

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Tenth Edition 2024.

DESIGN LOADING

Live Load.....HL - 93 Modified for Strength I

HYDROLOGIC DATA

Drainage Area	1.22 sq mi
Discharge (Q10)	135 cfs
Design Discharge (Q50)	210 cfs
Check Discharge (Q100)	240 cfs
Headwater Elevation (Q10) at MHHW	9.34 ft
Headwater Elevation (Q50) at MHHW	9.34 ft
Headwater Elevation (Q100) at MHHW	9.37 ft
Mean Lower Low Water (MLLW)	-9.93 ft
Mean Low Water (MLW)	-9.49 ft
Mean Tide Level (MTL)	-0.31 ft
Mean High Water (MHW)	8.86 ft
Mean Higher High Water (MHHW)	9.34 ft
Highest Astronomical Tide (HAT)	12.83 ft

MATERIALS

Concrete:	
Precast	Class "P"
All Other	Class "A"
Reinforcing:	
Plain Reinforcing Steel	ASTM A615, Grade 60
Glass Fiber Reinforcing Polymer (GFRP)	ASTM D7957
Low-Carbon Chromium Steel:	ASTM A1035, Type CS, Grade 100
Prestressing Strands	AASHTO M 203 (ASTM A416), Grade 270, Low Relaxation

BASIC DESIGN STRESSES

Concrete:	
Class "A"	f 'c = 4,000 psi
Class "P"	f 'c = 8,000psi
	f 'ci = 6,000 psi
Reinforcing:	
Plain Reinforcing Steel	f y = 60,000 psi
Glass Fiber Reinforced Polymer	
Minimum Tensile Strength	f fu = 100,000 psi
Minimum Elastic Modulus	E f = 8,700,000 psi
Minimum Nominal Design Tensile Strain	e fu = 1.1%
Low-Carbon Chromium Steel:	f y = 100,000 psi
Prestressing Strand	F μ = 270,000 psi

PERRY
WASHINGTON COUNTY
SMELT BROOK BRIDGE
OVER
SMELT BROOK

FEDERAL AID PROJECT NO. 02663007
BRIDGE NO. 2774
PROJECT LENGTH 0.13 MILES

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UTILITIES

Versant Power	Consolidated Communications
FirstLight	Charter Communications

TRAFFIC DATA

Current (2024) AADT	1720
Future (2036) AADT	1820
DHV - % of AADT	13%
Design Hour Volume	237
Heavy Trucks (% of AADT)	11%
Heavy Trucks (% of DHV)	8%
Directional Distribution (% of DHV)	52%
18 kip Equivalent P 2.0	84
18 kip Equivalent P 2.5	80
Design Speed (mph)	45

MAINTENANCE OF TRAFFIC

Maintain one lane of alternating one - way traffic on temporary bridge upstream of existing bridge controlled by temporary traffic signals.
Maintain two lanes of traffic on approaches to the temporary detour.

Lat./Long. 44°57'16.06" N 67°06'02.33" W



PROJECT LOCATION	Smelt Brook Bridge (#2774) over Smelt Brook. Located 0.10 of a mile west of Thompson Store Road. FHWA INFRA Grant recipient.
OUTLINE OF WORK	Bridge Replacement

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE 8-25-25
ACTING COMMISSIONER: [Signature]		CHIEF ENGINEER: [Signature]

STATE OF MAINE ENGINEER ELIZABETH S. BROWNELL No. 14337 PROFESSIONAL	SIGNATURE [Signature] 14337	P.E. NUMBER 8/12/2025	DATE 8-20-2025
PROJ. MANAGER MARK PARLIN	BY MARK PARLIN	DATE 7/11/2025	
DESIGN-DETAILED EBROWNELL	CHECKED-REVIEWED EBROWNELL	DESIGN-DETAILED EBROWNELL	
REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4
FIELD CHANGES			

BRIDGE NO. 2774 CROSSING SMELT BROOK PERRY	TITLE SHEET
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SHEET NUMBER
1
OF 35

Date: 8/12/2025

Username: EBrownell

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
201.11	CLEARING	1.5	AC
202.19	REMOVING EXISTING BRIDGE (575 CY)	1	LS
202.202	REMOVING PAVEMENT SURFACE	4300	SY
203.20	COMMON EXCAVATION	9750	CY
203.21	ROCK EXCAVATION	195	CY
203.25	GRANULAR BORROW	680	CY
206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES	565	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	3425	CY
403.2081	HOT MIX ASPHALT, 12.5 MM NOMINAL MAX SIZE (POLYMER MODIFIED)	230	T
403.211	HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (SHIMMING)	25	T
403.2131	HOT MIX ASPHALT, 12.5 MM NOM MAX SIZE (BASE AND INTERMEDIATE COURSE POLYMER MODIFIED)	555	T
409.15	BITUMINOUS TACK COAT, APPLIED	170	G
461.131	TEMPORARY PAVEMENT	880	T
501.502	ROCK-SOCKETED H-PILES 117 LB/FT, IN PLACE	300	LF
501.54	STEEL H-BEAM PILES 117 LB/FT, DELIVERED	300	LF
501.804	DRILLING EQUIPMENT MOBILIZATION, ROCK SOCKETED H-PILE	1	LS
502.219	STRUCTURAL CONCRETE, ABUTMENTS & RETAINING WALLS (80 CY)	1	LS
502.261	STRUCTURAL CONCRETE ROADWAY AND SIDEWALK SLAB ON CONCRETE BRIDGE (220 CY)	1	LS
502.31	STRUCTURAL CONCRETE APPROACH SLABS (24 CY)	1	LS
502.49	STRUCTURAL CONCRETE CURBS AND SIDEWALKS (16 CY)	1	LS
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	18000	LB
503.13	REINFORCING STEEL, PLACING	18000	LB
503.19	LOW-CARBON CHROMIUM REINFORCEMENT, FABRICATED AND DELIVERED	17000	LB
503.20	LOW-CARBON CHROMIUM REINFORCEMENT, PLACING	17000	LB
507.0821	STEEL BRIDGE RAILING, 3 BAR (275 LF)	1	LS
507.0822	STEEL APPROACH RAILING, 3 BAR	4	EA
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE (430 SY)	1	LS
510.10	SPECIAL DETOUR, VEHICULAR AND PEDESTRIAN TRAFFIC NOT SEPARATED	1	LS
511.07	COFFERDAM	1	LS
512.081	FRENCH DRAINS (113 LF)	1	LS
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES (140 SY)	1	LS
526.301	TEMPORARY CONCRETE BARRIER TYPE 1 (50 LF)	1	LS
527.34	WORK ZONE CRASH CUSHION	10	UN
530.30	GFRP, REINFORCEMENT BARS, FABRICATED & DELIVERED	25000	LF
530.31	GFRP, REINFORCEMENT BARS, PLACED	25000	LF
535.61	PRESTRESSED STRUCTURAL CONCRETE I-GIRDERS (558 LF)	1	LS
606.1301	31" W-BEAM GUARDRAIL - MID-WAY SPLICE - SINGLE FACED	413	LF
606.1305	31" W-BEAM GUARDRAIL - MID-WAY SPLICE, FLARED TERMINAL	4	EA
606.1721	BRIDGE TRANSITION - TYPE 1	4	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	8	EA
610.08	PLAIN RIPRAP	8	CY
610.16	HEAVY RIPRAP	3500	CY
610.18	STONE DITCH PROTECTION	41	CY
613.319	EROSION CONTROL BLANKET	25	SY
615.07	LOAM	90	CY
618.14	SEEDING METHOD NUMBER 2	60	UN
619.12	MULCH	60	UN
619.14	EROSION CONTROL MIX	610	CY
620.58	EROSION CONTROL GEOTEXTILE	2610	SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	2600	LF
627.77	REMOVING EXISTING PAVEMENT MARKINGS	2000	SF
627.78	TEMPORARY 4" PAVEMENT MARKING LINE, WHITE OR YELLOW	6400	LF
629.05	HAND LABOR, STRAIGHT TIME	20	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	10	HR
631.14	GRADER (INCLUDING OPERATOR)	10	HR
631.15	ROLLER, EARTH, AND BASE COURSE (INCLUDING OPERATOR)	10	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	10	HR
631.18	CHAIN SAW RENTAL (INCLUDING OPERATOR)	10	HR
631.20	STUMP CHIPPER RENTAL (INCLUDING OPERATOR)	10	HR
631.22	FRONT END LOADER (INCLUDING OPERATOR)	10	HR
631.32	CULVERT CLEANER (INCLUDING OPERATOR)	10	HR
639.19	FIELD OFFICE TYPE B	1	EA
643.72	TEMPORARY TRAFFIC SIGNAL	1	EA
645.292	REGULATORY, WARNING, CONFIRMATION, AND ROUTE MARKER ASSEMBLY SIGNS TYPE II	36	SF
652.312	TYPE III BARRICADE	10	EA
652.33	DRUM	50	EA
652.34	CONE	25	EA
652.35	CONSTRUCTION SIGNS	300	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	1	LS
652.38	FLAGGERS	600	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

GENERAL CONSTRUCTION NOTES

1. For easements, construction limits, and right of way lines, refer to the Right of Way Map.
2. The clearing limits as shown on the plans are approximate. The actual clearing limits for payment will be established in the field 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. All embankment material, except as otherwise shown, placed below EL. 18.0 shall be Granular Borrow meeting the requirements of Standard Specifications Subsection 703.19, Granular Borrow, for Material for Underwater Backfill.
8. Place riprap on sideslopes up to EL. 18.0
9. Construct the riprap shelf at EL. 21.00 at Abutment No. 1 and at Abutment No. 2.
10. Place loam 2 inches deep on all new or reconstructed sideslopes or as directed by the Resident.
11. Seeding Method No. 2 is anticipated on all undisturbed slope areas.
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 Specifications Section 619, Mulch. Payment will be made under Pay Item 619.14, Erosion Control Mix.
13. Place a 24 inch wide strip of Erosion Control Blanket on the sideslopes along the top of the riprap and behind the wingwalls.
14. A MASH compliant guardrail end treatment shall be installed concurrently with the placement of each section of beam guardrail.
15. Where it is apparent that runoff will cause continual erosion, 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. Payment will be made under the appropriate Contract Items.
16. Where called for on the plans, where new pavement joins existing pavement, 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.
17. Inlets and outlets of all culverts shall be riprapped unless otherwise noted on the plans or directed by the Resident.
18. No existing drainage shall be removed, abandoned, or plugged without prior approval of the Resident.
19. Existing culverts and catch basins will be cleaned as directed by the Resident under the appropriate Contract Items.
20. Sign posts and any associated breakaway devices necessary will be considered incidental to Item 645.292, Regulatory, Warning, Confirmation, and Route Marker Assembly Signs Type II.
21. Two reflectORIZED guardrail markers shall be installed at each guardrail end.
22. Protective Coating for Concrete Surfaces shall be applied to the following areas:

All exposed surfaces of concrete curbs, Fascias down to the drip notch, Top of abutment backwalls and wingwalls, and To one foot below the ground on vertical walls against earth.
23. Project information referred to below may be accessed at the following MaineDOT web address: <https://www.maine.gov/dot/doing-business/bid-opportunities>
24. 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.

25. Reports on hydrology and/or hydraulics applicable to the bridge site may be accessed at the MaineDOT web address. The reports are based on MaineDOT's interpretation of the information obtained for the subject site. No assurance is given that the information or the conclusions of the report will be representative of actual conditions at the time of construction.

26. The project geotechnical report titled: Geotechnical Design Report, Smelt Brook Bridge, Soils Report, 2025-08-13 may be accessed at the MaineDOT web address.

27. Geotechnical information furnished or referred to in this plan set is for the use of the Bidders and the Contractor. No assurance is given that the information or interpretations will be representative of actual subsurface conditions at the construction site. MaineDOT will not be responsible for the Bidders' or Contractor's interpretations of, or conclusions drawn from, the geotechnical information. The boring logs contained in the plan set present factual and interpretive subsurface information collected at discrete locations. Data provided may not be representative of the subsurface conditions between the boring locations.

28. 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 and Time.

29. This site lends itself to different cofferdam configurations, depending on the Contractor's means and methods. Rather than speculate on how the bidders will configure the cofferdams, the Department has provided a single pay item to be used to cover all cofferdams on the project, regardless of how many are actually used.

30. Payment for equipment, labor and materials to access the work, as well as to re-establish original ground, will be considered incidental to related Contract Items.

31. The Contractor will be responsible for maintaining all existing mailboxes to ensure that the mail will be deliverable. Payment for this work will be considered incidental to the Contract.

STATE OF MAINE

DEPARTMENT OF TRANSPORTATION

Federal Project No. 02663007

WIN 026630.07

PROJ. MANAGER

DESIGN-DETAILED

CHECKED-REVIEWED

DESIGN-DETAILED02

DESIGN-DETAILED03

REVISIONS 1

REVISIONS 2

REVISIONS 3

REVISIONS 4

FIELD CHANGES

MARK PARLIN

EBROWNELL

EBROWNELL

EBROWNELL

EBROWNELL

EBROWNELL

EBROWNELL

EBROWNELL

EBROWNELL

BY

DATE

7/11/2025

7/11/2025

SIGNATURE

P.E. NUMBER

DATE

BRIDGE NO. 2774

CROSSING SMELT BROOK

PERRY

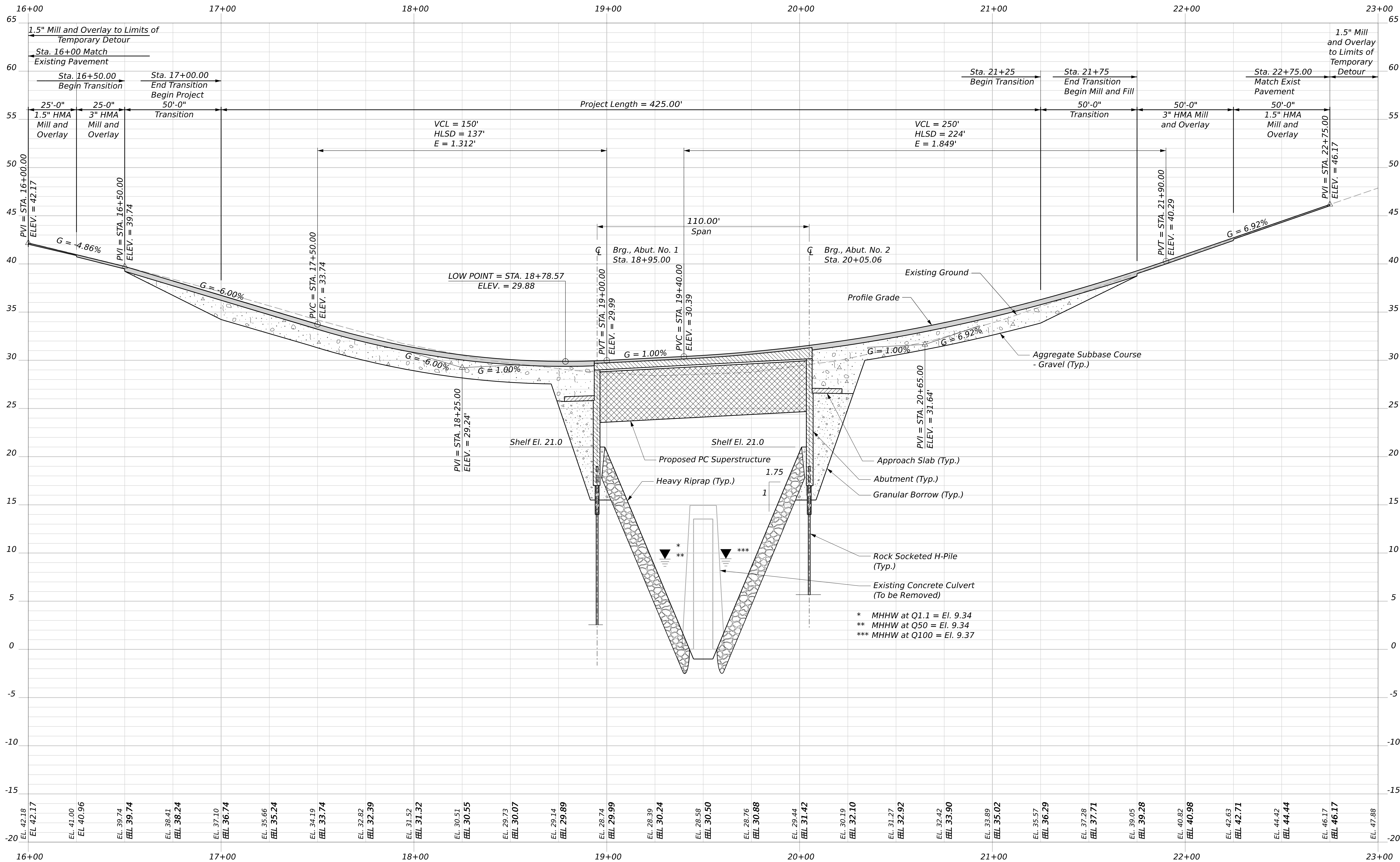
ESTIMATED QUANTITIES AND GENERAL NOTES

SHEET NUMBER

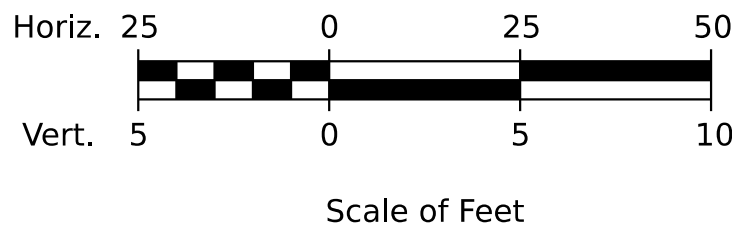
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OF 35



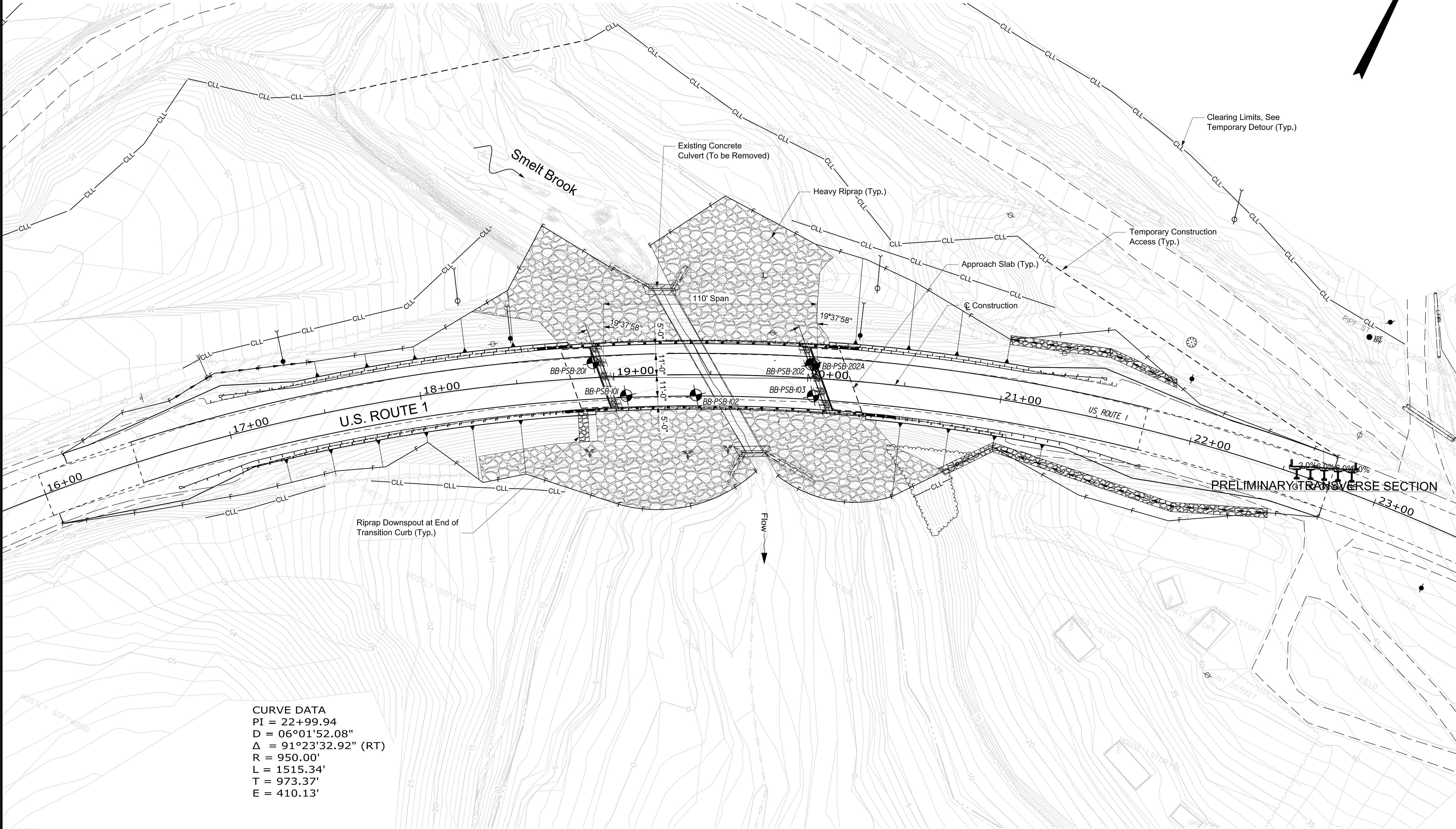


PROFILE



PROJ. MANAGER	MARK PARLIN	BY	DATE
DESIGN-DETAILED	EBROWNELL	EBURGESS	8/6/2025
CHECKED-REVIEWED	EBROWNELL	EBURGESS	8/6/2025
DESIGN-DETAILED			
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BRIDGE NO. 2774 CROSSING SMELT BROOK PERRY	SIGNATURE
PROFILE	P.E. NUMBER
	DATE



CURVE DATA
PI = 22+99.94
D = 06°01'52.08"
Δ = 91°23'32.92" (RT)
R = 950.00'
L = 1515.34'
T = 973.37'
E = 410.13'

LEGEND

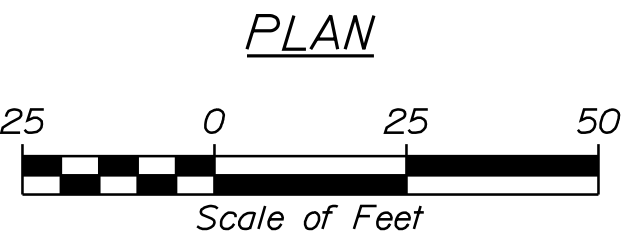
CASED WASHED BORINGS

SOURCE

Base plan is developed from electronic files (Contours.dgn, Text.dgn, Topo.dgn) provided to GEI by Thornton Tomasetti on April 26, 2024, electronic files (Alignment_Route 1.dgn, and Plan_Route 1.dgn) provided to GEI by Thornton Tomasetti on May 22, 2025 and electronic files (Corridor_Route 1_Linework.dgn and Corridor_Route 1.dgn) provided to GEI by Thornton Tomasetti on June 31, 2025.

NOTES

- Borings BB-PSB-101 through BB-PSB-103 were drilled by New England Boring Contractors of Hermon, Maine between April 12 and April 18, 2024 and were observed by GEI personnel.
- Borings BB-PSB-201 through BB-PSB-202A were drilled by New England Boring Contractors of Hermon, Maine between May 14 and May 15, 2025 and were observed by GEI personnel.
- As-drilled boring locations for borings BB-PSB-101 through BB-PSB-103 were surveyed by MaineDOT and provided to GEI.
- As-drilled boring locations for borings BB-PSB-201 through BB-PSB-202A were located using tape ties and should be considered accurate to the degree implied.

