTROL MIX		10	CY
620.58	EROSION CONTROL GEOTEXTILE		180	SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE		3150	LF
627.75	WHITE OR YELLOW PAVEMENT & CURB MARKING		44	SF
627.77	REMOVING EXISTING PAVEMENT MARKING		440	SF
627.78	TEMPORARY 4" PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW		1150	LF
629.05	HAND LABOR, STRAIGHT TIME		25	HR
631.10	AIR COMPRESSOR (INCLUDING OPERATOR)		5	HR
631.11	AIR TOOL (INCLUDING OPERATOR)		5	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)		25	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)		25	HR

ESTIMATED QUANTITIES			
ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT
631.22	FRONT END LOADER (INCLUDING OPERATOR)	25	HR
639.19	FIELD OFFICE TYPE B	1	EA
643.72	TEMPORARY TRAFFIC SIGNAL	1	LS
652.30	FLASHING ARROW	2	EA
652.312	TYPE III BARRICADE	4	EA
652.33	DRUM	70	EA
652.34	CONE	10	EA
652.35	CONSTRUCTION SIGNS	690	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	1	LS
652.38	FLAGGERS	320	HR
652.41	PORTABLE-CHANGEABLE MESSAGE SIGN	2	EA
656.75	TEMPORARY SOIL EROSION & WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

STATE OF MAINE
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FEDERAL AID PROJECT NO. 2623800

BRIDGE NO. 6165
WIN
26238.00
BRIDGE PLAN

CASEY ROAD / I-95 BRIDGE
BENEDICTA
AROOSTOOK COUNTY

ESTIMATED QUANTITIES

SHEET NUMBER
2
OF 29

GENERAL CONSTRUCTION NOTES

1. Approximate Right-Of-Way lines were developed from record plans and are shown on the Plans. All work shall be performed within the existing Right-Of-Way.

2. All clearing shall be considered incidental to the Contract and no separate payment will be made. Clear trees and shrubs under the bridge and to a 15' offset on both sides of the bridge, as directed by the Resident.

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

4. Existing signs within the Project limits shall be removed and reset as directed by the Resident. Payment for removal and reinstallation of existing signs will be considered incidental to the Contract. No separate payment will be made.

5. Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.

6. In areas where the Resident directs the Contractor not to excavate to the subgrade line shown on the Plans, payment for removing existing pavement, grubbing, shaping, ditching, and compacting the existing subbase and layers of new subbase 6 inches or less thick will be made under appropriate equipment rental items.

7. Place loam 2 inches deep on all new or reconstructed sideslopes or as directed by Resident.

8. 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 Specifications Section 619, Mulch. Payment will be made under Pay Item 619.14, Erosion Control Mix.

9. A MASH compliant guardrail end treatment shall be installed concurrently with the placement of each leading end section of beam guardrail.

10. Where it is apparent that runoff will cause continual erosion, Erosion Control Blanket, seeded gutters, or riprap downspouts shall be constructed after paving and shoulder work is completed. Payment will be made under the appropriate Contract Items.

11. Protective Coating for Concrete Surfaces shall be applied to the following areas:

All exposed surfaces of concrete curbs,
Fascias down to the drip notch,
Concrete wearing surfaces,
Top of abutment backwalls and wingwalls,
To one foot below the top of backwalls and wingwalls on the back side,
All exposed horizontal faces of abutments and piers, and
All exposed vertical faces of abutments and piers.

12. Project information referred to below may be accessed at the following MaineDOT web address:
http://www.maine.gov/mdot/contractors/

13. 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.

14. 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 Specification 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 and Time.

15. The Contractor shall submit Bridge Demolition Plans 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, portions of abutments and wingwalls, and identified diaphragms and bearings. No work related to the removal of the bridge deck shall be undertaken by the Contractor until MaineDOT has reviewed the Bridge Demolition Plans for appropriateness and completeness. Payment for all work necessary for developing, submitting and finalizing the Bridge Demolition Plans will be considered incidental to the appropriate bridge removal pay items.

16. The existing bridge components to be removed shall be removed by and become the property of the Contractor. The steel portions of the existing bridges may be coated with a lead-based paint system. The Contractor is responsible for the containment, proper management and disposal of hazardous waste generated by the process of demolishing the existing decks, modifications of structural steel, and installation of shear studs. The Contractor is responsible for implementing appropriate OSHA mandated personal protection standards related to these processes. Once the existing bridge components are removed, the Contractor is solely responsible for the care, custody, and control of the components of the existing bridges and any hazardous water 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. Payment for all labor, materials, equipment, and other costs required to remove and dispose of the existing bridge components will be considered incidental to related Contract Items.

17. Where a joint between new pavement and existing pavement is called for on the Plans, the existing pavement shall be sawcut 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.

18. All existing delineators and mile marker posts on Interstate 95 which are impacted shall be removed and reset. Payment for removing and resetting delineators and mile marker posts shall be incidental to the Contract.

19. Relocating existing ground mounted signs during traffic control phasing will not be directly measured for payment; payment shall be considered incidental to related various Contract Items. Signs temporarily relocated within 30' of an active travel way shall have breakaway devices or be protected with portable concrete barrier. Temporary sign supports shall meet the requirements of Specification Section 652.

20. Payment for connections of proposed guardrail to existing guardrail will be considered incidental to related Contract Items.

21. The Resident shall be informed a minimum of two weeks prior to the removal of any survey monuments from the Project. Monuments shall be carefully salvaged by the Contractor and will remain the property of the Department.
- CASEY ROAD / I-95 BRIDGE

BENEDICTA

AROOSTOOK COUNTY

GENERAL NOTES
- SHEET NUMBER

3

OF 29
- STATE OF MAINE

DEPARTMENT OF TRANSPORTATION

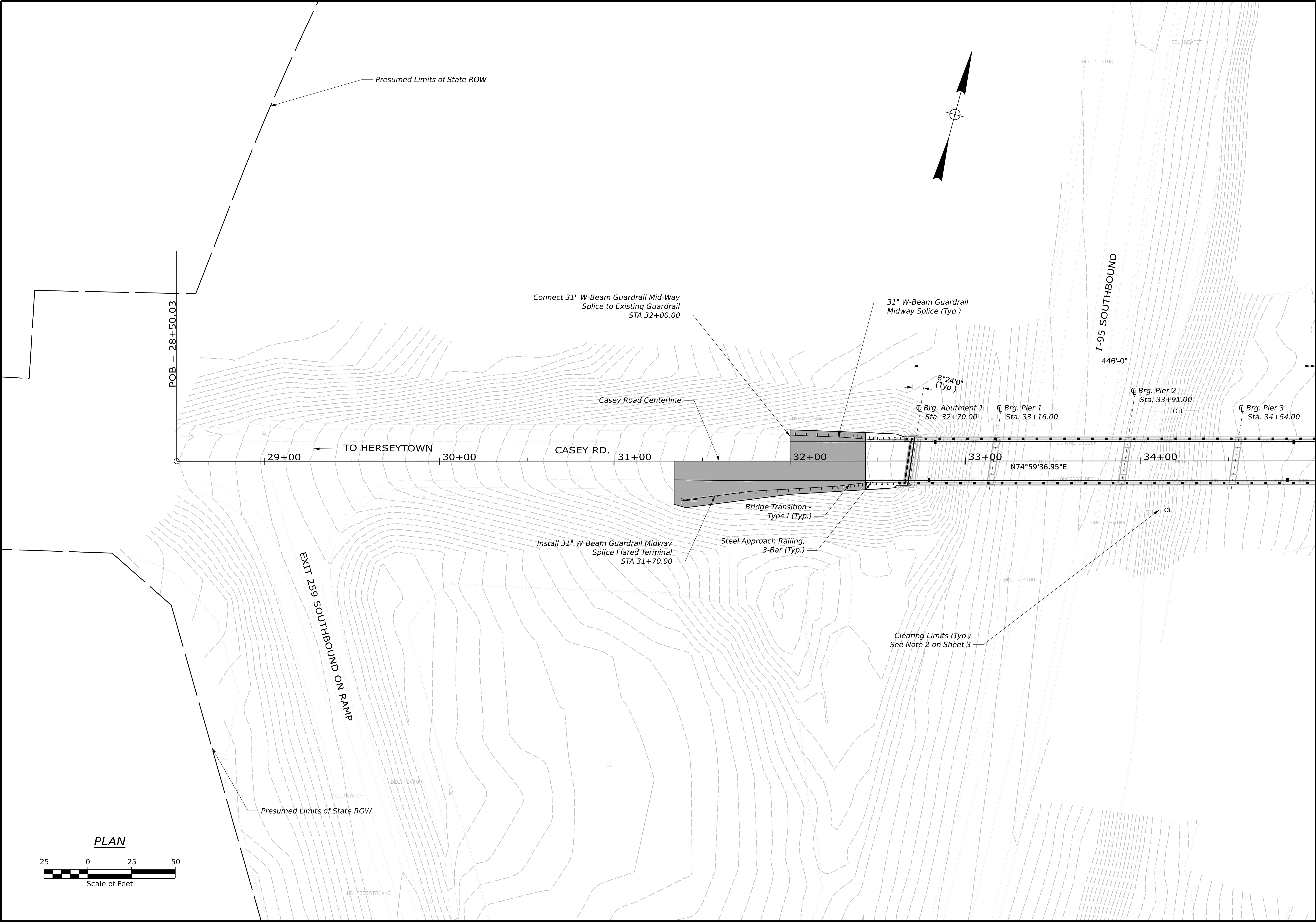
FEDERAL AID PROJECT NO. 2623800

BRIDGE NO. 6165

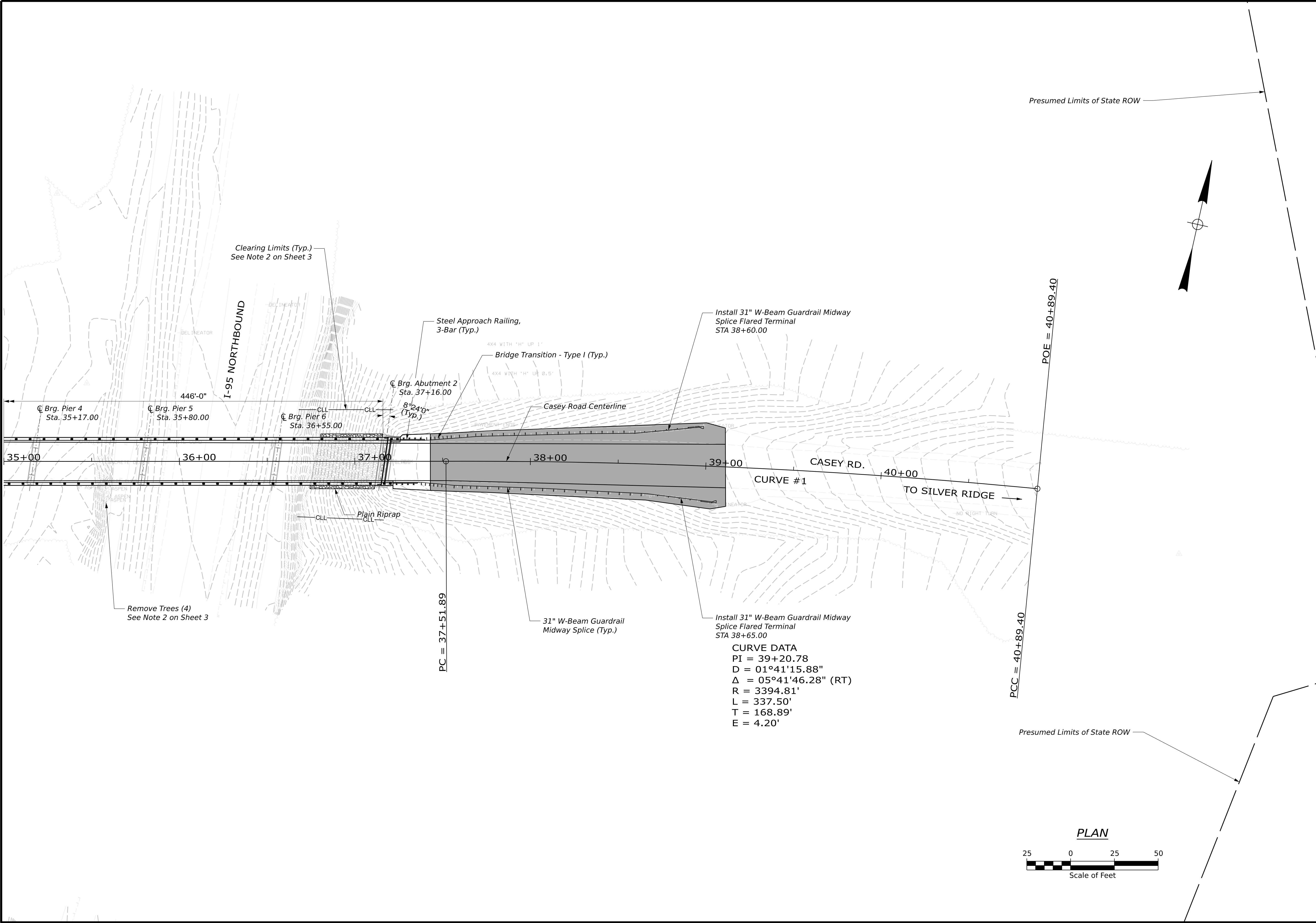
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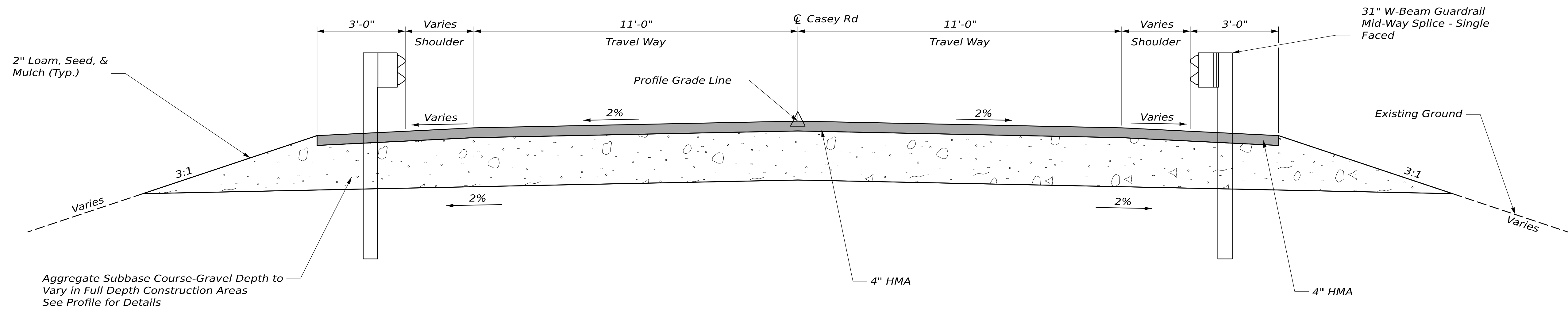
BRIDGE PLAN
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| PROJ. MANAGER | DESIGNER-DETAILED | CHECKED-REVIEWED | DESIGNED-DETAILED | DESIGNED-DETAILED | REVISIONS 1 | REVISIONS 2 | REVISIONS 3 | REVISIONS 4 | FIELD CHANGES |
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| PROJ. MANAGER | DESIGNER-DETAILED | CHECKED-REVIEWED | DESIGNED-DETAILED | DESIGNED-DETAILED | REVISIONS 1 | REVISIONS 2 | REVISIONS 3 | REVISIONS 4 | FIELD CHANGES |
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| PROJ. MANAGER | DESIGNER-DETAILED | CHECKED-REVIEWED | DESIGNED-DETAILED | DESIGNED-DETAILED | REVISIONS 1 | REVISIONS 2 | REVISIONS 3 | REVISIONS 4 | FIELD CHANGES |
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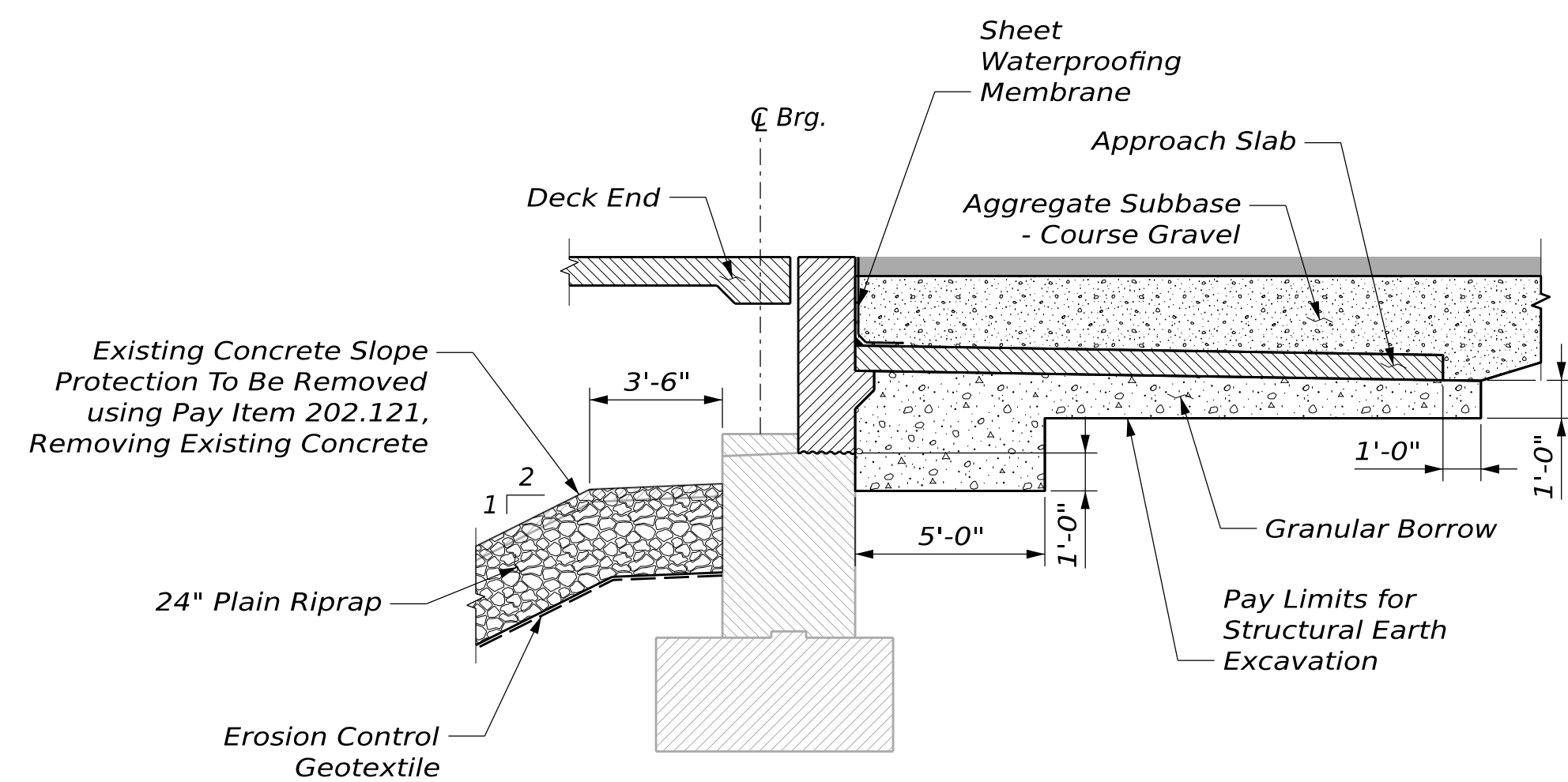
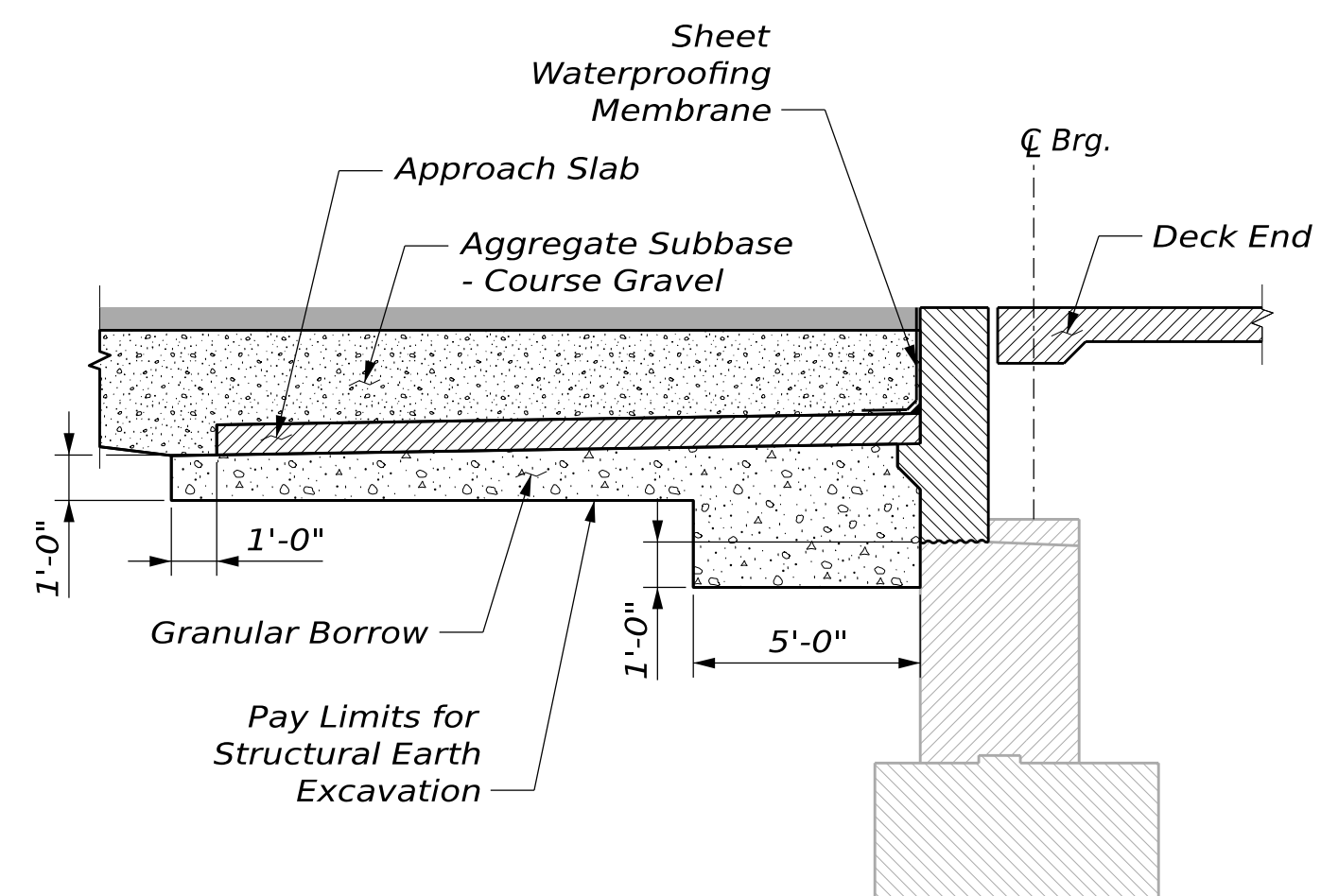
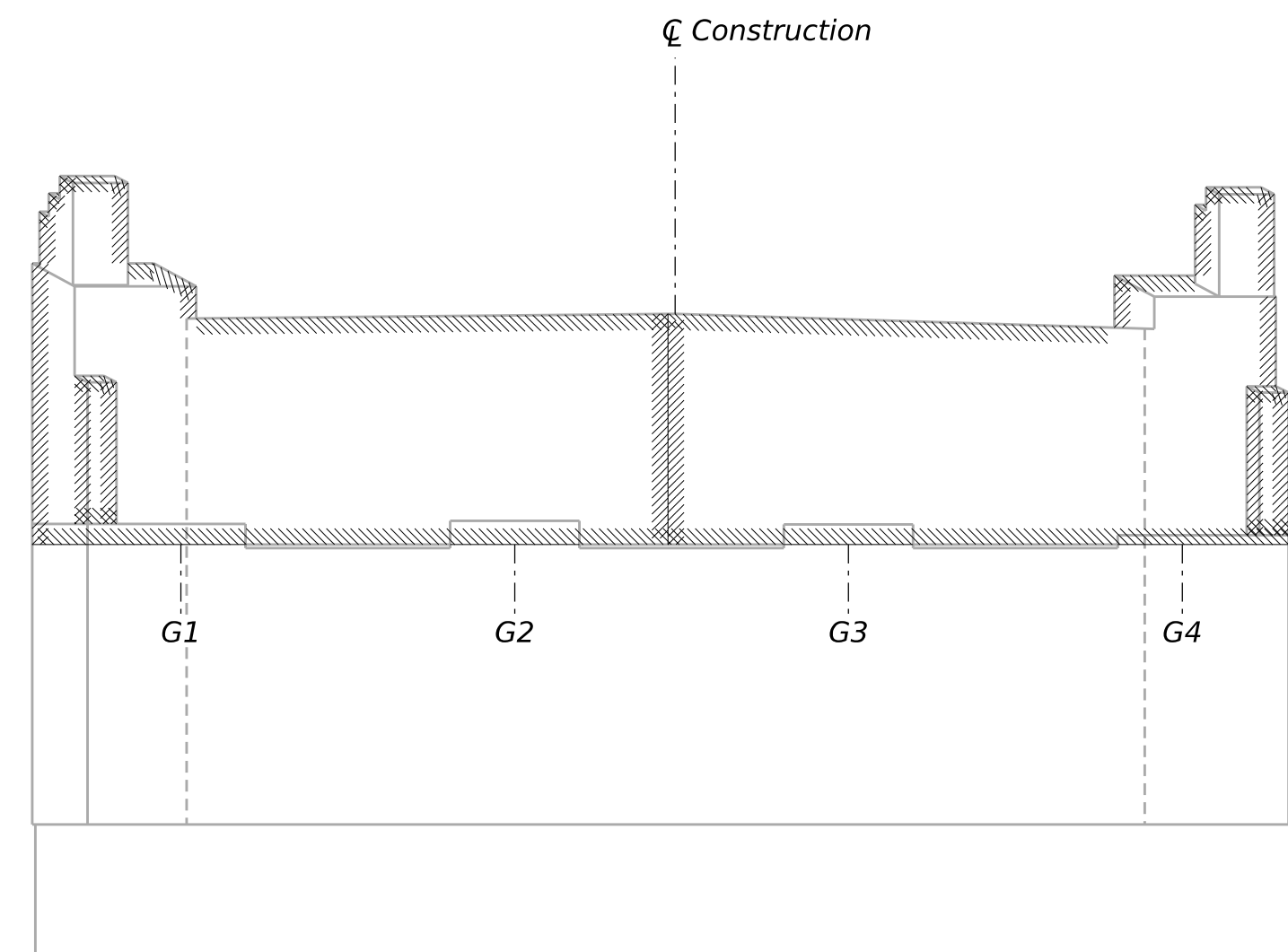
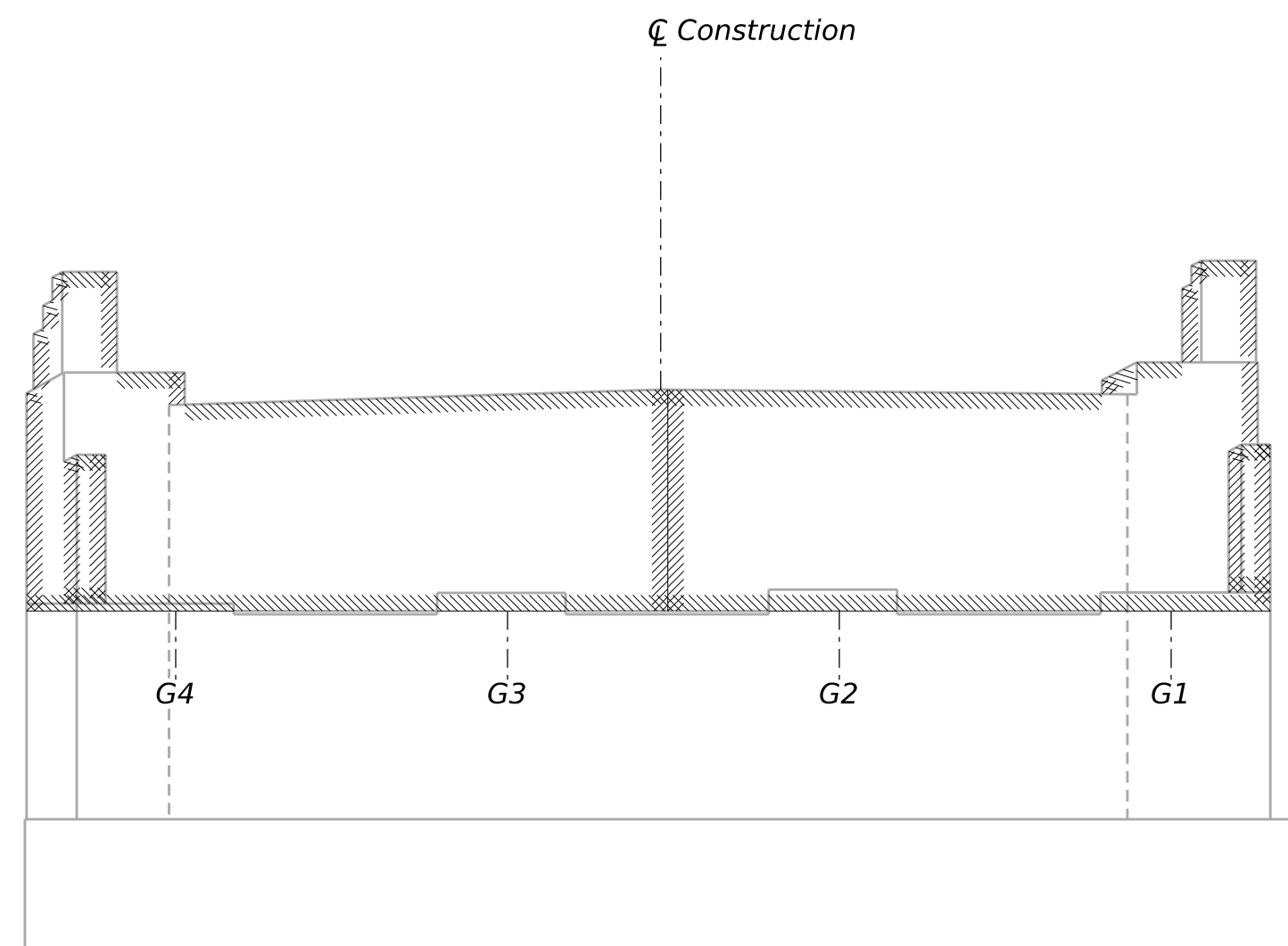
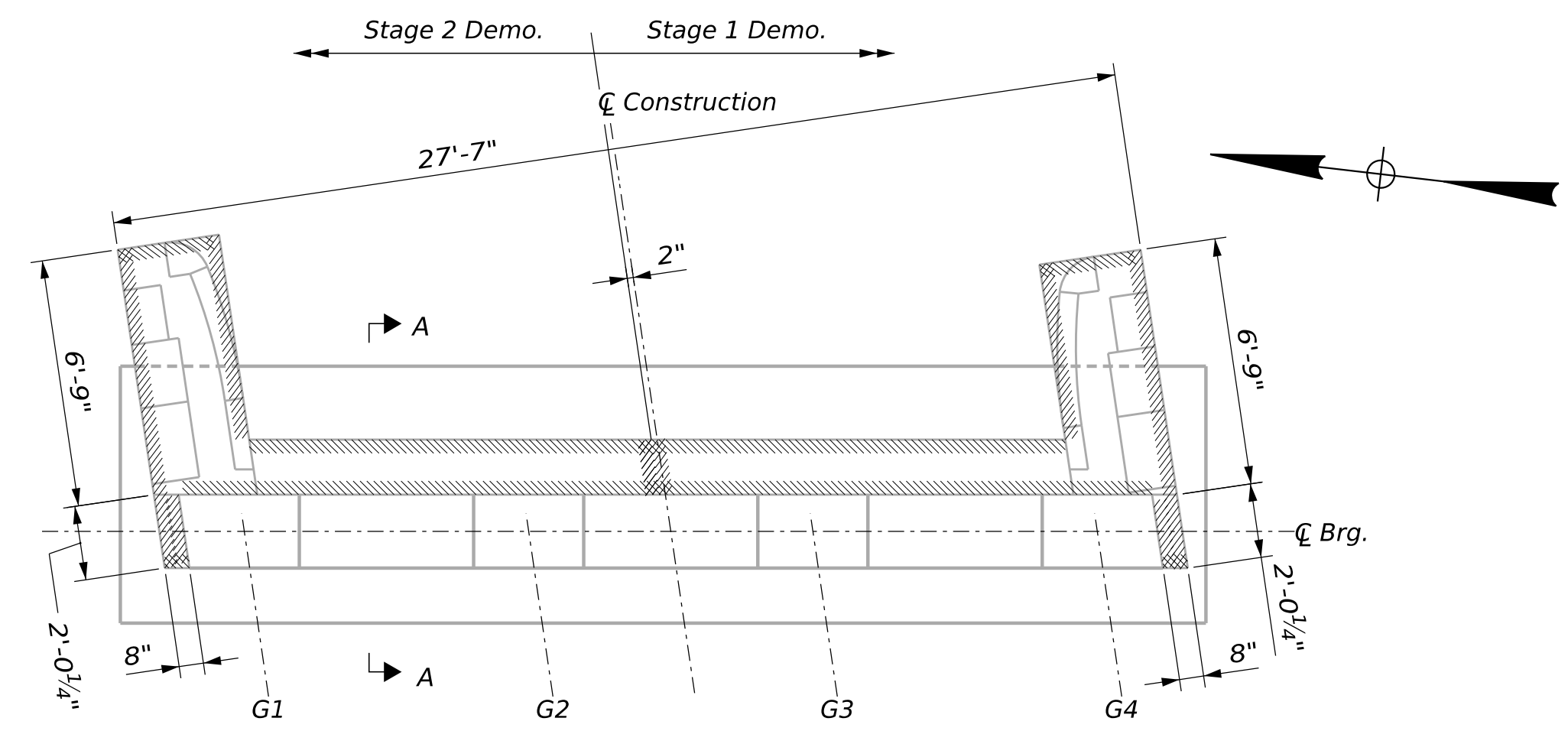
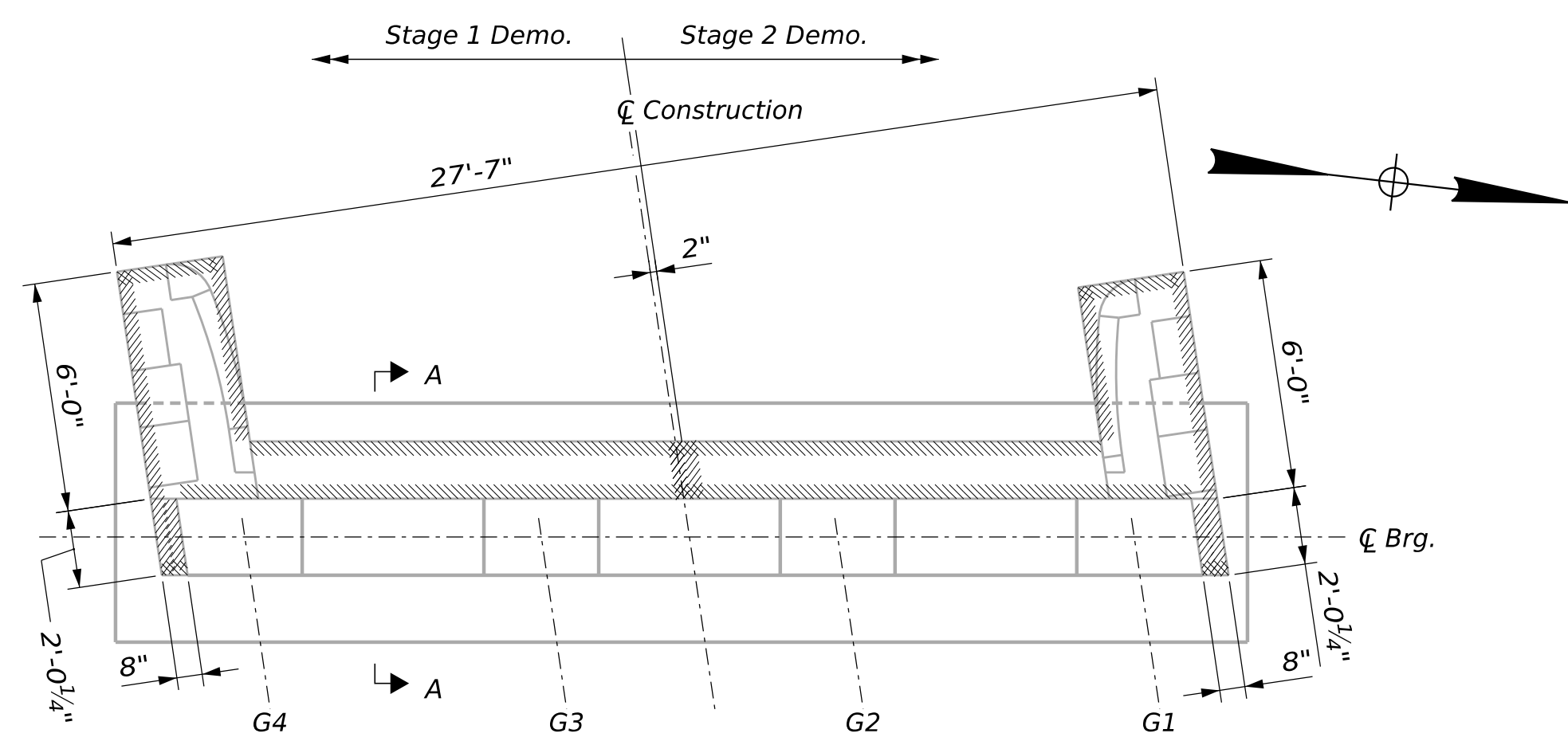
STATE OF MAINE DEPARTMENT OF TRANSPORTATION FEDERAL AID PROJECT NO. 2623800	SIGNATURE		DATE
	P.E. NUMBER		DATE
	BRIDGE NO. 61.65		WIN 26238.00
SHEET NUMBER		BRIDGE PLAN	
4		OF 29	

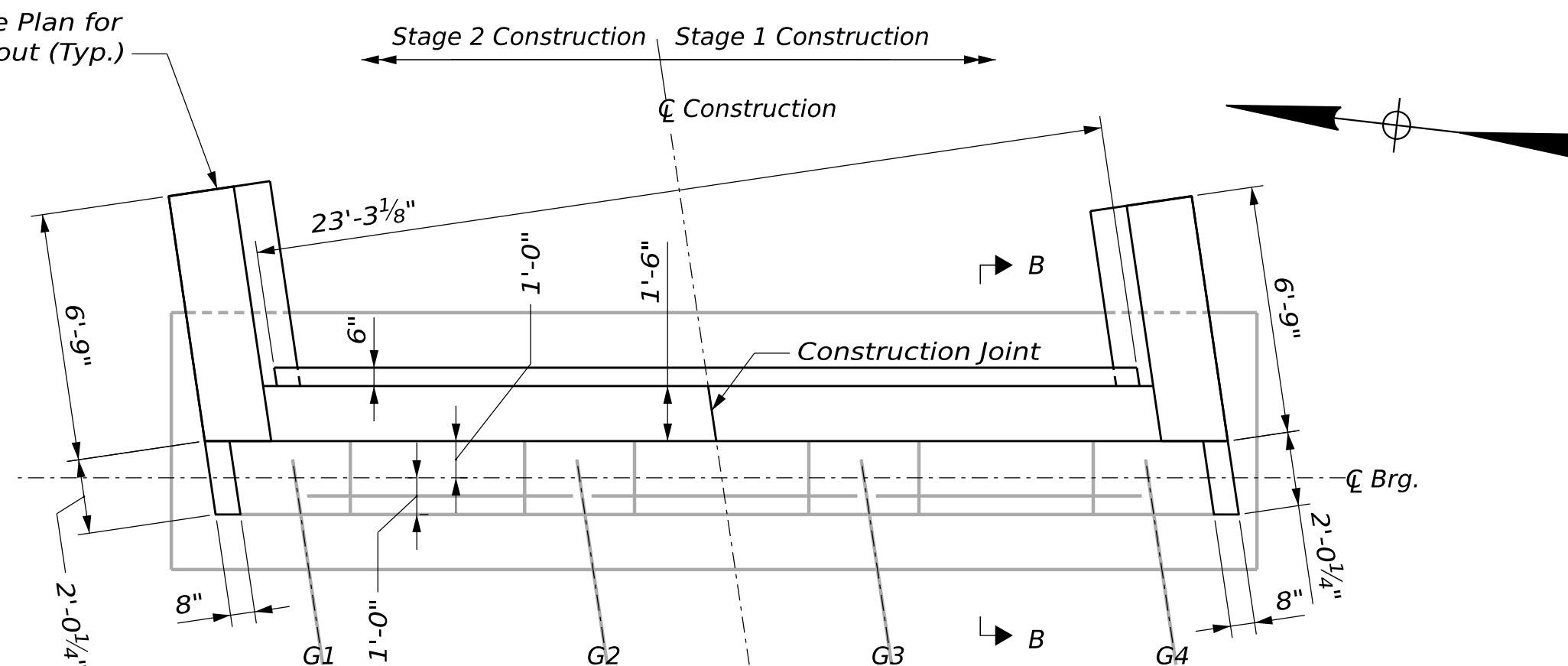


STATE OF MAINE DEPARTMENT OF TRANSPORTATION FEDERAL AID PROJECT NO. 2623800		SIGNATURE		DATE	
		P.E. NUMBER		DATE	
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BENEDICTA		AROOSTOOK COUNTY		GENERAL PLAN	
SHEET NUMBER					
5		OF 29			



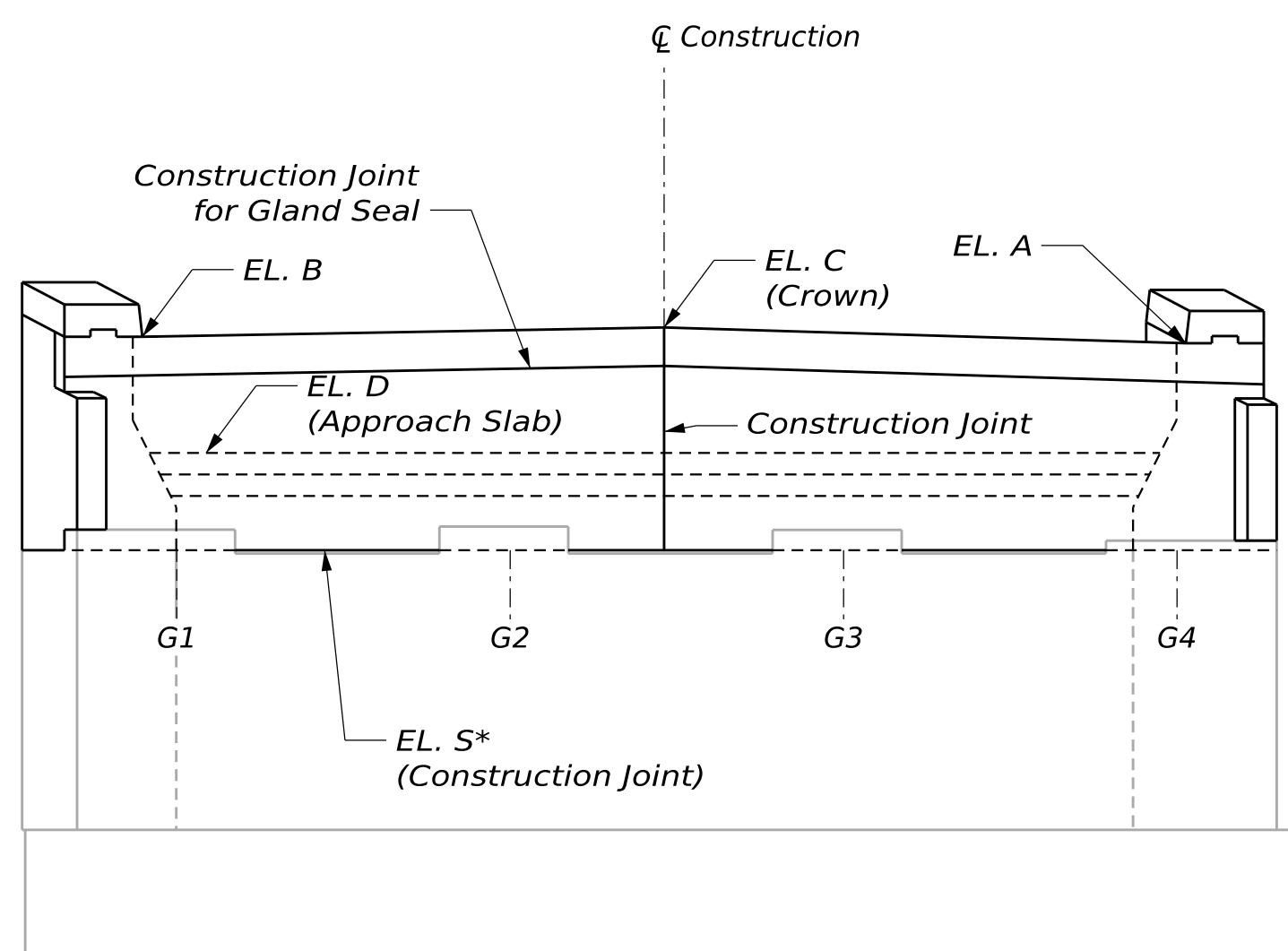
BRIDGE APPROACH TYPICAL SECTION



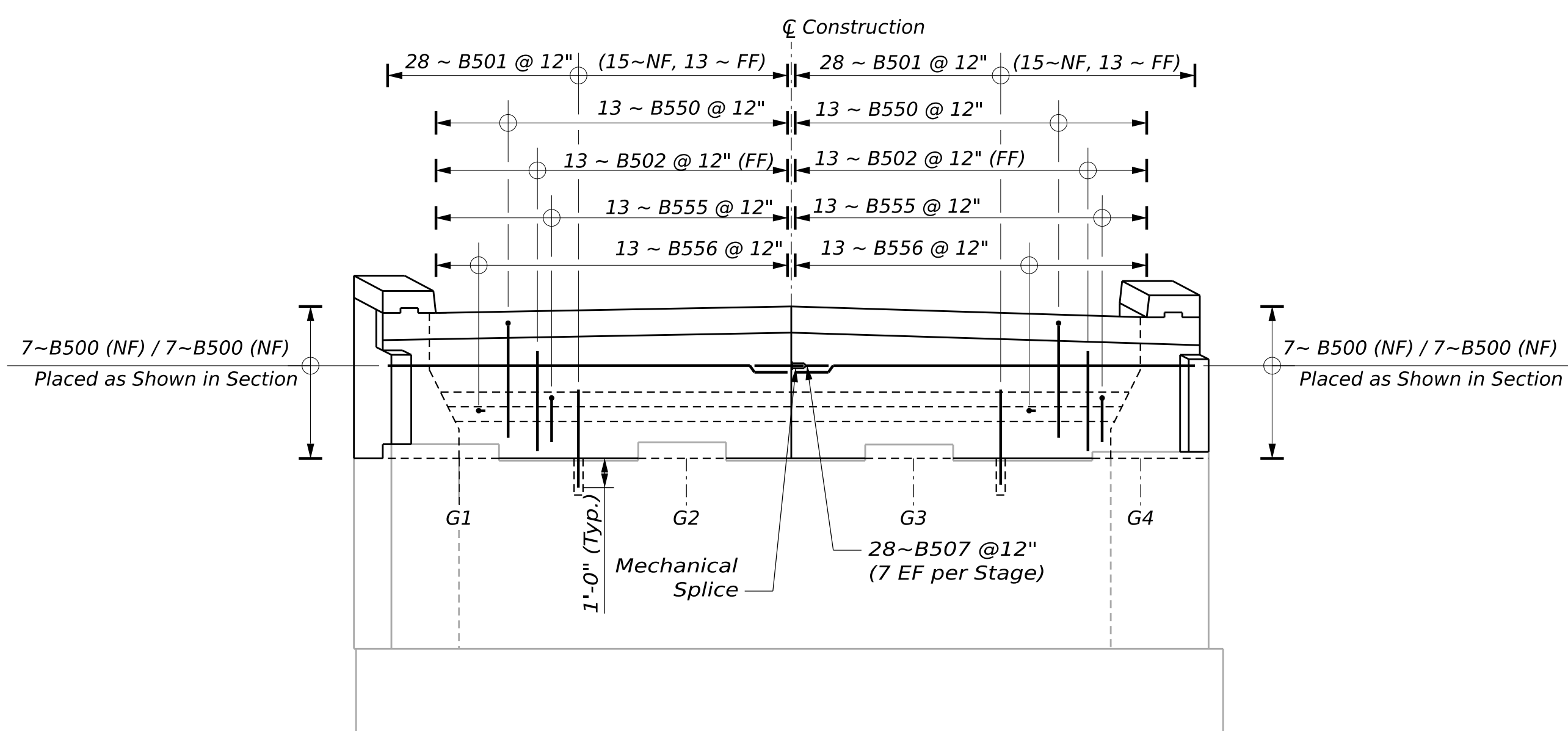


ABUTMENT 2 CONSTRUCTION PLAN

See Sheet 11 for Abutment Construction Section.
Approach Slab not shown for Clarity.

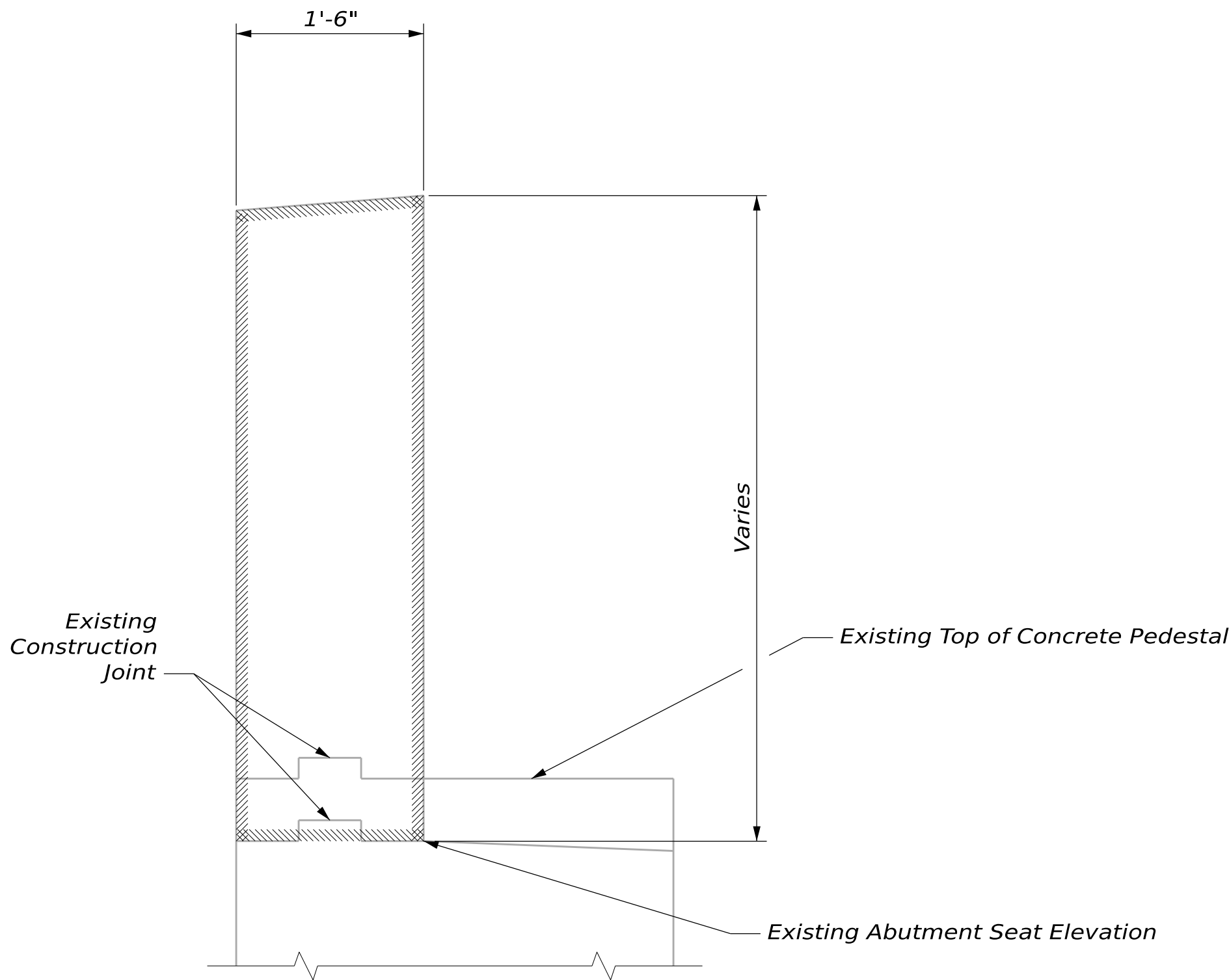


ABUTMENT 2 CONSTRUCTION ELEVATION

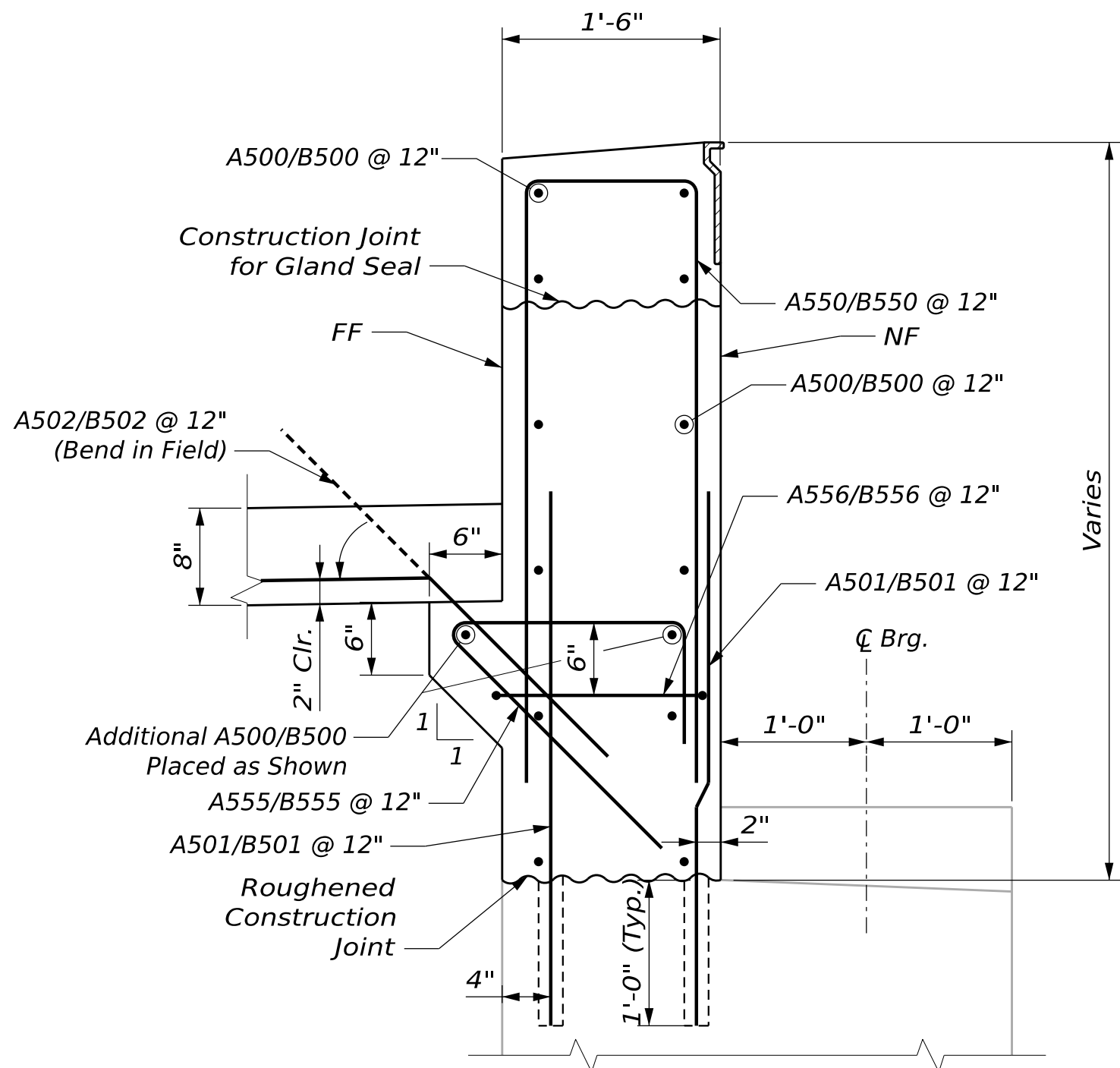


ABUTMENT 2 REINFORCING ELEVATION

Abutment 2 Elevations							
EL. A		EL. B		EL. C		EL. D	EL. S*
NF	FF	NF	FF	NF	FF		
495.28	495.39	495.54	495.66	495.65	495.76	492.72	490.41
NF = Near Face FF= Far Face *Elevation to coincide with the existing construction joint between the backwall and abutment seat. Elevations provided are approximated from the existing bridge plans. To be field verified.							



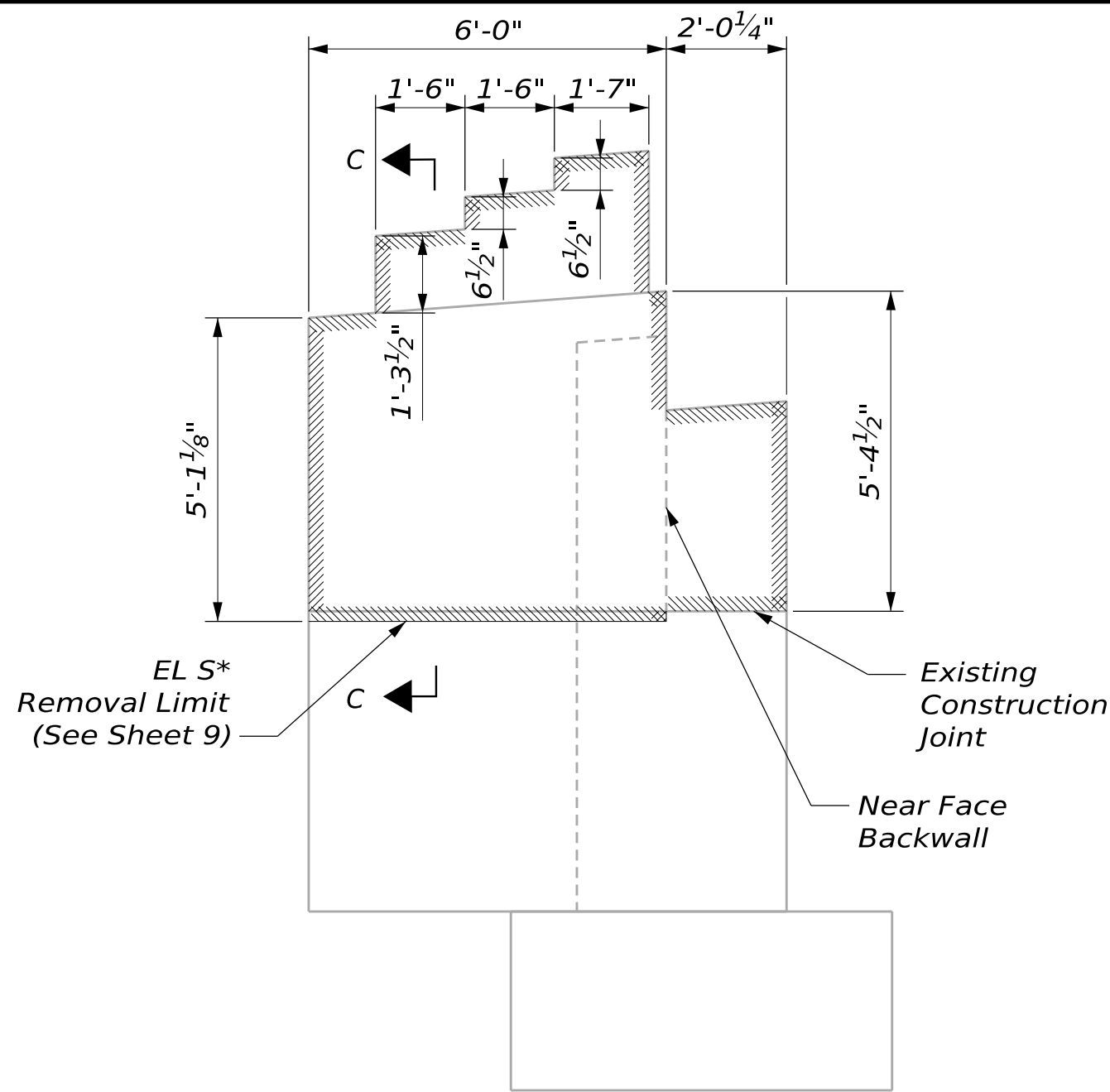
ABUTMENT DEMOLITION SECTION
(SECTION A-A)
Abutment 1 Shown, Abutment 2 Similar