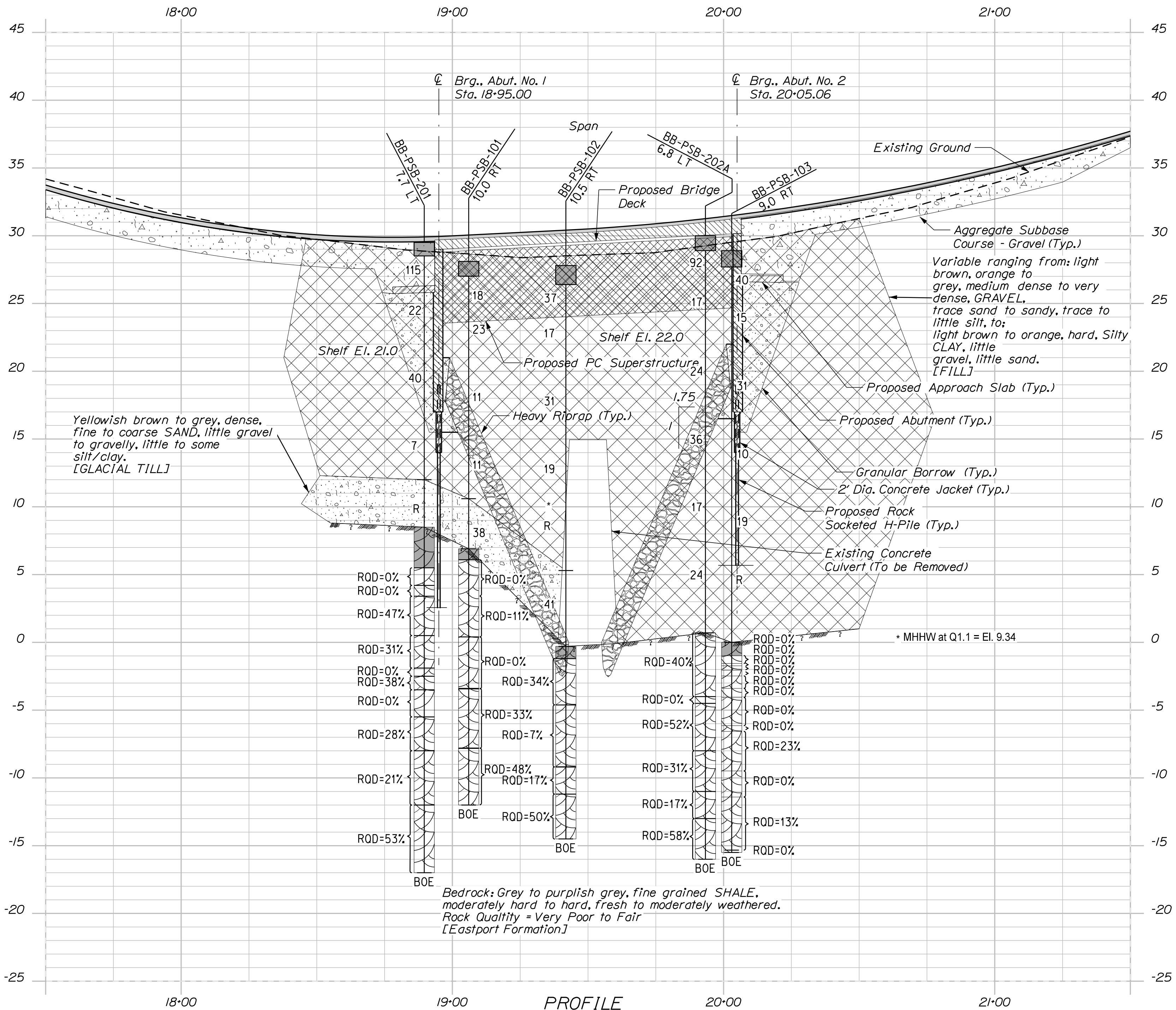


STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
APPROVED	DATE
COMMISSIONER:	
CHIEF ENGINEER:	

PROJ. MANAGER	BY	DATE	SIGNATURE
M. JOHNESE	M. JOHNESE	7/17/2025	
CHECKED/REVIEWED	BY	DATE	P.E. NUMBER
M. JOHNESE	M. JOHNESE	8/5/2025	
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BRIDGE NO. 2774 CROSSING SMELT BROOK PERRY	BORING LOCATION PLAN
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SHEET NUMBER
5
OF 35



NOTES

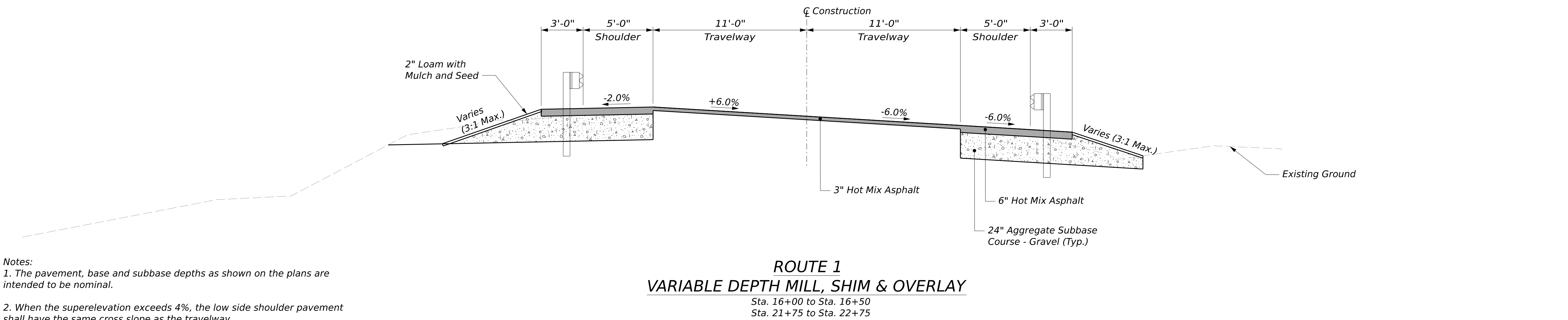
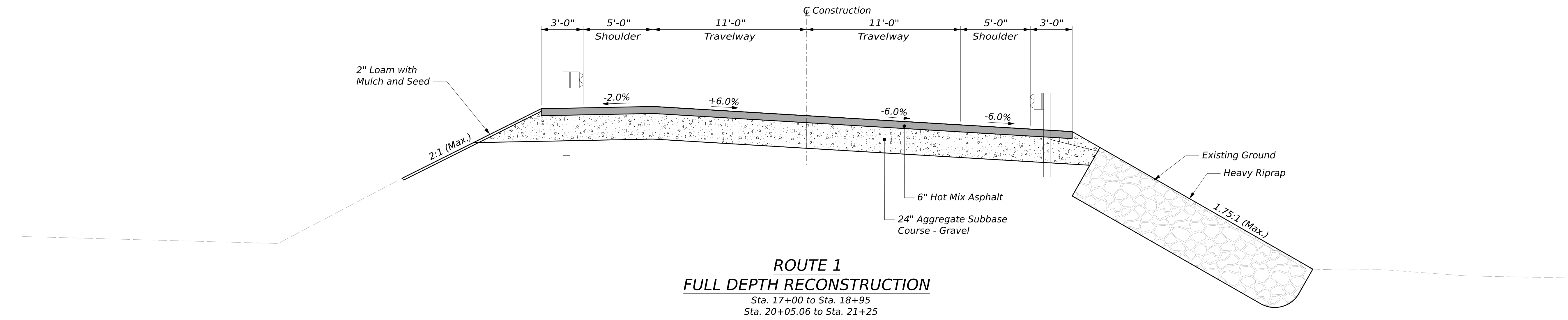
1) Profile developed from electronic files (Profile.dgn) provided to GEI by Thornton Tomasetti on May 22, 2025 and electronic files (Profile.Route 1.dgn) provided to GEI by Thornton Tomasetti on June 31, 2025.

2) As-drilled boring locations for borings BB-PSB-101 through BB-PSB-103 were surveyed by MaineDOT and provided to GEI.

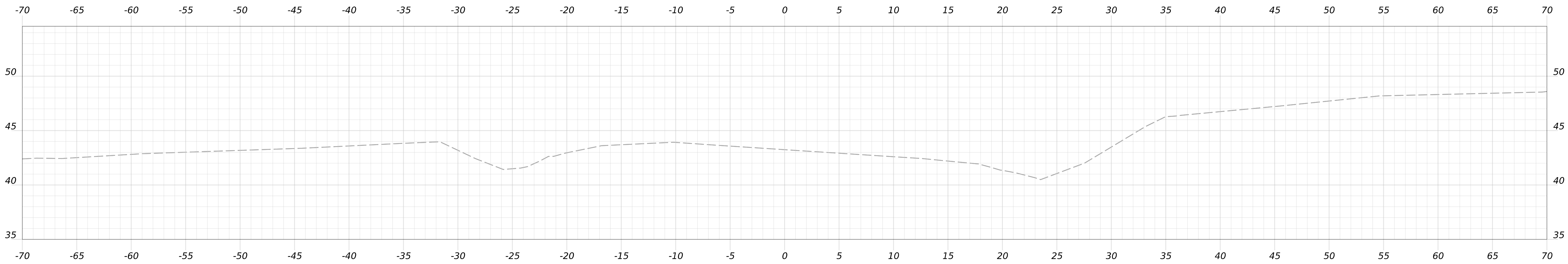
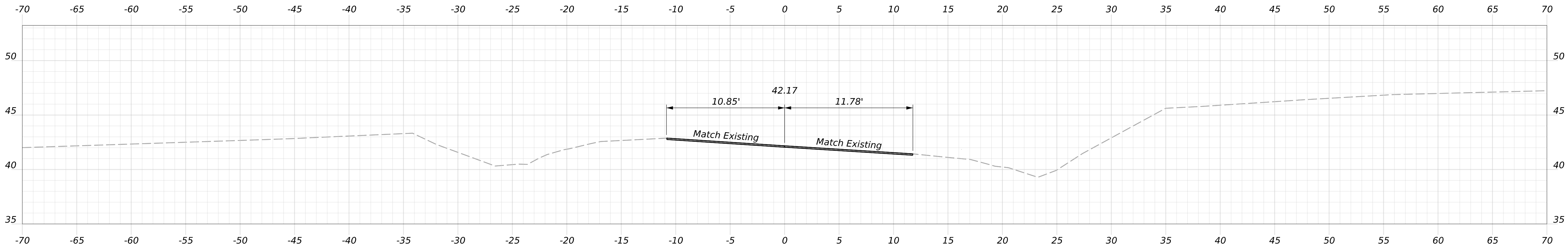
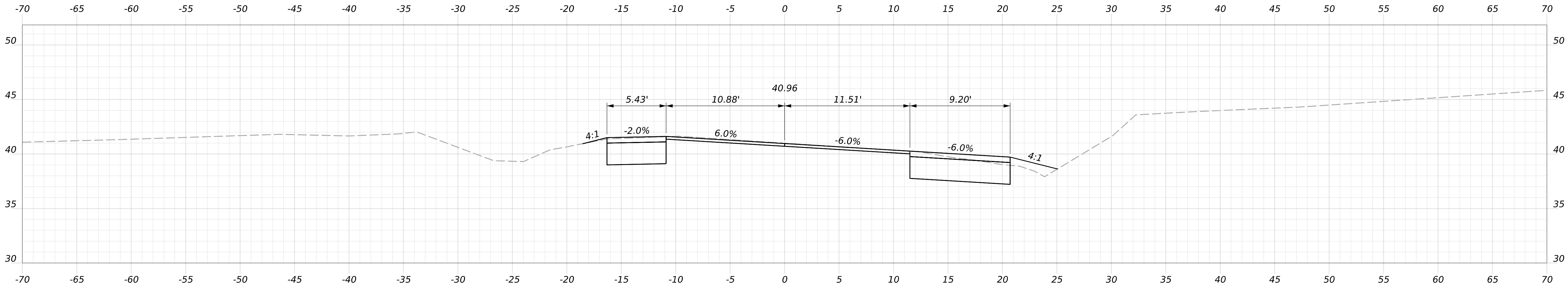
3) As-drilled boring locations for borings BB-PSB-201 through BB-PSB-202A were located using tape ties and should be considered accurate to the degree implied.

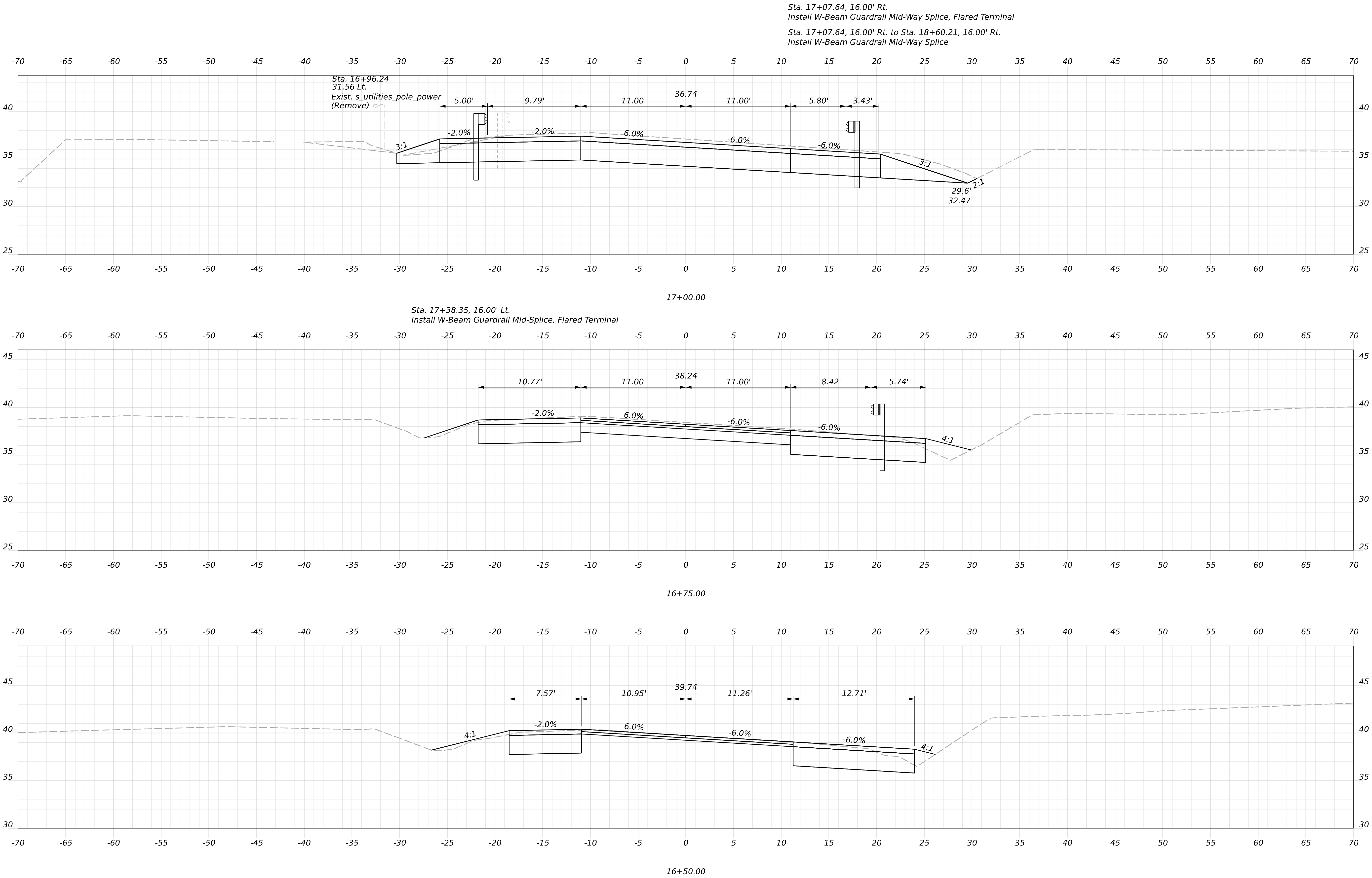
4) Boring BB-PSB-202 is not shown since offset boring BB-PSB-202A was drilled approximately 2 feet away. Boring BB-PSB-202A shown in the profile contains the blow counts from boring BB-PSB-202 since boring BB-PSB-202A was drilled straight down to bedrock without performing SPTs.

5) This generalized interpretive soil profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil transitions may vary and are probably more erratic. For more information refer to the boring logs.

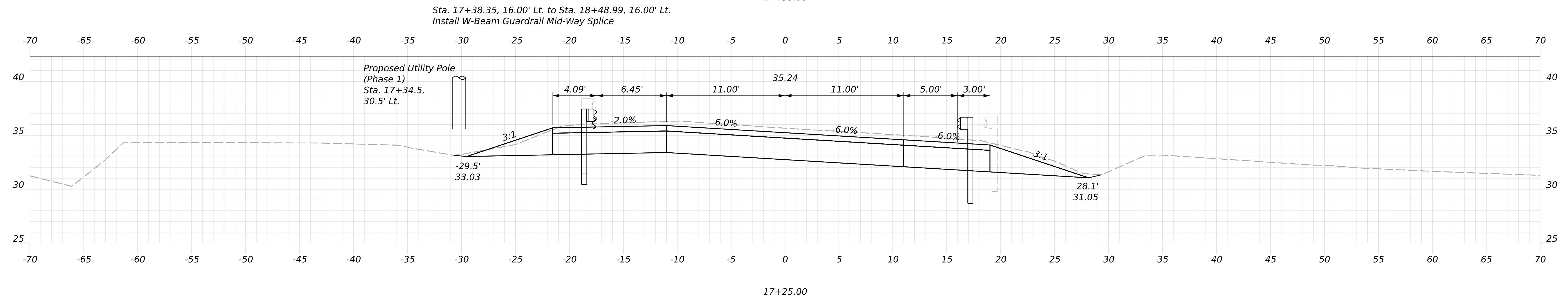
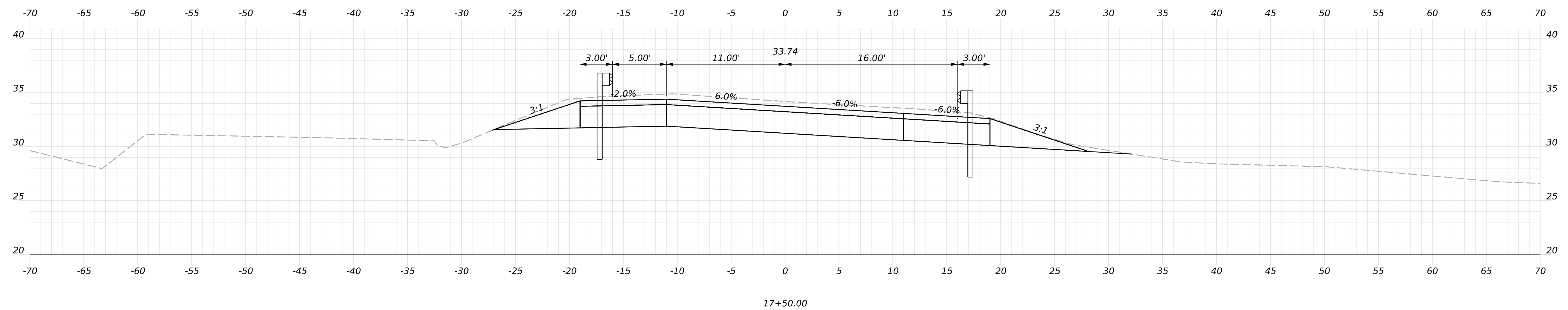
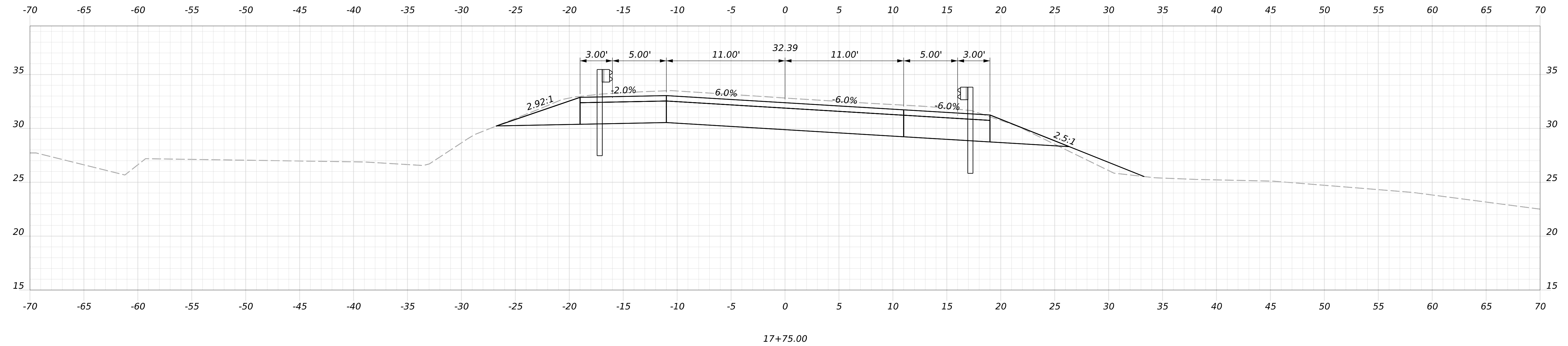


- Notes:
1. The pavement, base and subbase depths as shown on the plans are intended to be nominal.
 2. When the superelevation exceeds 4%, the low side shoulder pavement shall have the same cross slope as the travelway.
 3. Crowns for both normal and superelevation sections for all courses of subbase and pavement shall be straight.
 4. The algebraic difference between the shoulder and travelway cross slopes "rollover" shall not exceed 8%.
 5. The stationing on the typical sections and in the tables is approximate.
 6. Embankment grading presented on the cross sections represents the final finished grade elevations (top of loam to be placed).





STATE OF MAINE DEPARTMENT OF TRANSPORTATION		SIGNATURE		DATE	
Federal Project No. 02663007		P.E. NUMBER		DATE	
WIN 026630.07					
BRIDGE NO. 2774 CROSSING SMELT BROOK PERRY		PROJ. MANAGER		MARK PARLIN	DATE
		DESIGNER/TAILED		E. BROWNELL	8/6/2025
CROSS SECTIONS		CHECKED/REVIEWED		E. BROWNELL	8/6/2025
		DESIGNER/TAILED			
SHEET NUMBER		DESIGNER/TAILED			
		REVISIONS 1			
11		REVISIONS 2			
		REVISIONS 3			
OF 35		REVISIONS 4			
		FIELD CHANGES			



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DEPARTMENT OF TRANSPORTATION

Federal Project No. 02663007

WIN 026630.07

SIGNATURE

P.E. NUMBER

DATE _____

DATE	
------	--

BY

MARK PARLIN

PROJ. MANAGER

DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED

DESIGN3-DETAILED3

REVISIONS 1

DESIGN3-DETAILED3

REVISIONS 1

DESIGN3-DETAILED3

REVISIONS 1

DESIGN3-DETAILED3

REVISIONS 1

DESIGN3-DETAILED3

REVISIONS 1

DESIGN3-DETAILED3
REVISIONS 1

DESIGN3-DETAILED3
REVISIONS 1

DESIGN3-DETAILED3
REVISIONS 1

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REVISIONS 1

DESIGN3-DETAILED3

REVISIONS 1

BRIDGE NO. 2774
CROSSING SMELT BROOK
PERRY

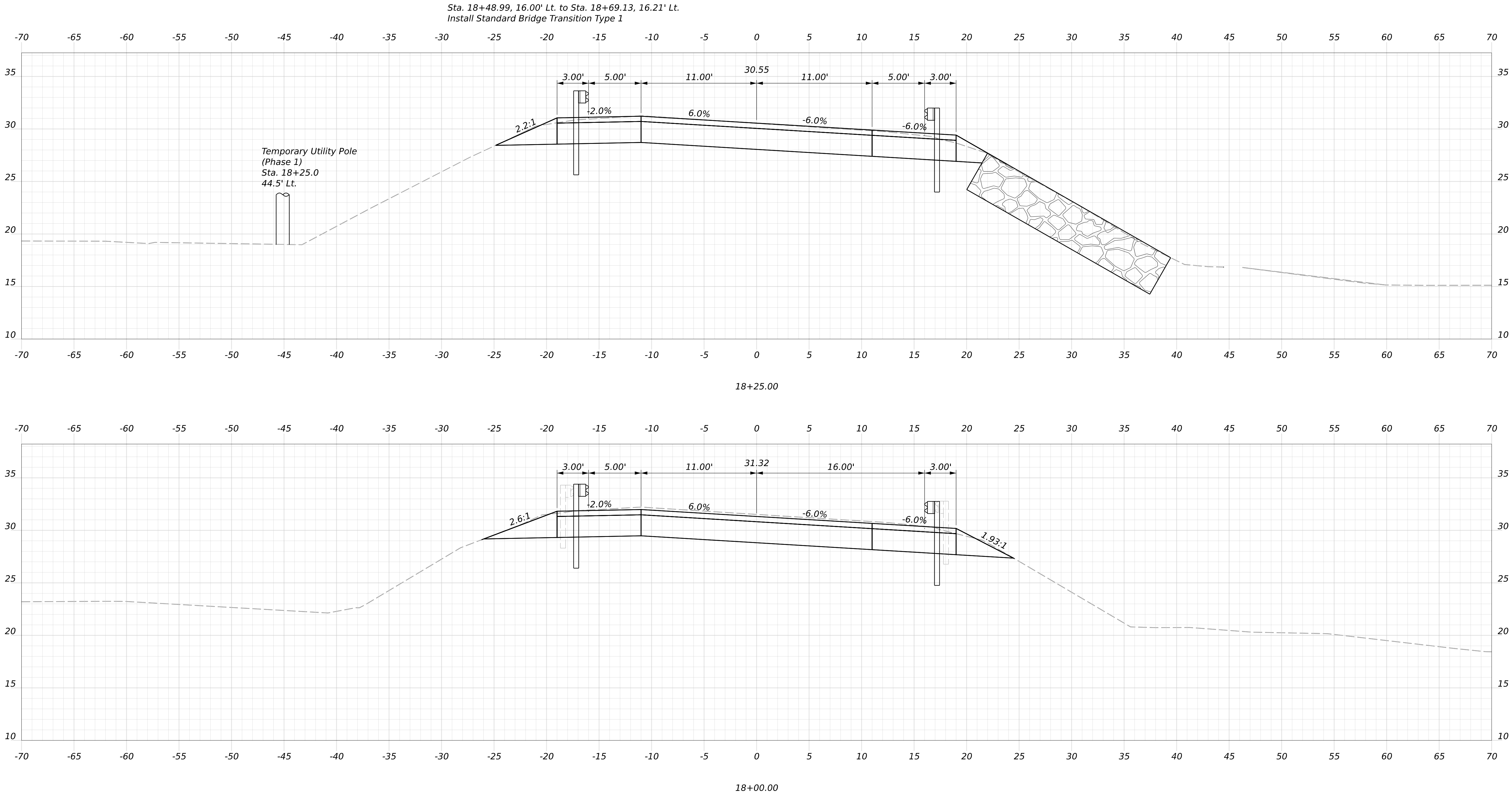
CROSSING SMELT BROOK

CROSS SECTIONS

SHEET NUMBER

12

OF 35



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 02663007
WIN 026630.07

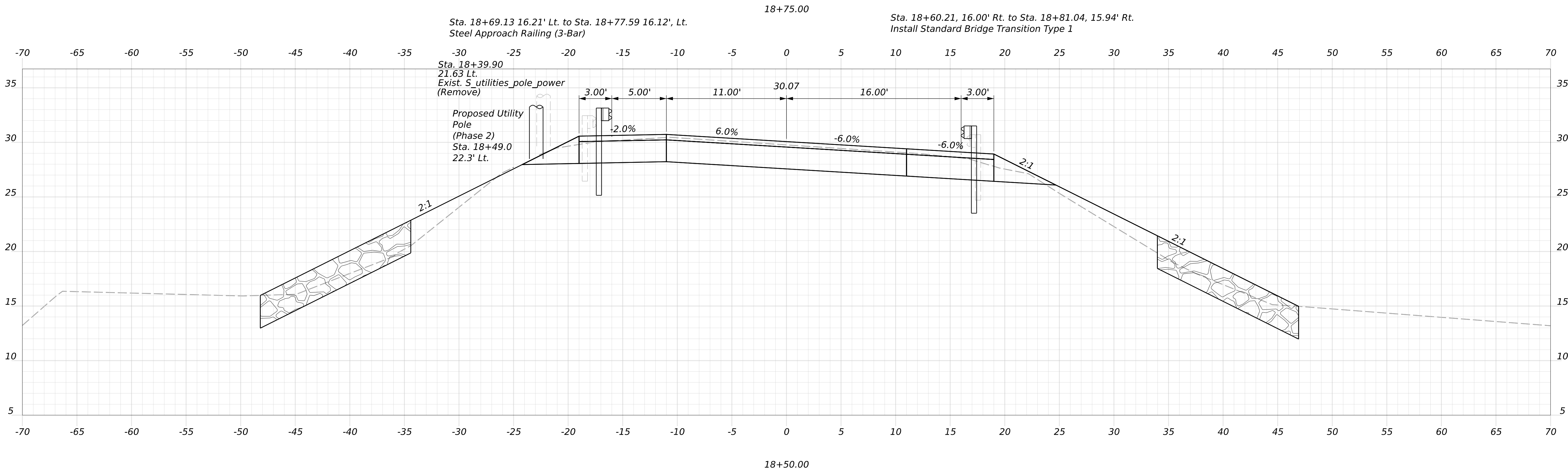
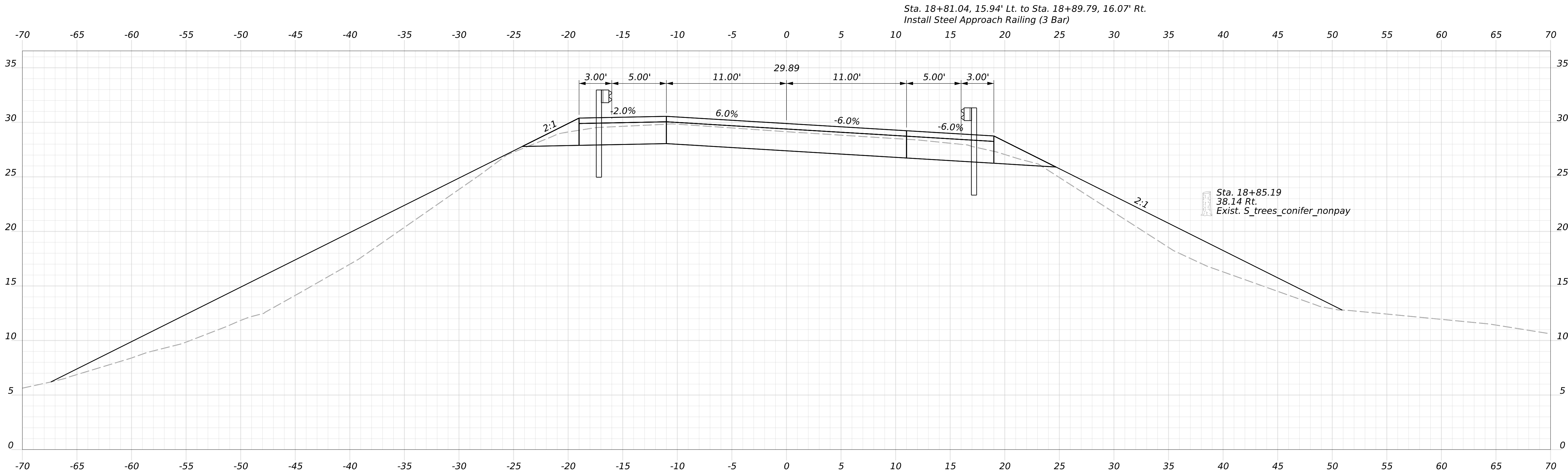
PROJ. MANAGER	MARK PARLIN	BY	DATE
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DESIGN-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE
P.E. NUMBER
DATE

BRIDGE NO. 2774
CROSSING SMELT BROOK
PERRY

SHEET NUMBER
13
OF 35

CROSS SECTIONS

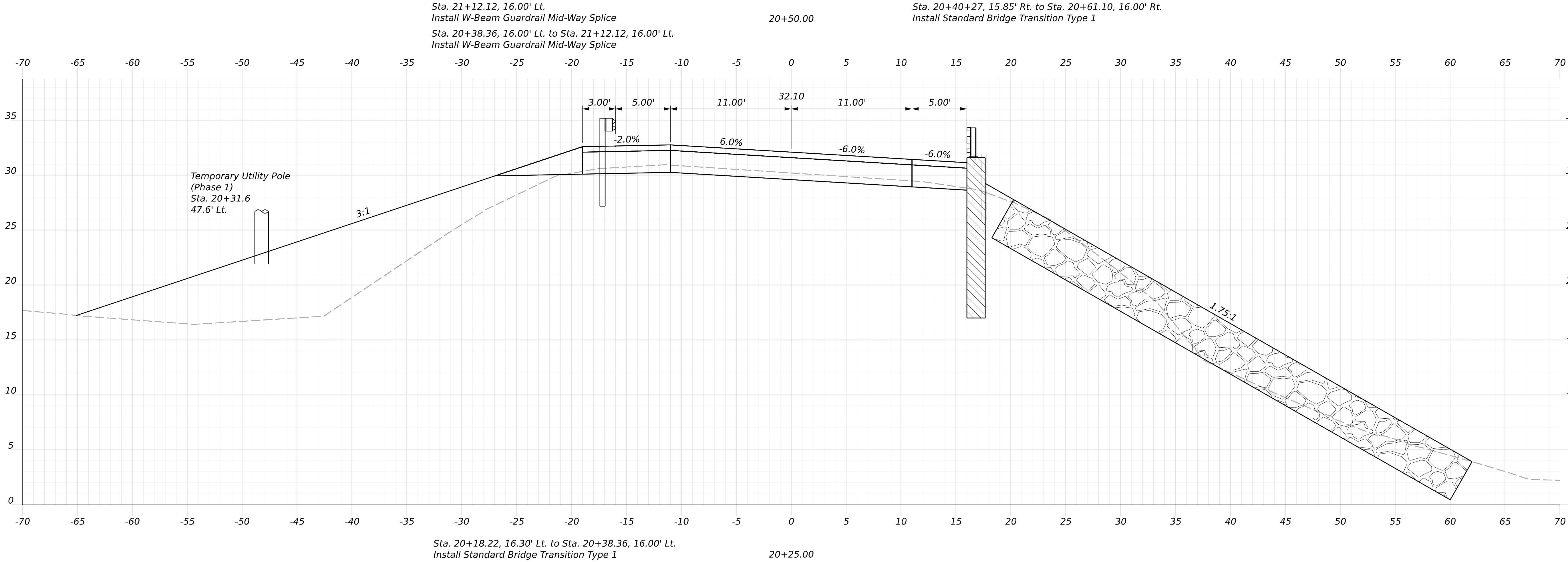
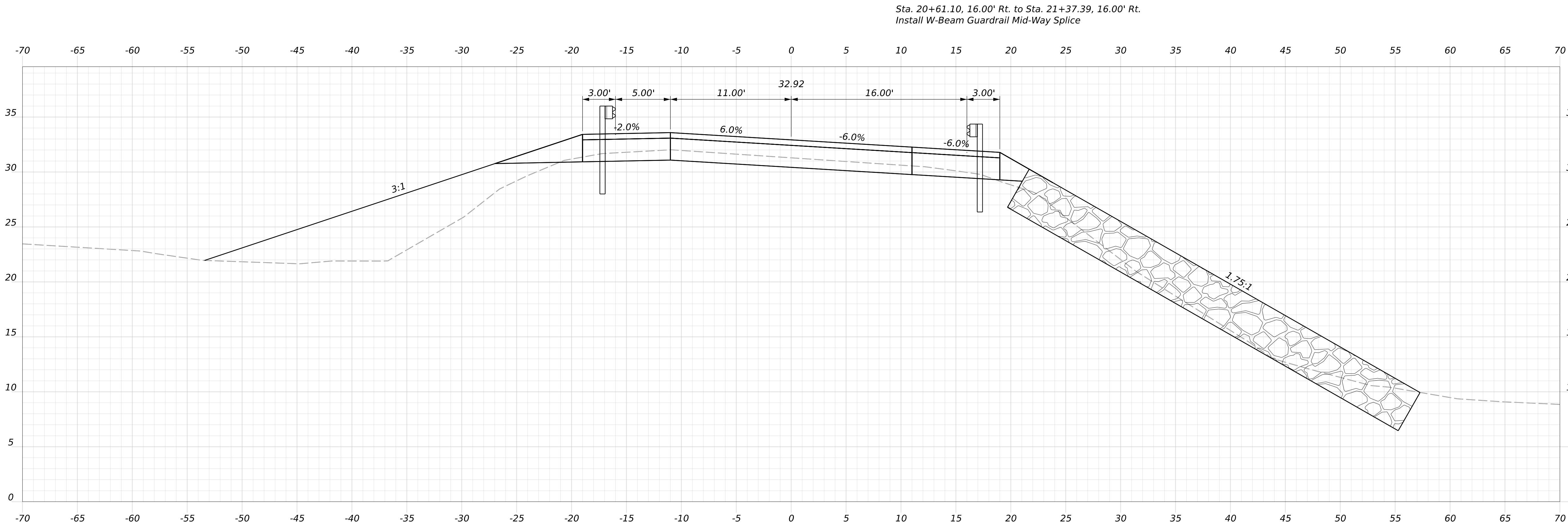


STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 02663007
WIN 026630.07

PROJ. MANAGER	MARK PARLIN	BY	DATE
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CHECKED-REVIEWED	EBROWNELL	EBURGESS	8/6/2025
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FIELD CHANGES			

BRIDGE NO. 2774
CROSSING SMELT BROOK
PERRY
CROSS SECTIONS

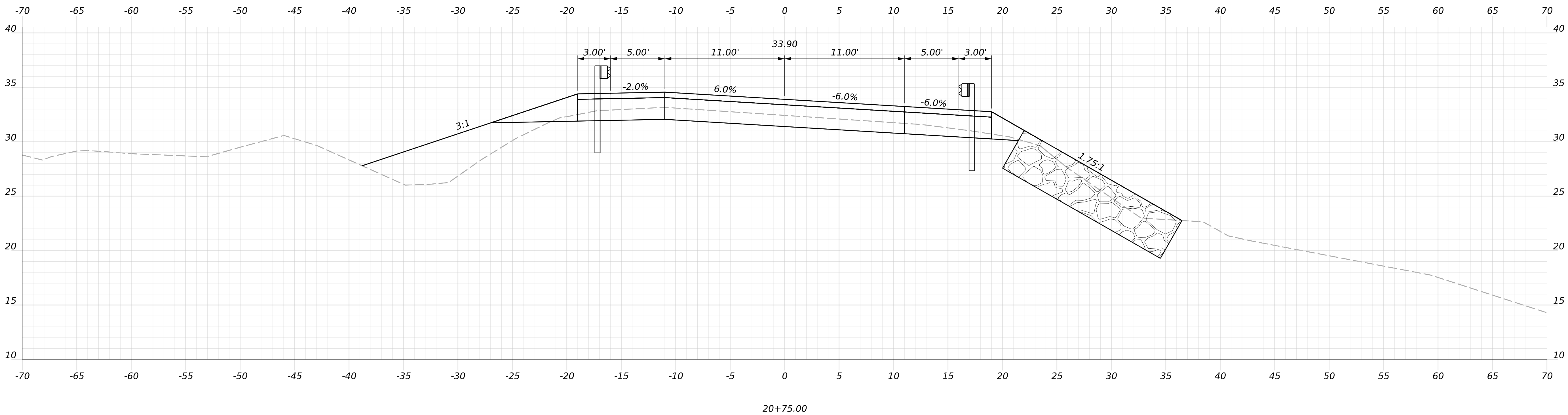
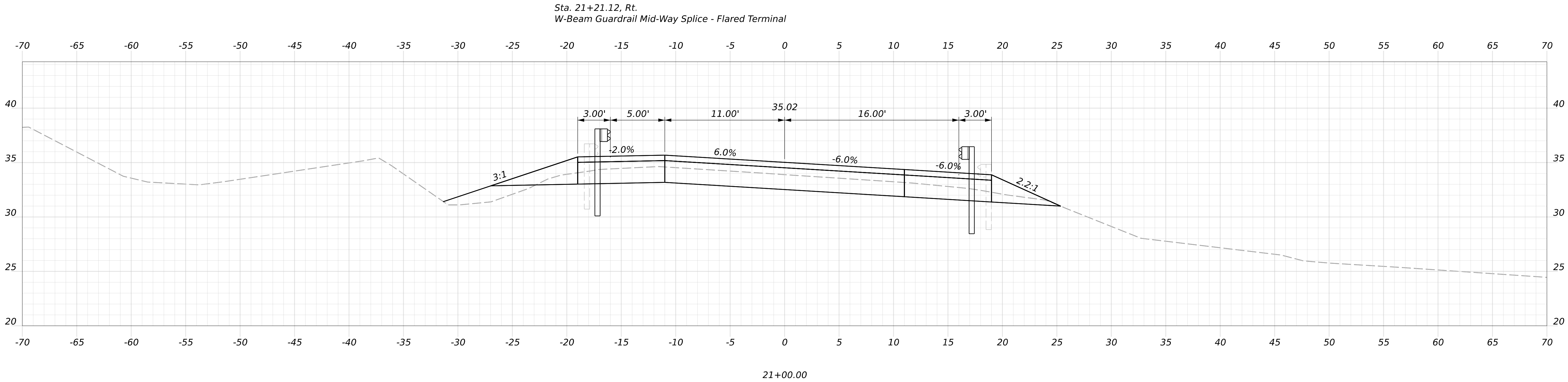
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OF 35



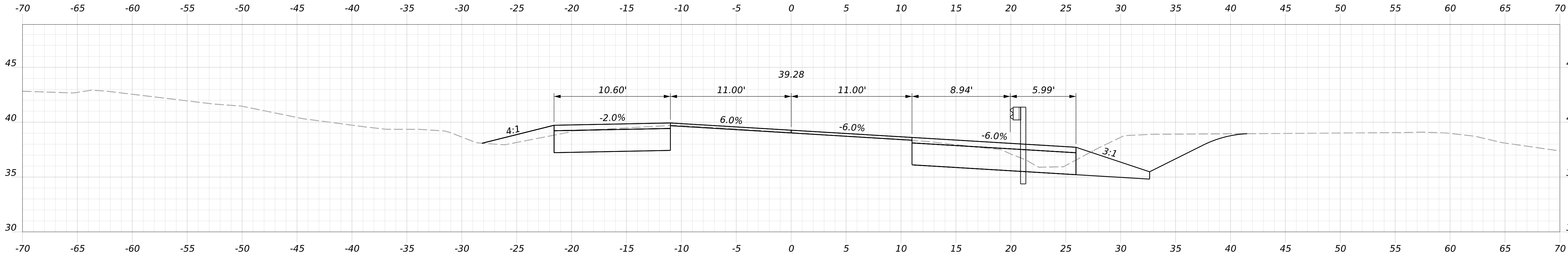
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DEPARTMENT OF TRANSPORTATION
Federal Project No. 02663007
WIN 026630.07

PROJ. MANAGER	MARK PARLIN	BY	DATE
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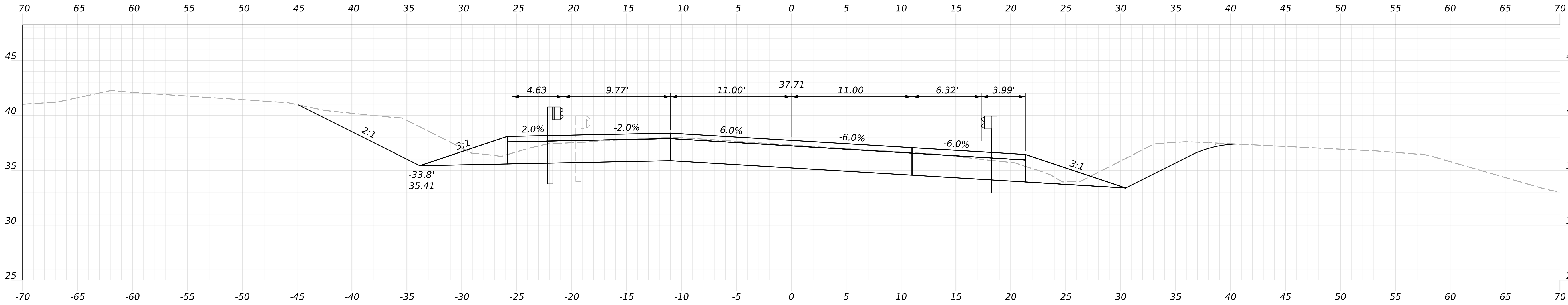
BRIDGE NO. 2774
CROSSING SMELT BROOK
PERRY
CROSS SECTIONS
SHEET NUMBER
15
OF 35



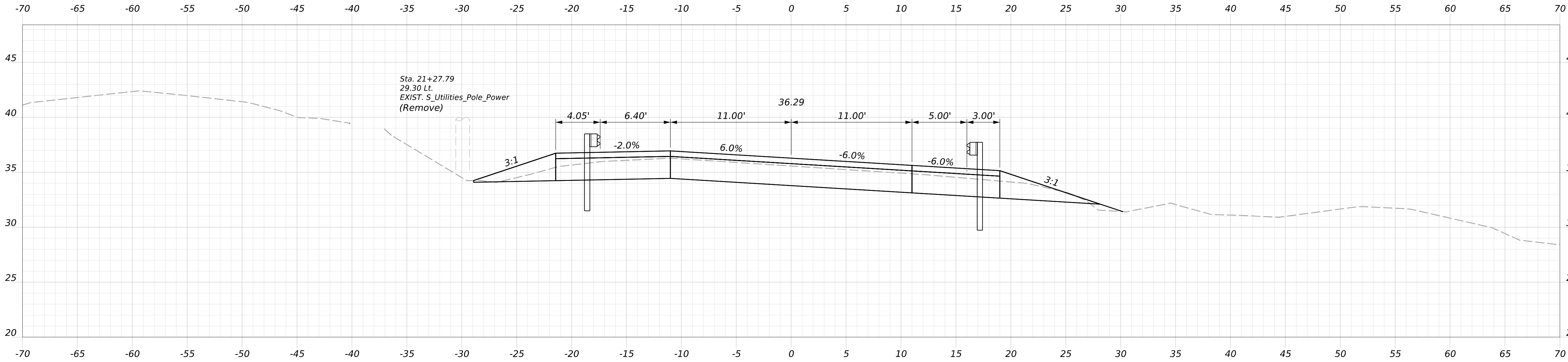
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				CHECKED-REVIEWED		EBROWNELL	EBURGESS	8/6/2025			
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				REVISIONS 2							
				REVISIONS 3					DATE		
REVISIONS 4											
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SHEET NUMBER											
16											
OF 35											



21+75.00



21+50.00



21+25.00

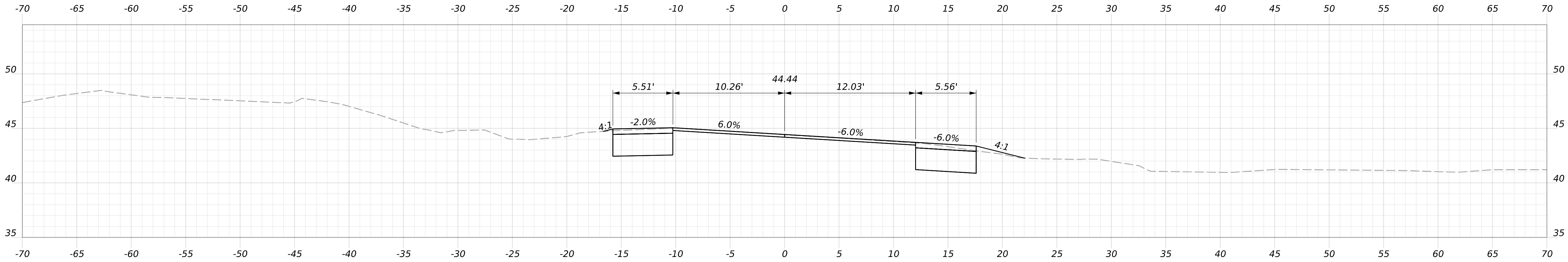
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DEPARTMENT OF TRANSPORTATION
Federal Project No. 02663007
WIN 026630.07