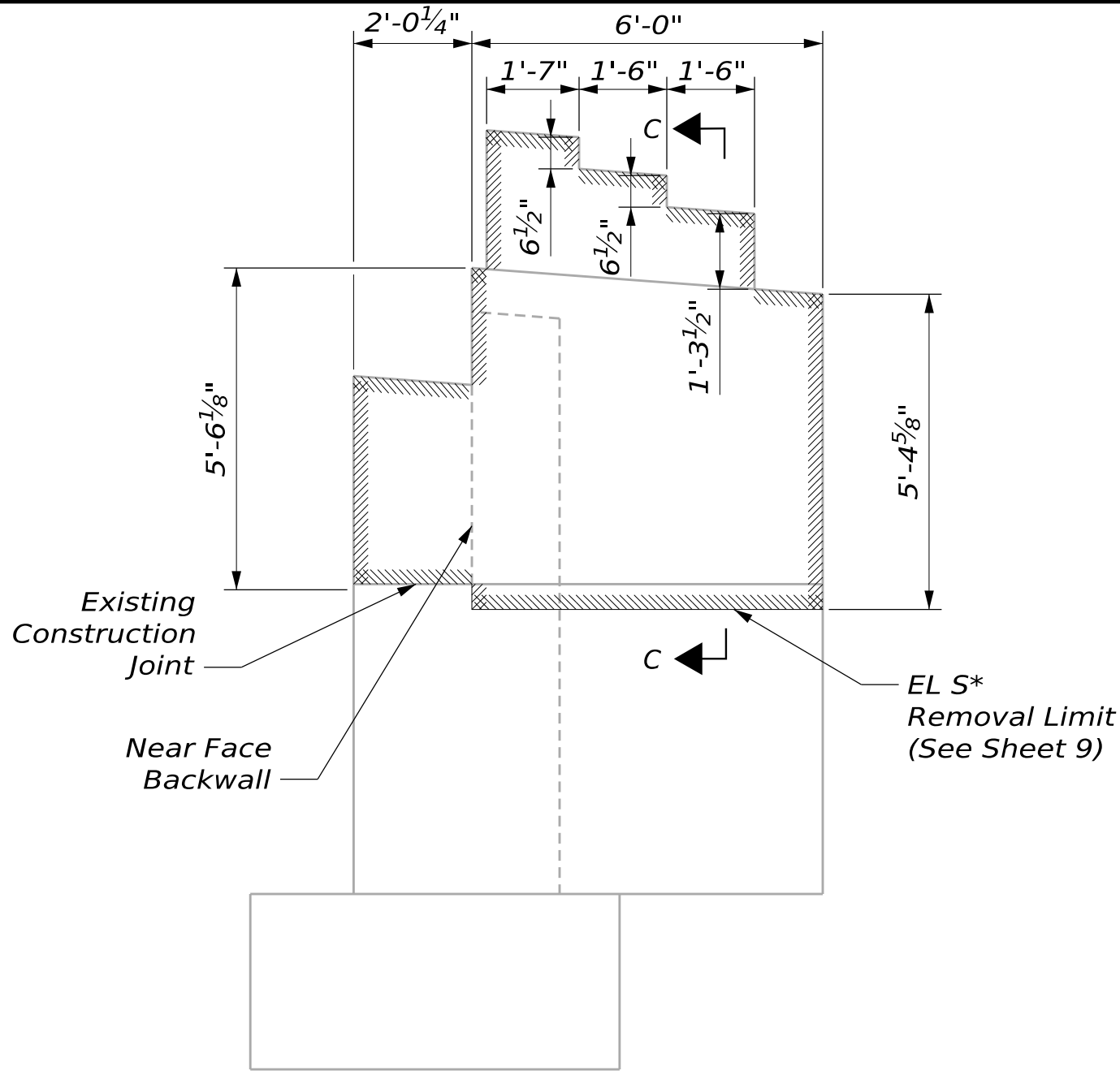
ABUTMENT CONSTRUCTION SECTION
(SECTION B-B)
Abutment 1 Shown, Abutment 2 Similar

PROJ. MANAGER	DENVER SMALL	BY	DATE
DESIGNED-Detailed	S. LINDSLEY	E. MORRISON	11-24
CHECKED-Reviewed	D. WHITE	B. COLBURN	11-24
DESIGNED-Detailed	N. EDWAN	J. FITZPATRICK	11-24
DESIGNED-Detailed			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

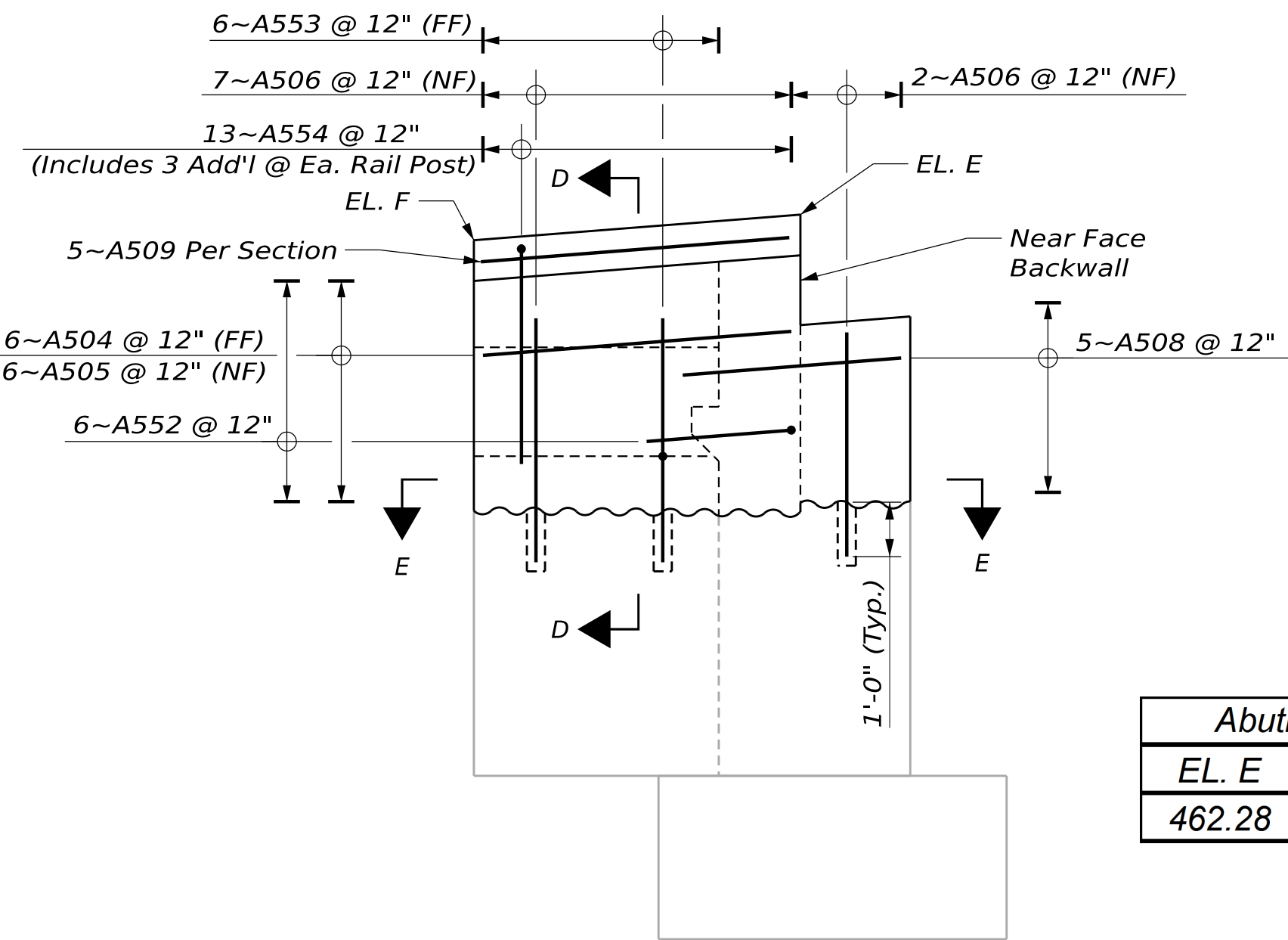
SIGNATURE	P.E. NUMBER	DATE



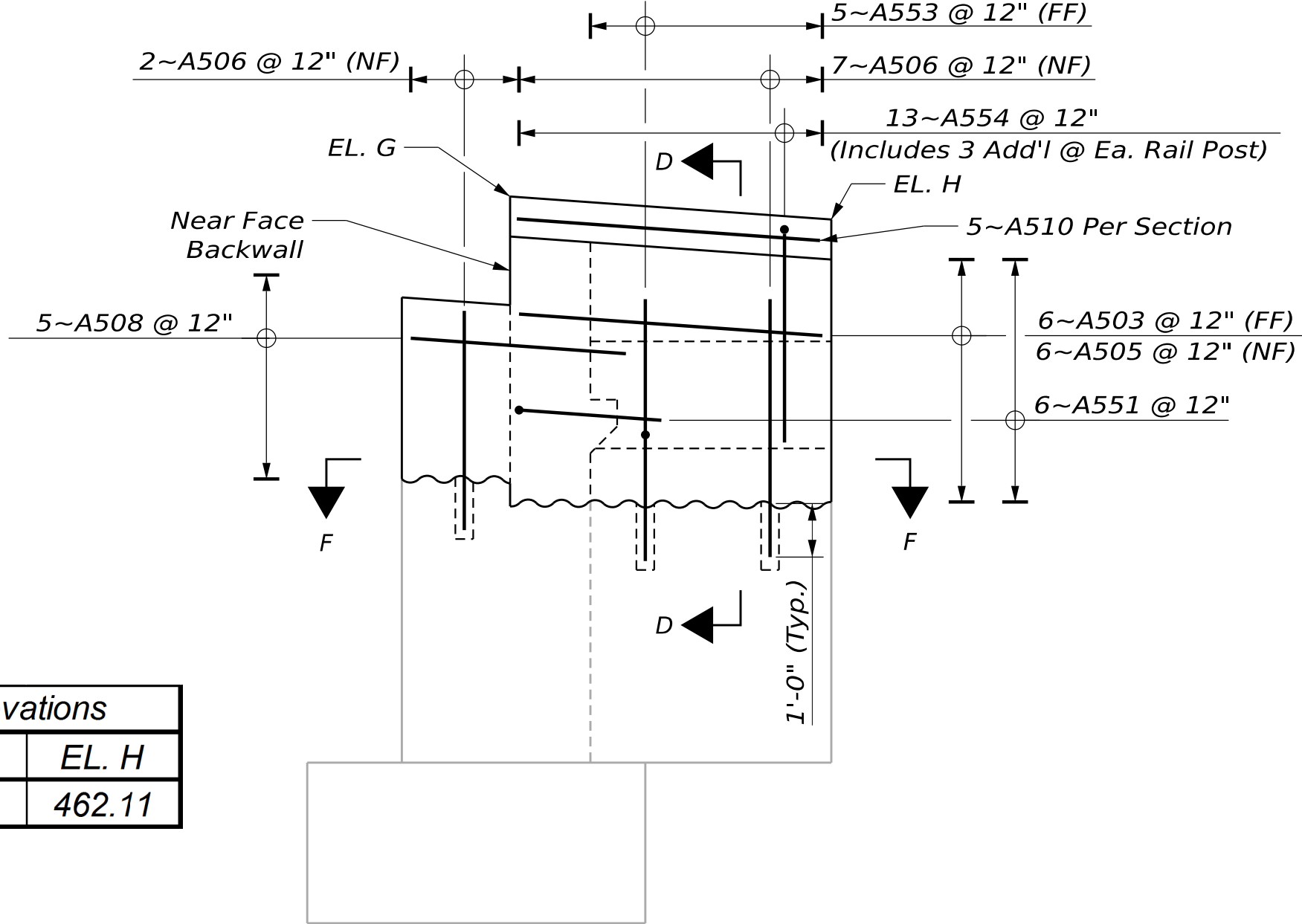
ABUTMENT 1 RIGHT WINGWALL DEMOLITION ELEVATION



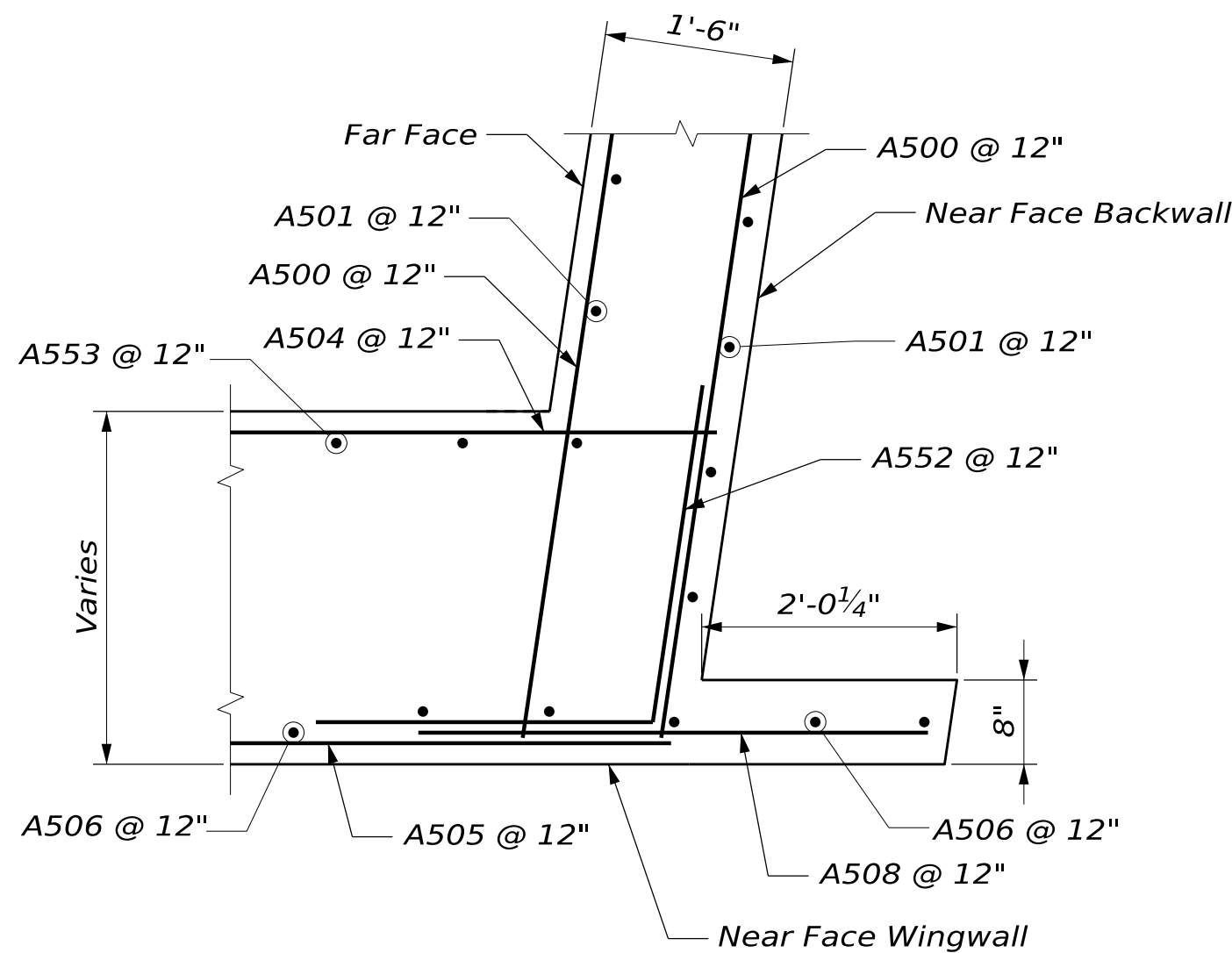
ABUTMENT 1 LEFT WINGWALL DEMOLITION ELEVATION



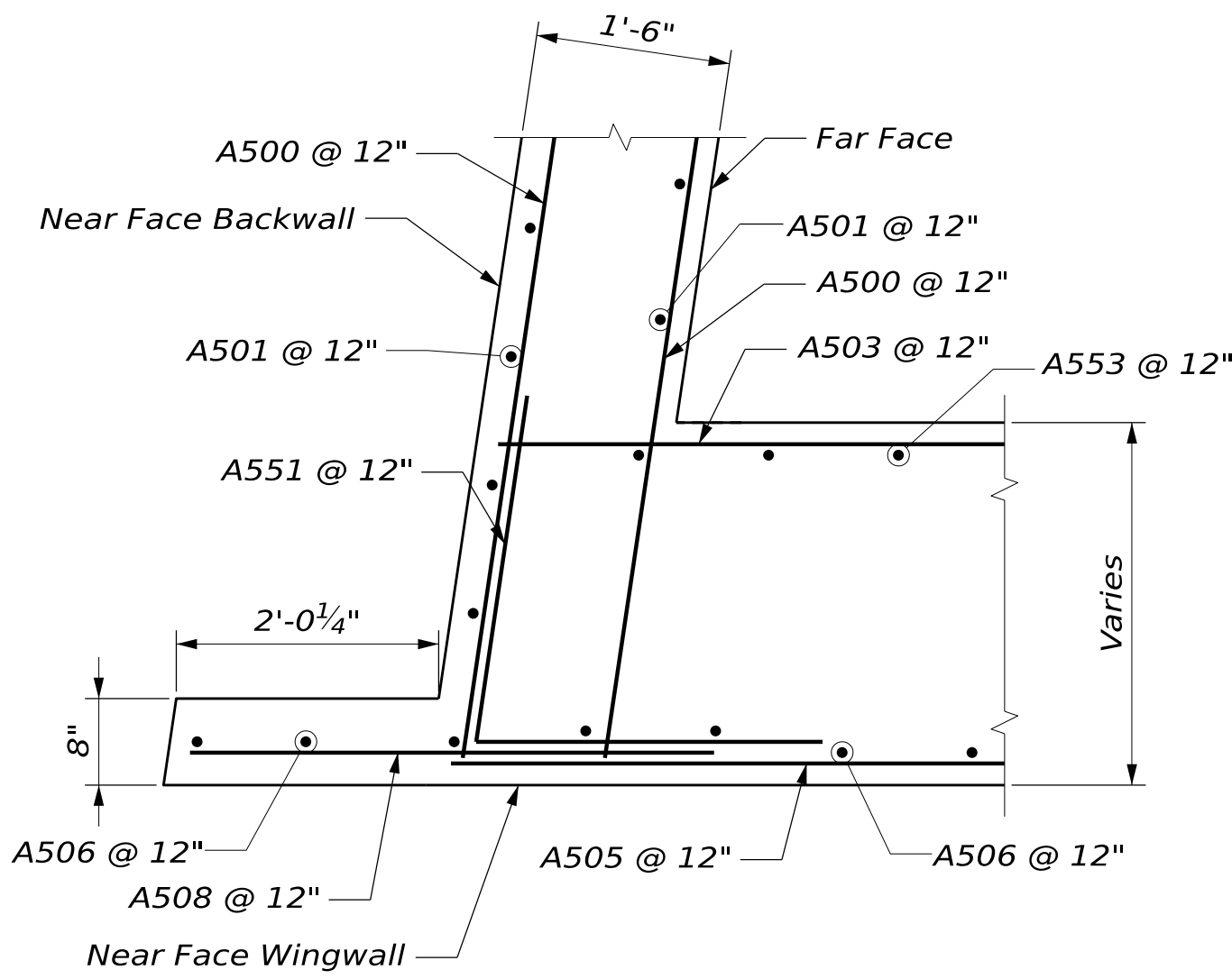
ABUTMENT 1 RIGHT WINGWALL CONSTRUCTION ELEVATION



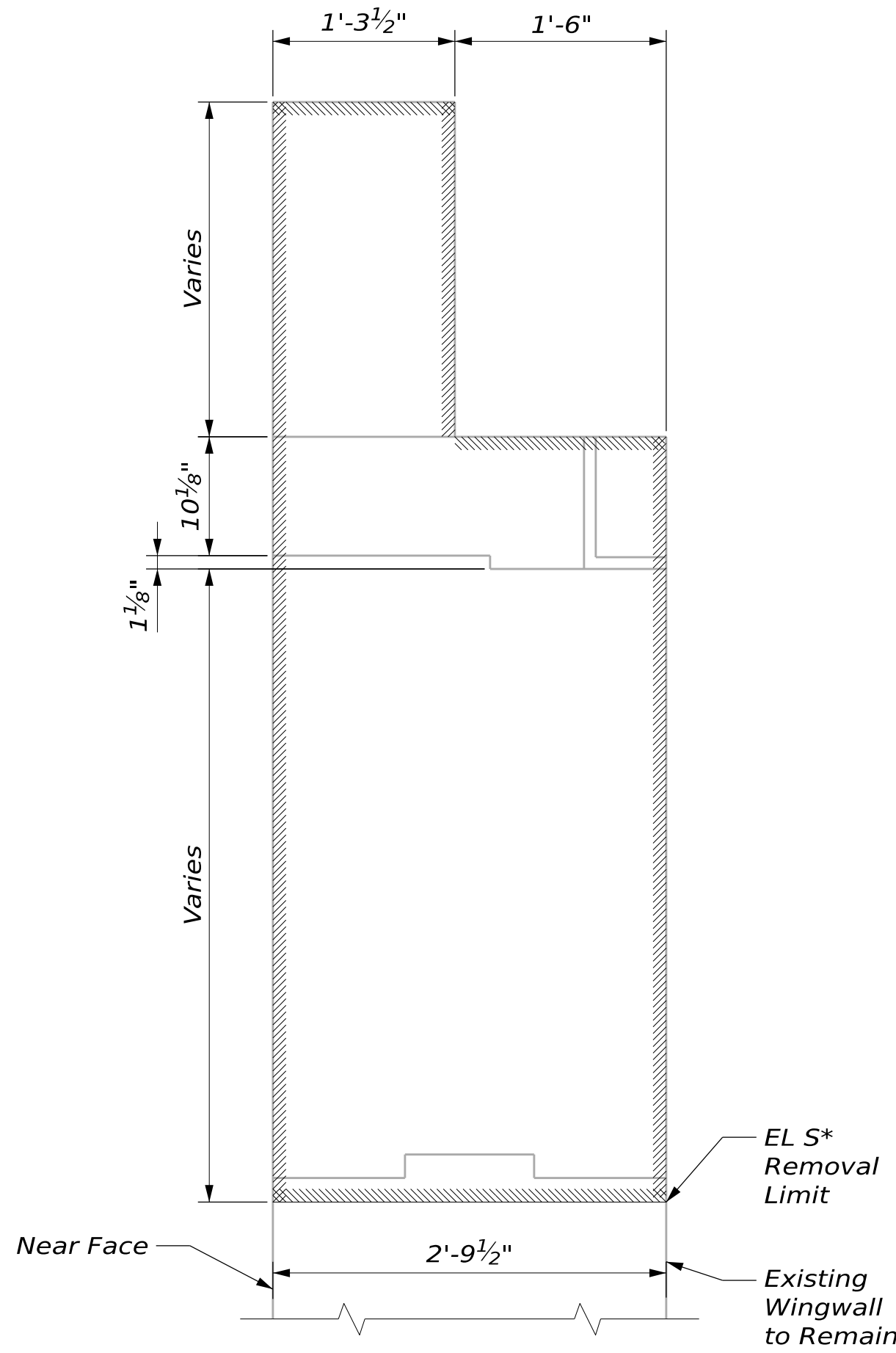
ABUTMENT 1 LEFT WINGWALL CONSTRUCTION ELEVATION



SECTION E-E

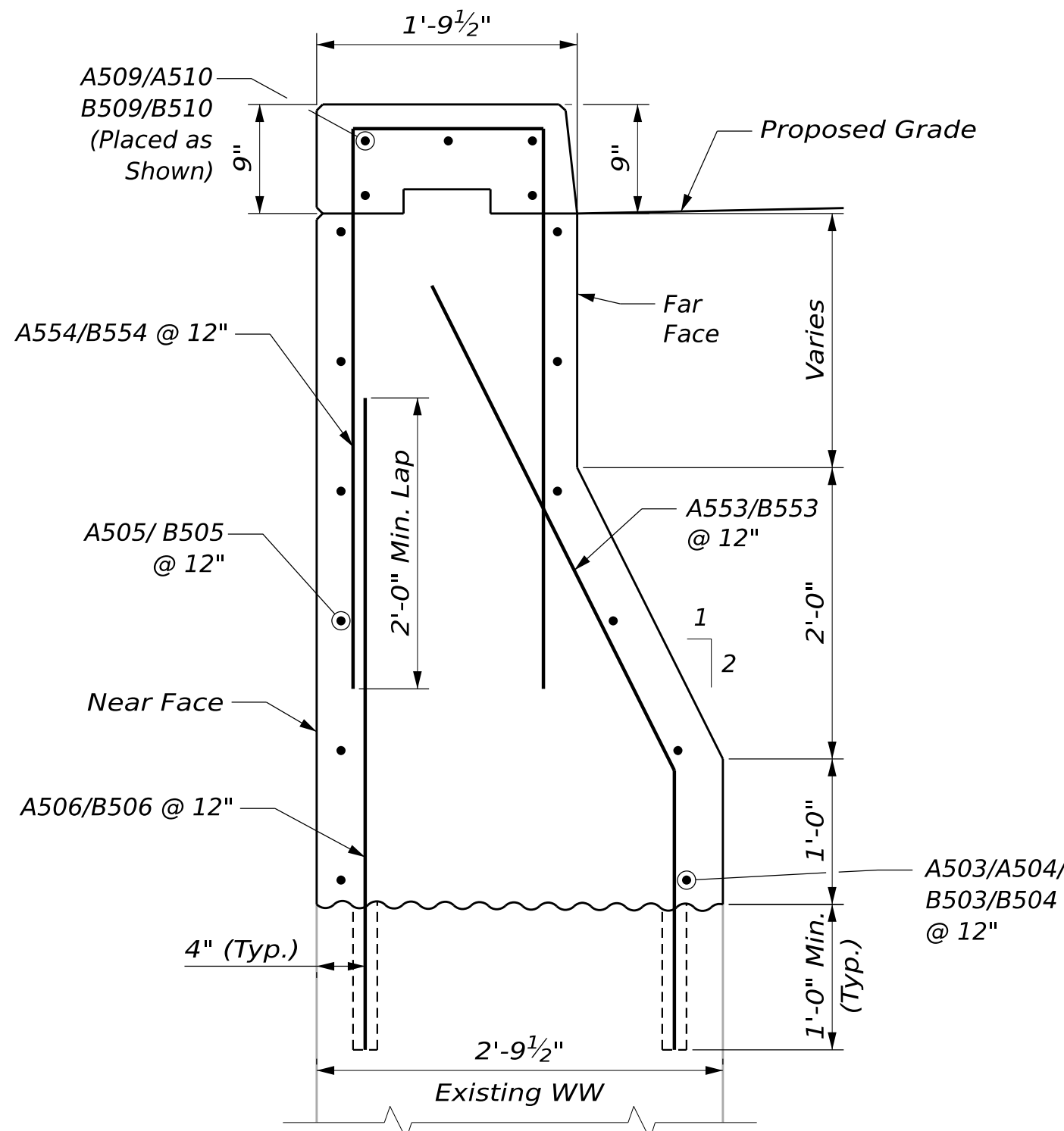


SECTION F-F



WINGWALL DEMOLITION SECTION

(SECTION C-C)

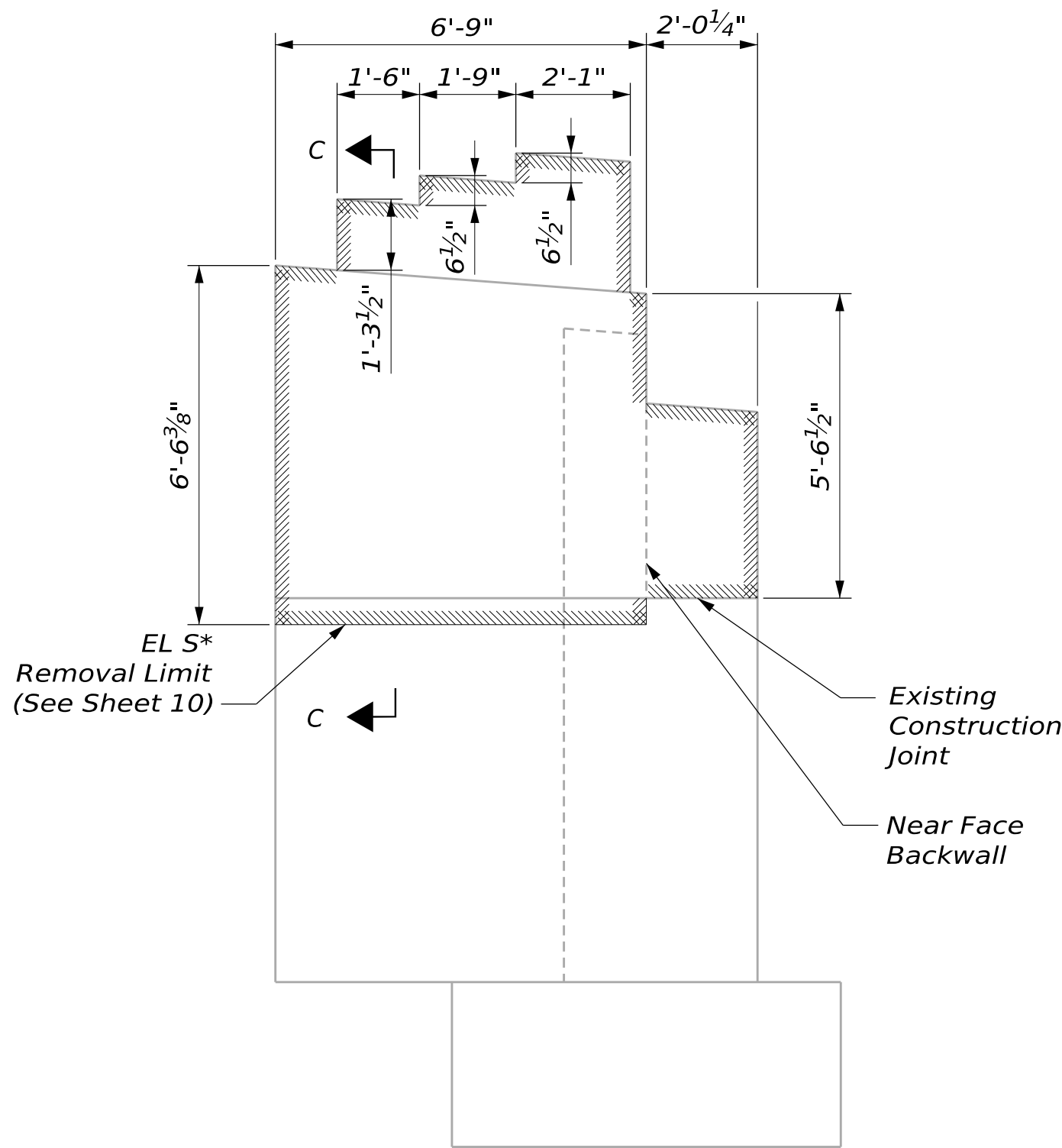


WINGWALL CONSTRUCTION SECTION

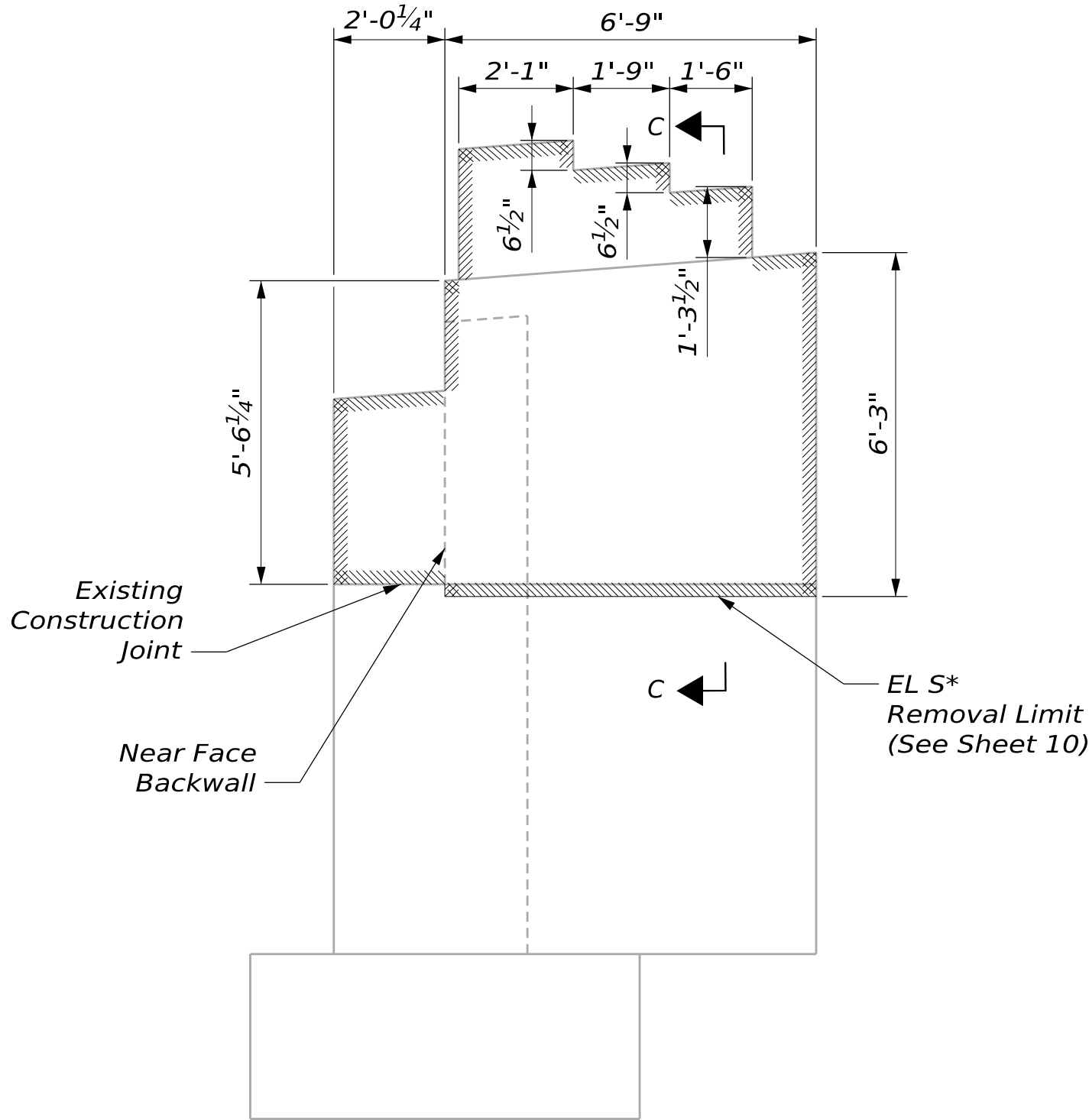
(SECTION D-D)

Abutment 1 Wingwall Elevations			
EL. E	EL. F	EL. G	EL. H
462.28	461.80	462.54	462.11

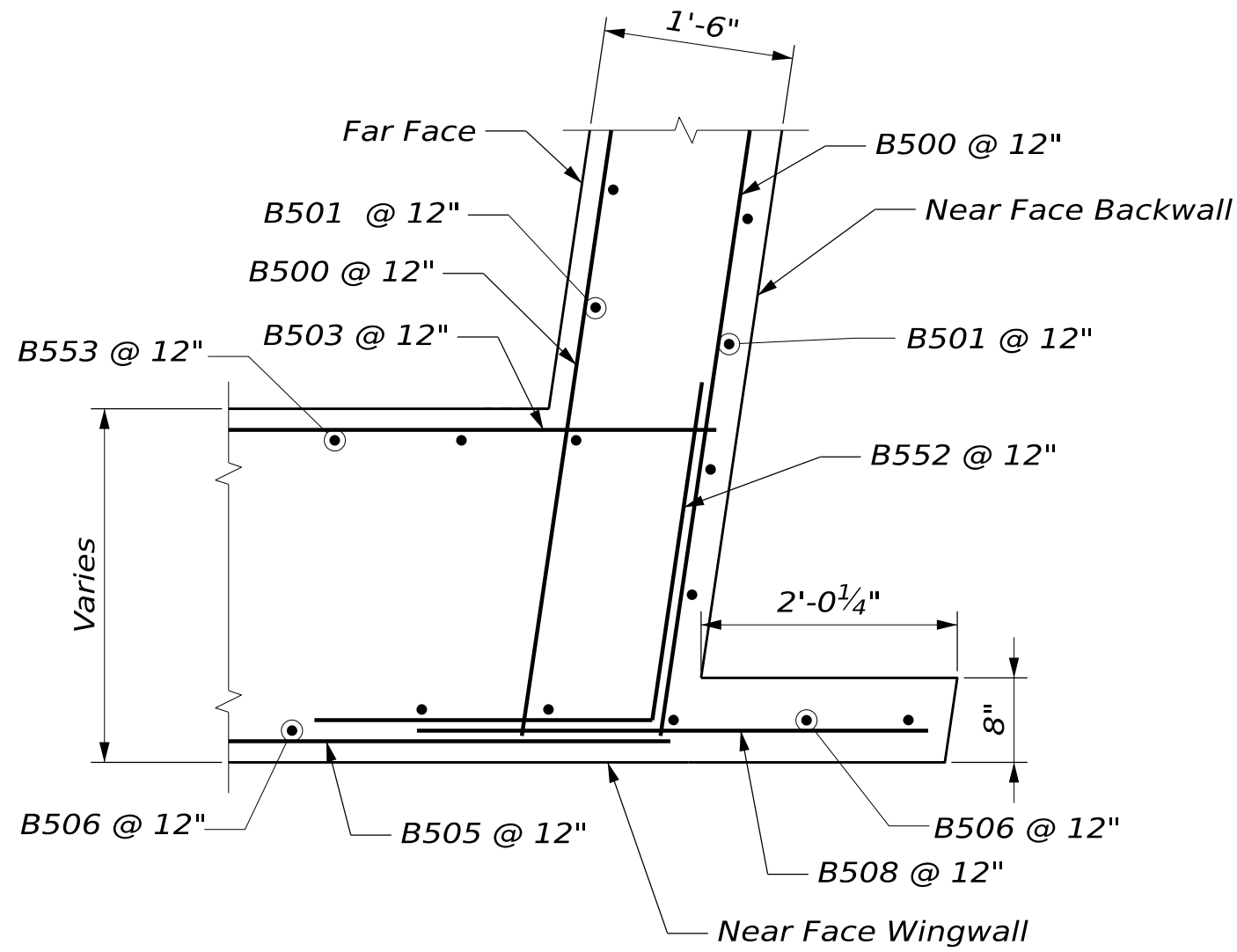
PROJ. MANAGER	DESIGNED-Detailed	CHECKED-Reviewed	DESIGNED-Detailed	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES
DENVER SWALL	S. LINDSLEY	D. WHITE	E. MORRISON	11-24	11-24	11-24	11-24	
BY	DATE	SIGNATURE	P.E. NUMBER	DATE				



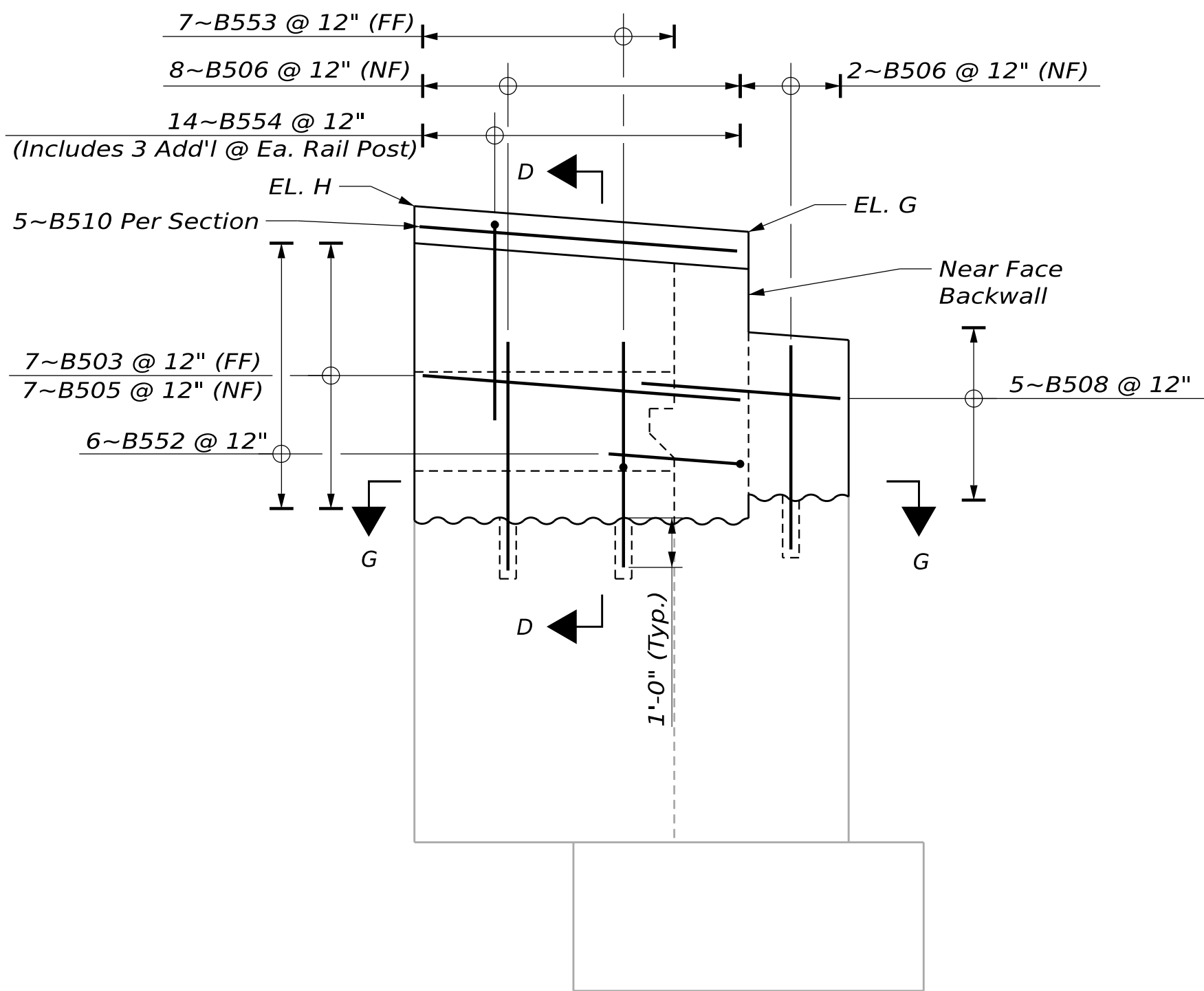
ABUTMENT 2 LEFT WINGWALL DEMOLITION ELEVATION
See Sheet 12 for Wingwall Demolition Section.



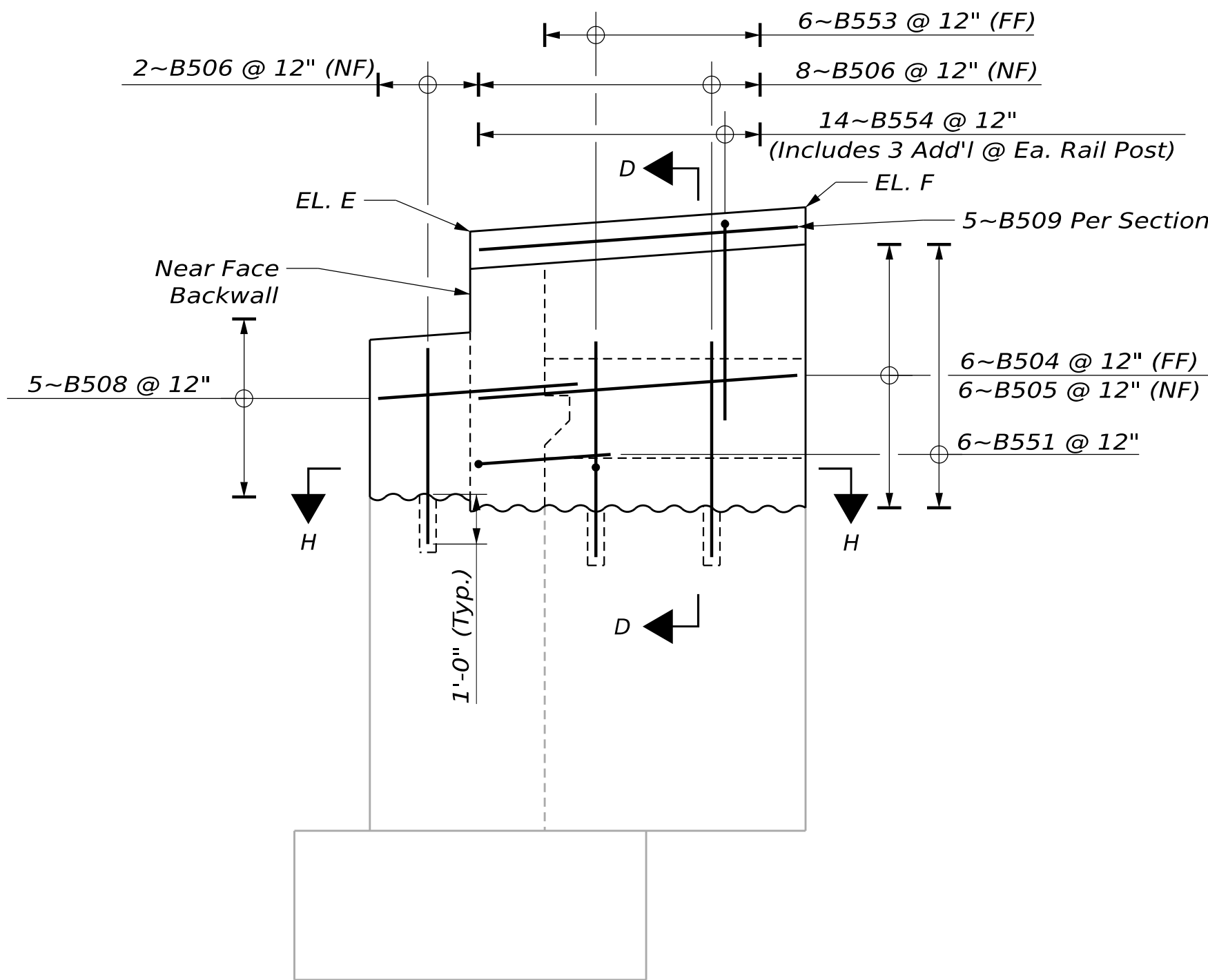
ABUTMENT 2 RIGHT WINGWALL DEMOLITION ELEVATION
See Sheet 12 for Wingwall Demolition Section.



SECTION G-G

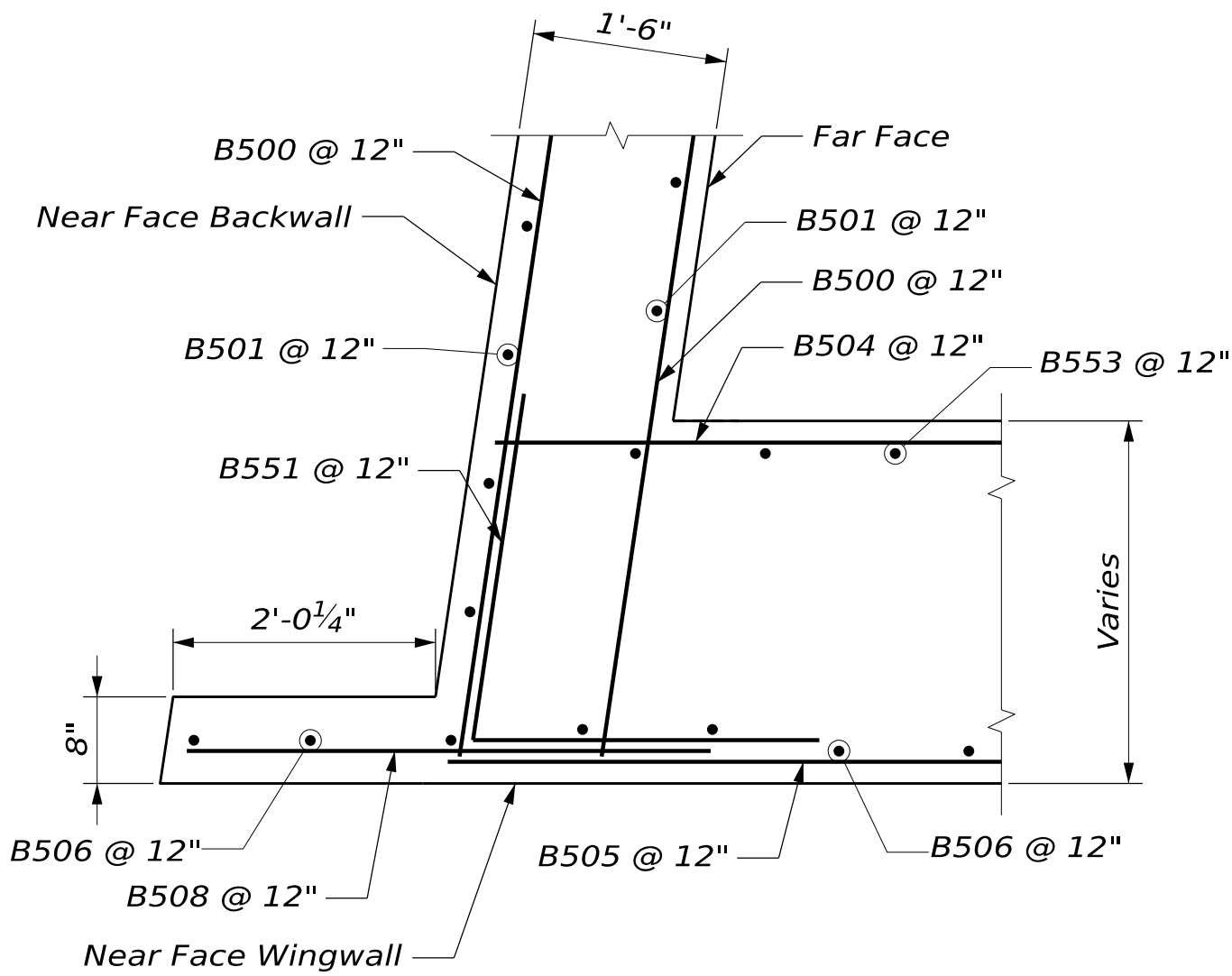


ABUTMENT 2 LEFT WINGWALL CONSTRUCTION ELEVATION
See Sheet 12 for Wingwall Construction Section.



ABUTMENT 2 RIGHT WINGWALL CONSTRUCTION ELEVATION
See Sheet 12 for Wingwall Construction Section.

Abutment 2 Wingwall Elevations			
EL. E	EL. F	EL. G	EL. H
496.03	496.52	496.29	496.82



SECTION H-H

PROJ. MANAGER	DENVER SMALL	BY	DATE
DESIGN-REVIEWED	S. LINDSLEY	E. MORRISON	11-24
CHECKED-REVIEWED	D. WHITE	R. COLBURN	11-24
DESIGN-DETAILED	N. EDWAN	J. FITZPATRICK	11-24
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

MASONRY PLATE

WASHER PLATE DETAIL

ANCHOR ROD DETAIL

Plan

Elevation

Section A-A

Abutment 1 Shown, Abutment 2 Similar

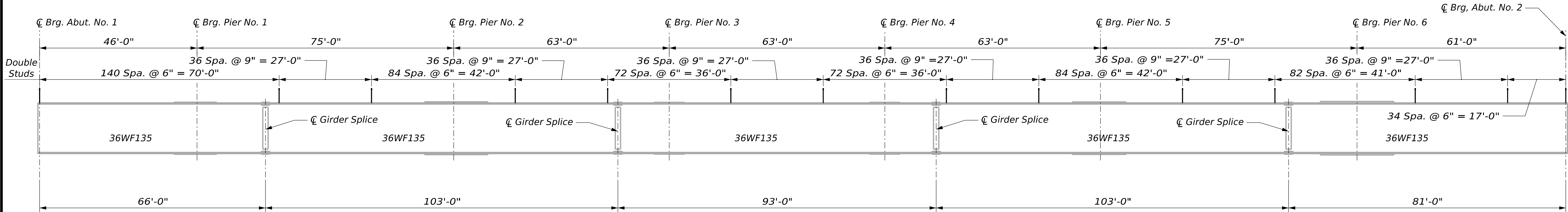
Elastomeric Pad Section

Sole Plate Section

<i>Bearing Design Loads</i>		
<i>Criteria</i>	<i>Abutment 1</i>	<i>Abutment 2</i>
<i>Unfactored Dead Load</i>	<i>17 Kips</i>	<i>26 Kips</i>
<i>Unfactored Live Load</i>	<i>71 Kips</i>	<i>76 Kips</i>
<i>Max. Displacement</i>	<i>2.42 inch</i>	<i>2.59 inch</i>
<i>Dead Load Rotation</i>	<i>0.0792 rad.</i>	<i>0.0814 rad.</i>
<i>Max. Live Load Rotation</i>	<i>0.0012 rad.</i>	<i>0.0023 rad.</i>
<i>Rotational Tolerance</i>	<i>0.0100 rad.</i>	<i>0.0100 rad.</i>

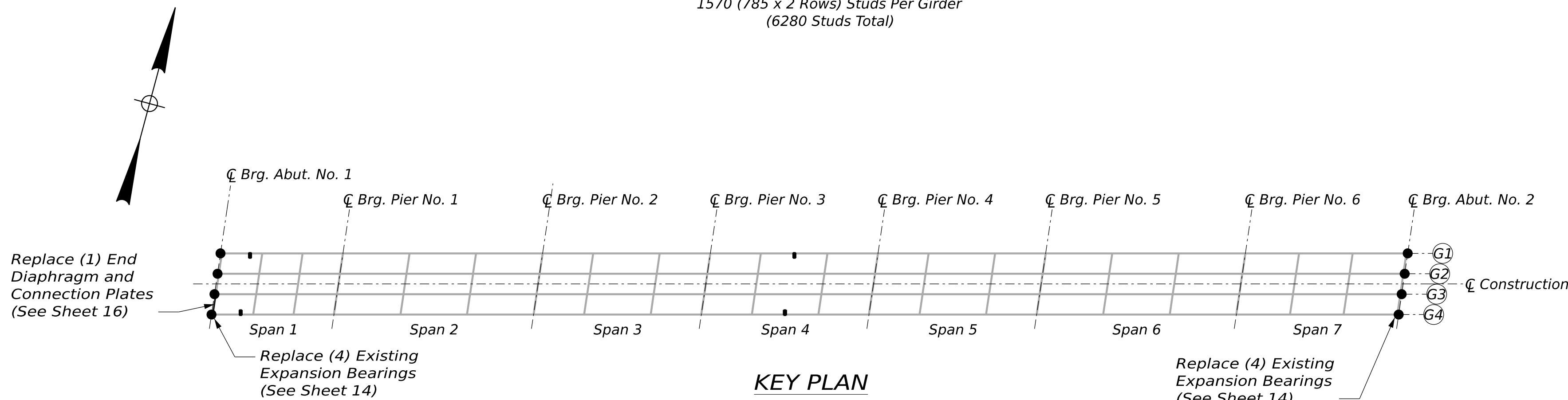
3. *Eight existing bearings shall be removed and replaced at the locations shown on the Key Plan. The existing anchor rods shall be cut flush with the concrete pedestal. Payment for removal and installation of new anchor rods is incidental to the Bearing Installation Pay Item.*
2. *The shear modulus of the elastomer shall be 130 psi and meet AASHTO M251 criteria for Design Method B.*
3. *Vulcanization of the elastomer to the steel plates shall be done during the primary mold process. Sole plates shall be vulcanized to the elastomer.*
4. *Sole and masonry plates shall meet the requirement of ASTM A709, Grade 50. Anchor rods shall meet the requirement of ASTM F1554, Grade 105 and shall be swaged or threaded on the embedded portion of the rod.*
5. *Masonry plates shall be galvanized in accordance with Section 506. Sole plates for steel superstructures shall be treated in the same manner as the existing structural steel. Anchor rods, washers, nuts, and shear blocks shall be galvanized to ASTM A153 or ASTM B695, Class 50, Type 1.*
6. *All bearings shall be marked prior to shipping. The marks shall include the bearing location on the bridge and a direction arrow that points upstation. All marks shall be permanent and shall be visible after the bearing is installed.*
7. *Bearings shall be covered during shipping and at any time prior to installation that the bearings may be exposed to sunlight.*
8. *The Contractor shall measure the steel temperature using a calibrated surface thermometer at 5 locations, as determined by the Resident, if the ambient air temperature is less than 30°F or over 90°F within the 24 hours prior to each day of erection. The average of the measured steel temperatures shall be above 0°F and less than 90°F in order for erection to proceed.*
9. *All necessary precautions shall be taken to protect bearing components from field weld flash and spatter. Heat from welding operations shall be controlled such that steel adjacent to the elastomer does not exceed 200°F. The temperature shall be verified by the use of temperature indicating crayons or other suitable means.*
10. *Upset the threads on the anchor rods after assembly of the bearing.*
11. *The Contractor shall not weld the girders to the sole plate until after all adjustments have been made in accordance with Standard Specification Section 523.094.*
12. *The "Bearing Design Load" for each bearing as noted in Standard Specification, Subsection 523.23.4 is given in the table. This is the total load for the Service I load combination without impact.*
13. *Anchor rods shall be drilled and grouted in place using a material listed on the Maine Department of Transportation Qualified Products List of Concrete Adhesive Anchoring Systems.*

PROJ. MANAGER	DEVELOPER SMALL	BY	DATE
DESIGN-DETAILED	S. LINDSEY	E. MORRISON	11-24
CHECKED-REVIEWED	D. WHITE	B. COLEBURN	11-24
DESIGN2-DETAILED2	N. EDMAN	J. FITZPATRICK	11-24
DESIGN3-DETAILED3			
REVISIONS 1			P.E. NUMBER
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			DATE
FIELD CHANGES			



SHEAR CONNECTOR LAYOUT

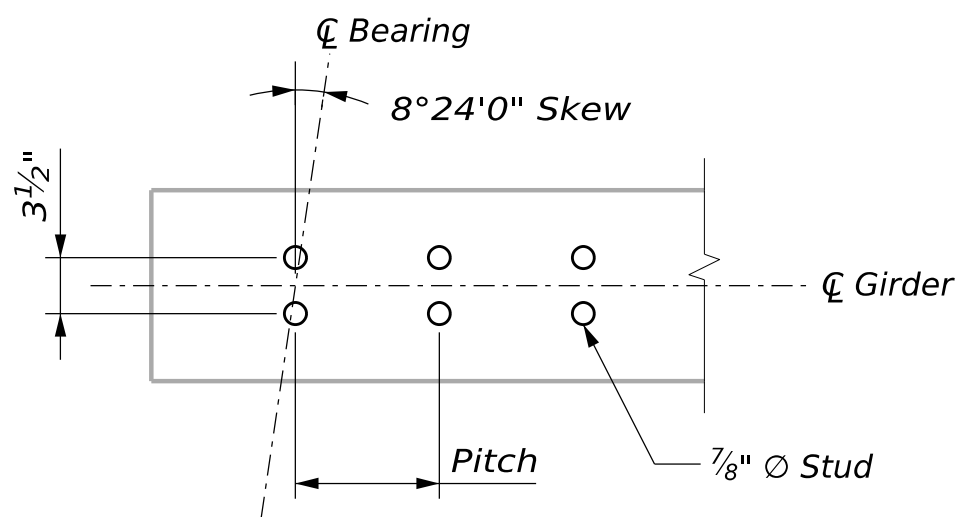
1570 (785 x 2 Rows) Studs Per Girder
(6280 Studs Total)



KEY PLAN

LEGEND

- Proposed Expansion Bearing Replacement

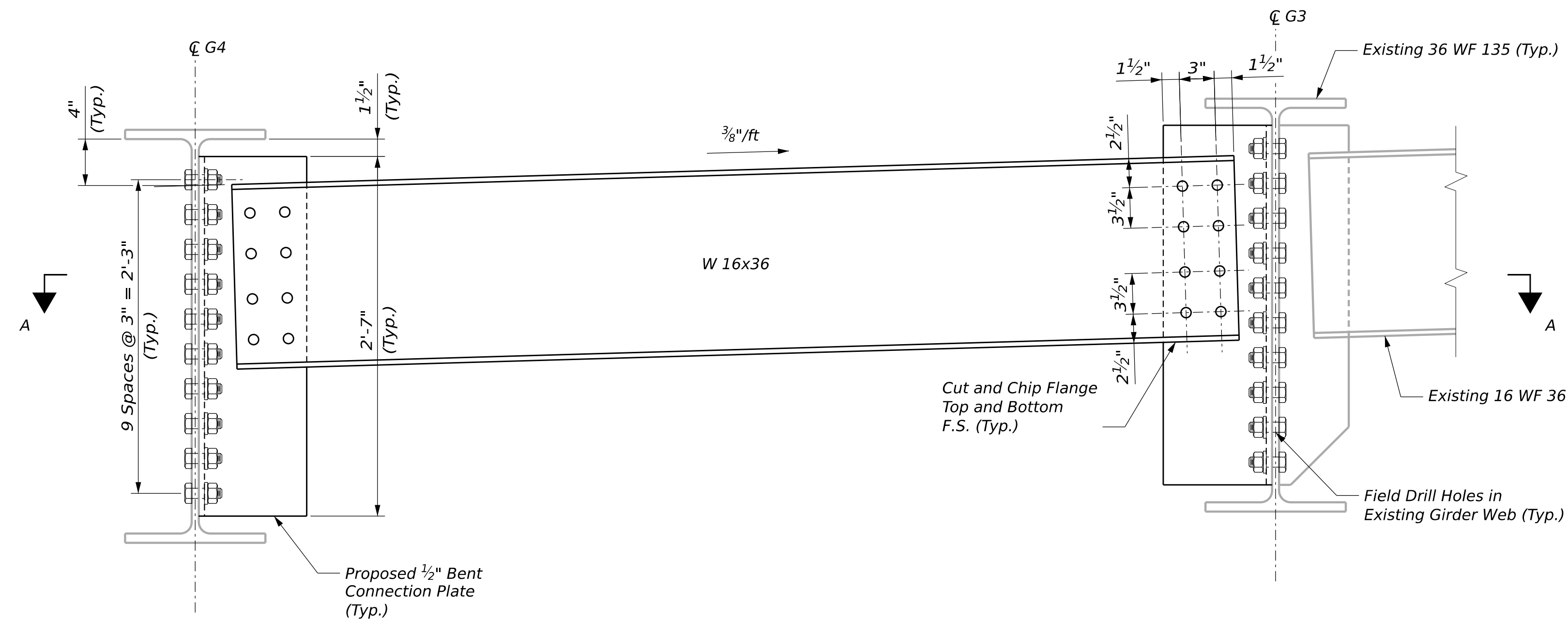


SHEAR CONNECTOR DETAIL

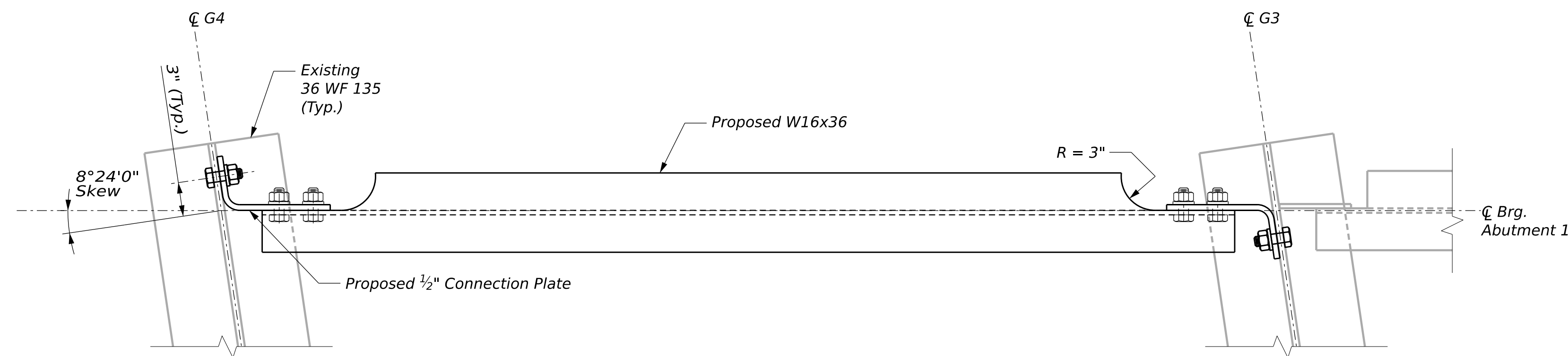
SHEAR CONNECTOR NOTES

- Dimensions are measured along centerline of the girder.
- 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. Existing steel may be coated with a lead-based paint system. See General Notes for more information.
- The proposed shear studs shall be 7/8" Ø. Studs shall penetrate into the deck a minimum of 2" and maintain a clear cover of 2" to the top of the studs.
- If existing shear connectors are present, they shall be removed such that they project 1" maximum above the top of the existing top flange unless they conflict with the installation of the new shear connectors or any other work. If the existing shear connectors interfere with installation of the new shear connectors or any other work, they shall be removed completely and ground flush with the top flange. All costs associated with this work shall be incidental to related Contract Items.
- Pitch spacing may be adjusted at bolted splices to avoid splice bolts.