BRIDGE NO. 2774
CROSSING SMELT BROOK
PERRY

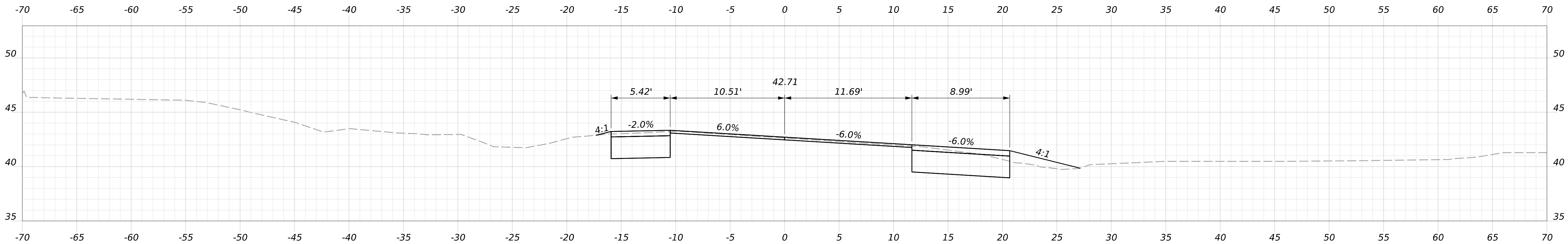
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17
OF 35

CROSS SECTIONS

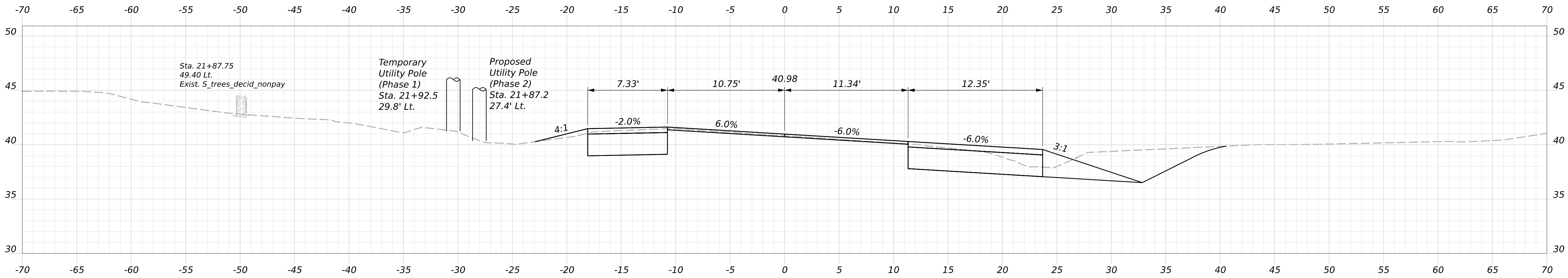
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FIELD CHANGES						



22+50.00



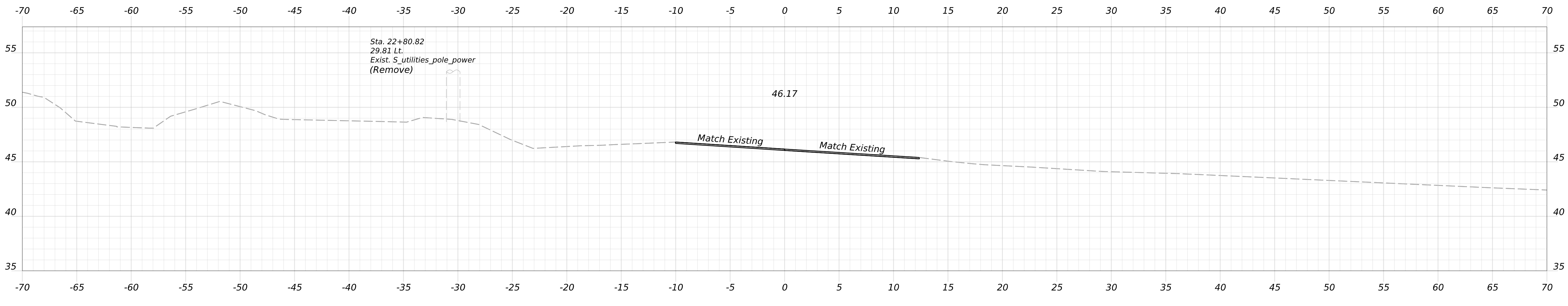
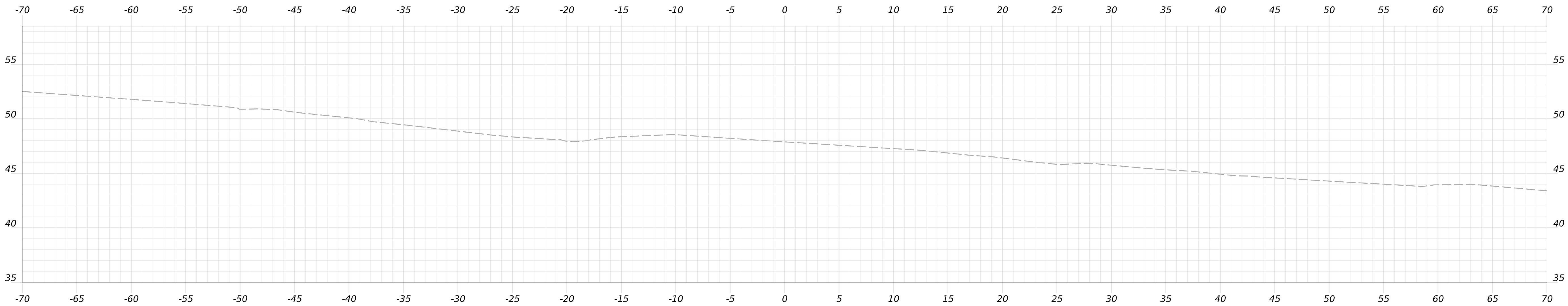
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22+00.00

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CHECKED-REVIEWED	EBROWNELL	CHECKED	8/6/2025
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DESIGN-DETAILED03			
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REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BRIDGE NO. 2774
CROSSING SMELT BROOK
PERRY
CROSS SECTIONS



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

Federal Project No. 02663007

WIN 026630.07

PROJ. MANAGER	MARK PARLIN	BY	DATE
DESIGN-DETAILED	EBROWNELL	EBURGESS	8/6/2025
CHECKED-REVIEWED	EBROWNELL	EBURGESS	8/6/2025
DESIGN-DETAILED2			
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FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

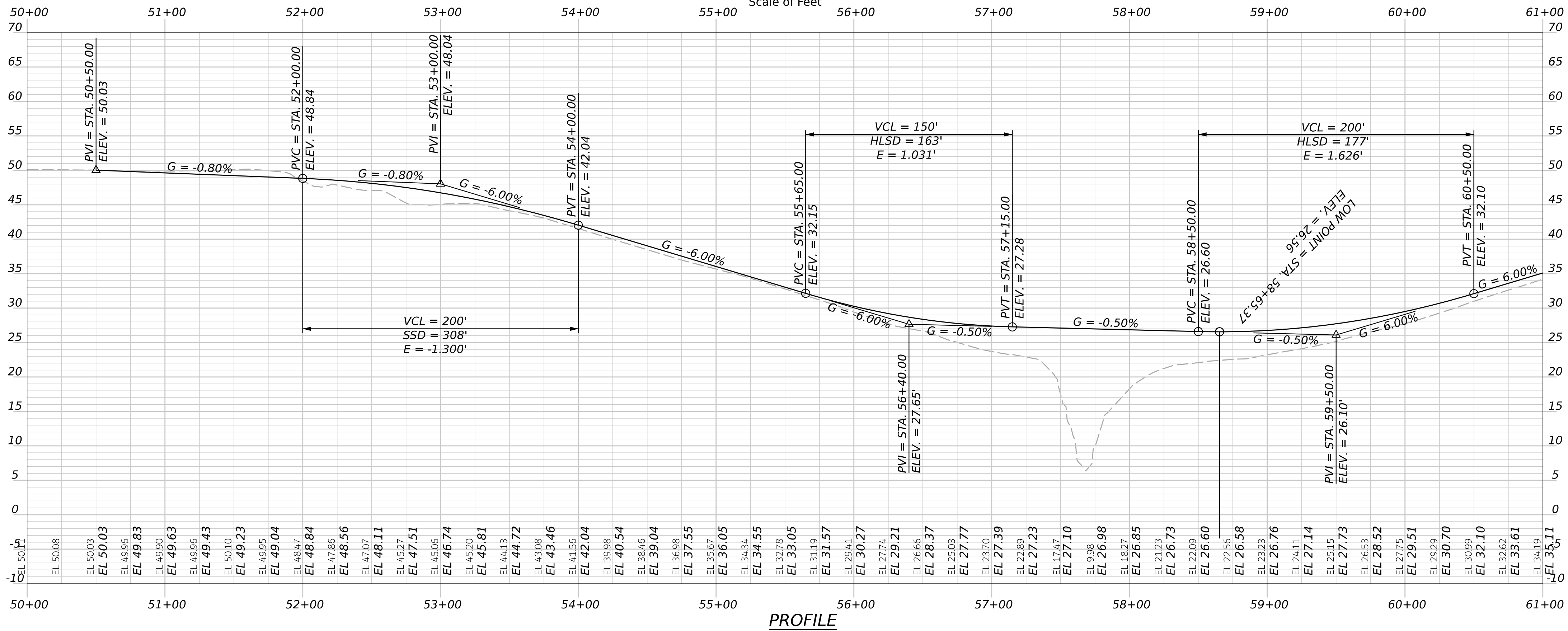
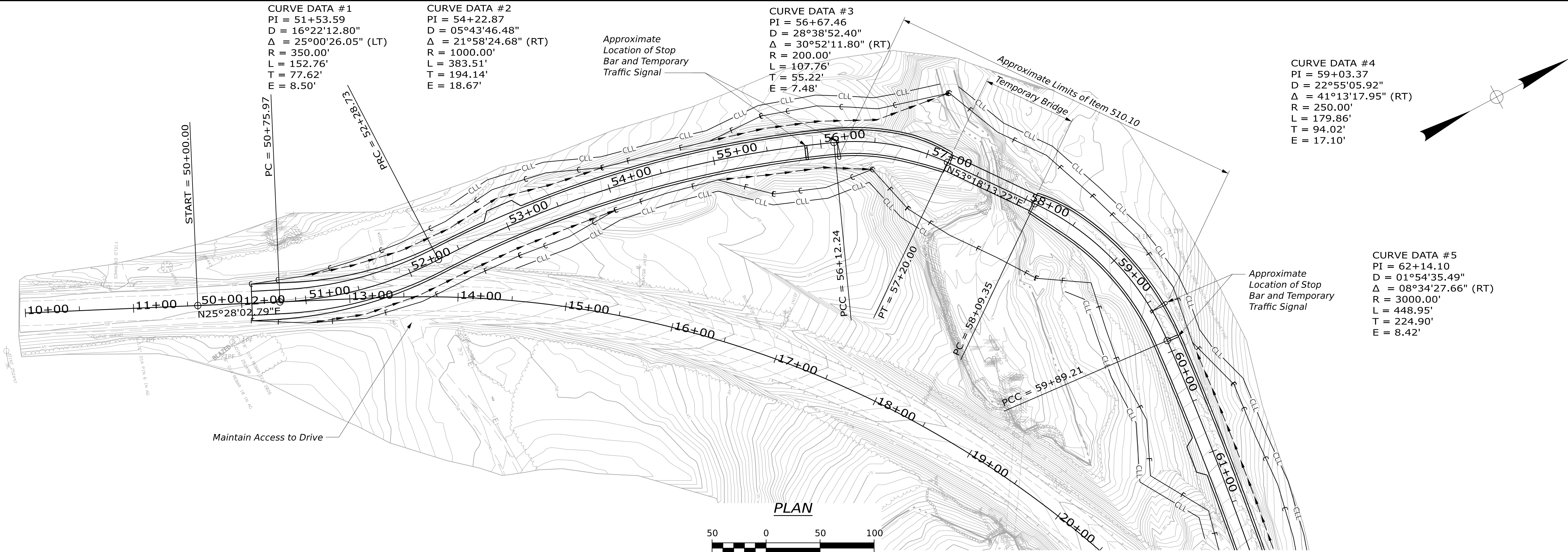
BRIDGE NO. 2774
CROSSING SMELT BROOK
PERRY

SHEET NUMBER

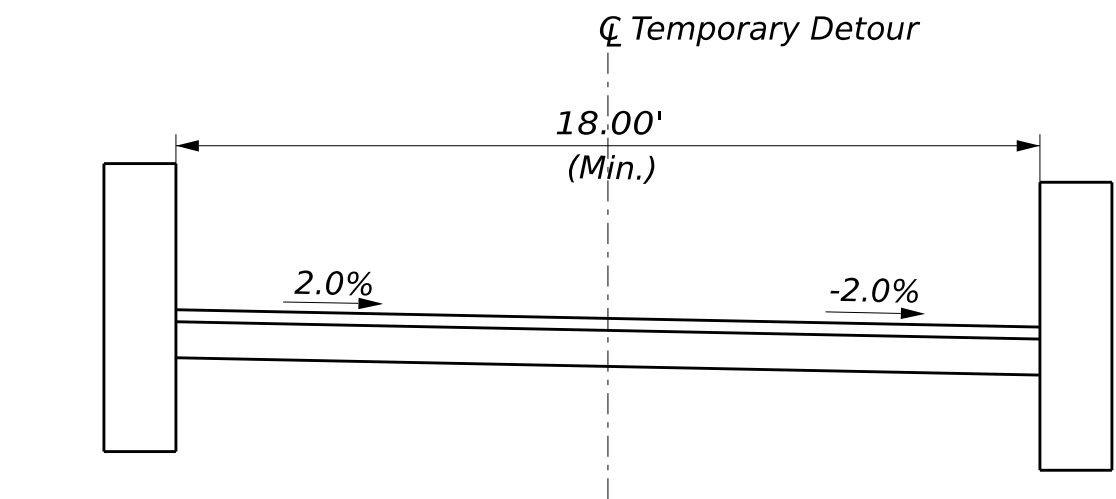
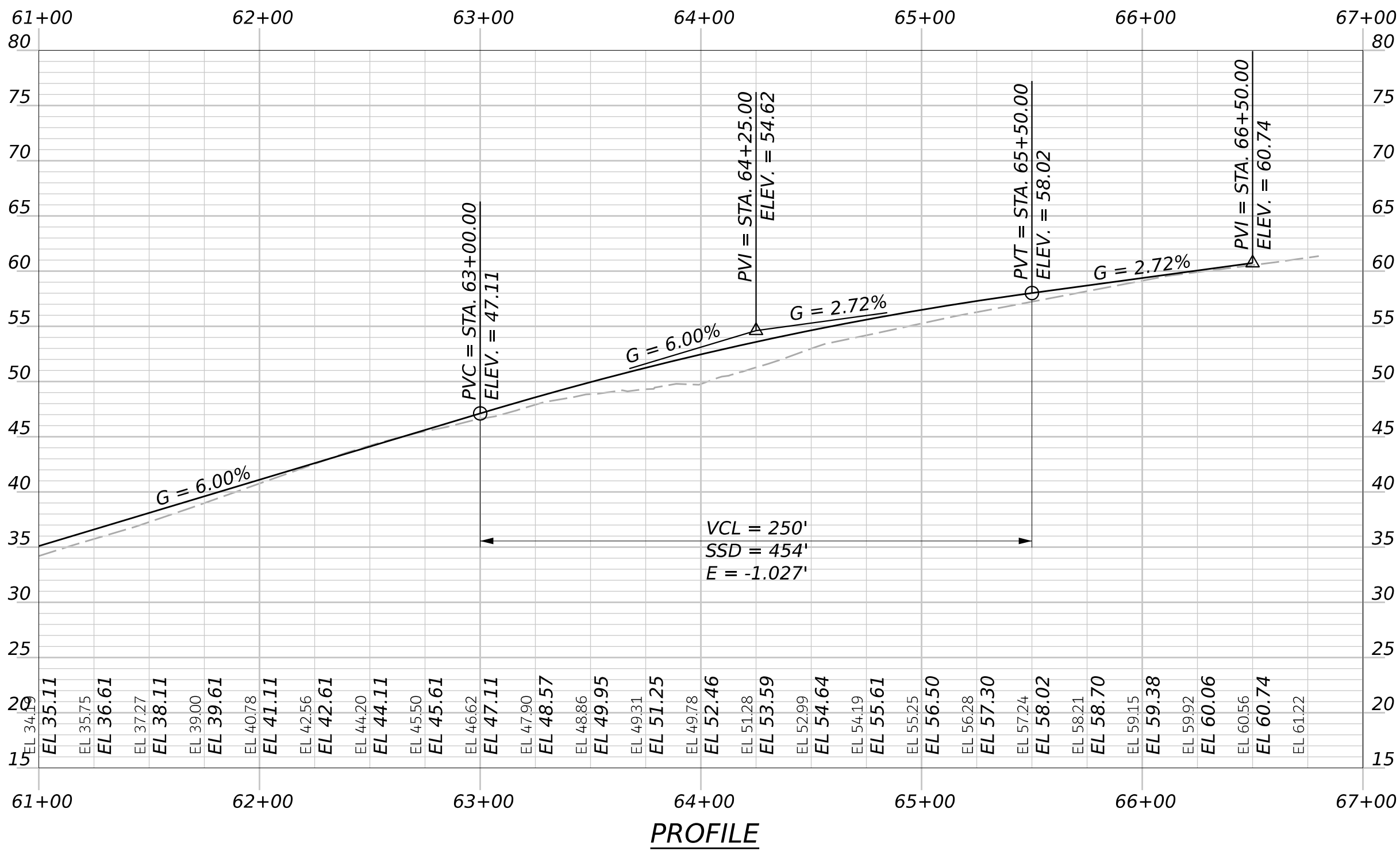
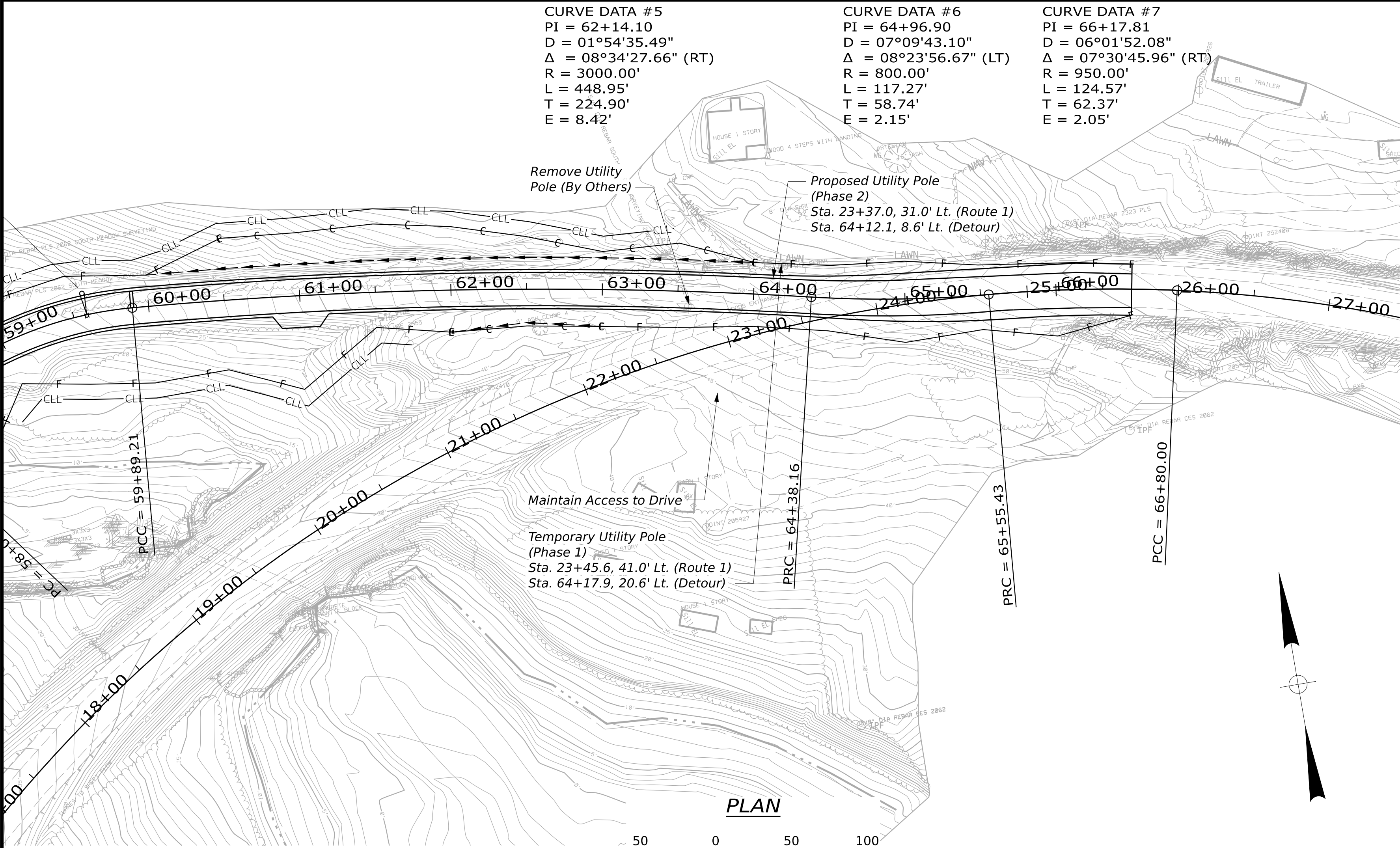
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OF 35

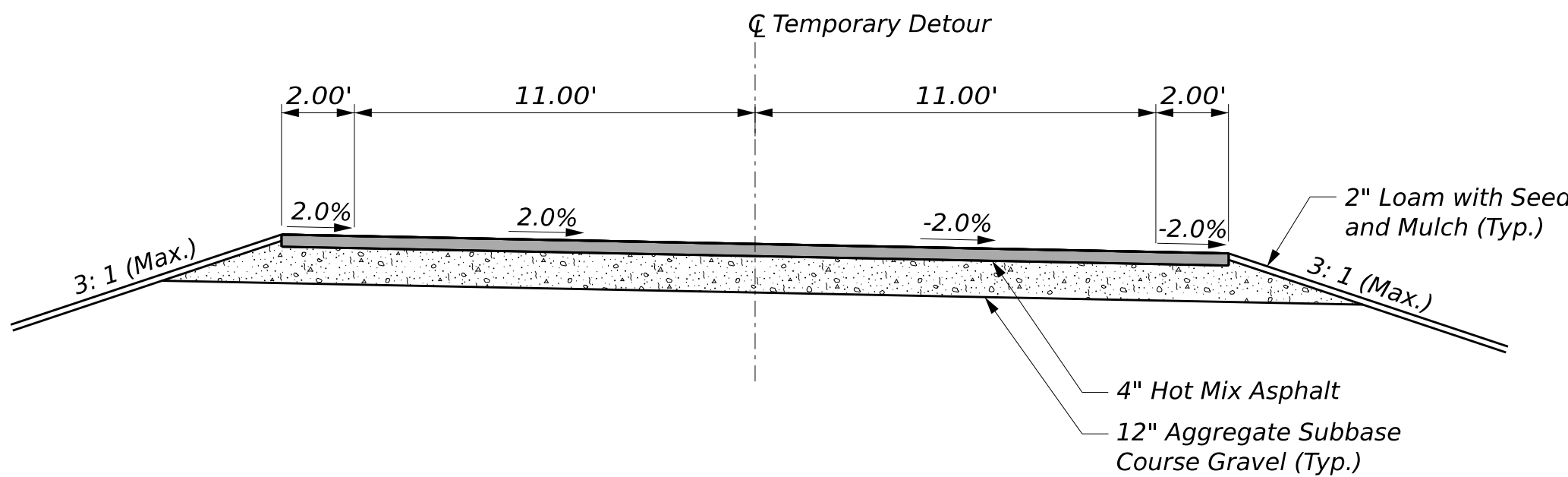
CROSS SECTIONS



STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		Federal Project No. 02663007		WIN 026630.07	
BRIDGE NO. 2774		CROSSING SMELT BROOK		PERRY		TEMPORARY DETOUR PLAN - 1	
SHEET NUMBER		12		OF		35	
PROJ. MANAGER	MARK PARLIN	BY	DATE	SIGNATURE	P.E. NUMBER	DATE	FIELD CHANGES
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CHECKED-REVIEWED	EBROWNELL	EBROWNELL	8/6/2025				
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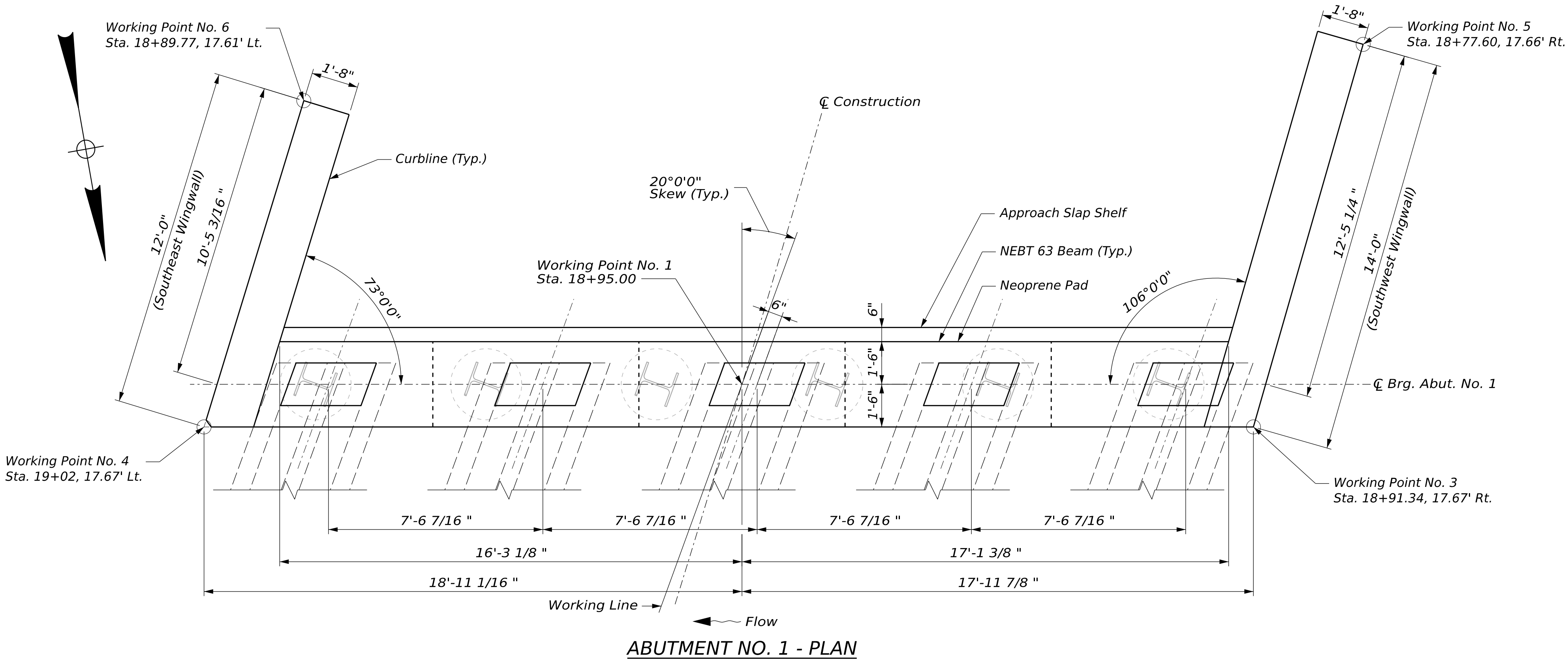


CONCEPTUAL TEMPORARY BRIDGE SECTION



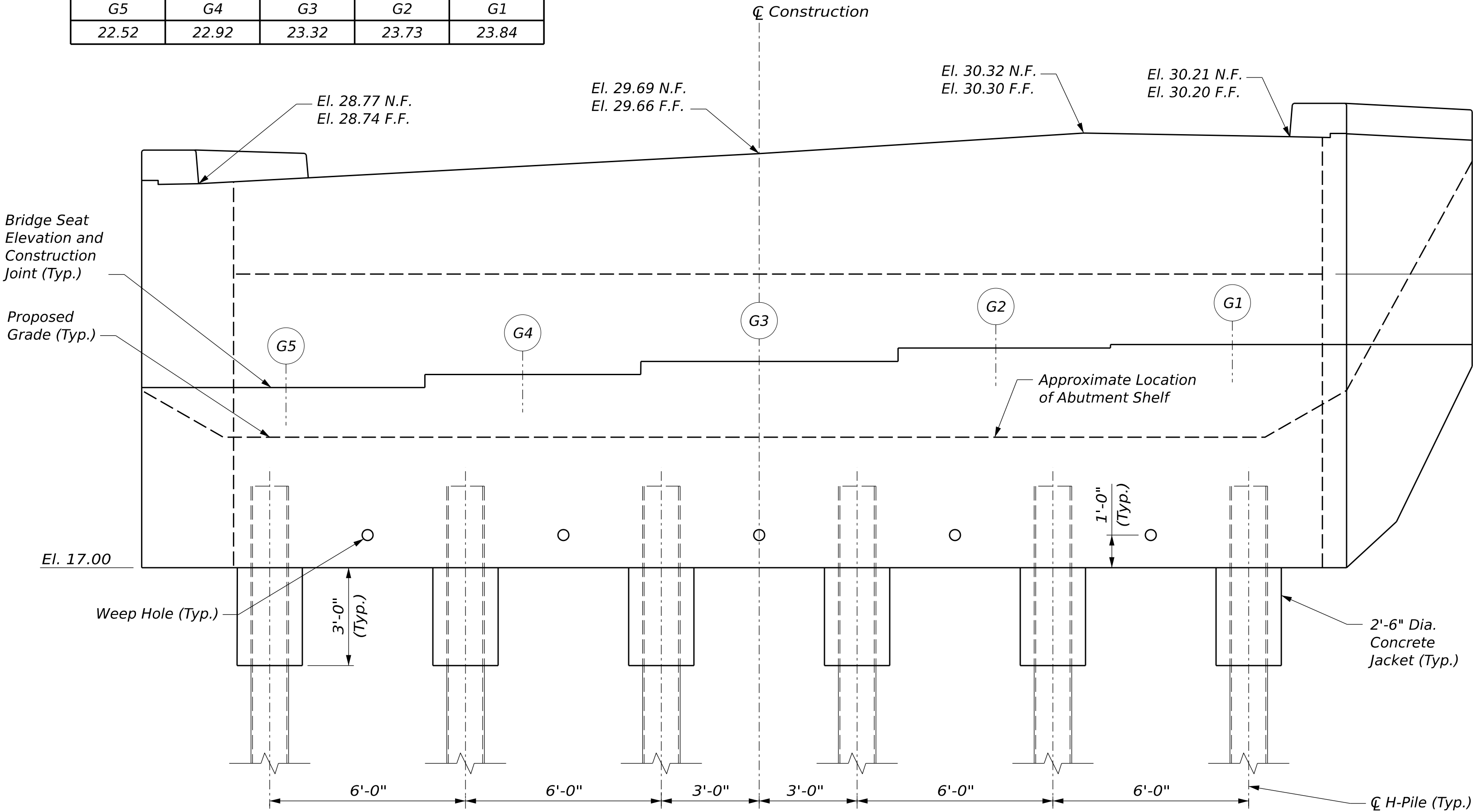
TYPICAL DETOUR APPROACH SECTION

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
BRIDGE NO. 2774		FEDERAL PROJECT NO. 02663007	
CROSSING SMELT BROOK		WIN 026630.07	
PERRY		SIGNATURE	
TEMPORARY		P.E. NUMBER	
DETOUR PLAN - 2		DATE	
SHEET NUMBER		13	
OF 35			



ABUTMENT NO. 1 - PLAN

BRIDGE SEAT ELEVATION - ABUTMENT NO. 1				
G5	G4	G3	G2	G1
22.52	22.92	23.32	23.73	23.84



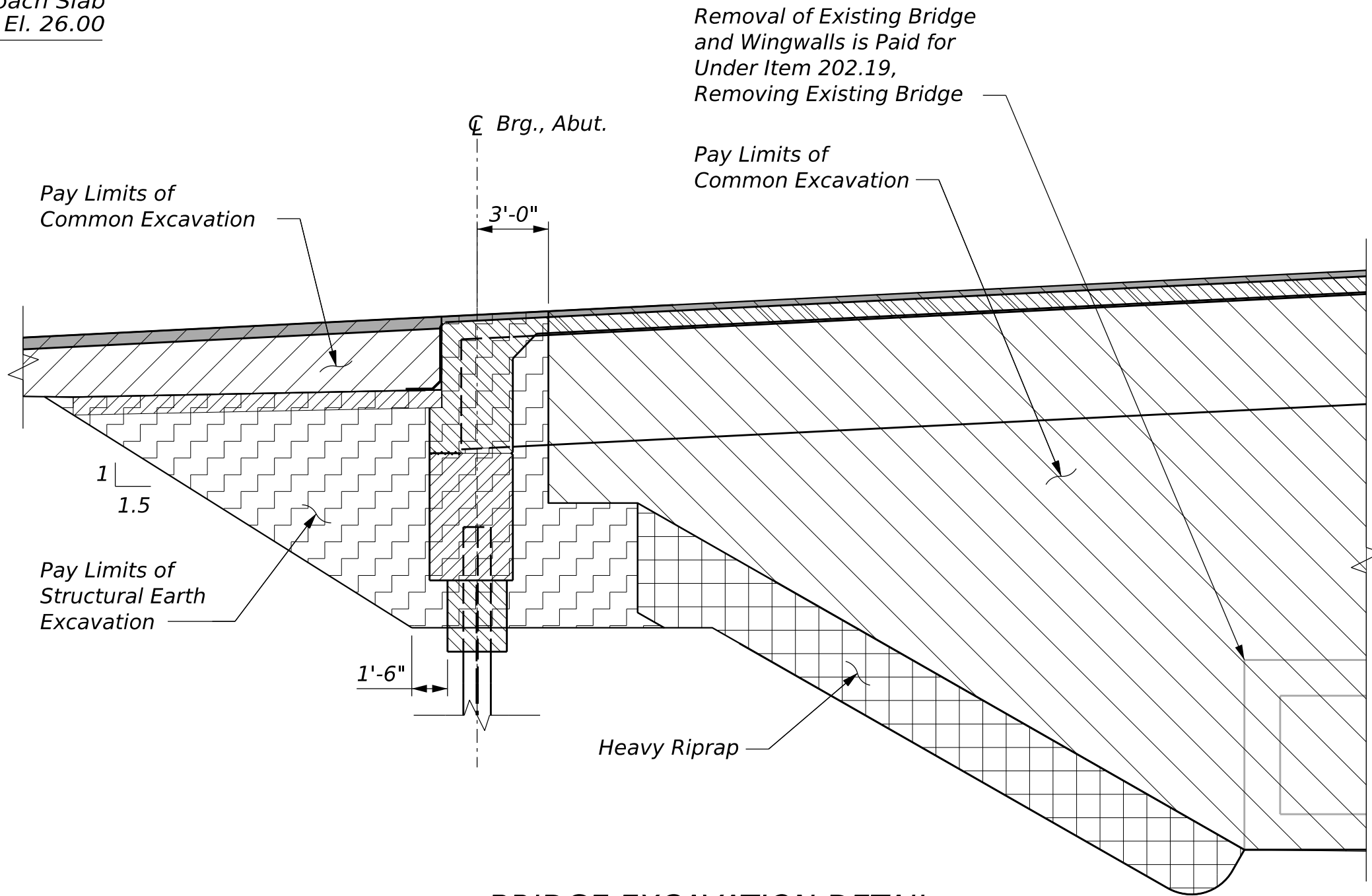
ABUTMENT NO. 1 - ELEVATION

ABUTMENT NOTES

- Reinforcing steel shall have a minimum concrete cover of 2 inches.
- Cover joints where waterstops are not required in accordance with Standard Details Section 502.
- Place 4-inch diameter drains in the breastwall and wingwalls at 10 feet maximum spacing. The exact location will be determined by the Resident.
- Payment for the concrete jackets around the tops of the H-piles will not be paid for directly but will be considered incidental to Pay Item 502.219 Structural Concrete Abutments and Retaining Walls. Fill Concrete may be used for the concrete jackets.
- Abutments, wingwalls, and their footings shall be backfilled with Granular Borrow. Pay limits will be the structural excavation limits.

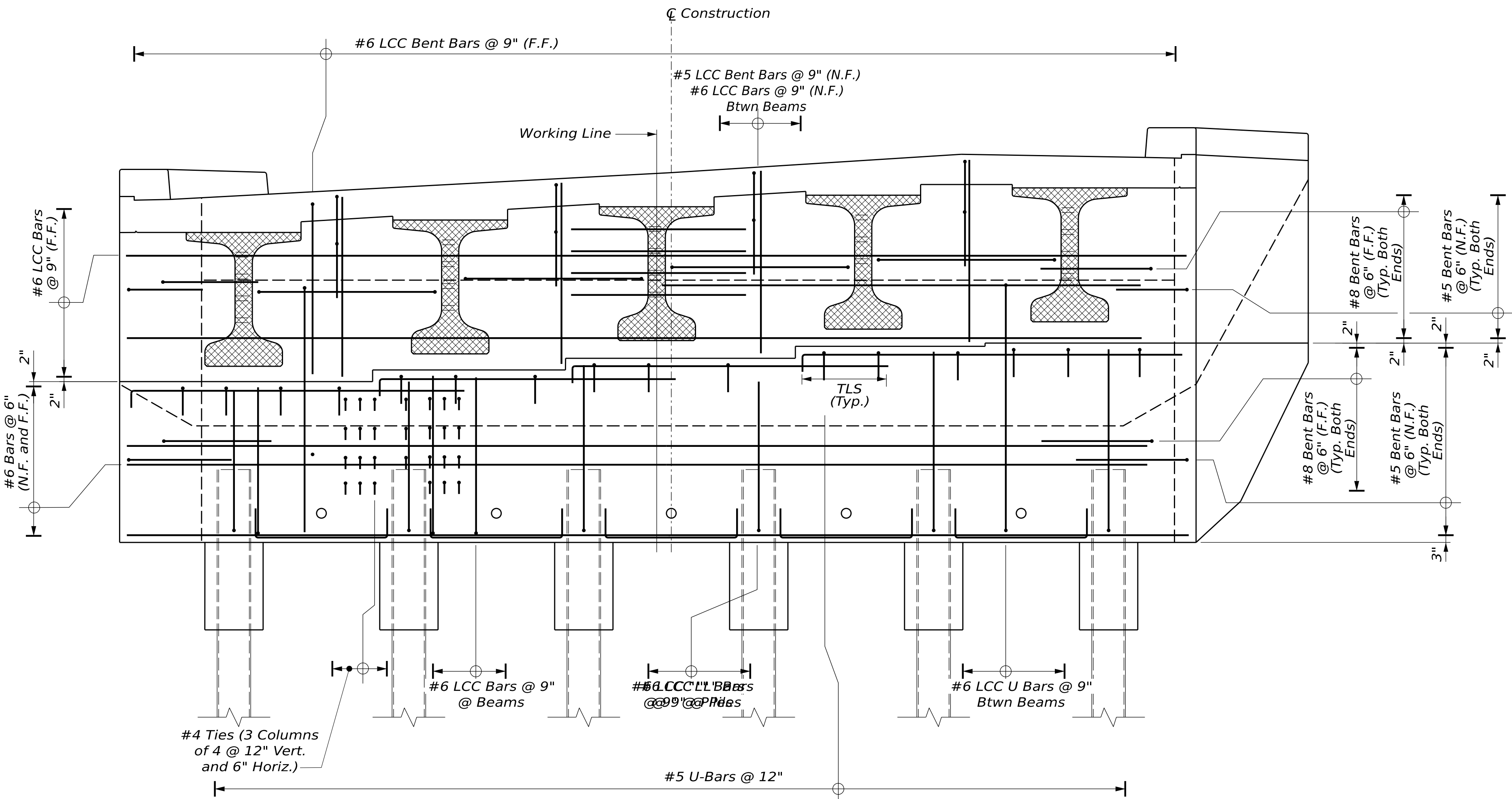
PILE NOTES

- The maximum factored pile load is 355 kips at the Strength Limit State.
- Estimate of piles required:
Abutment No. 1: 6 ~HP 14x117 at 25 feet
Abutment No. 2: 6 ~HP 14x117 at 25 feet
- H-pile material shall be ASTM A572, Grade 50.
- H-pile splices shall be in accordance with Standard Detail 501(03).
- Piles shall be placed in accordance with Special Provision Section 501 (Rock-Socketed H-Pile Foundation) of the Contract Documents.
- Piles shall not be out of position shown by more than 2 inches in any direction.

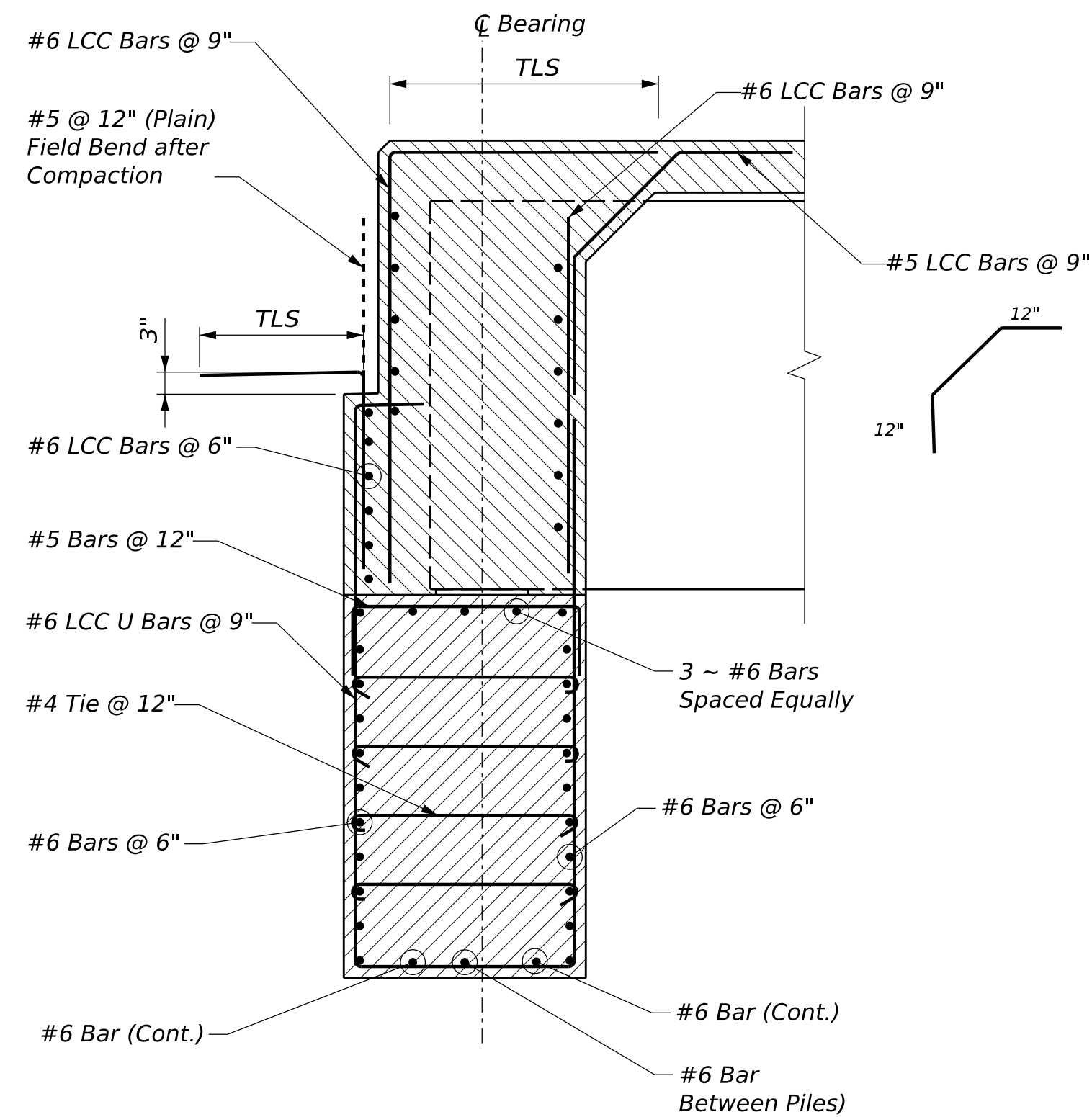


BRIDGE EXCAVATION DETAIL

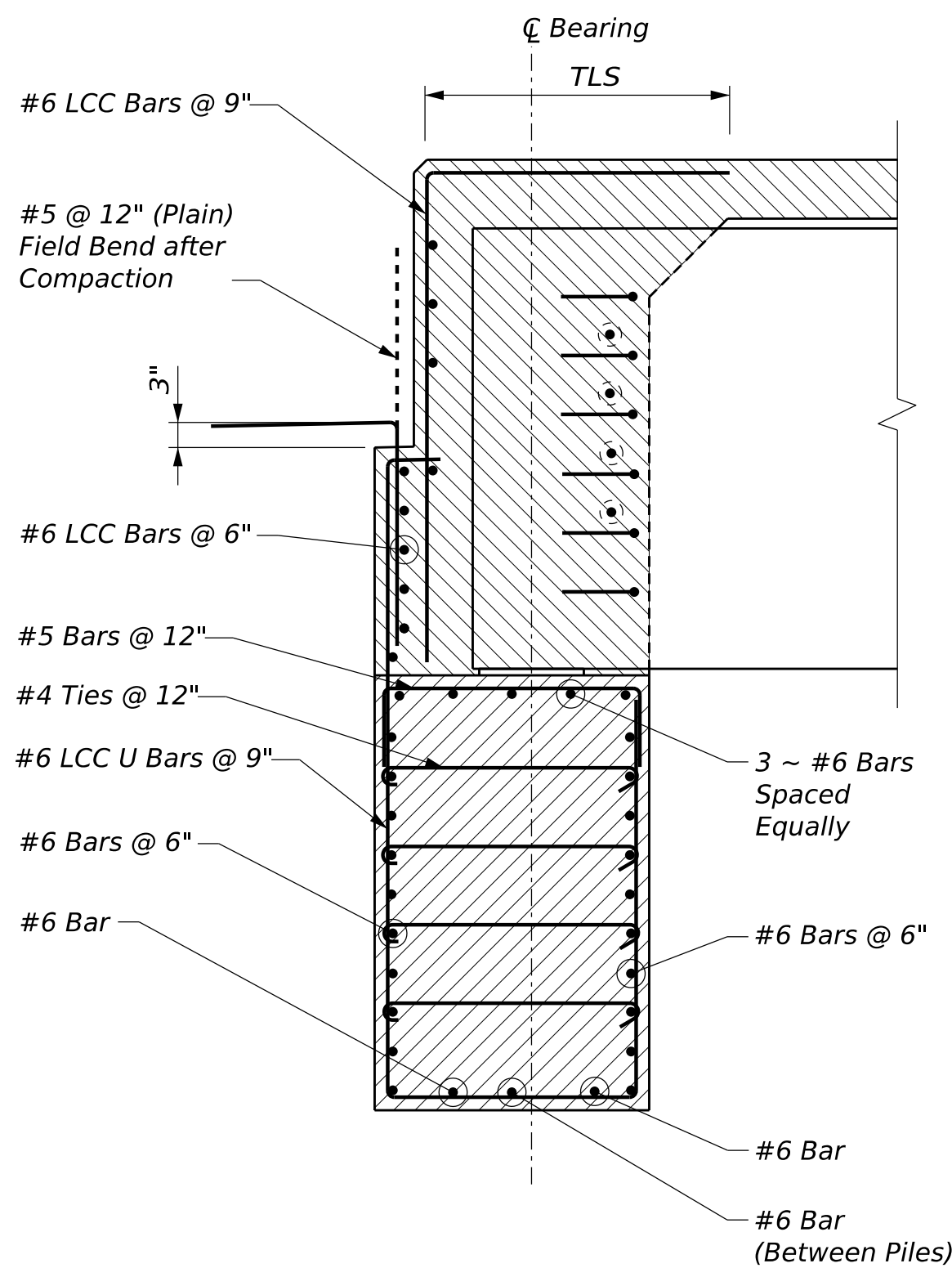
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REVISIONS 4			
FIELD CHANGES			