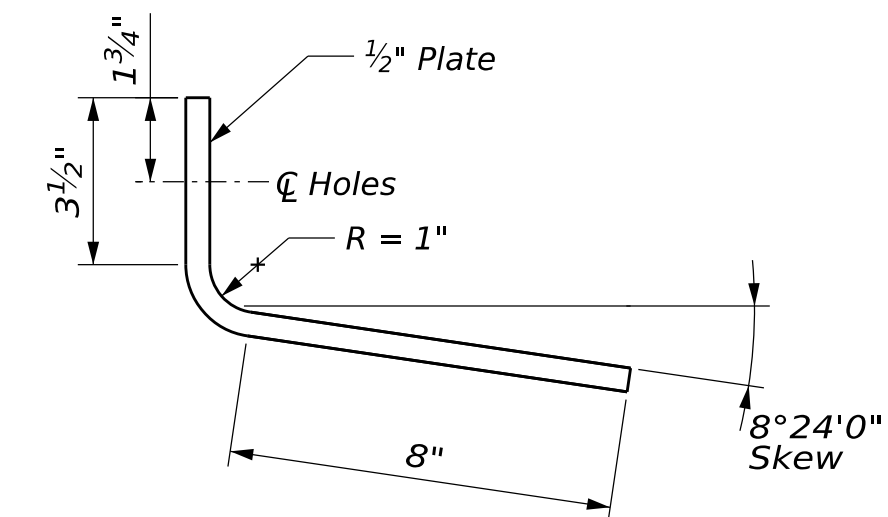
PROJ. MANAGER	DESIGN-DETAILED	CHECKED-REVIEWED	DESIGN-DETAILED	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES
BY	DATE	SIGNATURE	P.E. NUMBER	DATE				
E MORRISON	11-24							
B. COLEBURN	11-24							
J FITZPATRICK	11-24							
N EDMAN								
DESIGN-DETAILED23								
REVISIONS 1								
REVISIONS 2								
REVISIONS 3								
REVISIONS 4								
FIELD CHANGES								



END DIAPHRAGM ELEVATION
(Abutment 1)



SECTION A-A

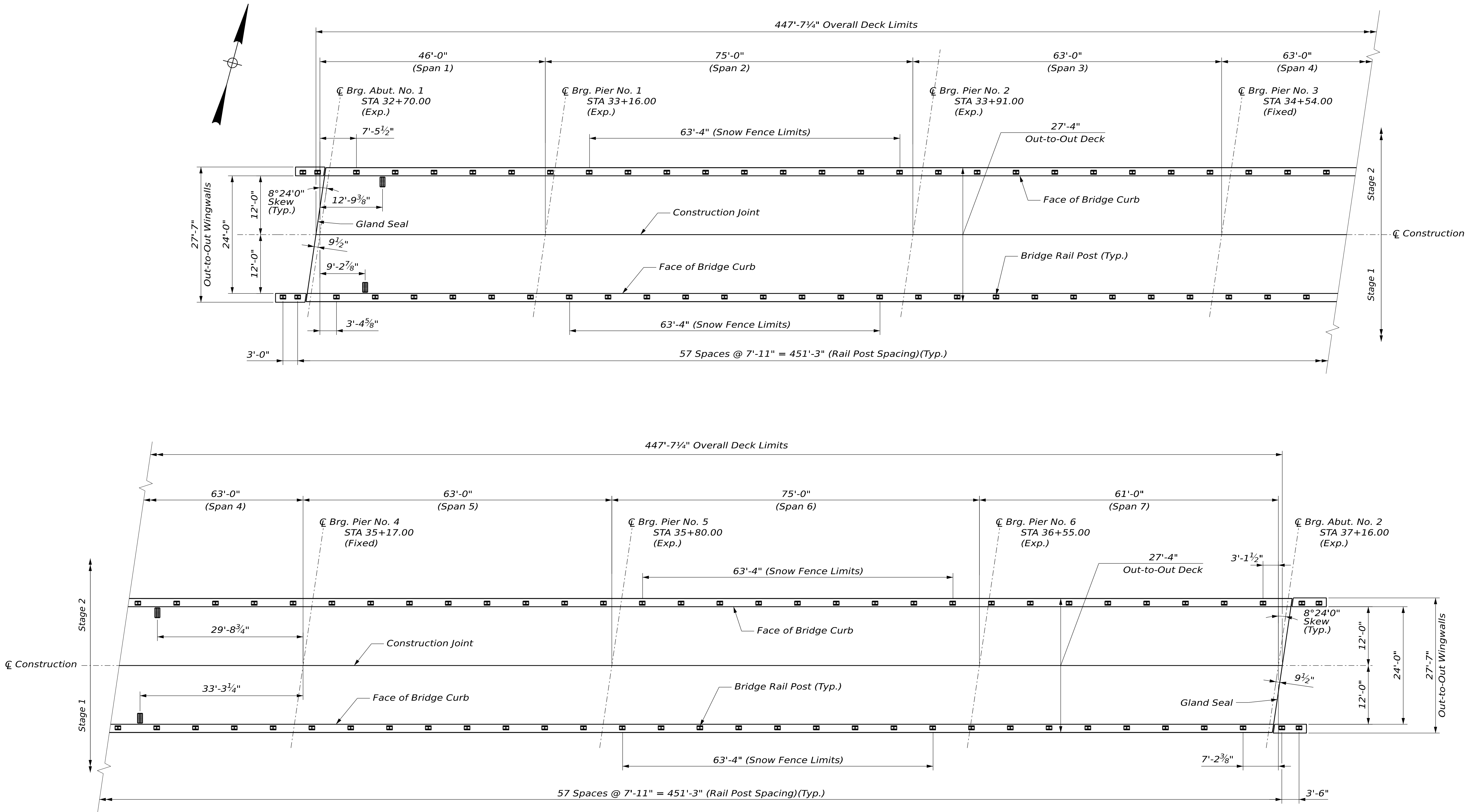


CONNECTION PLATE DETAIL

STRUCTURAL STEEL NOTES

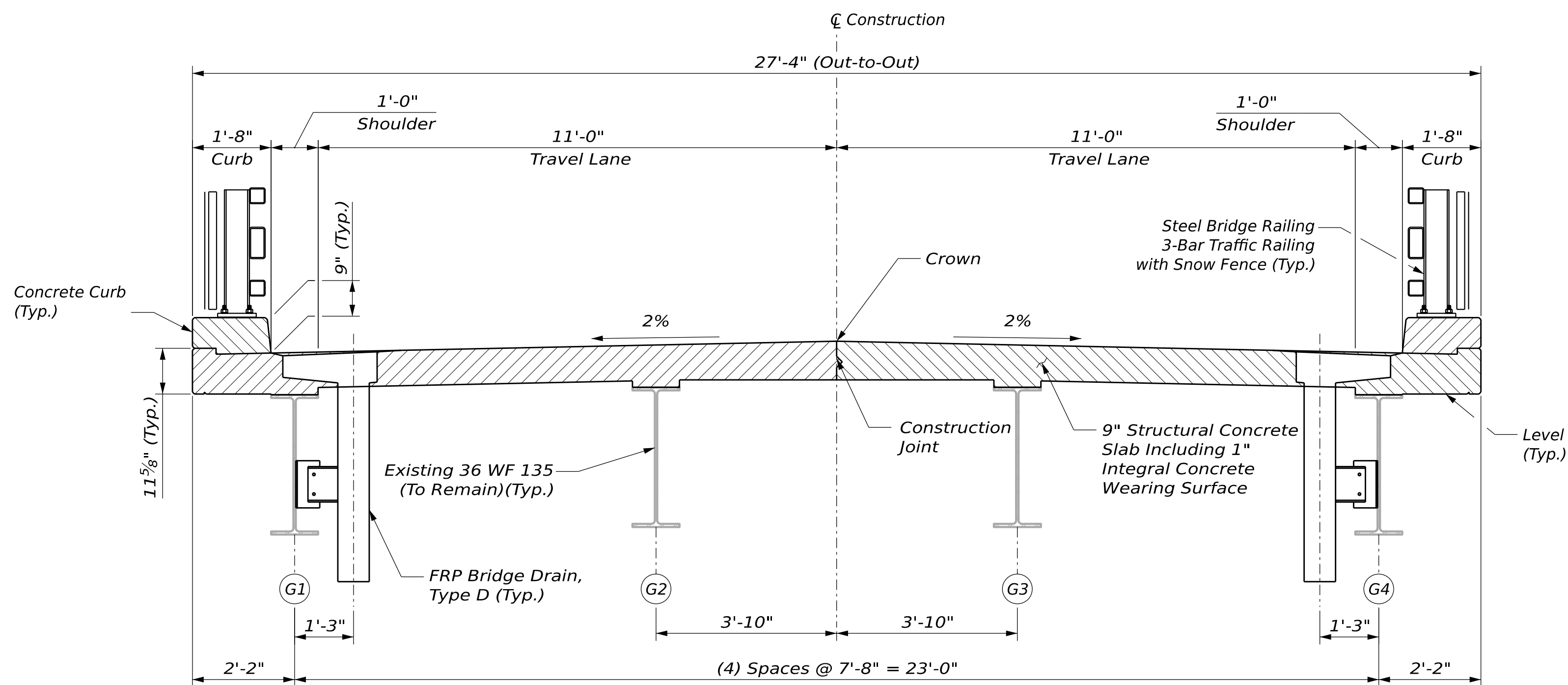
1. *Replace (1) Diaphragm and associated connection plates as shown on Key Plan.*
2. *The reuse of existing bolts will not be permitted.*
3. *All bolts shall be $\frac{7}{8}$ " \odot , ASTM F3125 Grade A325, Type I, High Strength Bolts.*
4. *Proposed Structural Steel shall be coated in accordance with Standard Specifications Section 506, Shop Applied Protective Coating - Steel (Zinc Rich Coating System), except NEPCOAT Qualified Product List C may be used. Payment for the coating will be incidental to Pay Item 504.70.*
5. *Shop drill $\frac{15}{16}$ " \odot holes in diaphragms and connection plates for diaphragm connection. Shop drill $\frac{1}{16}$ " \odot holes in the connection plate for girder connection. Field drill $\frac{15}{16}$ " \odot holes in existing girders.*
6. *Proposed steel contact surfaces shall be cleaned in accordance with Special Provision Section 506, Shop Applied Protective Coating - Steel (Field Painting, New and Existing Steel with Zinc Rich Coating System).*
7. *Payment for field measuring and field drilling shall be incidental to Pay Item 504.71, "Structural Steel Erection".*
8. *Existing connection plates that are being replaced shall be removed without damage to the girder. Payment will be incidental to Pay Item 504.71.*

<div> <div>CASEY ROAD / I-95 BRIDGE</div> <div>BENEDICTA</div> <div>AROOSTOOK COUNTY</div> </div>	PROJ. MANAGER	DENVER SMALL	BY	DATE	<div>STATE OF MAINE</div> <div>DEPARTMENT OF TRANSPORTATION</div> <div>FEDERAL AID PROJECT NO. 2623800</div> <div>BRIDGE NO. 6165</div> <div>WIN</div> <div>26238.00</div> <div>BRIDGE PLAN</div>
	DESIGN-DETAILED	S. LINSLEY	E. ROSSIGNOL	11-24	
	CHECKED-REVIEWED	D. WHITE	B. COBURN	11-24	
	DESIGN-DETAILED02	J. EDMAN	J. FITZPATRICK	11-24	
<div>STRUCTURAL STEEL DETAILS</div>	DESIGN-DETAILED03				SIGNATURE
	REVISIONS 1				P.E. NUMBER
	REVISIONS 2				
	REVISIONS 3				
	REVISIONS 4				DATE
	FIELD CHANGES				



SUPERSTRUCTURE PLAN

STATE OF MAINE DEPARTMENT OF TRANSPORTATION FEDERAL AID PROJECT NO. 2623800	SIGNATURE			
	P.E. NUMBER			
	DATE			
SHEET NUMBER 17 OF 29	PROJ. MANAGER	DENVER SMALL	BY	DATE
	CHECKED-REVIEWED	S. LINDSLEY D. WHITE	E. MORRISON B. COLBURN	11-24 11-24
	DESIGNED-DETAILED	D. J. FITZPATRICK		
	REVISIONS			
CASEY ROAD / I-95 BRIDGE BENEDICTA AROOSTOOK COUNTY SUPERSTRUCTURE PLAN	FIELD CHANGES			
BRIDGE NO. 6165			WIN	26238.00
BRIDGE PLAN				



TRANSVERSE SECTION

SUPERSTRUCTURE NOTES

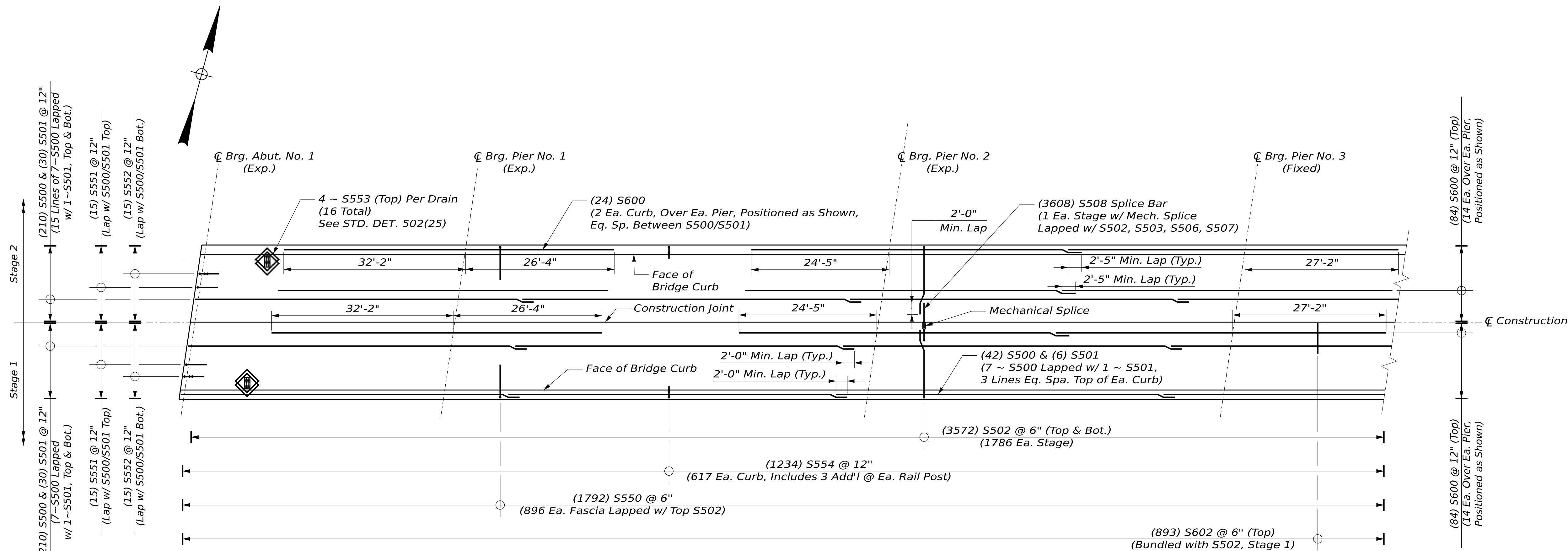
1. *The theoretical blocking used for design of the structure is 1.75 inches at the centerlines of bearing of the abutments and piers as measured from the top of the rolled beam flange. Refer to Standard Detail 502(03) for blocking details.*
2. *Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.*
3. *Form a one inch V-groove on the fascias of the horizontal joint between the curb and slab.*
4. *The superstructure slab concrete shall be placed continuously, per Stage, and shall be kept plastic until the entire placement has been made.*
5. *Precast Concrete Deck Panels are not allowed on this project.*
6. *The Saw Cut Grooving shall be in the longitudinal direction.*
7. *Contractor shall stagger the splice locations of the longitudinal bars.*
8. *Location of the bridge drains shall be finalized in the field. Placement may shift up to 1.5 feet upstation or downstation, if needed, to avoid conflicts for attachment of bridge drain support assembly.*

GIRDER	BOTTOM OF SLAB ELEVATIONS																																								
	CL BRG ABUT. NO. 1	0.1 x L	0.2 x L	0.3 x L	0.4 x L	0.5 x L	0.6 x L	0.7 x L	0.8 x L	0.9 x L	CL BRG PIER NO. 1	0.1 x L	0.2 x L	0.3 x L	0.4 x L	0.5 x L	0.6 x L	0.7 x L	0.8 x L	0.9 x L	CL BRG PIER NO. 2	0.1 x L	0.2 x L	0.3 x L	0.4 x L	0.5 x L	0.6 x L	0.7 x L	0.8 x L	0.9 x L	CL BRG PIER NO. 3	0.1 x L	0.2 x L	0.3 x L	0.4 x L	0.5 x L	0.6 x L	0.7 x L	0.8 x L	0.9 x L	CL BRG PIER NO. 4
G1	461.13	461.47	461.82	462.17	462.52	462.86	463.20	463.55	463.89	464.24	464.59	465.16	465.75	466.32	466.90	467.47	468.03	468.58	469.13	469.68	470.24	470.71	471.19	471.67	472.14	472.62	473.10	473.57	474.04	474.51	474.99	475.46	475.95	476.43	476.91	477.38	477.86	478.33	478.79	479.26	479.73
G2	461.19	461.54	461.89	462.24	462.58	462.93	463.27	463.62	463.96	464.31	464.66	465.24	465.82	466.40	466.98	467.55	468.11	468.66	469.21	469.75	470.31	470.78	471.26	471.73	472.21	472.69	473.17	473.64	474.11	474.58	475.05	475.53	476.02	476.50	476.98	477.46	477.93	478.40	478.86	479.33	479.80
G3	461.11	461.46	461.81	462.15	462.50	462.84	463.19	463.53	463.88	464.22	464.57	465.15	465.73	466.32	466.89	467.46	468.02	468.57	469.12	469.67	470.22	470.69	471.17	471.65	472.13	472.60	473.08	473.55	474.02	474.49	474.97	475.45	475.93	476.41	476.89	477.37	477.84	478.31	478.78	479.24	479.71
G4	460.87	461.22	461.57	461.91	462.26	462.60	462.95	463.29	463.64	463.99	464.33	464.91	465.49	466.07	466.64	467.21	467.77	468.33	468.88	469.43	469.98	470.46	470.93	471.41	471.89	472.36	472.84	473.31	473.78	474.26	474.73	475.21	475.69	476.17	476.65	477.13	477.60	478.07	478.54	479.00	479.48

GIRDER	BOTTOM OF SLAB ELEVATIONS																														
	CL BRG. PIER NO. 4	0.1 x L	0.2 x L	0.3 x L	0.4 x L	0.5 x L	0.6 x L	0.7 x L	0.8 x L	0.9 x L	CL BRG. PIER NO. 5	0.1 x L	0.2 x L	0.3 x L	0.4 x L	0.5 x L	0.6 x L	0.7 x L	0.8 x L	0.9 x L	CL BRG. PIER NO. 6	0.1 x L	0.2 x L	0.3 x L	0.4 x L	0.5 x L	0.6 x L	0.7 x L	0.8 x L	0.9 x L	CL BRG. ABUT. NO. 2
G1	479.73	480.21	480.68	481.16	481.64	482.12	482.59	483.06	483.53	484.00	484.48	485.05	485.63	486.20	486.77	487.34	487.90	488.46	489.01	489.57	490.13	490.59	491.05	491.52	491.99	492.45	492.91	493.37	493.82	494.27	494.72
G2	479.80	480.28	480.75	481.23	481.71	482.19	482.66	483.13	483.60	484.07	484.55	485.12	485.70	486.28	486.85	487.42	487.98	488.53	489.08	489.64	490.20	490.66	491.12	491.59	492.06	492.53	492.99	493.45	493.90	494.35	494.79
G3	479.71	480.19	480.67	481.15	481.63	482.10	482.57	483.04	483.51	483.98	484.46	485.03	485.61	486.19	486.76	487.33	487.89	488.45	489.00	489.55	490.11	490.57	491.04	491.51	491.97	492.44	492.90	493.36	493.81	494.26	494.70
G4	479.48	479.95	480.43	480.91	481.38	481.86	482.33	482.80	483.27	483.75	484.22	484.79	485.37	485.95	486.52	487.08	487.65	488.20	488.75	489.31	489.87	490.33	490.80	491.26	491.73	492.20	492.66	493.11	493.57	494.02	494.47

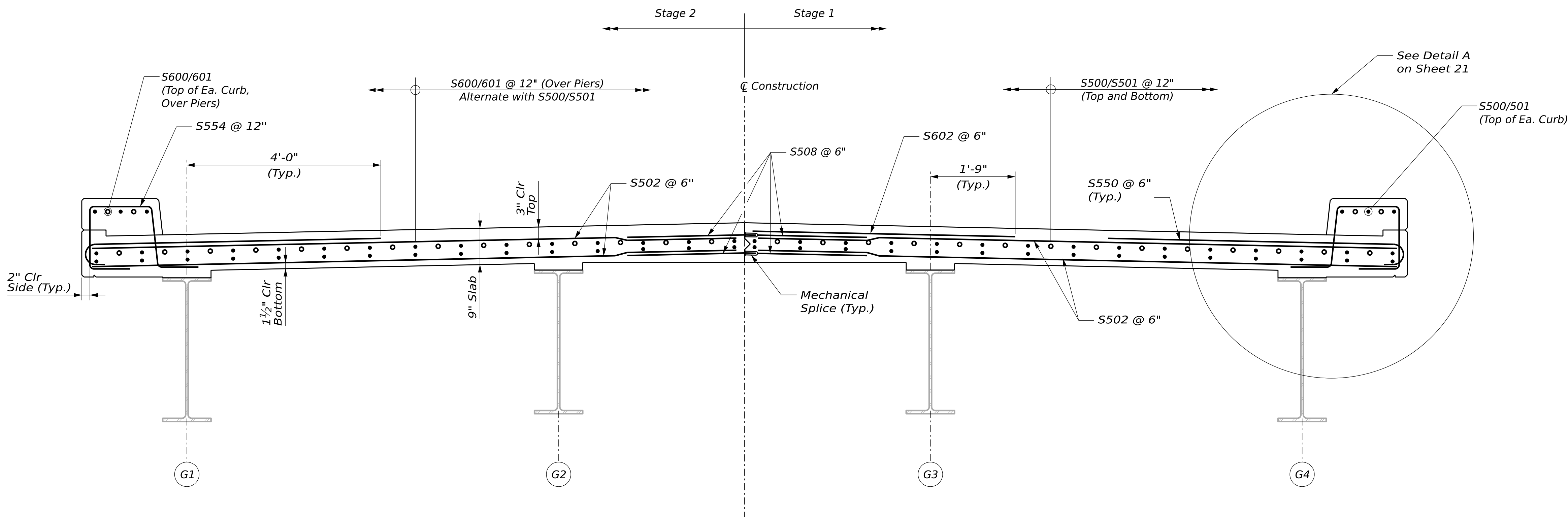
PROJ. MANAGER	BY	DATE
DEPIRCH-DETAILED	S. LINSLEY	11-24
CHECKED-SUPERVISOR	R. COBURN	11-24
DESIGN2-DETAILED2	D. WHITE	
DESIGN3-DETAILED3	N. EDMAN	11-24
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

CASEY ROAD / I-95 BRIDGE	AROOSTOOK COUNTY
BENEDICTA	TRANSVERSE SECTION



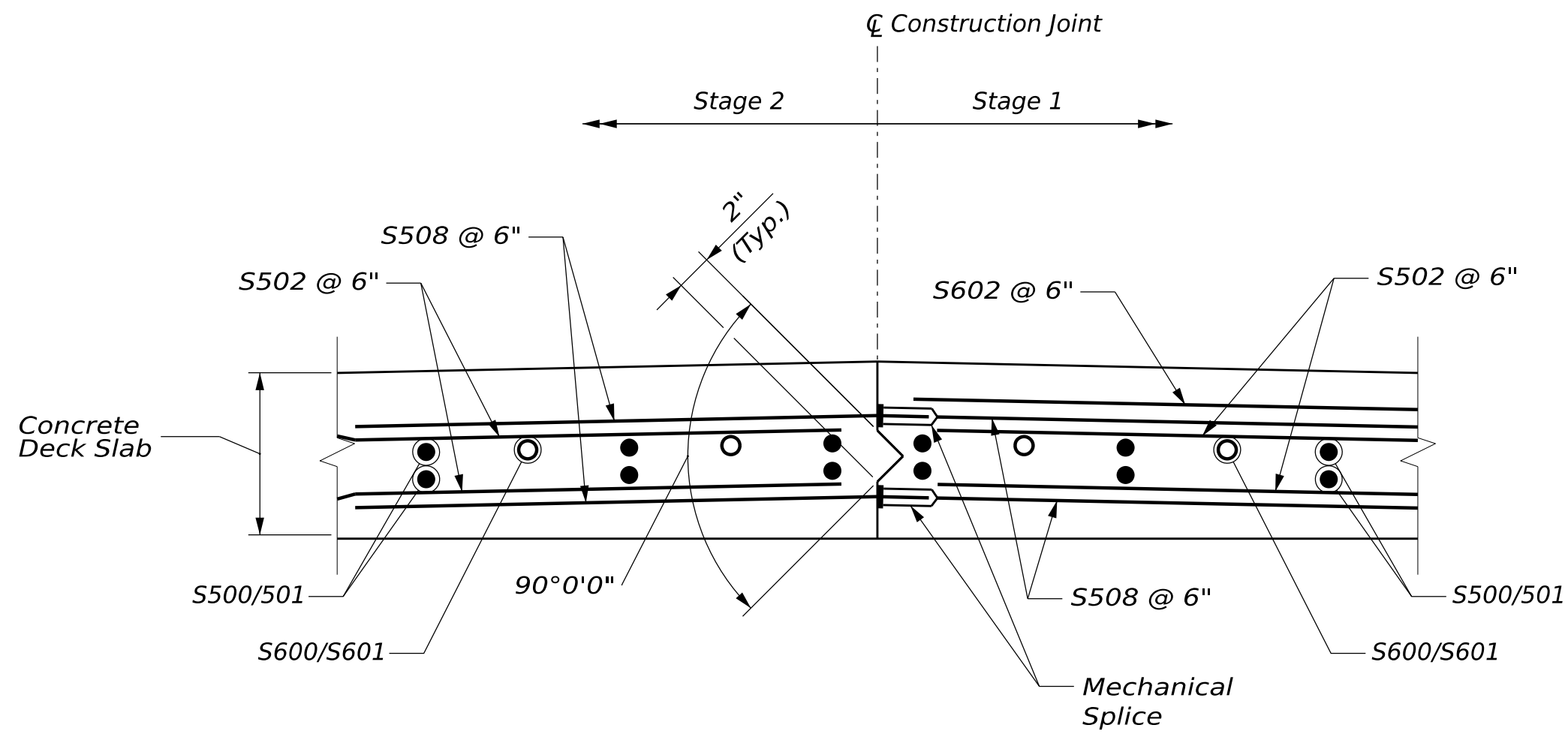
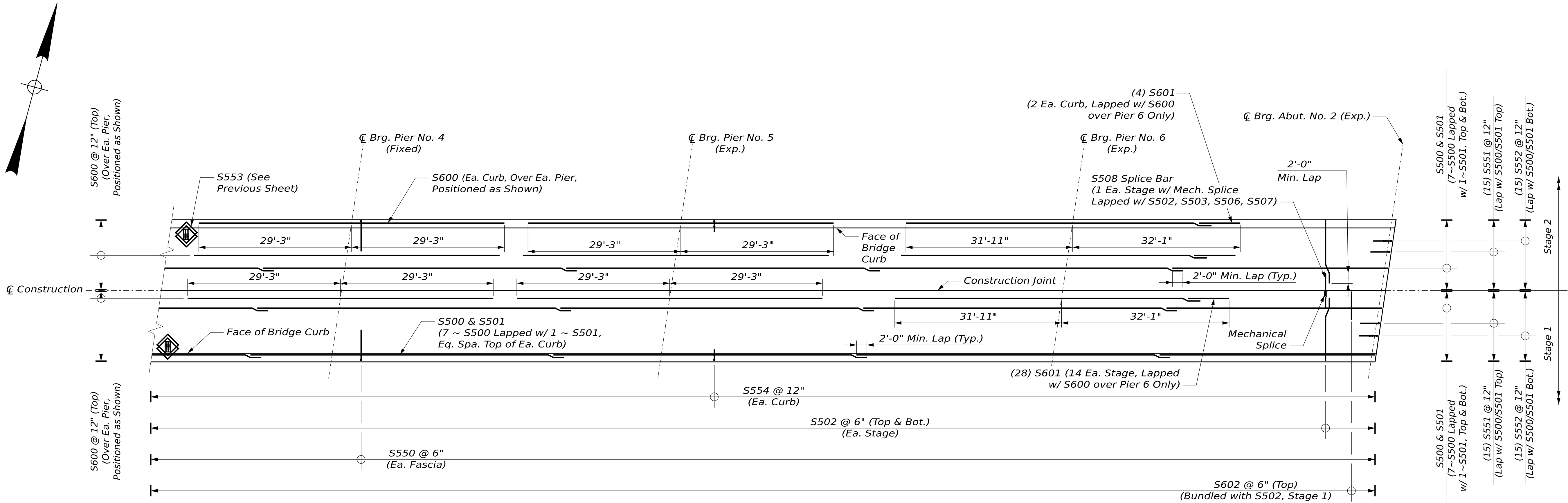
REINFORCING PLAN