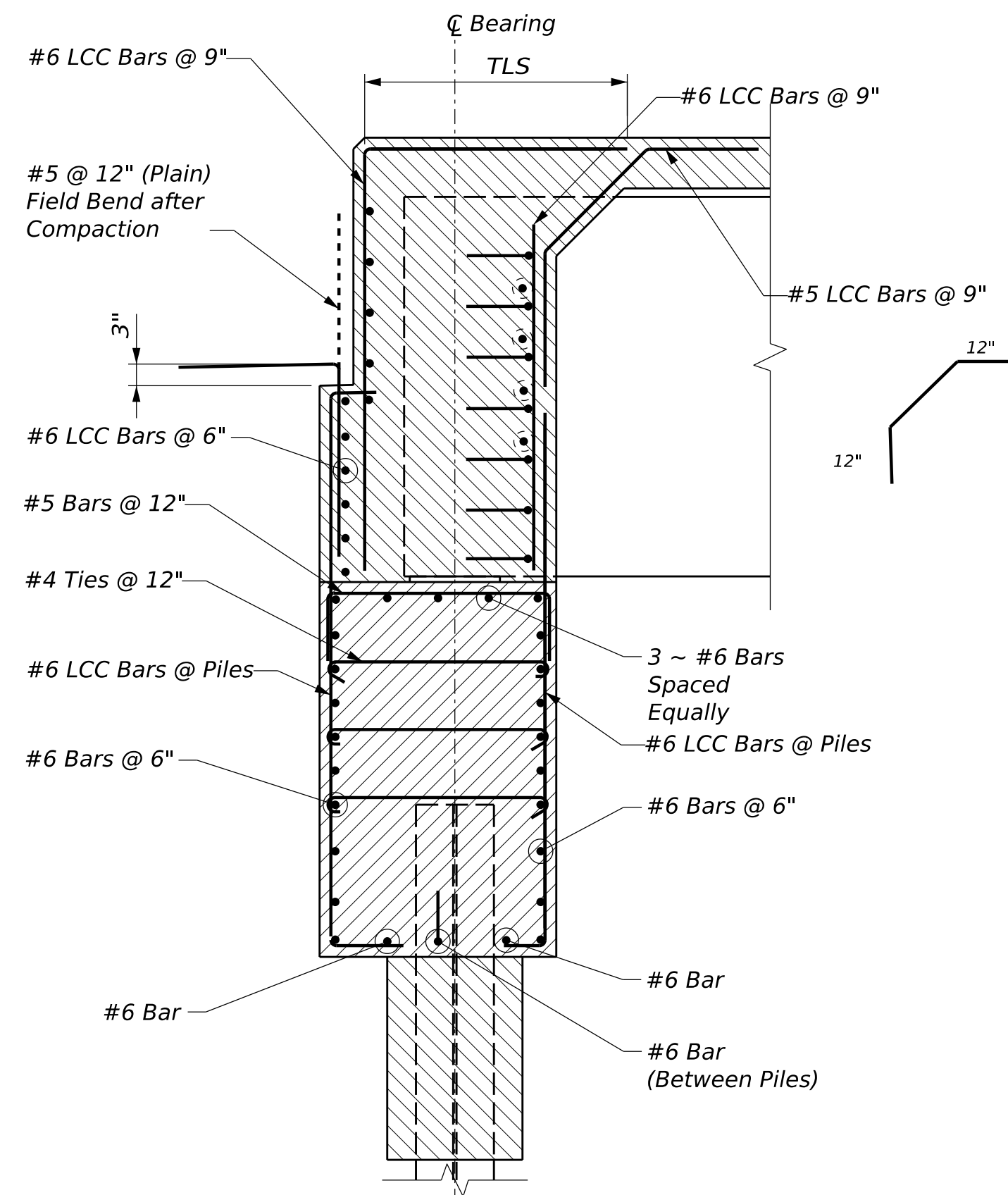
TYPICAL ABUTMENT REINFORCEMENT ELEVATION
Abutment No. 1 Shown, Abutment No. Similar



ABUTMENT SECTION BETWEEN PILES AND BEAMS
Abutment No. 1 Shown, Abutment No. 2 Similar



ABUTMENT SECTION AT BEAM
Abutment No. 1 Shown, Abutment No. 2 Similar

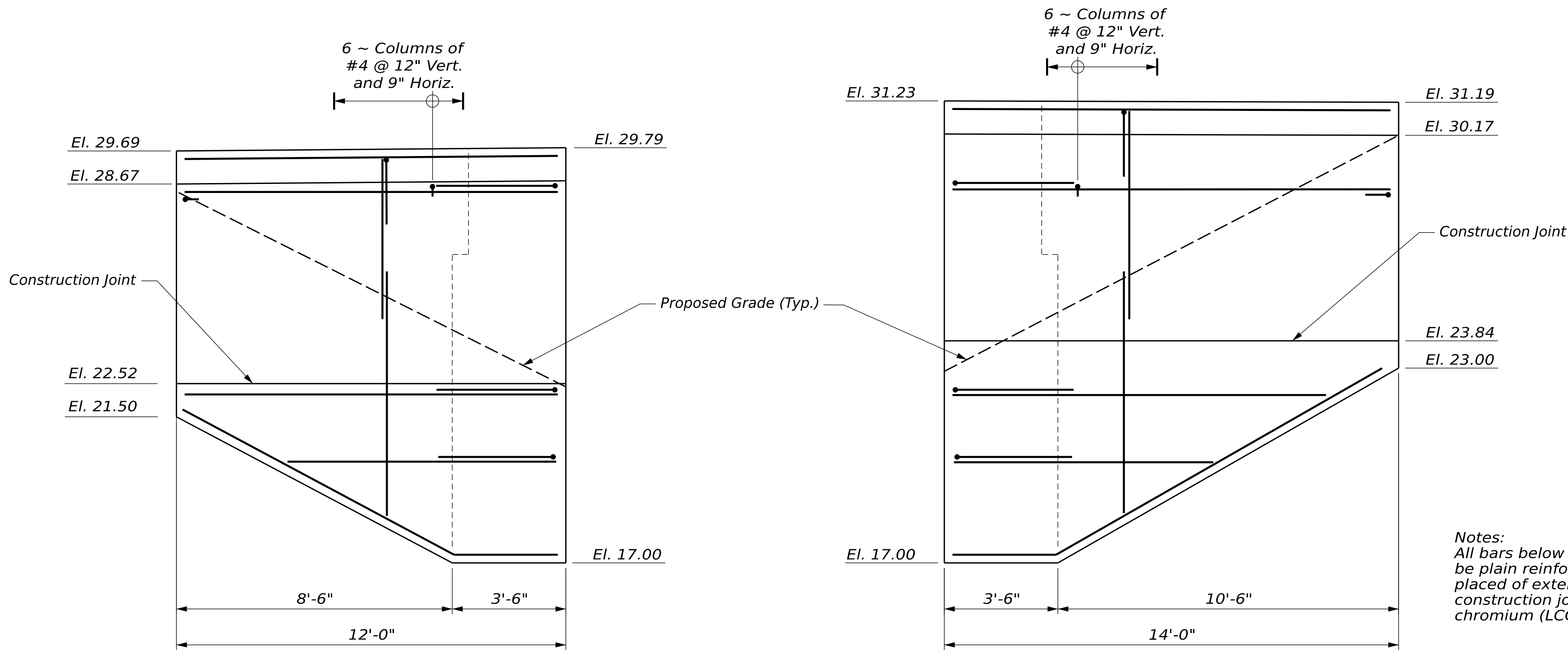


ABUTMENT SECTION AT PILES
Abutment No. 1 Shown, Abutment No. 2 Similar

Notes:
1. Reinforcement shown is typical unless noted otherwise. Details are provided to show required size and spacing. Reinforcing schedule, bar layout, and bending diagrams have not been provided and are incidental to the related Contract Items.
2. All bars below construction joint (bridge seat) shall be plain reinforcing steel. All bars placed or extending above construction joint shall be low carbon chromium (LCC) reinforcing steel.

Legend:
LCC = Low Carbon Chromium
N.F. = Near Face
F.F. = Far Face
E.F. = Each Face
TLS = Tension Lap Splice

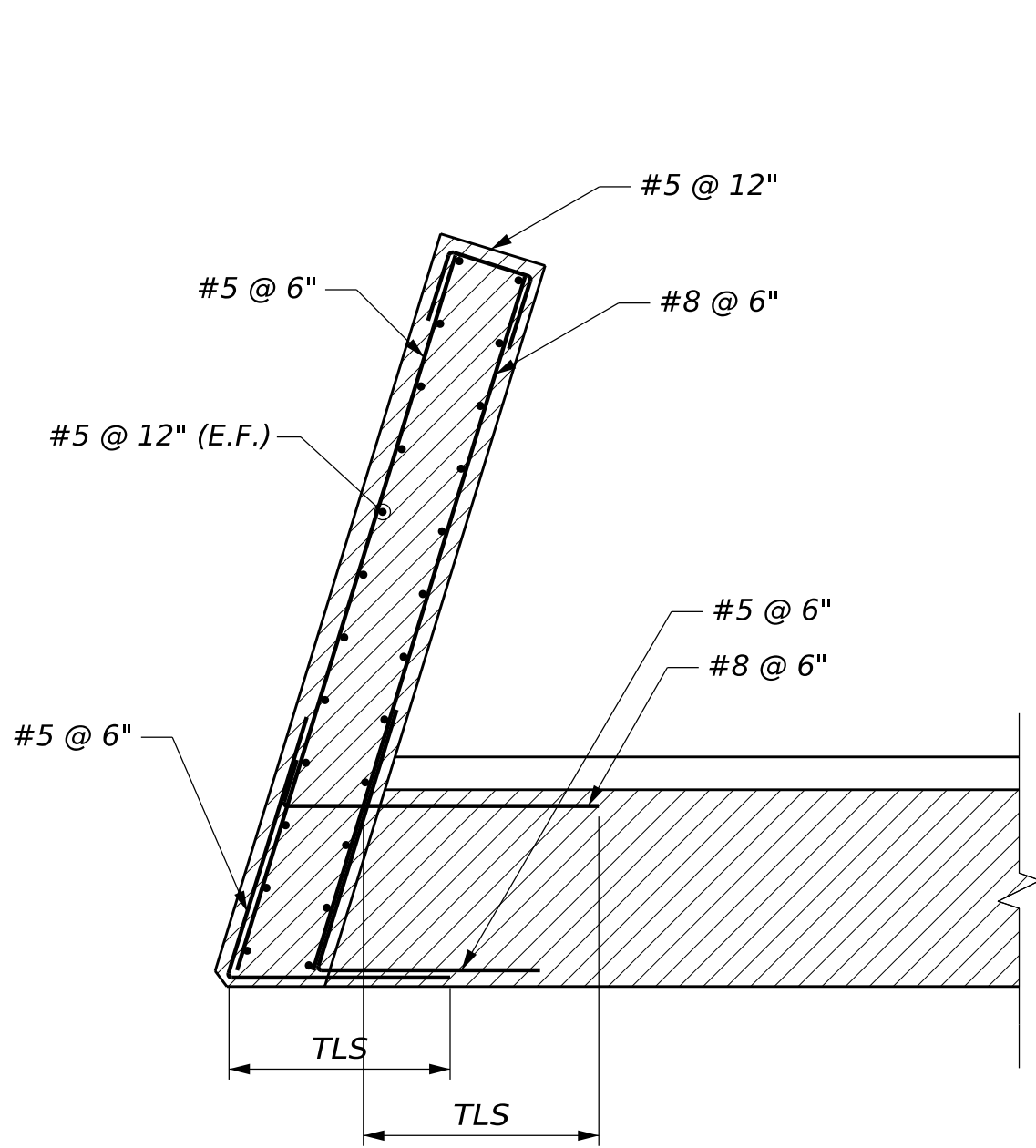
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		Federal Project No. 02663007		WIN 026630.07	
BRIDGE NO. 2774		CROSSING SMELT BROOK		PERRY		ABUTMENT REINFORCEMENT	
SHEET NUMBER		23		OF		35	
PROJ. MANAGER	MARK PARLIN	DESIGN-DETAILED	LEBROWNE	CHECKED-REVIEWED	LEBROWNE	DATE	8/6/2025
DESIGN-DETAILED	LEBROWNE	CHECKED-REVIEWED	LEBROWNE	DATE	8/6/2025	SIGNATURE	
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DESIGN-DETAILED	LEBROWNE	CHECKED-REVIEWED	LEBROWNE	DATE	8/6/2025	DATE	
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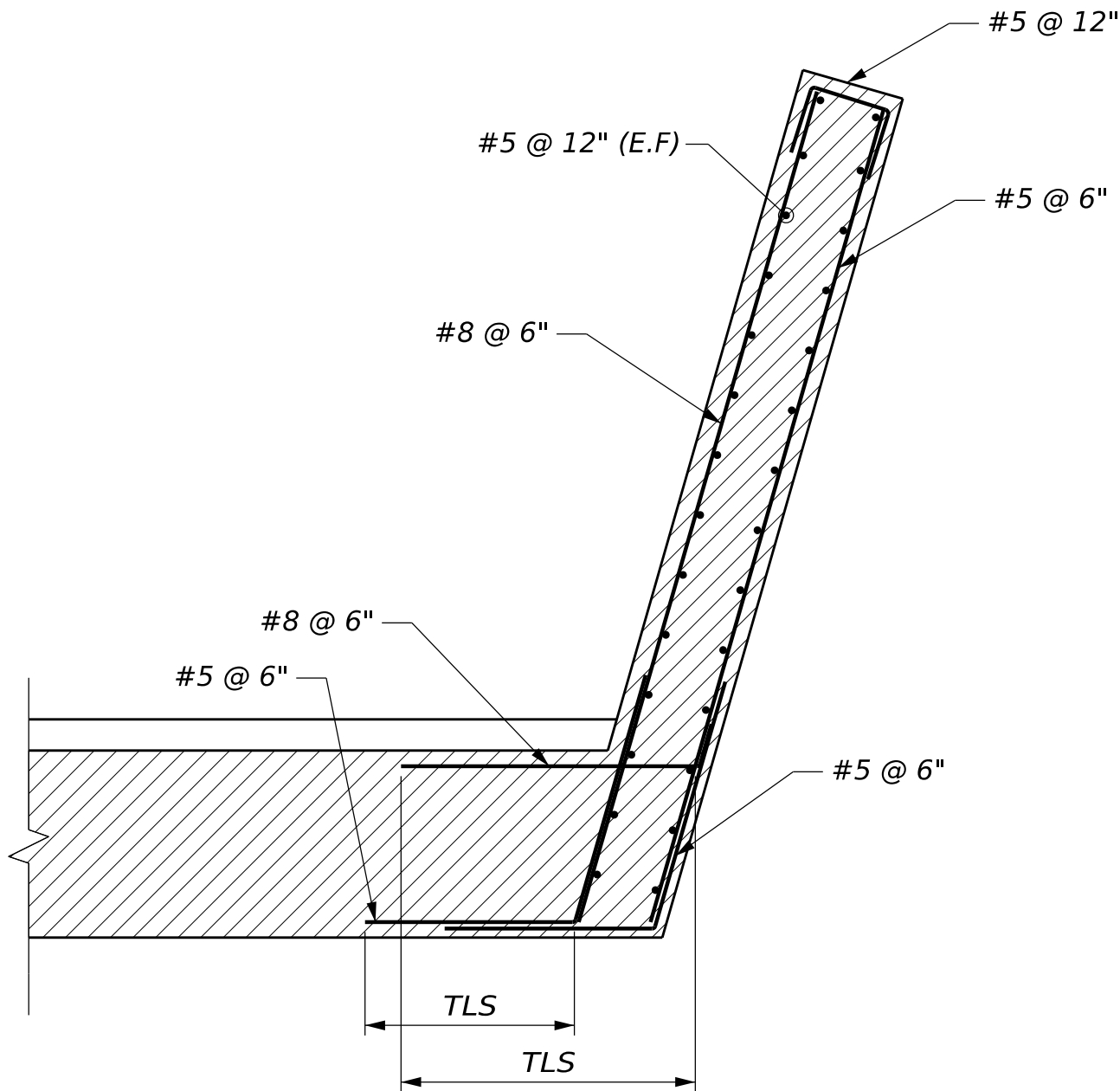
ABUTMENT NO. 1
SOUTHEAST WINGWALL ELEVATION

ABUTMENT NO. 1
SOUTHWEST WINGWALL ELEVATION

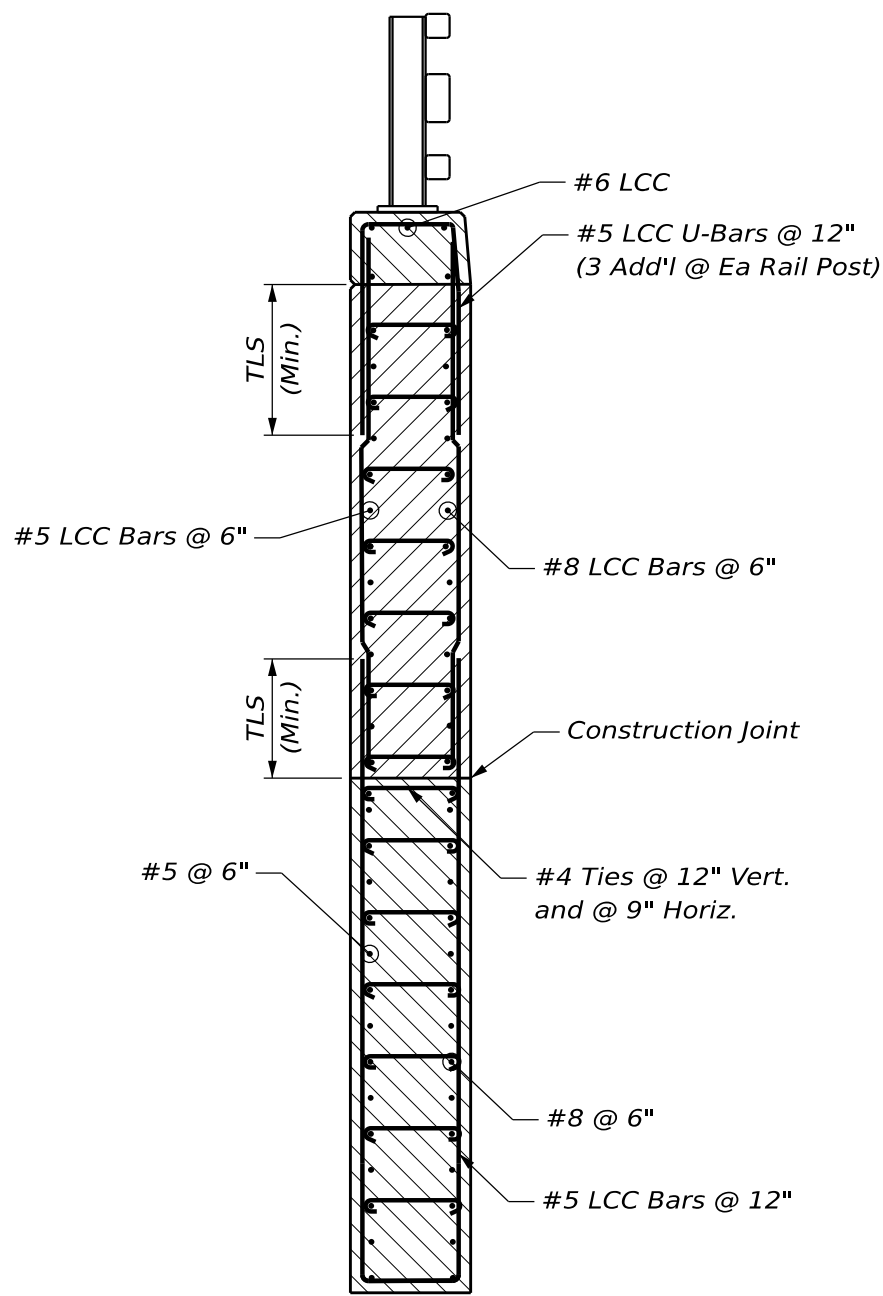
Notes:
All bars below construction joint to be plain reinforcing steel. All bars placed of extending above construction joint to be low carbon chromium (LCC) reinforcing steel.