Deck End Reinforcing Not Shown for Clarity,
See Sheet 21 for Details

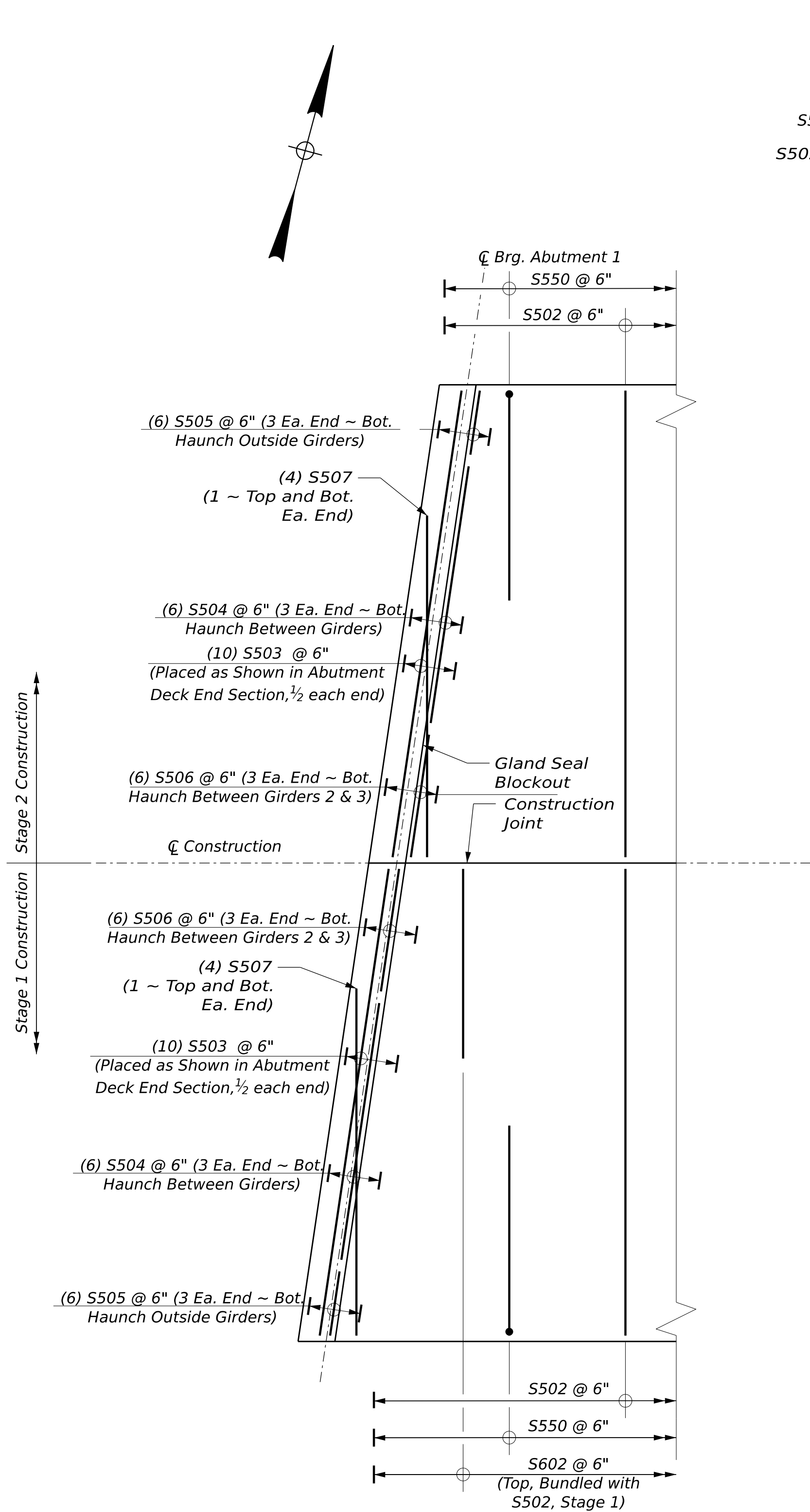


REINFORCING SECTION

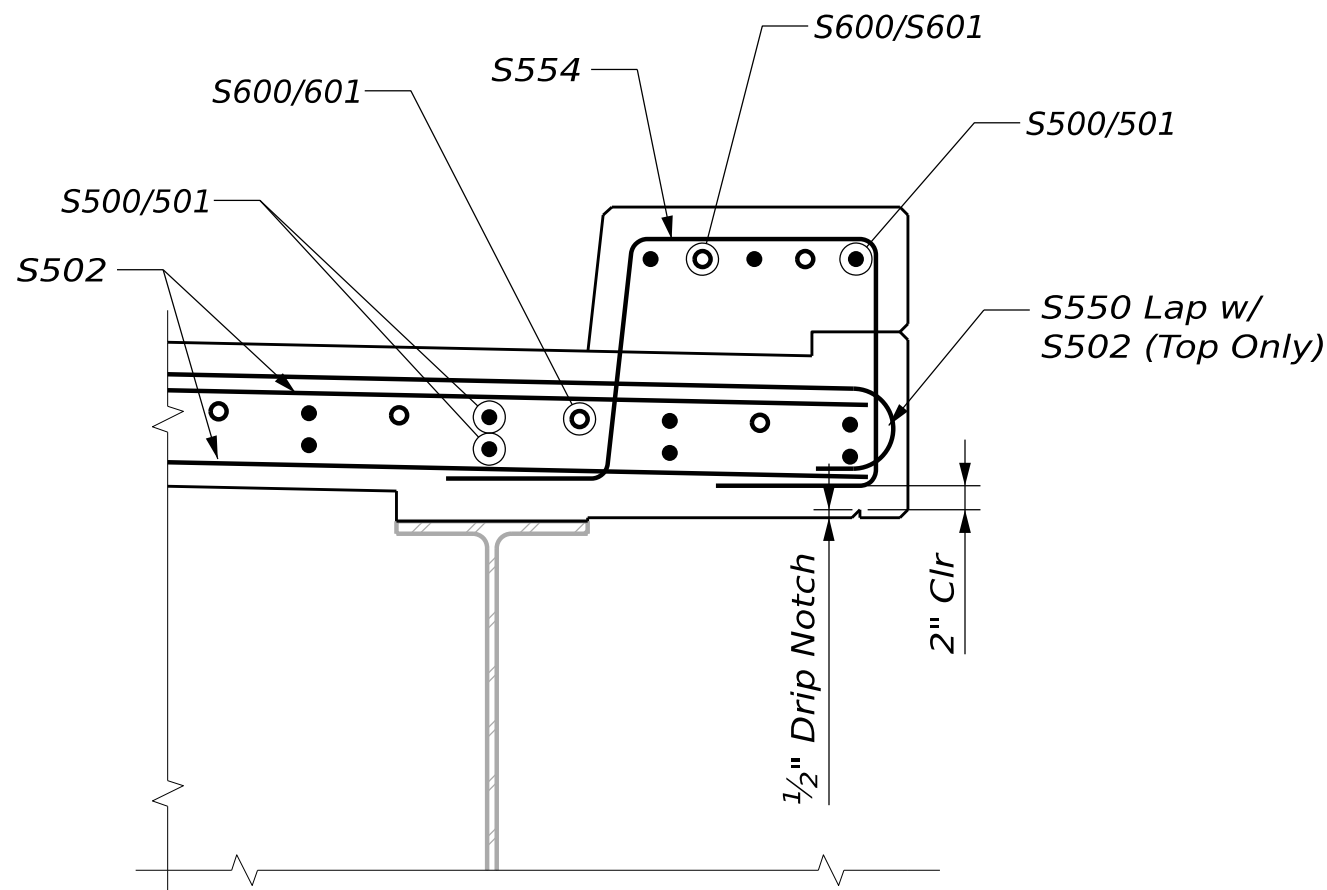
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BENEDICTA		AROOSTOOK COUNTY	
CASEY ROAD / I-95 BRIDGE		FEDERAL AID PROJECT NO. 2623800	
SHEET NUMBER		BRIDGE NO. 6165	
19		WIN	
OF 29		26238.00	
DECK REINFORCING		BRIDGE PLAN	



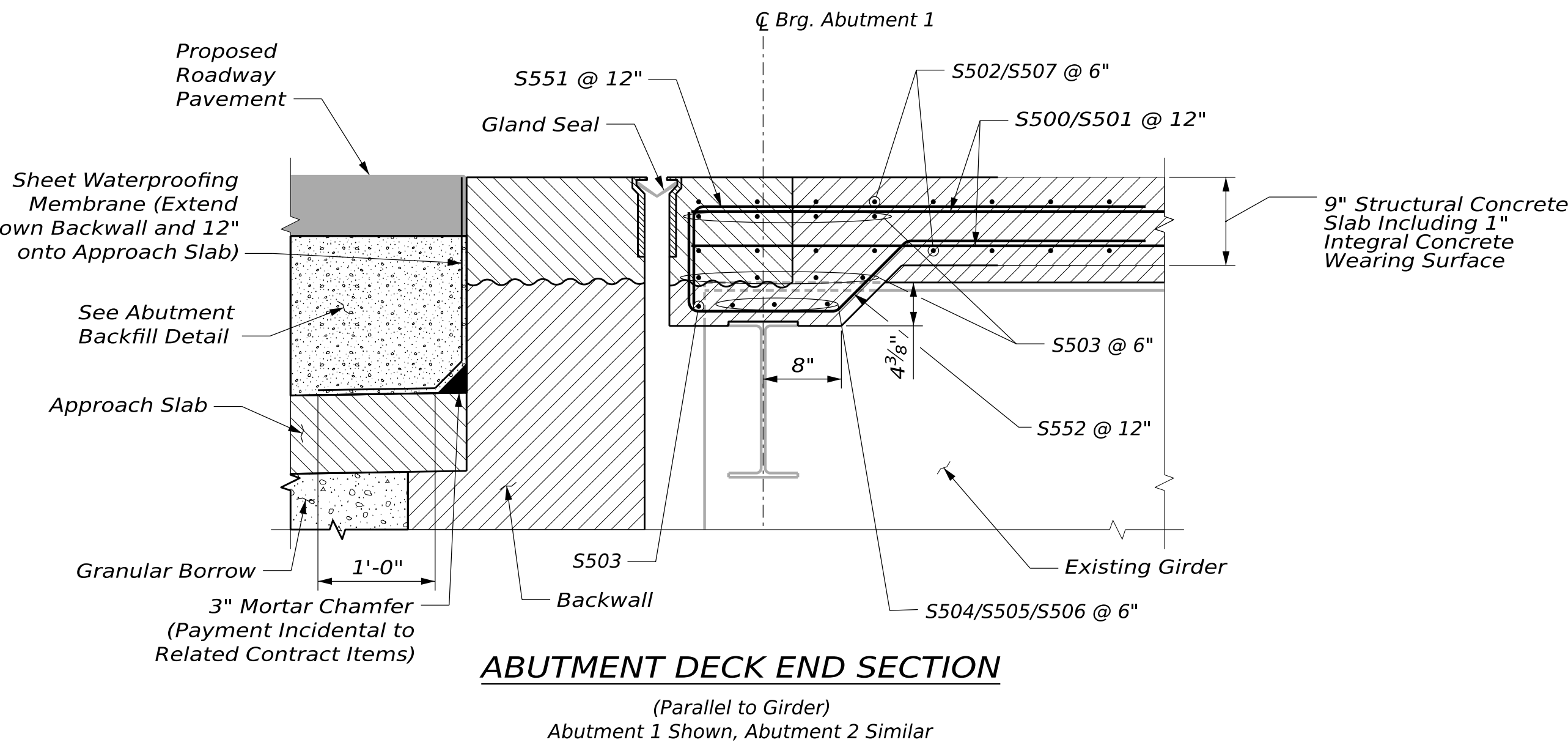
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BENEDICTA		AROOSTOOK COUNTY	
CASEY ROAD / I-95 BRIDGE		DECK REINFORCING	
SHEET NUMBER		20	
OF		29	
FEDERAL AID PROJECT NO. 2623800		BRIDGE NO. 6165	
WIN		26238.00	
BRIDGE PLAN		26238.00	
SIGNATURE		P.E. NUMBER	
DATE		DATE	
PROJ. MANAGER		BY	
DESIGNED-Detailed		DATE	
DESIGNED-Detailed		11-24	
DESIGNED-Detailed		11-24	
DESIGNED-Detailed		11-24	
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			



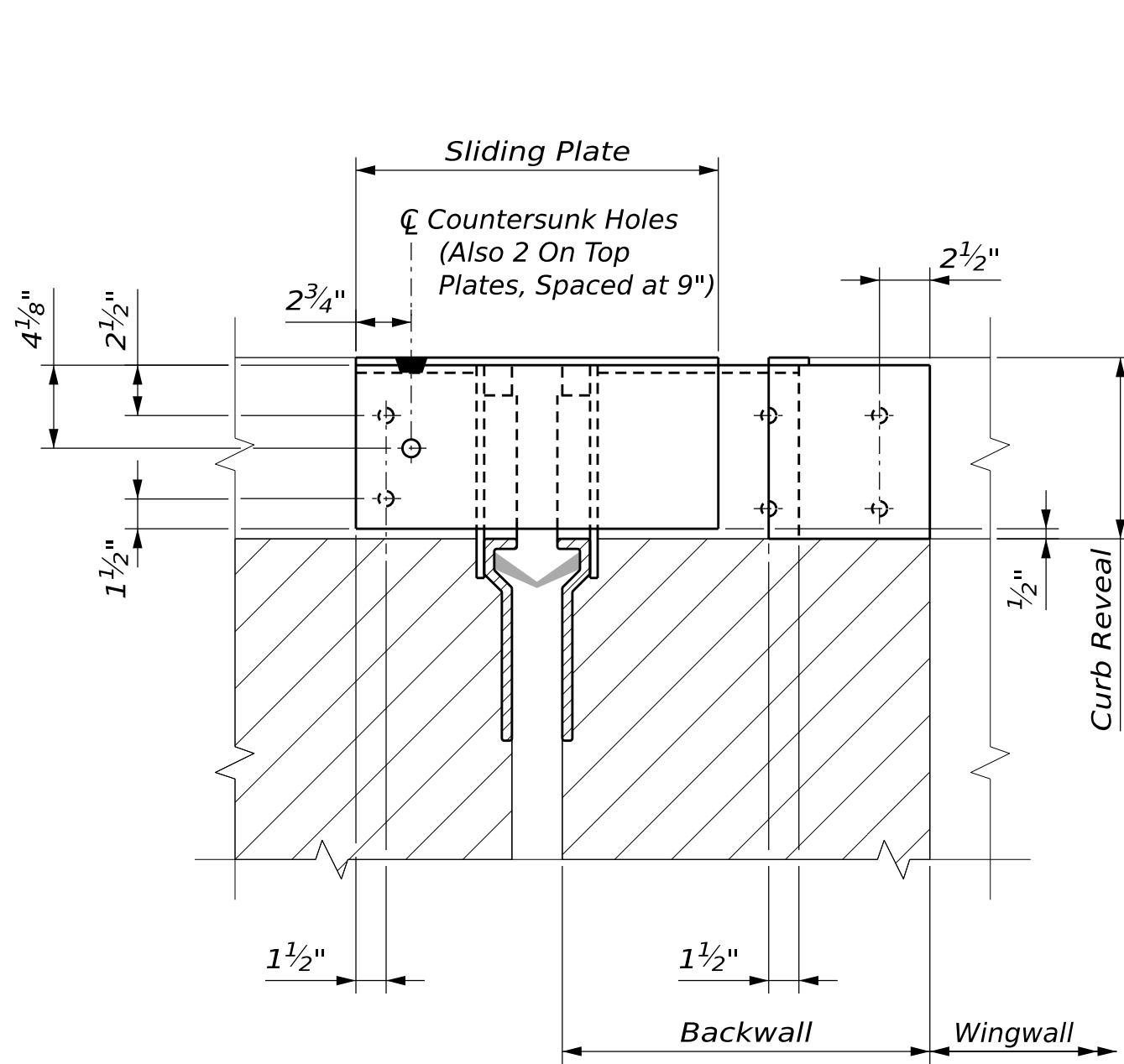
DECK END DETAIL
Abutment 1 Shown, Abutment 2 Similar
Longitudinal Bars, Curb Bars, and Splice Bars with Mechanical Couplers Not Shown for Clarity



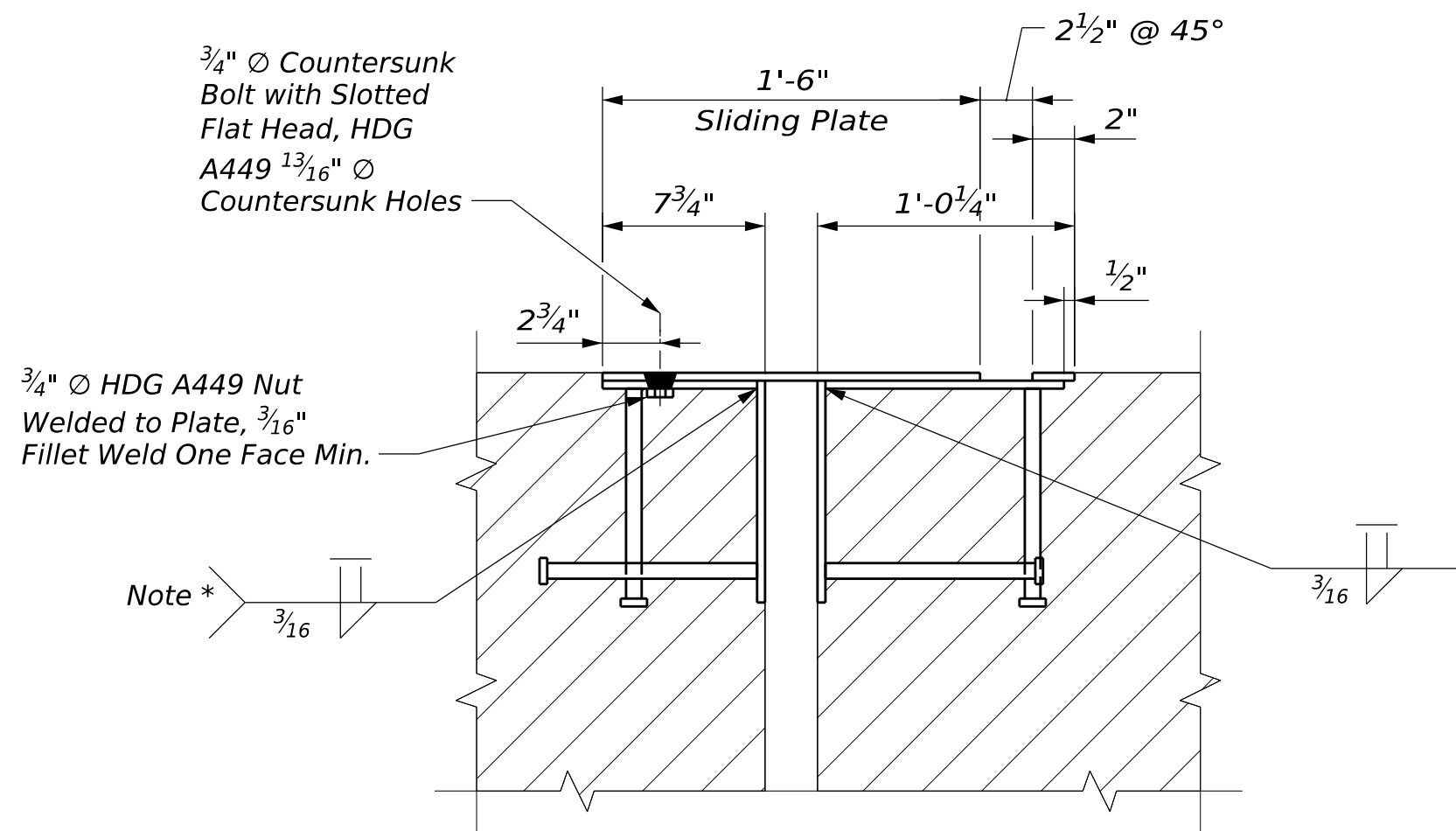
DETAIL A
Right Overhang Shown, Left Overhang Similar



ABUTMENT DECK END SECTION
(Parallel to Girder)
Abutment 1 Shown, Abutment 2 Similar



EXPANSION DAM ELEVATION
Per Gland Seal Note 2,
This Elevation Replaces the Elevation Shown in Standard Detail 520(05)



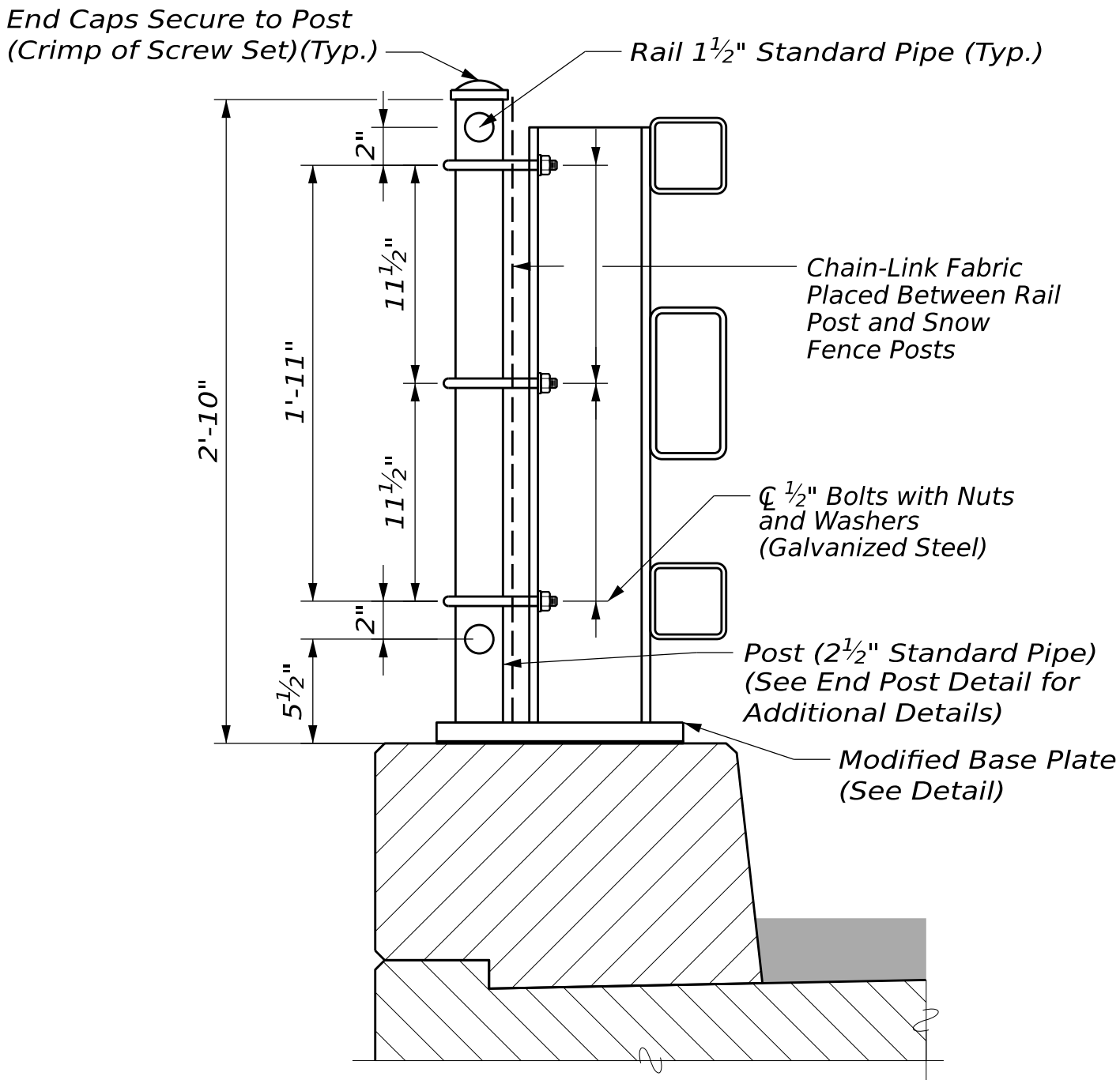
SECTION C-C
Per Gland Seal Note 2,
This Section Replaces Section C-C Shown in Standard Detail 520(07),
Section D-D Will Be Similar

GLAND SEAL NOTES

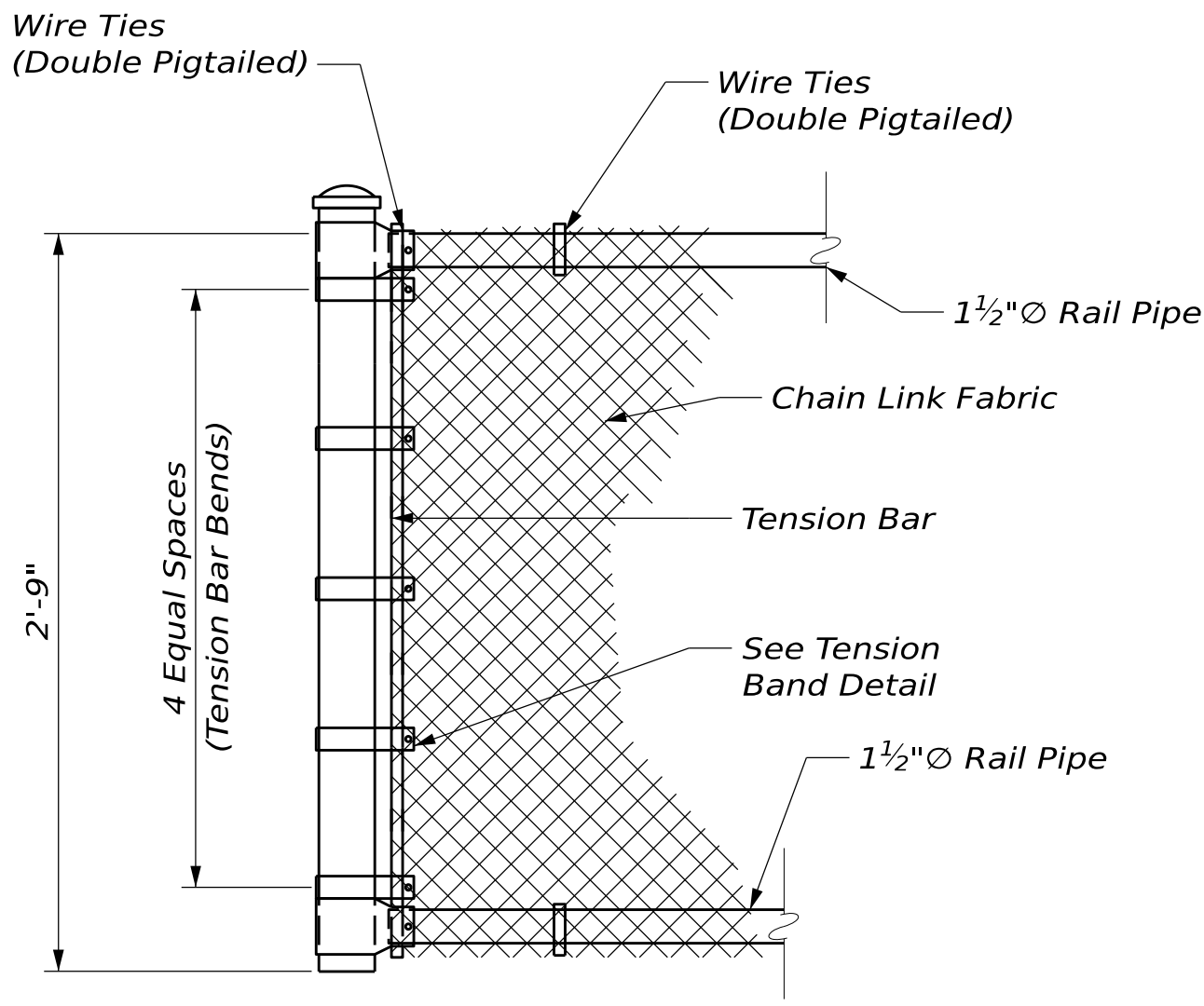
- The gland seal to be furnished shall have minimum Movement Ratings as follows:

Abutment No. 1 = 2.75"
Abutment No. 2 = 3.00"
- The Standard sliding plate detail for the curbs shall be modified to use countersunk bolts.