ABUTMENT NO. 1
SOUTHEAST WINGWALL PLAN

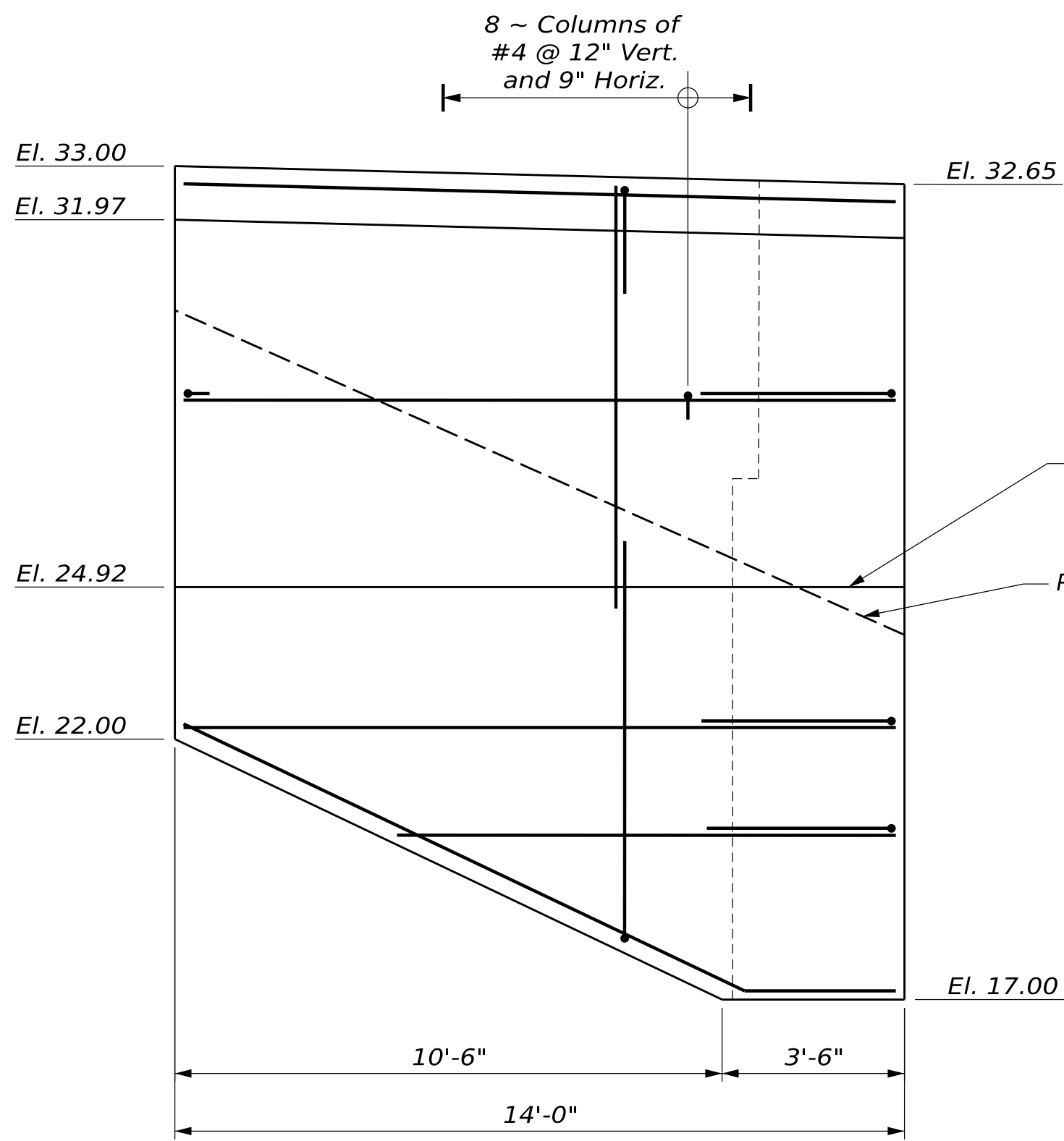


ABUTMENT NO. 1
SOUTHWEST WINGWALL ELEVATION

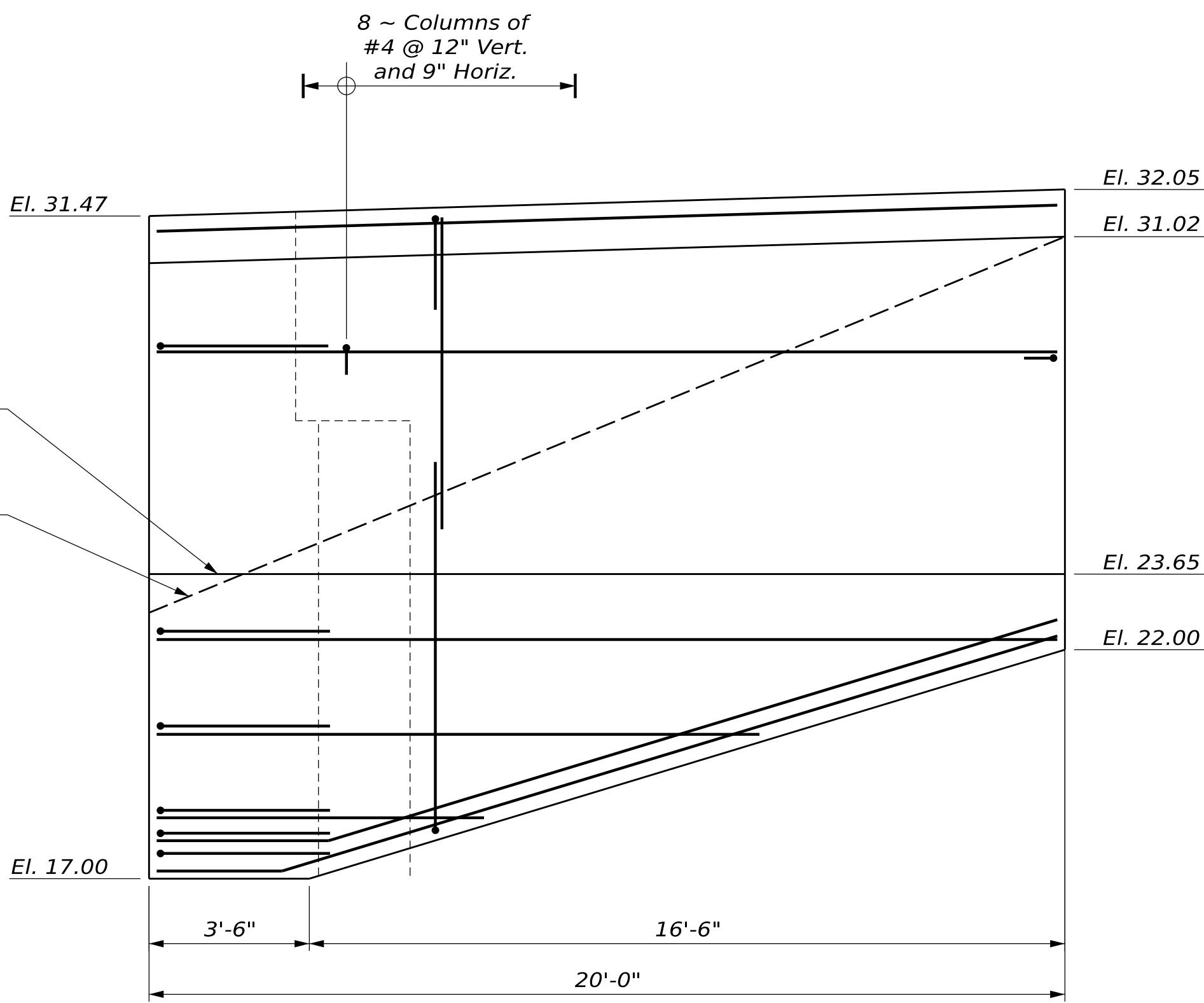


WINGWALL REINFORCEMENT SECTION

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		Federal Project No. 02663007		WIN 026630.07	
BRIDGE NO. 2774		CROSSING SMELT BROOK		ABUTMENT NO. 1		WINGWALLS	
PERRY		SIGNATURE		P.E. NUMBER		DATE	
SHEET NUMBER		24		OF		35	

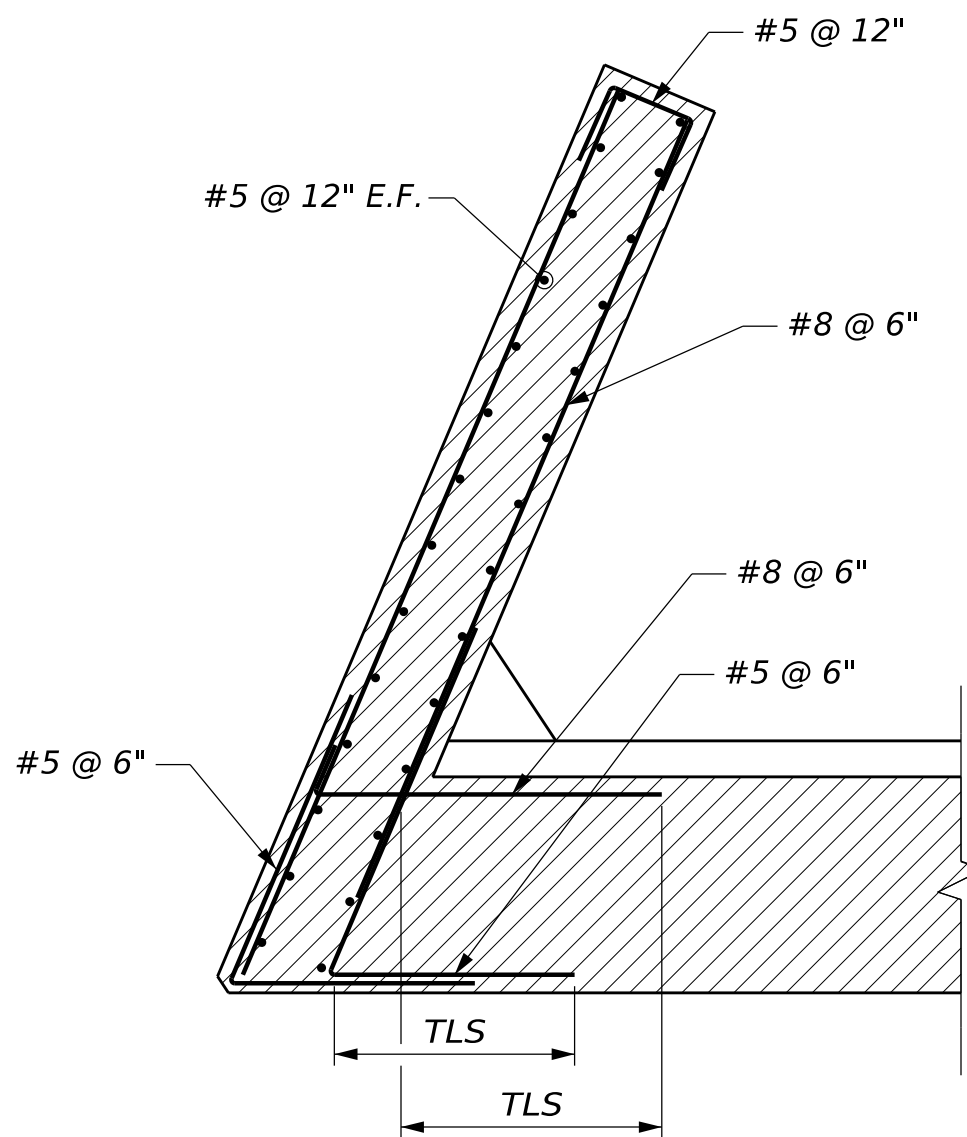


ABUTMENT NO. 2
NORTHWEST WINGWALL ELEVATION

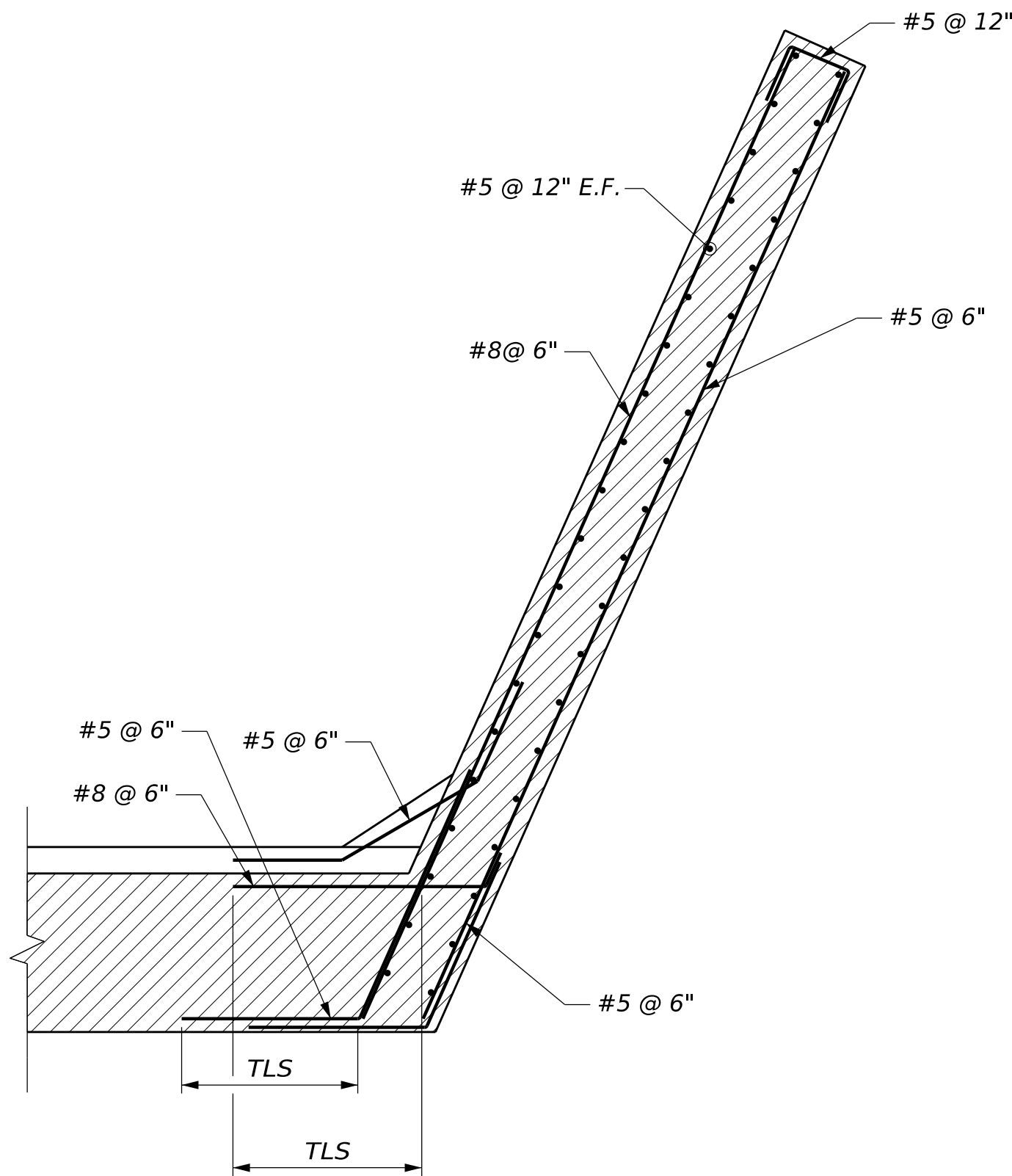


ABUTMENT NO. 2
NORTHEAST WINGWALL ELEVATION

Notes:
1. All bars below construction joint to be plain reinforcing steel. All bars placed of extending above construction joint to be low carbon chromium (LCC) reinforcing steel.
2. See Abutment No. 1 Wingwalls and Reinforcement for additional reinforcement details.

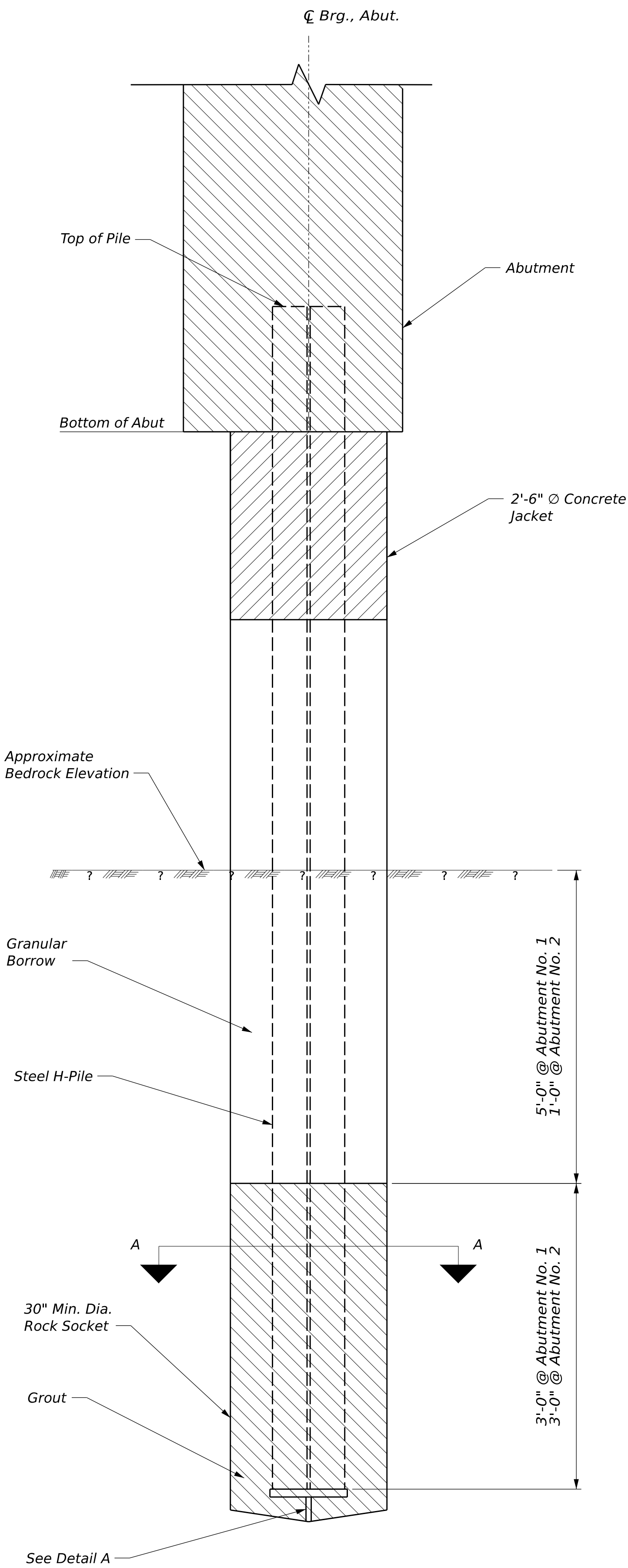


ABUTMENT NO. 2
SOUTHEAST WINGWALL PLAN SECTION

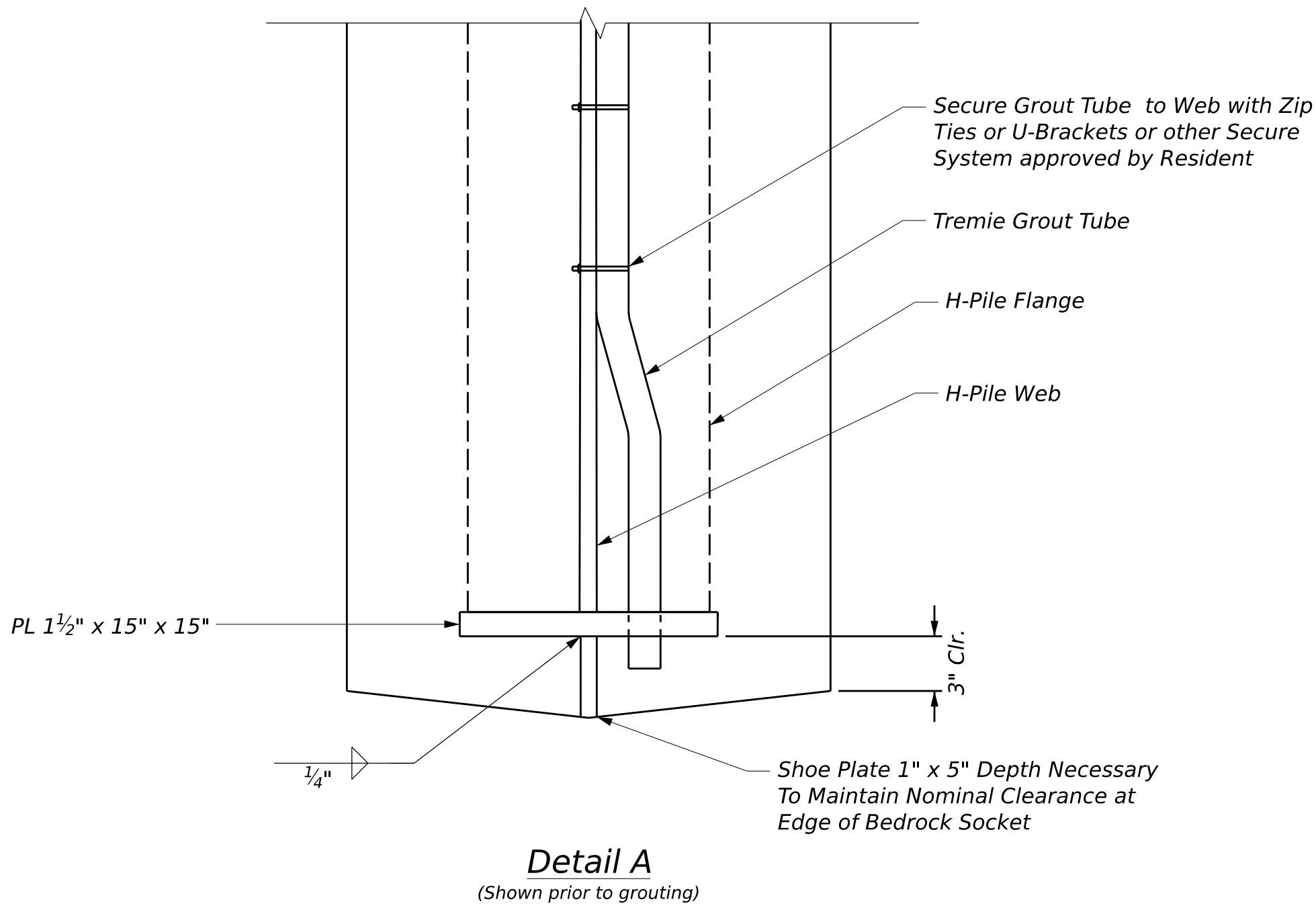
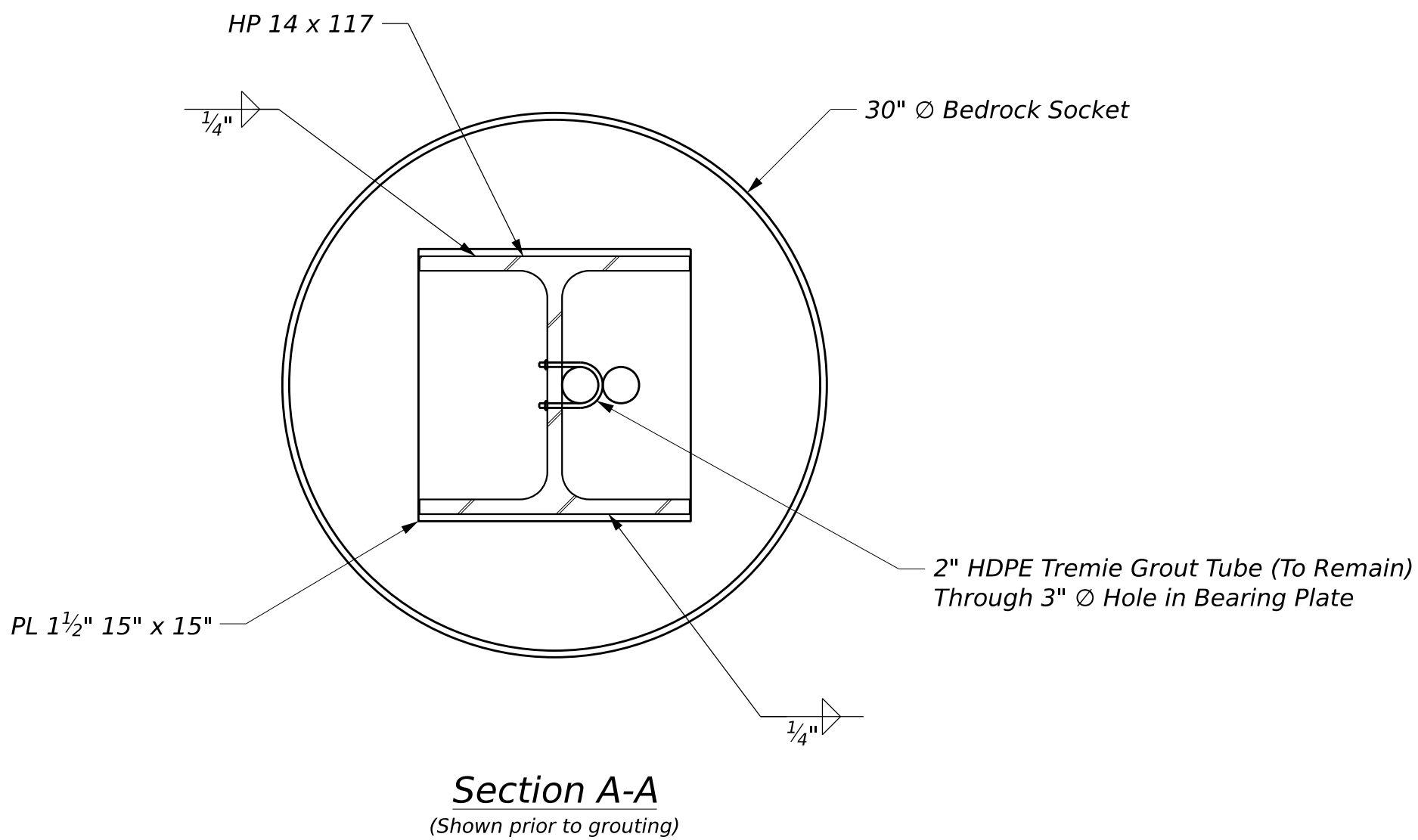


ABUTMENT NO. 2
NORTHEAST WINGWALL PLAN SECTION

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		Federal Project No. 02663007		WIN 026630.07	
BRIDGE NO. 2774		CROSSING SMELT BROOK		ABUTMENT NO. 2		WINGWALLS	
PERRY		SIGNATURE		P.E. NUMBER		DATE	
SHEET NUMBER		26		OF		35	



ROCK SOCKETED PILE DETAIL



Abutment	Offset	Bottom of Abutment (ft) Elevation	Approximate Top of Bedrock Elevation (ft)	Estimated Top of Grout Elevation (ft)	Estimated Bottom of Pile Elevation (ft)	Estimated Pile Length (ft)
1	LT	17.00	9.00	4.00	1.00	25.00
1	RT	17.00	7.00	2.00	-1.00	25.00
2	LT	17.00	0.00	-1.00	-4.00	25.00
2	RT	17.00	0.00	-1.00	-4.00	25.00

PILE NOTES

1. Approximate top of bedrock elevations are based on widely spaced explorations. Actual bedrock elevations may vary.
2. Top of Bedrock is defined as the elevation at which the full diameter of the rock excavation equipment is beneath the bedrock surface, as determined by the Resident.
3. Estimated top of grout elevation is a minimum of 5' below the bottom of abutment and a minimum of 1' below the top of bedrock.
4. Estimated pile lengths are based on approximate bedrock elevations. Required pile lengths may vary, depending on actual bedrock elevations.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 02663007
WIN 026630.07