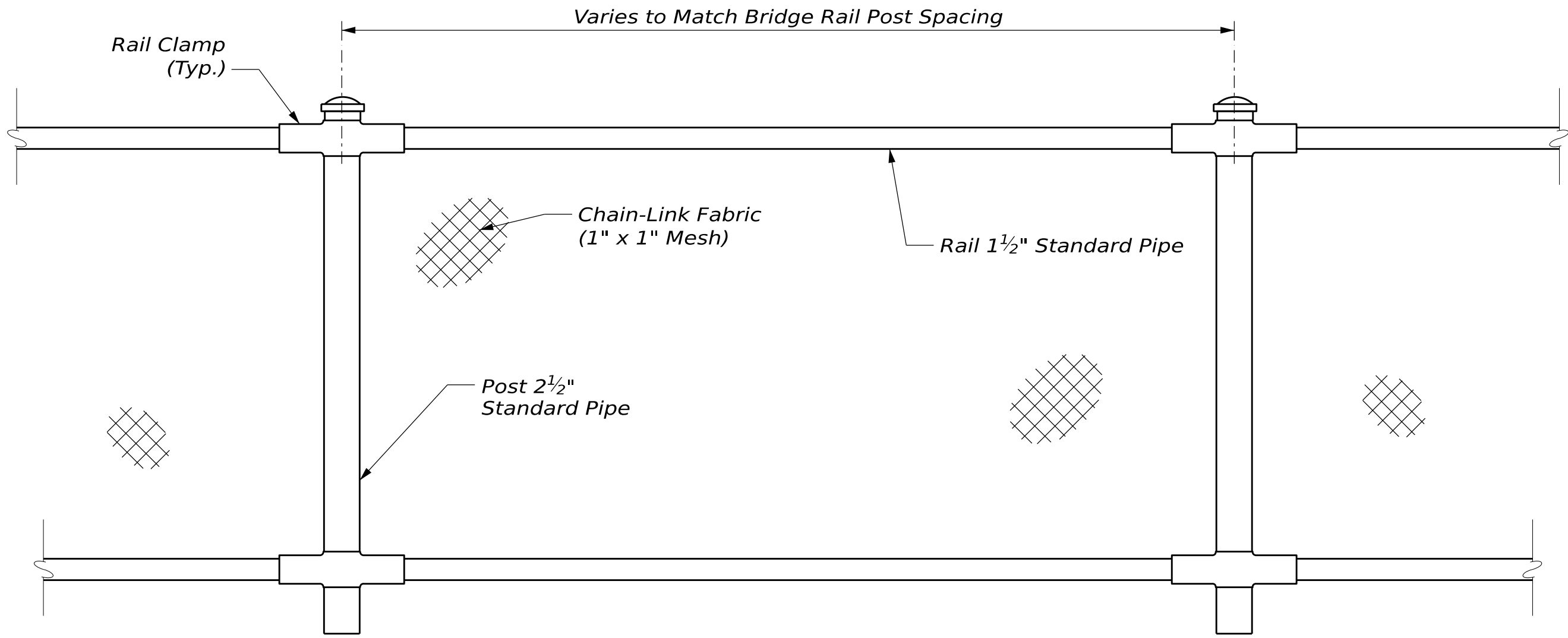
STATE OF MAINE				DEPARTMENT OF TRANSPORTATION			
FEDERAL AID PROJECT NO. 2623800				BRIDGE NO. 6165			
WIN				26238.00			
BRIDGE PLAN							
CASEY ROAD / I-95 BRIDGE		AROOSTOOK COUNTY		BENEDICTA		SUPERSTRUCTURE DETAILS	
SHEET NUMBER		21		OF		29	



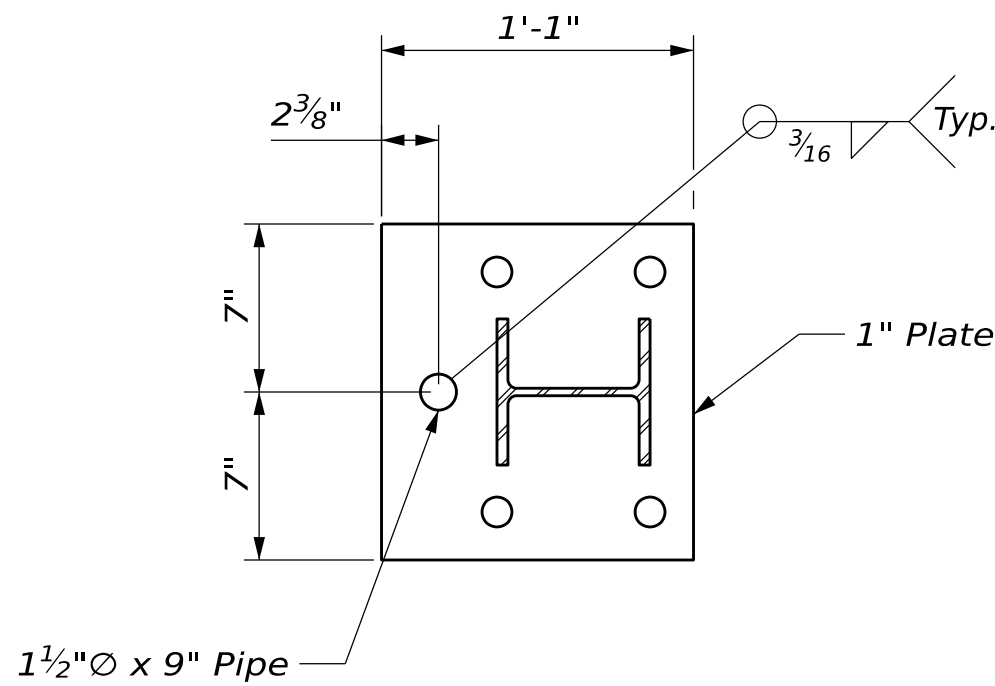
SNOW FENCE CONNECTION DETAIL



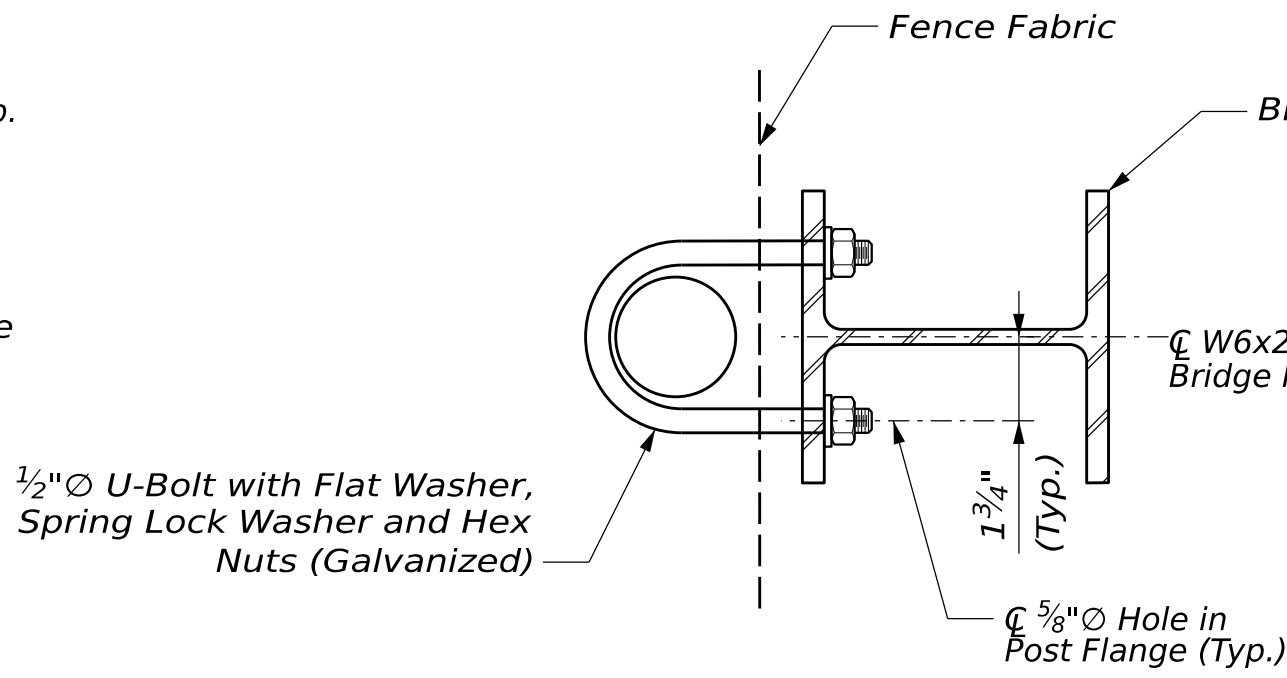
END POST DETAIL



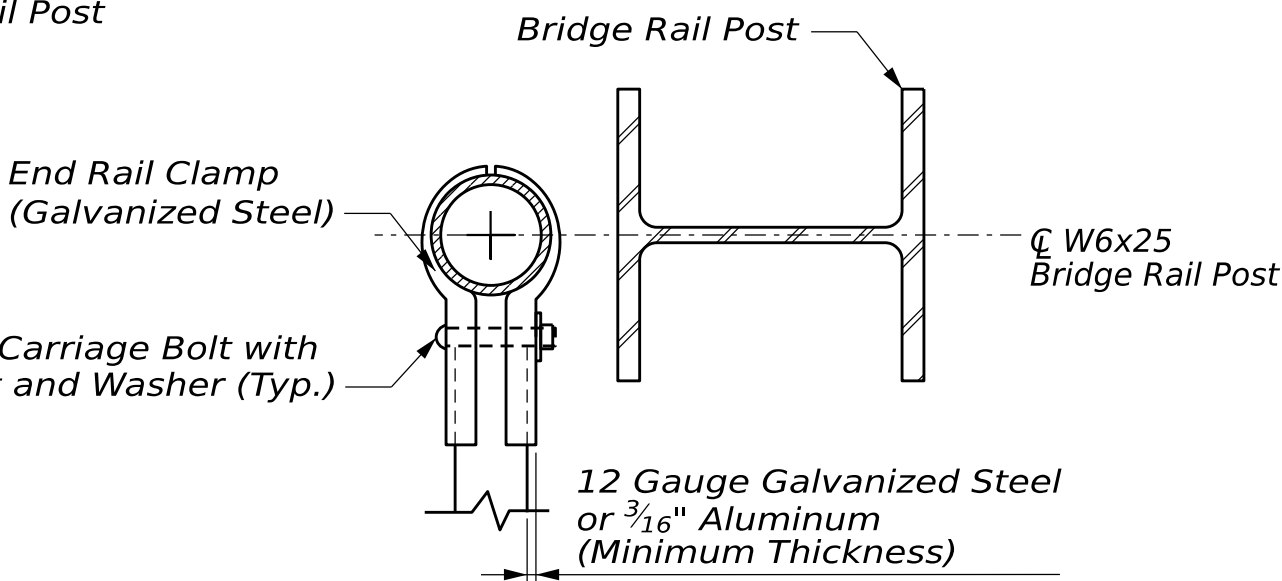
ELEVATION - SNOW FENCE



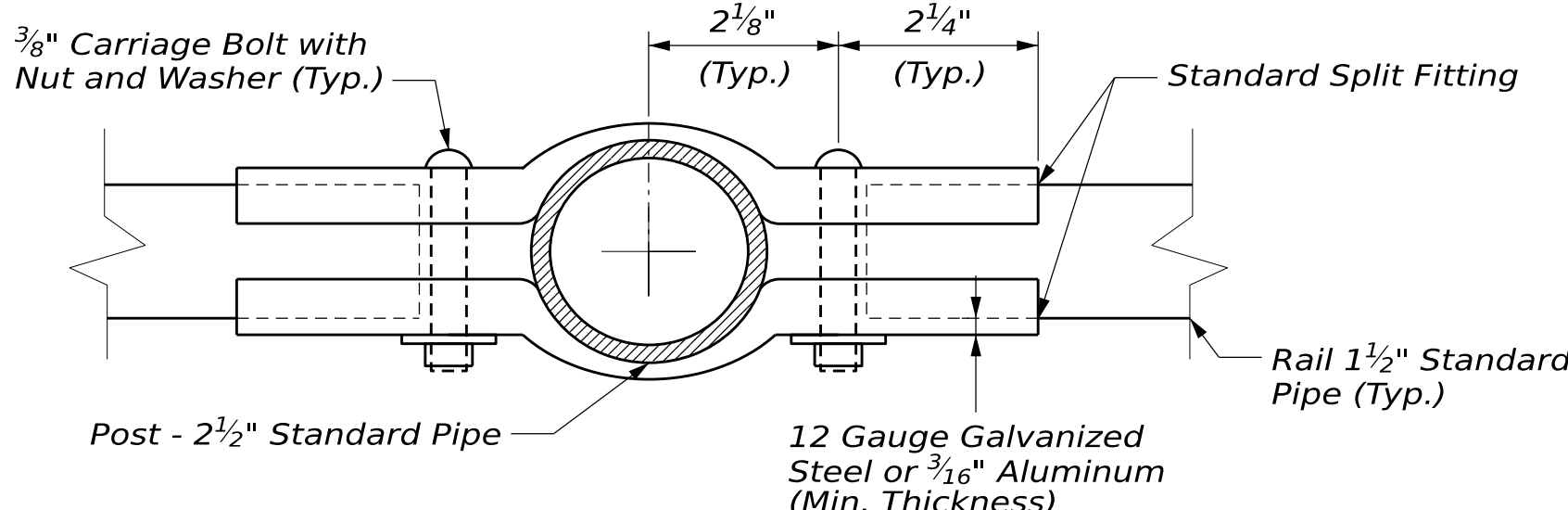
MODIFIED BASE PLATE DETAIL



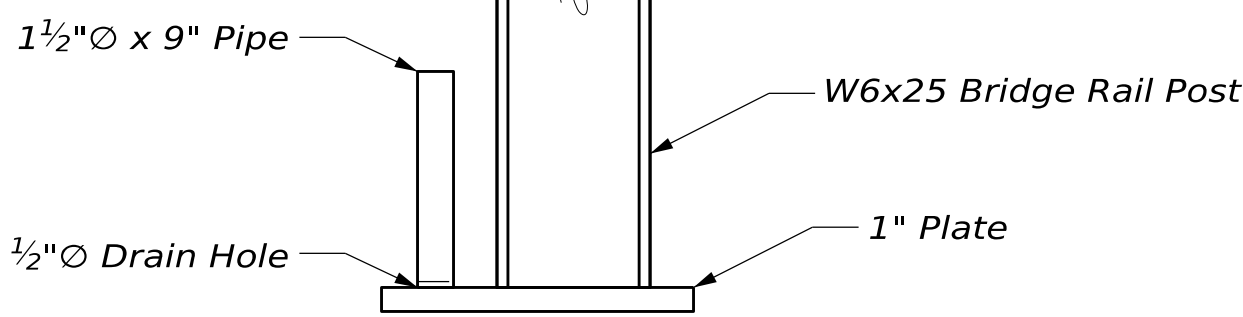
U-BOLT CONNECTION DETAIL



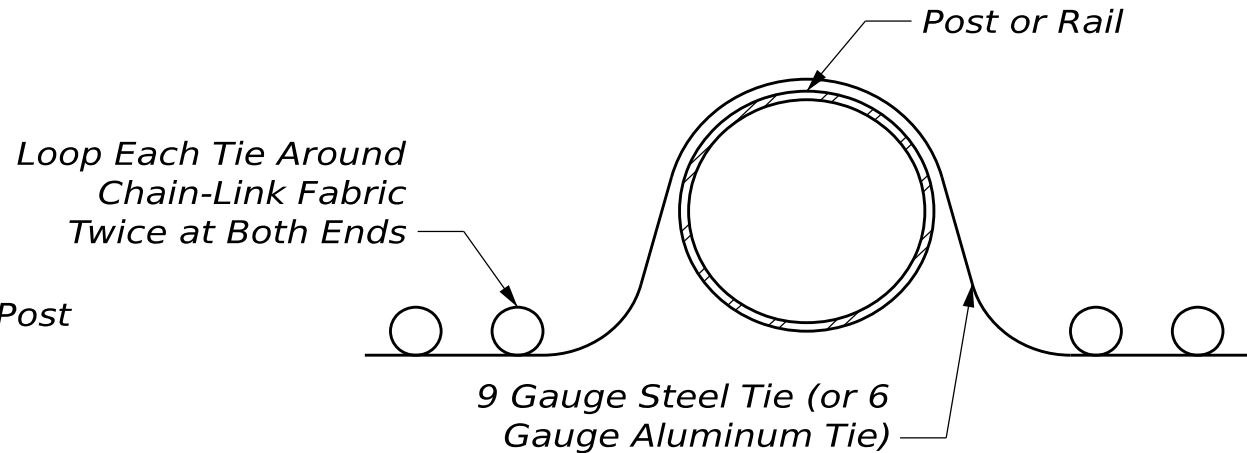
END POST SECTION
(U-Bolt Not Shown)



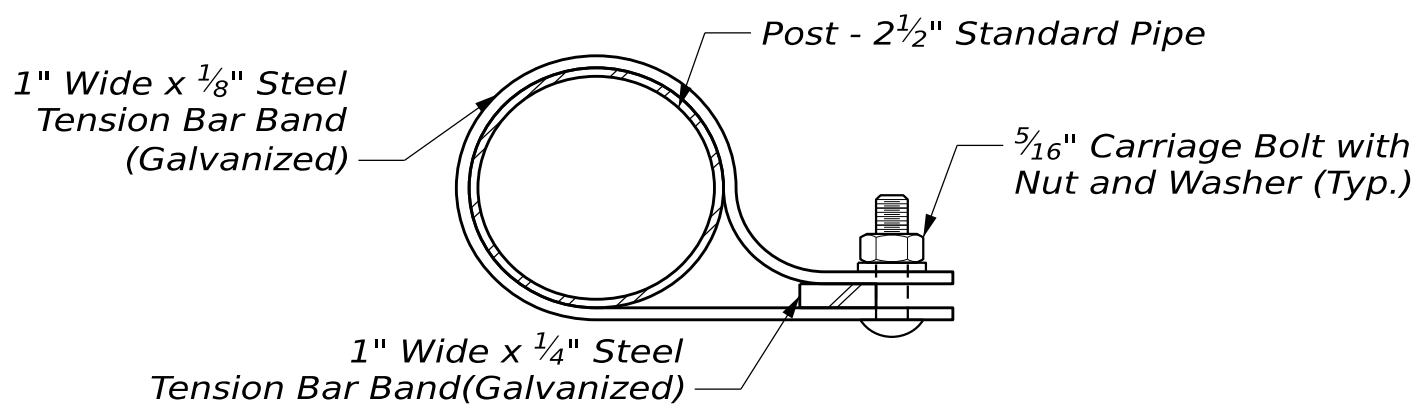
RAIL CLAMP DETAIL



MODIFIED BASE PLATE ELEVATION



DOUBLE PIGTAILED TIE

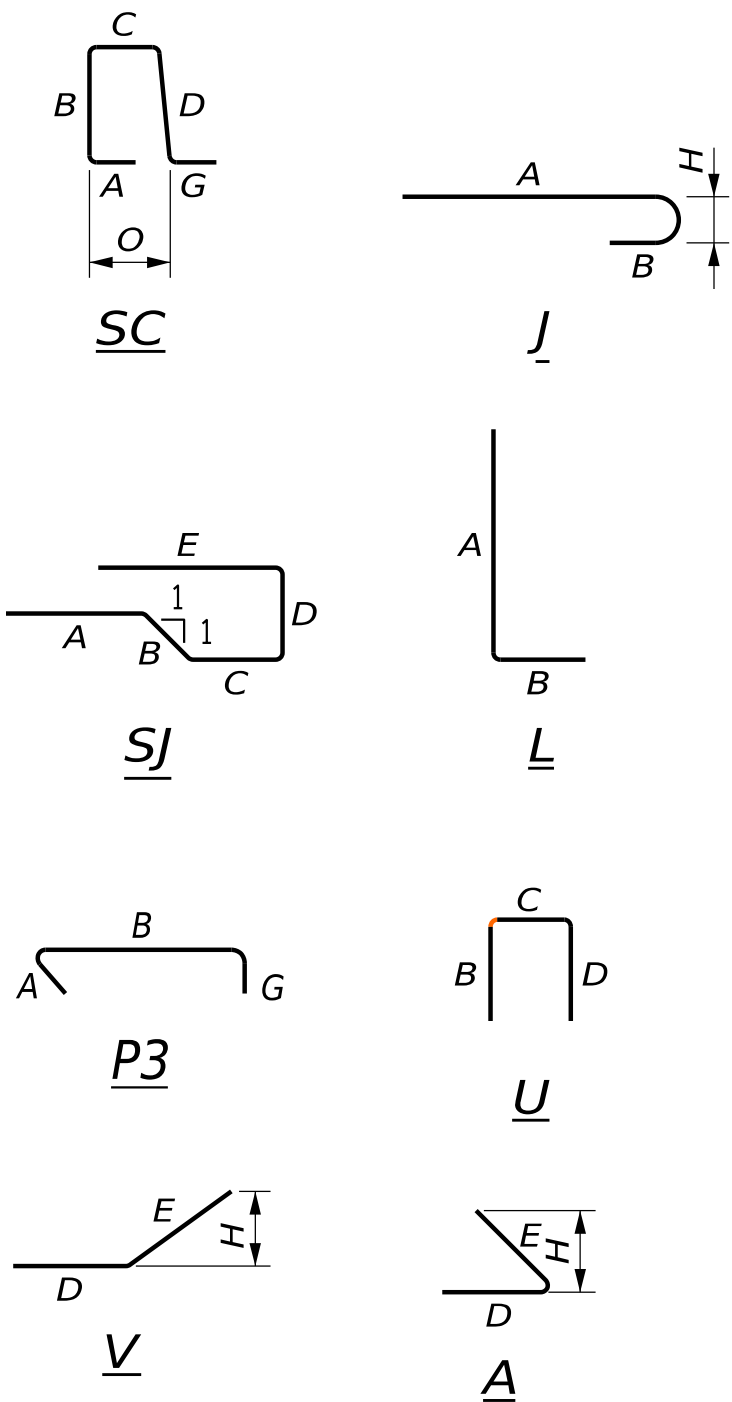


TENSION BAND DETAIL

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".
- 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. Repair galvanizing on cut edges in accordance with ASTM A780.
- Payment for modified base plate will be considered incidental to related Contract Items.

CASEY ROAD / I-95 BRIDGE										STATE OF MAINE									
BENEDICTA										DEPARTMENT OF TRANSPORTATION									
AROOSTOOK COUNTY										FEDERAL AID PROJECT NO. 2623800									
SNOW FENCE DETAILS										BRIDGE NO. 6165									
FIELD CHANGES										26238.00									
REVISIONS 1										WIN									
REVISIONS 2										DATE									
REVISIONS 3																			
REVISIONS 4																			
22																			
OF 29																			

[illegible]

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.

Plain Reinforcing Steel: ASTM A 615, Grade 60
Stainless Steel Reinforcing: ASTM A955, Grade 75
Glass Fiber Reinforced Polymer: ASTM D7957
Low-Carbon Chromium Steel: ASTM A1035,
Type CS, Grade 100

GENERAL NOTES

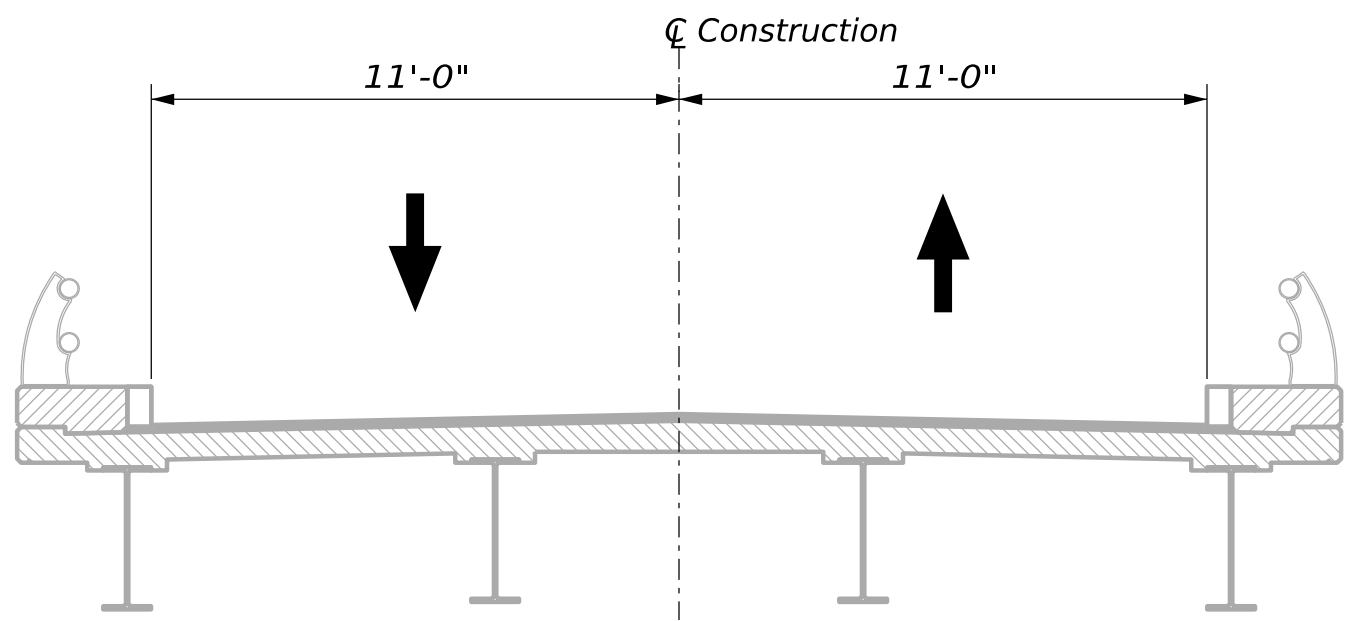
1. The first digit(s) following the letter(s) of the mark indicate the size of the bar:

Mark "A502" = bar size #5
Mark "P805" = bar size #8
Mark "S650" = bar size #6
Mark "P1404" = bar size #14

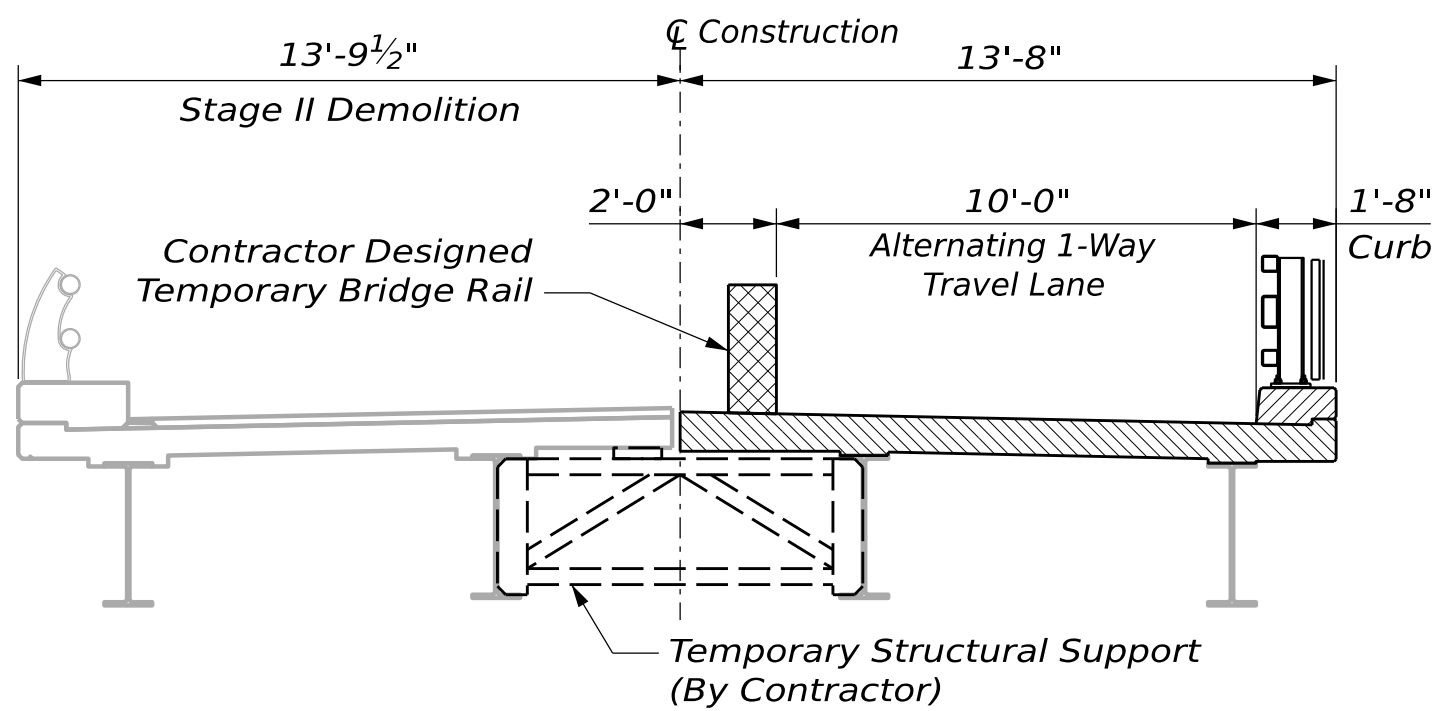
2. The lower case letter following the bar number indicates the material of the bar.

"A500b", b = (Black) Plain Steel
 "A550s", s = Stainless Steel
 "S500p", p = Glass Fiber Reinforced Polymer
 "P510c", c = Low-Carbon Chromium Steel

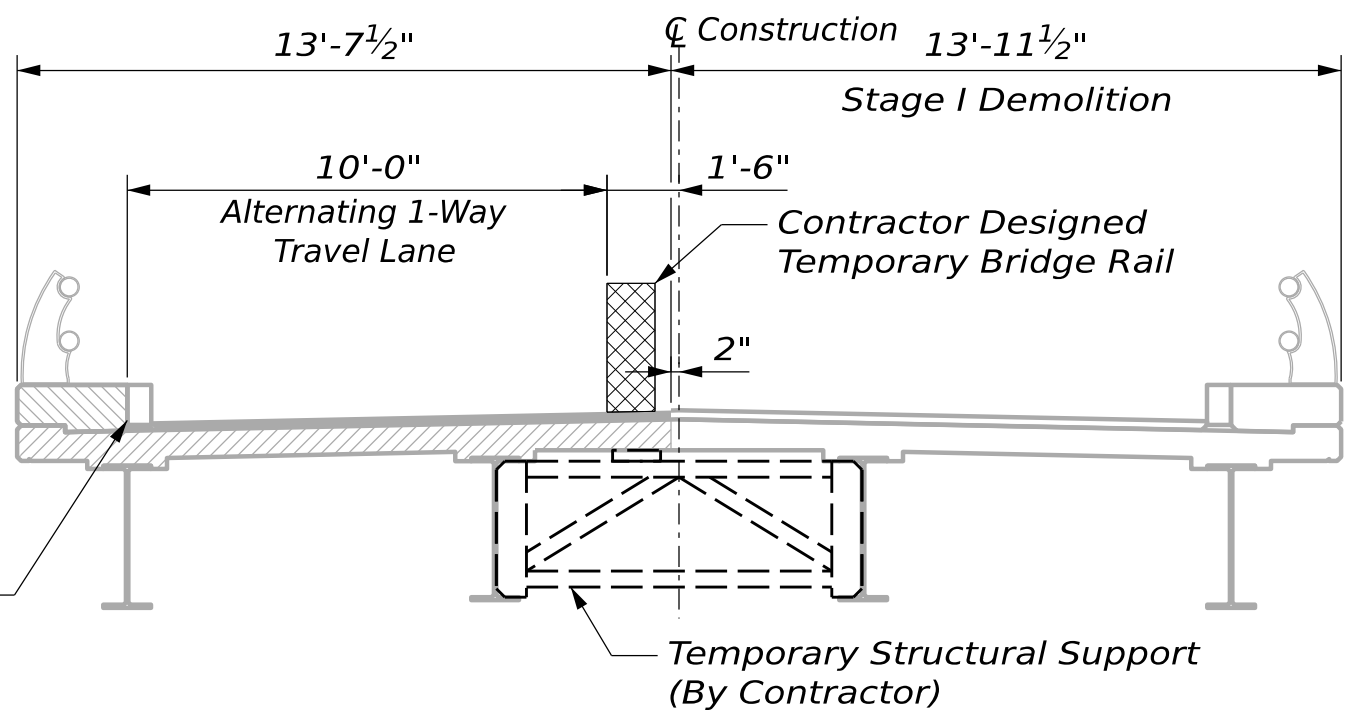
3. All reinforcement bars shall be Plain Reinforcing Steel.



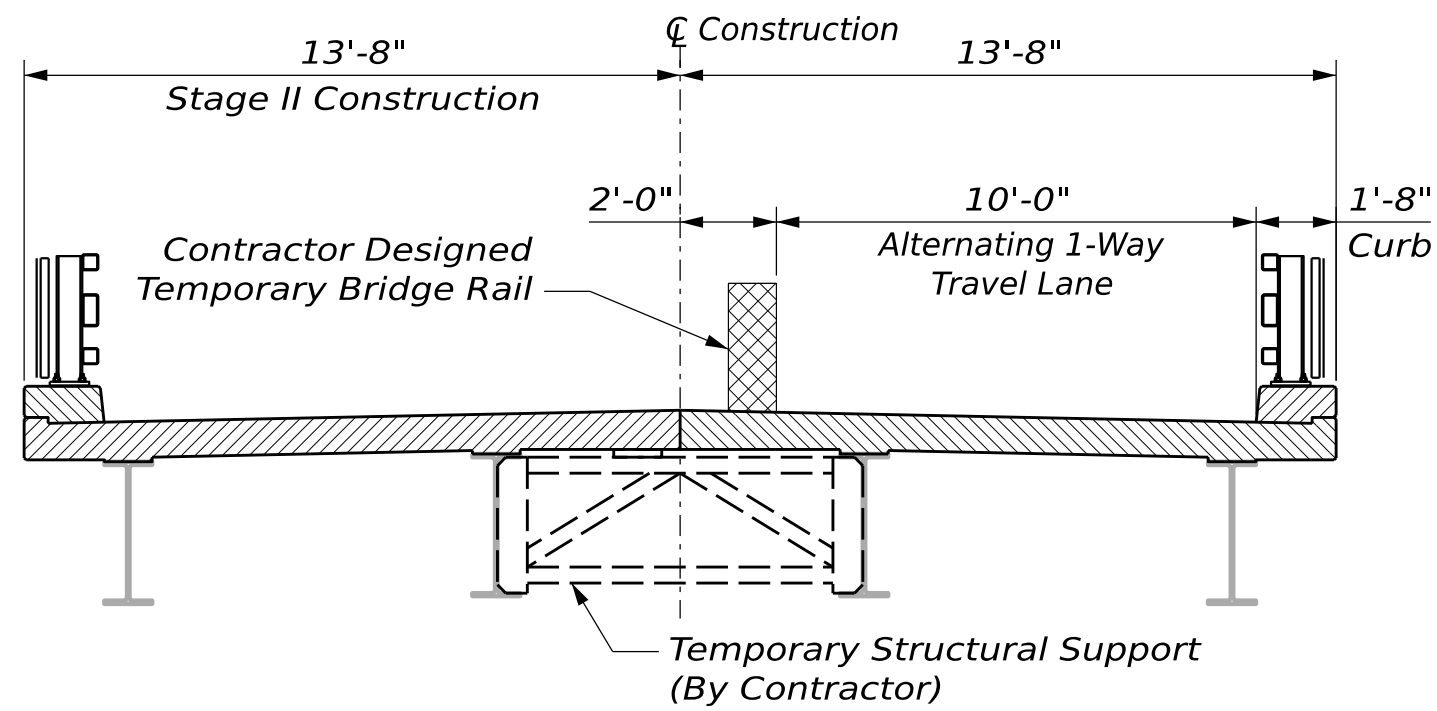
EXISTING TRANSVERSE SECTION



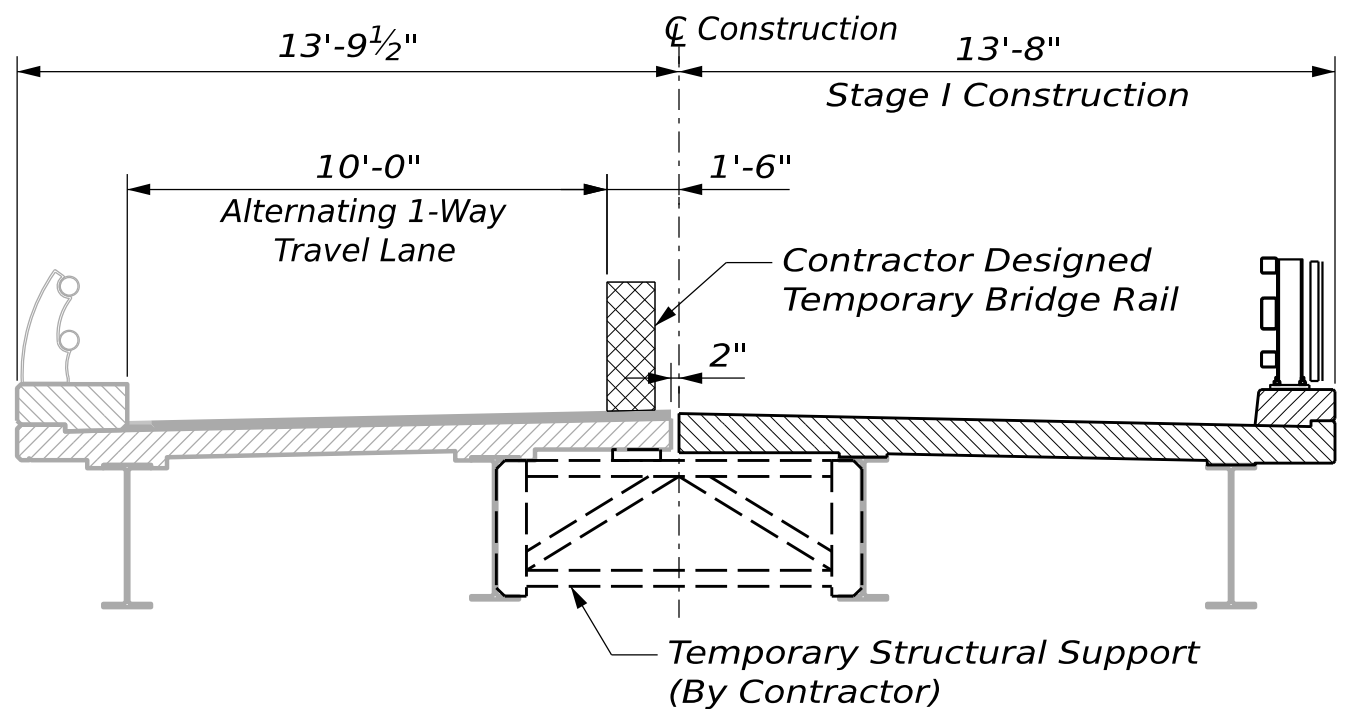
STAGE II DEMOLITION



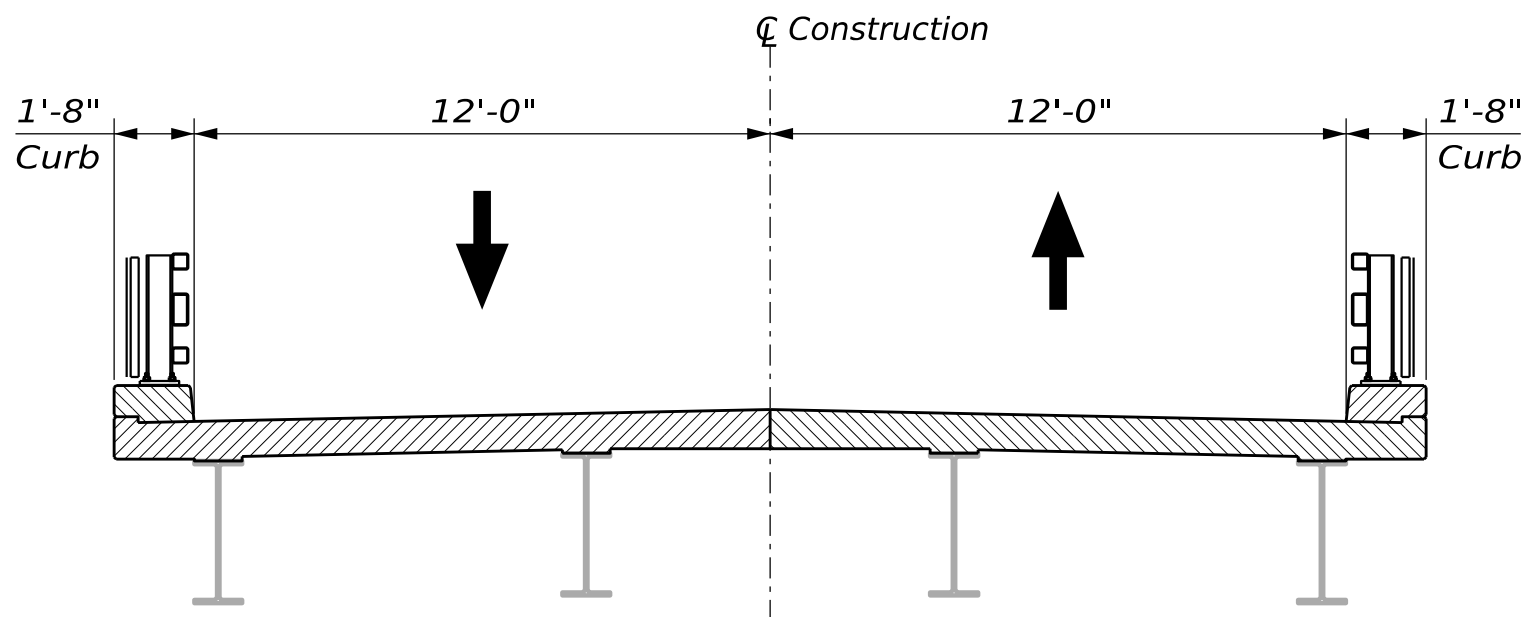
STAGE I DEMOLITION



STAGE II CONSTRUCTION



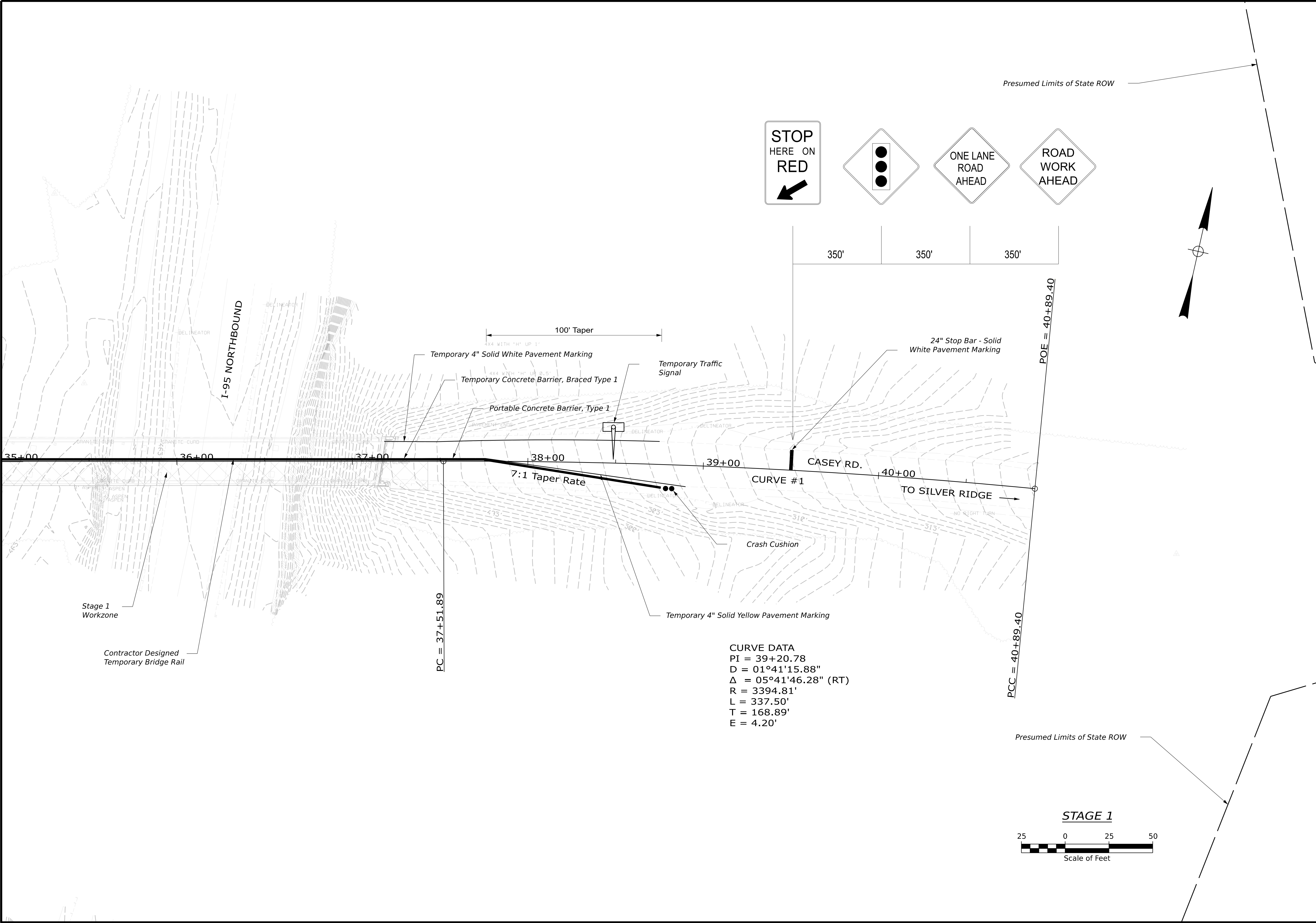
STAGE I CONSTRUCTION



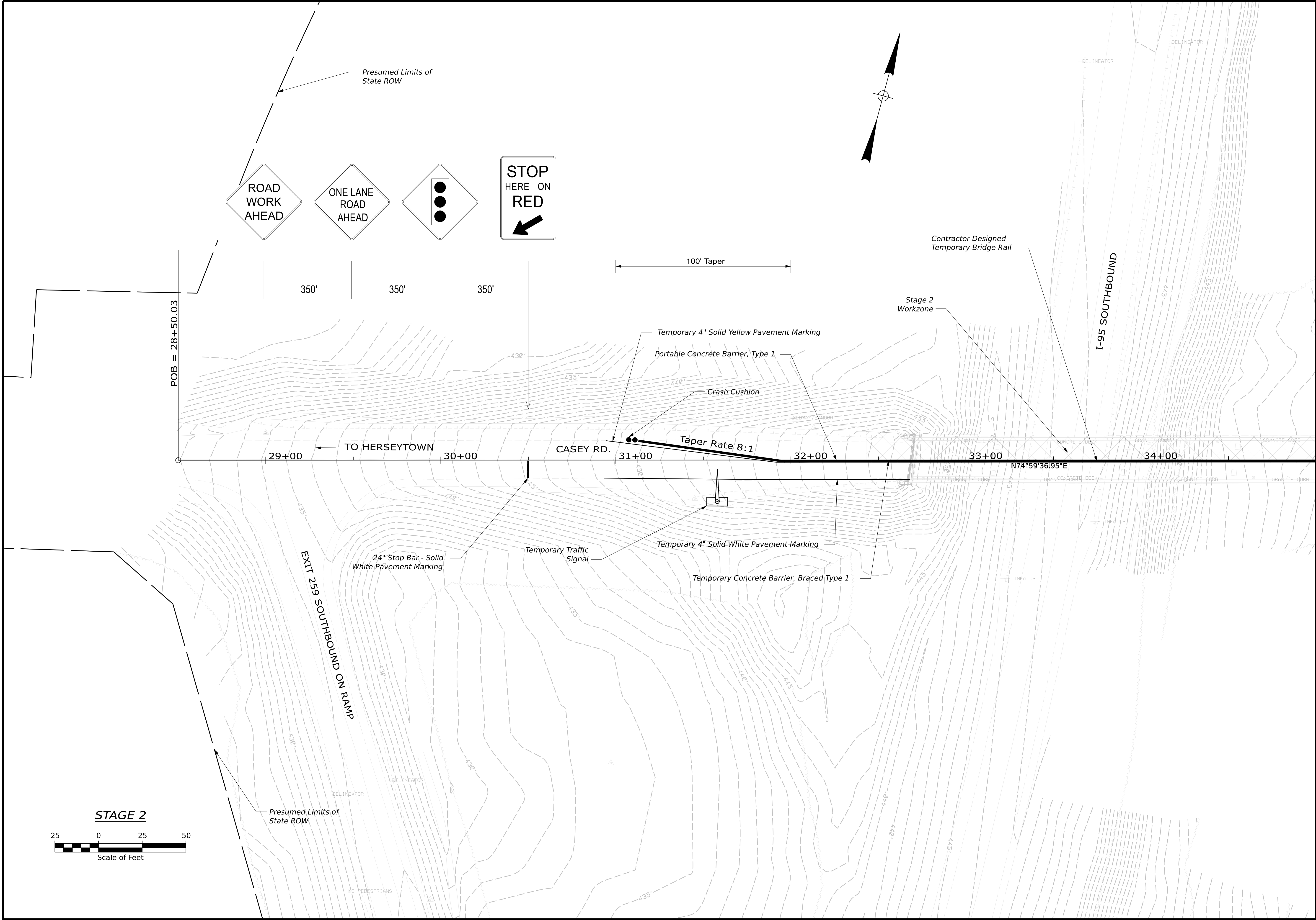
PROPOSED TRANSVERSE SECTION

Remove Curb and Pave 1" Temporary Pavement (Payment for Temporary Pavement Shall Be Incidental to Pay Item 652.361 Maintenance of Traffic Control Devices)

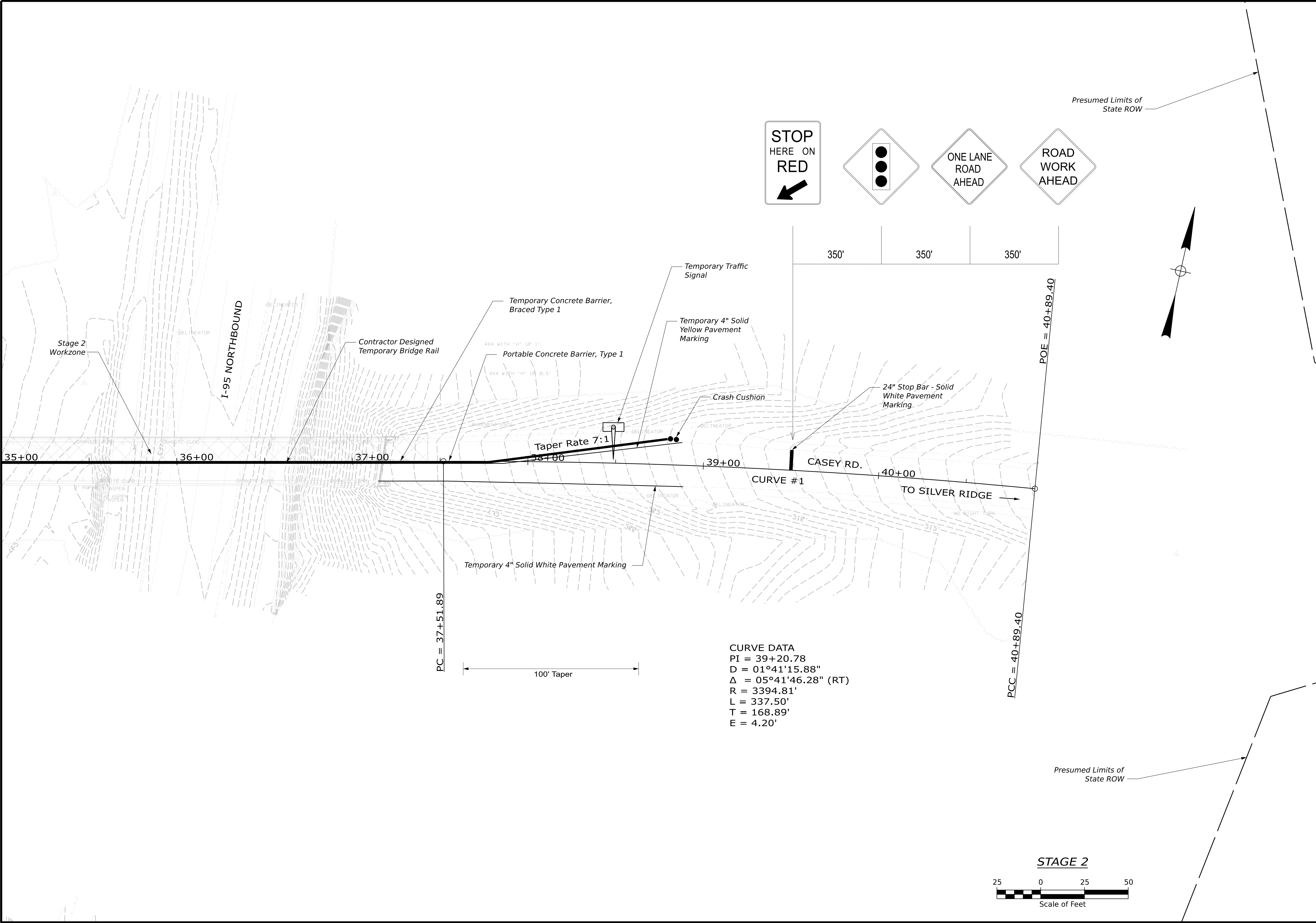
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		FEDERAL AID PROJECT NO. 2623800		WIN		26238.00		BRIDGE NO. 6165		BRIDGE PLAN	
CASEY ROAD / I-95 BRIDGE		AROOSTOOK COUNTY		BENEDICTA		STAGED CONSTRUCTION		SHEET NUMBER		24		OF 29	
PROJ. MANAGER		DENVER SMALL		BY		DATE		SIGNATURE		P.E. NUMBER		DATE	
DESIGNED-DETAILED		S. LINDSLEY		E. MORRISON		11-24							
CHECKED-REVIEWED		D. WHITE		B. COLBURN		11-24							
DESIGNED-DETAILED		N. EDWAN		J. FITZPATRICK		11-24							
CHECKED-REVIEWED													
REVISIONS 1													
REVISIONS 2													
REVISIONS 3													
REVISIONS 4													
FIELD CHANGES													



STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		FEDERAL AID PROJECT NO. 2623800		BRIDGE NO. 61.65		WIN 26238.00		BRIDGE PLAN	
CASEY ROAD / I-95 BRIDGE		BENEDICTA		AROOSTOOK COUNTY		TRAFFIC CONTROL PLAN		SHEET NUMBER		26	
PROJ. MANAGER		DENVER SMALL		BY		DATE		SIGNATURE		P.E. NUMBER	
DESIGNED-DETAILED		S. LINDSLEY		D. WHITE		11-24		11-24		11-24	
DESIGNED-DETAILED		J. LUND		N. EDWAN		11-24		11-24		11-24	
REVISIONS 1											
REVISIONS 2											
REVISIONS 3											
REVISIONS 4											
FIELD CHANGES											
DATE		DATE		DATE		DATE		DATE		DATE	



STATE OF MAINE DEPARTMENT OF TRANSPORTATION FEDERAL AID PROJECT NO. 2623800	SIGNATURE		DATE
	P.E. NUMBER		DATE
	BRIDGE NO. 61.65		WIN 26238.00
SHEET NUMBER		BRIDGE PLAN	
27		26238.00	
OF 29			



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
FEDERAL AID PROJECT NO. 2623800

PROJ. MANAGER
DENVER SMALL
S. LINDSLEY

CHECKED-REVIEWED
D. WHITE

DESIGNED-DETAILED
N. EDWAN

REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

DATE
11-24

BY
E. MORRISON
B. COLBURN
J. FITZPATRICK

SIGNATURE
P.E. NUMBER
DATE

CASEY ROAD / I-95 BRIDGE
BENEDICTA
AROOSTOOK COUNTY

SHEET NUMBER
28
OF 29

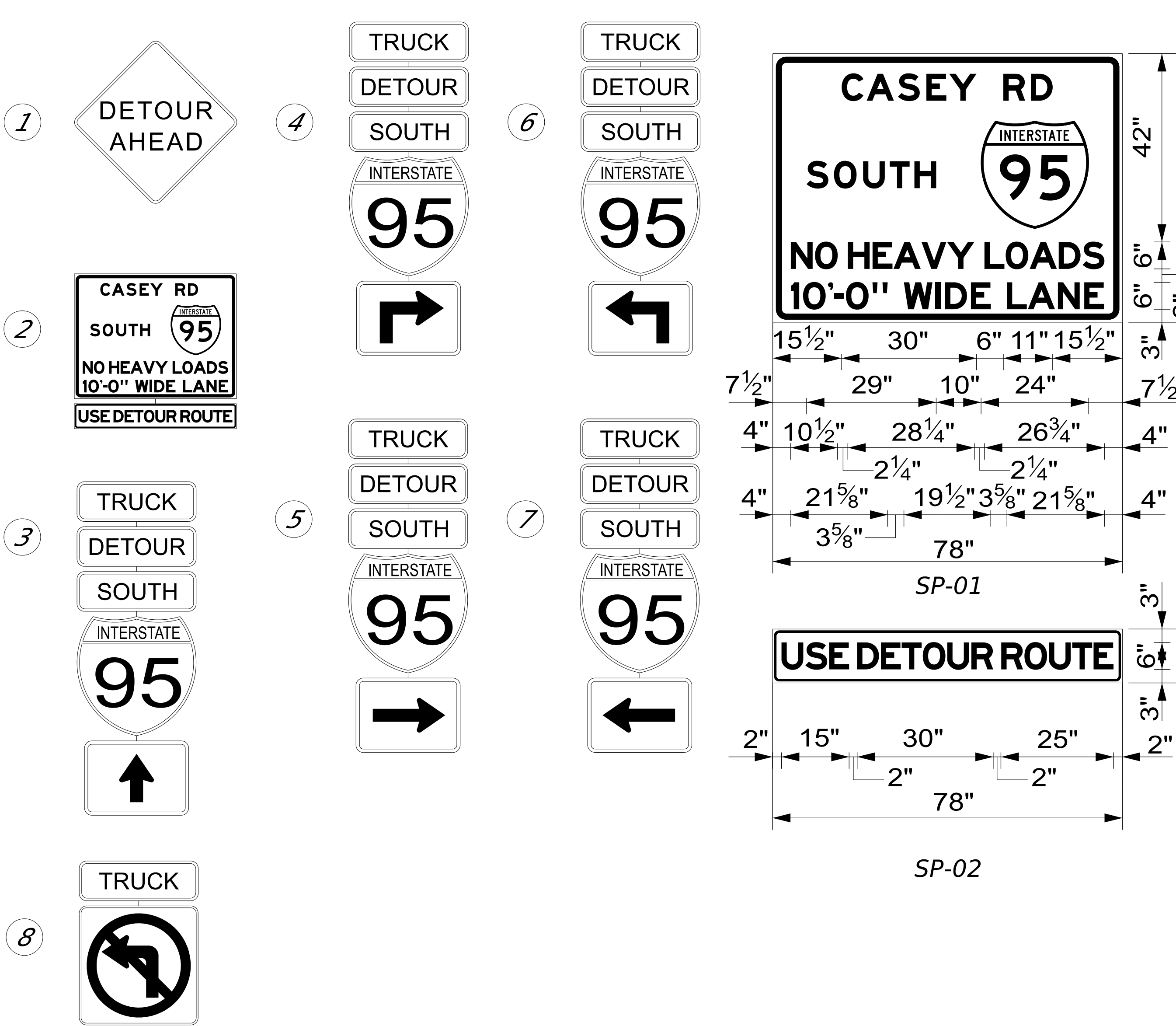
TRAFFIC CONTROL PLAN

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
FEDERAL AID PROJECT NO. 2623800

BRIDGE NO. 61.65
WIN
26238.00

BRIDGE PLAN

Filename: M:\DDE\Worksets\MEDOT\CS2023\26238_00\BRIDGE\--Sheet\HWY_Traffic P2.dgn



DETOUR NOTES

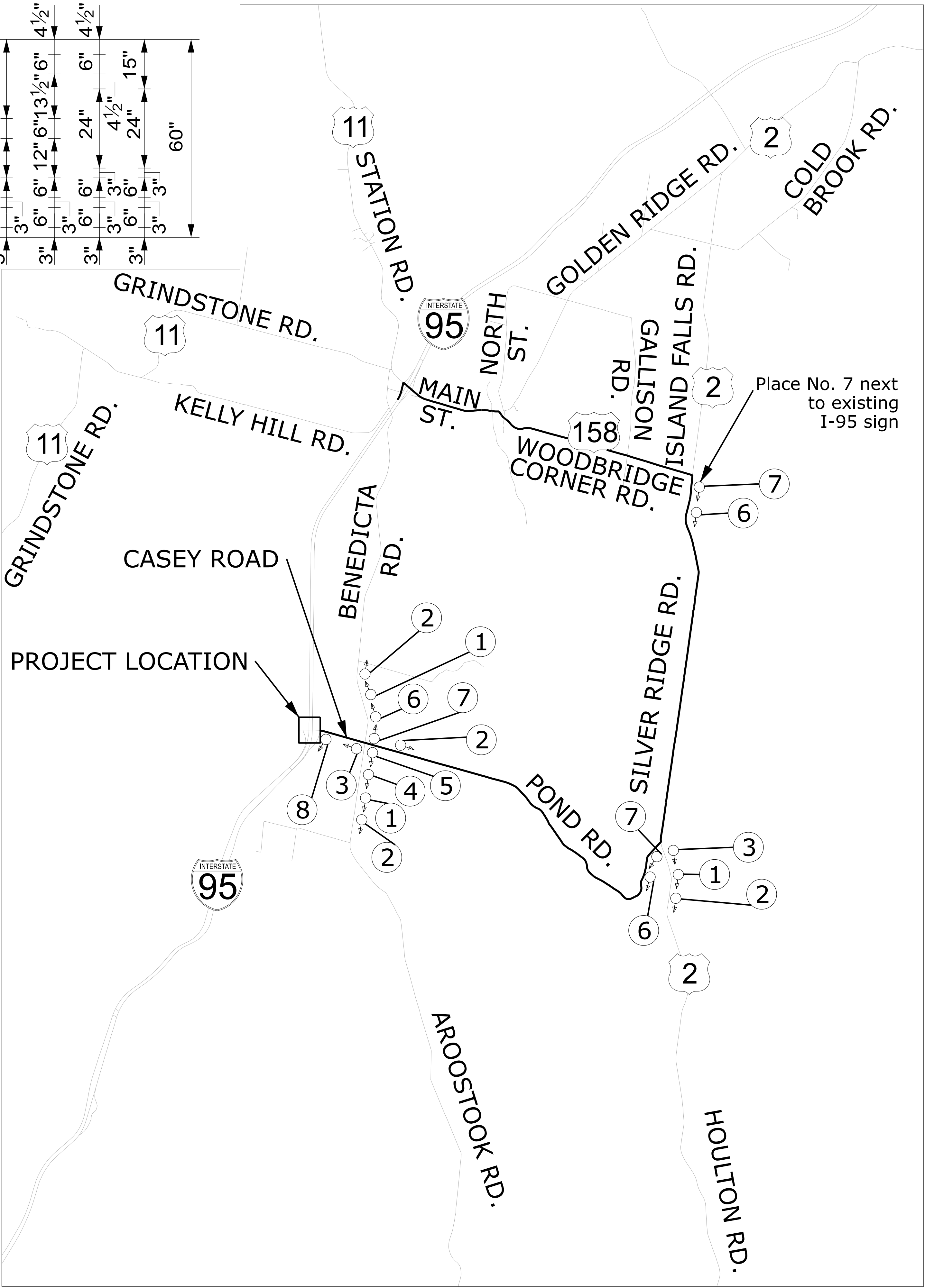
1. All sign locations are approximate, actual locations shall be determined in the field by the Resident.

2. All modifications to traffic control devices shall be in accordance with the Manual On Uniform Traffic Control Devices. Changes and adjustments to traffic control devices shall be approved by the Resident prior to implementation.

3. Any and all changes and adjustments to traffic control devices shall be included in the Traffic Control Plan submitted. The Traffic Control Plan shall be submitted, designed, and stamped by a Professional Engineer licensed in State of Maine, and shall be approved by the Resident prior to implementation.
4. The Contractor shall cover all existing signs that conflict with work zone signs. Payment will be incidental to Pay Item 652.35.

5. In addition to signs shown, the Contractor shall place portable changeable message signs prior to closure. Locations and messages to be determined by the Contractor and approved by the Resident.

6. Additional signs may be needed as directed by the Resident.



STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		FEDERAL AID PROJECT NO. 2623800		WIN 26238.00		BRIDGE PLAN	
CASEY ROAD / I-95 BRIDGE		AROOSTOOK COUNTY		BENEDICTA		SHEET NUMBER			
						29			
DETOUR PLAN		AROOSTOOK COUNTY		BENEDICTA		OF 29			