BRIDGE NO. 2774
CROSSING SMELT BROOK
PERRY

ROCK SOCKET DETAILS

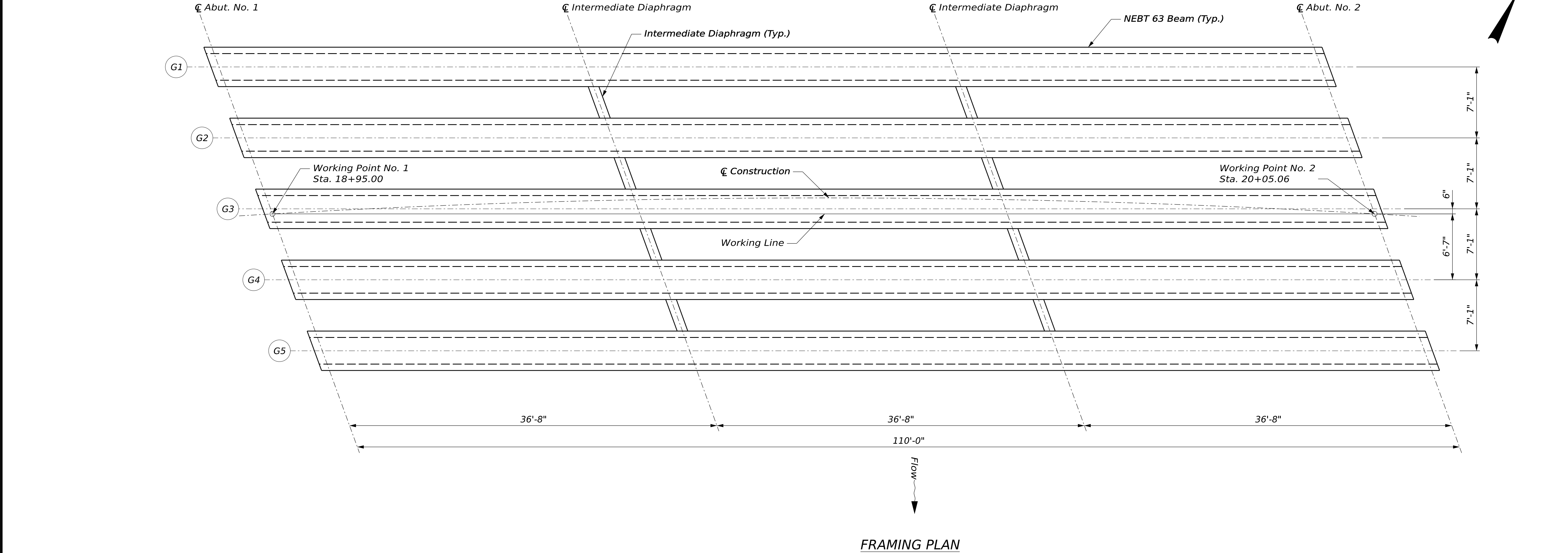
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PROJ. MANAGER	MARK PARLIN	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
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REVISIONS 2						
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FIELD CHANGES						

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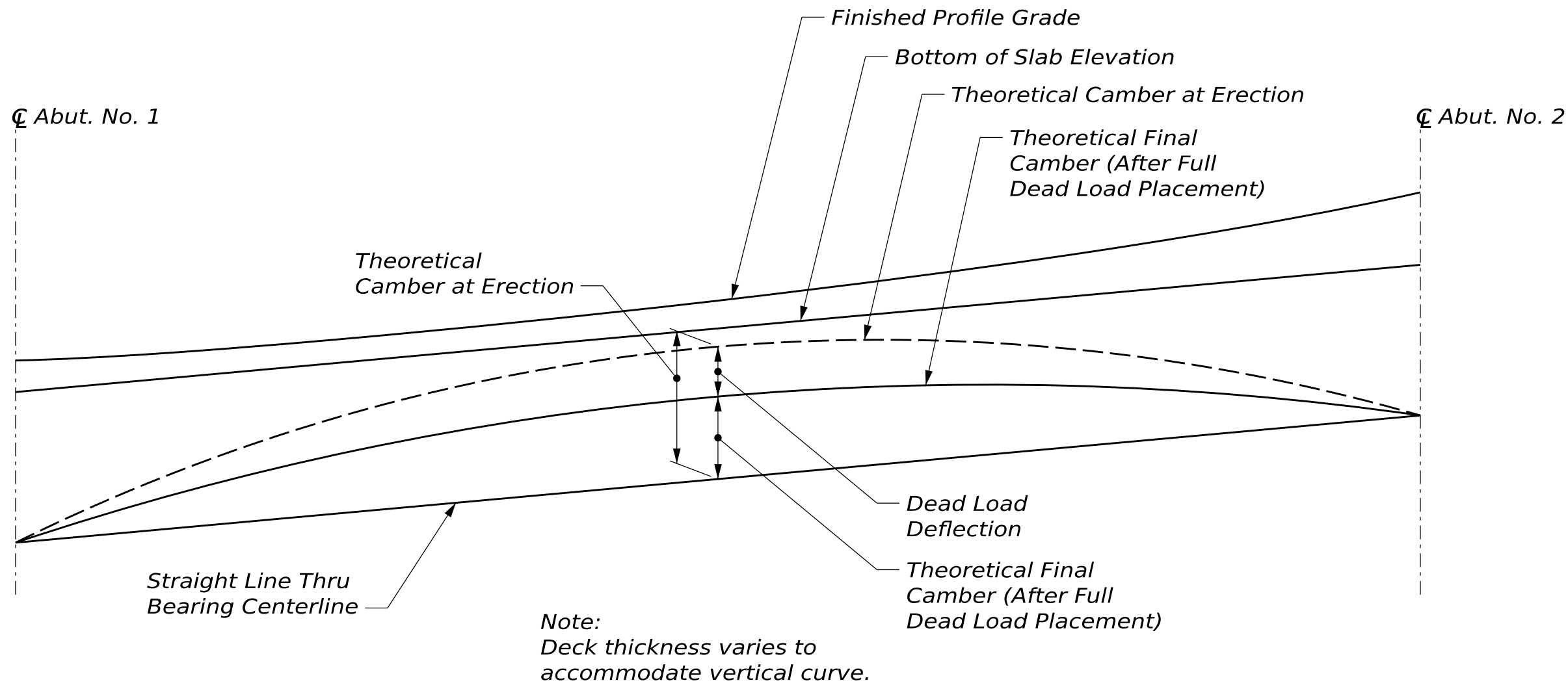
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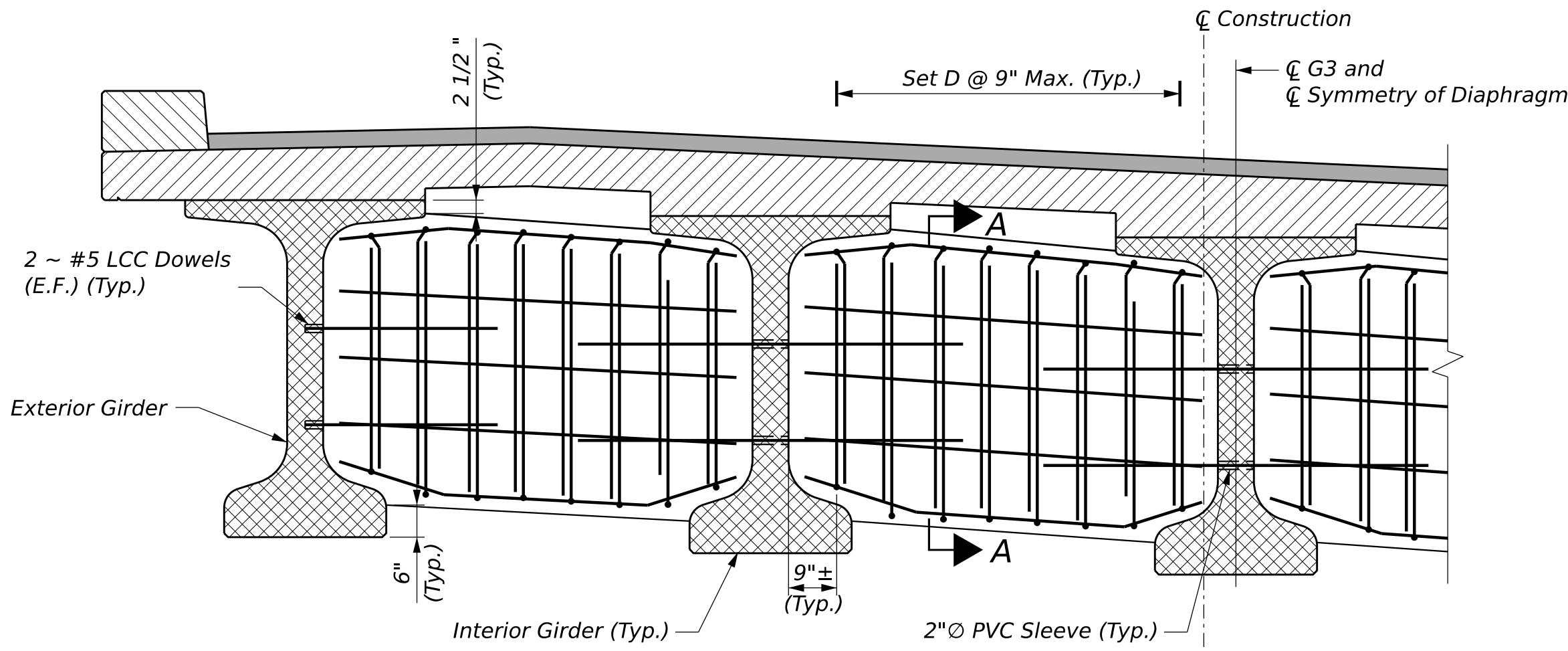
FRAMING PLAN

STATE OF MAINE DEPARTMENT OF TRANSPORTATION					
		Federal Project No. 02663007		WIN 026630.07	
BRIDGE NO. 2774 CROSSING SMELT BROOK PERRY FRAMING PLAN		PROJ. MANAGER MARK PARLIN	BY EBURGESS	DATE 8/6/2025	SIGNATURE
		CHECKED-REVIEWED EBROWNELL	DESIGNED-DETAILED EBROWNELL	DATE 8/6/2025	
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28					
OF 35					

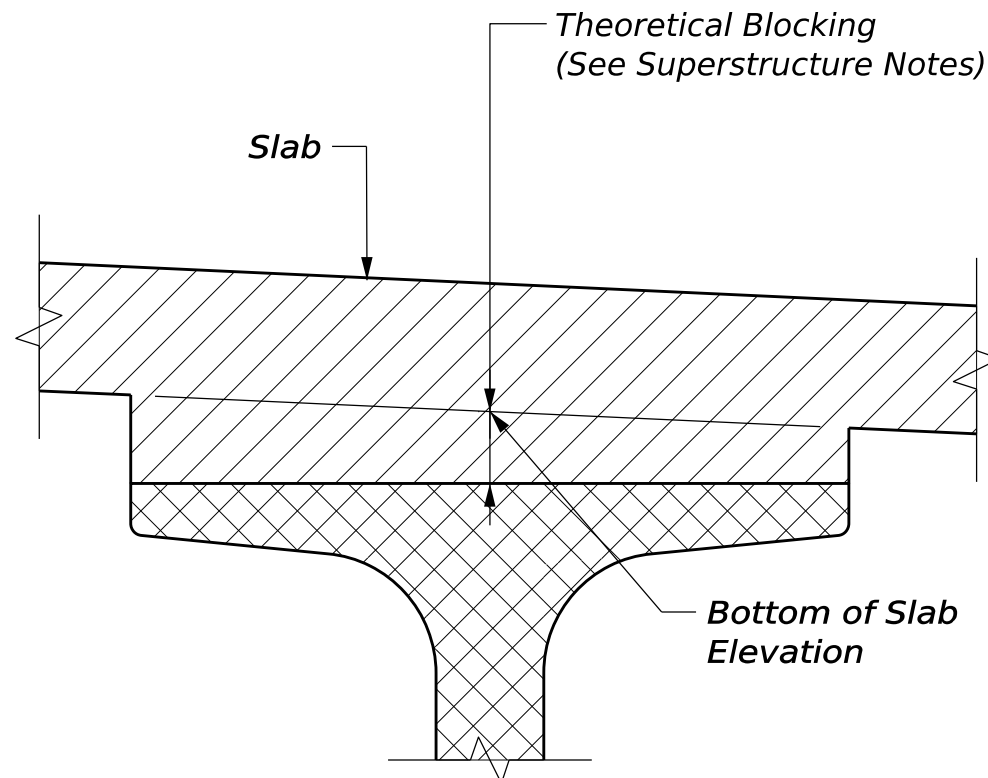


GIRDER CAMBER DIAGRAM

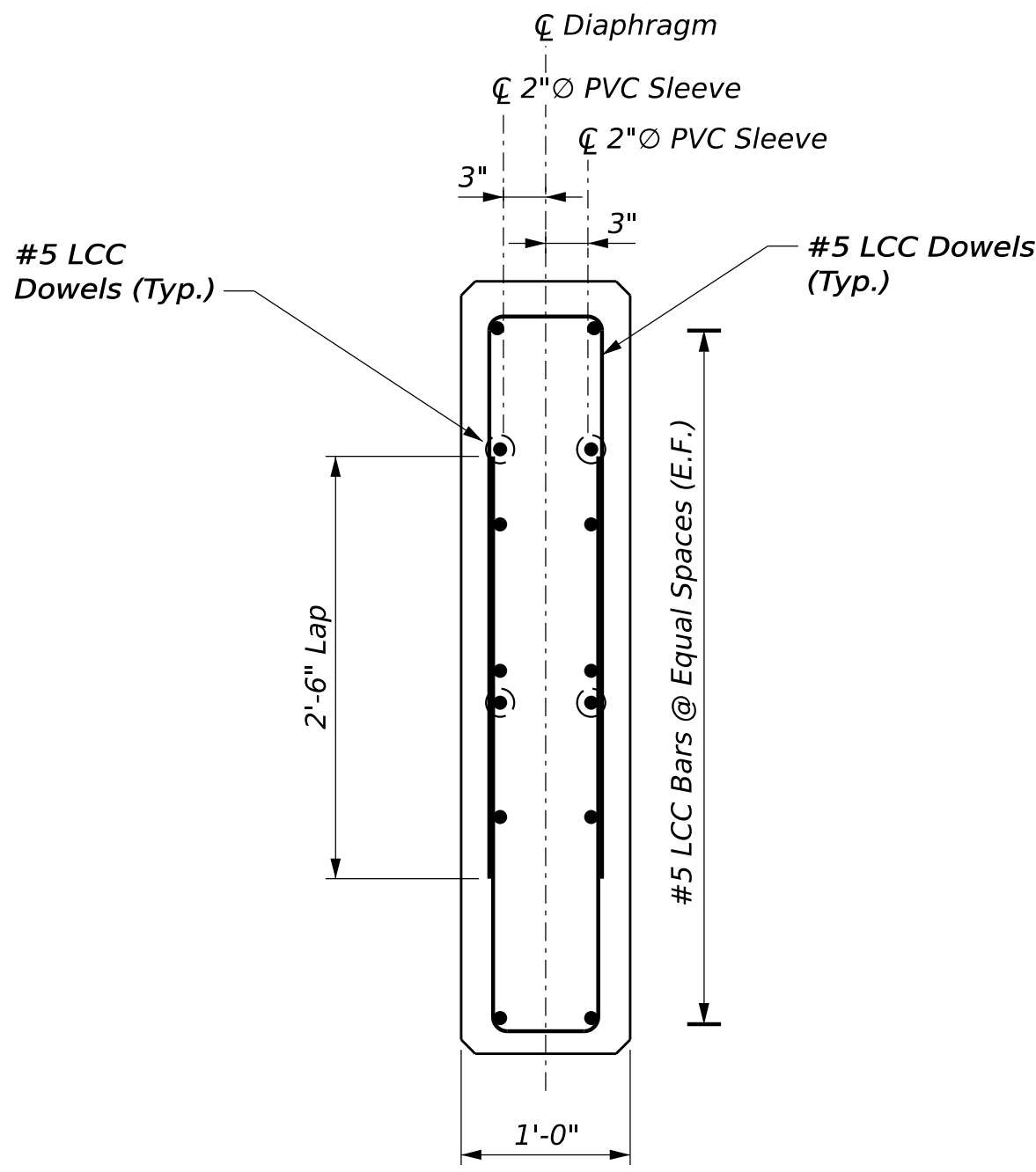
BOTTOM OF SLAB ELEVATIONS											
GIRDER	CL BRG. ABUT. NO. 1	0.1xL	0.2xL	0.3xL	0.4xL	0.5xL	0.6xL	0.7xL	0.8xL	0.9xL	CL BRG. ABUT. NO. 2
G1	29.55	29.70	29.85	29.99	29.99	30.12	30.24	30.43	30.50	30.57	30.63
G2	29.43	29.54	29.66	29.77	29.77	29.88	30.10	30.20	30.31	30.42	30.53
G3	29.03	29.14	29.25	29.37	29.37	29.48	29.70	29.81	29.91	30.02	30.13
G4	28.63	28.74	28.85	28.97	28.97	29.08	29.30	29.41	29.52	29.63	29.74
G5	28.22	28.33	28.44	28.56	28.56	28.67	28.90	29.01	29.12	29.24	29.36



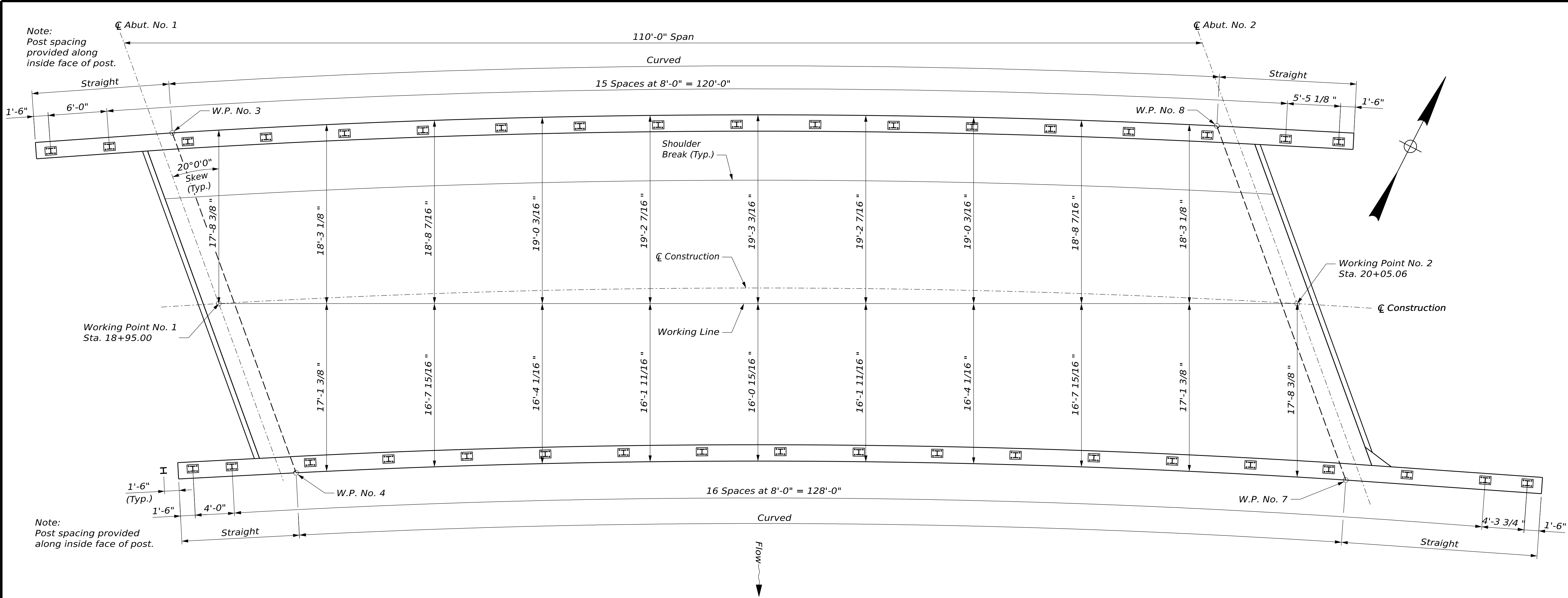
INTERMEDIATE DIAPHRAGM ELEVATION
(Bays 1 and 2 Shown, Bays 3 and 4 Similar)



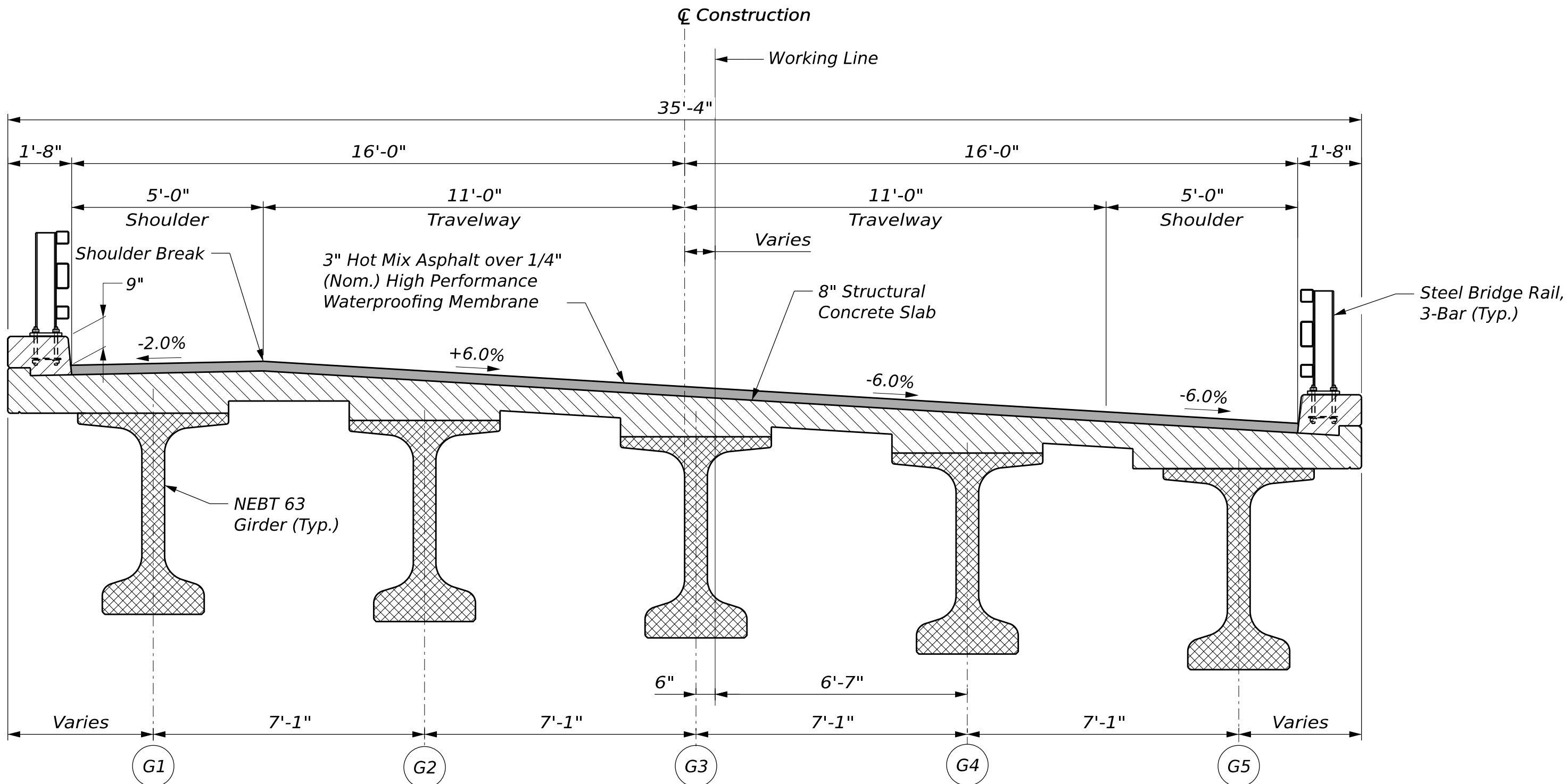
BLOCKING DETAIL



SECTION A-A



SUPERSTRUCTURE PLAN



PRELIMINARY TRANSVERSE SECTION

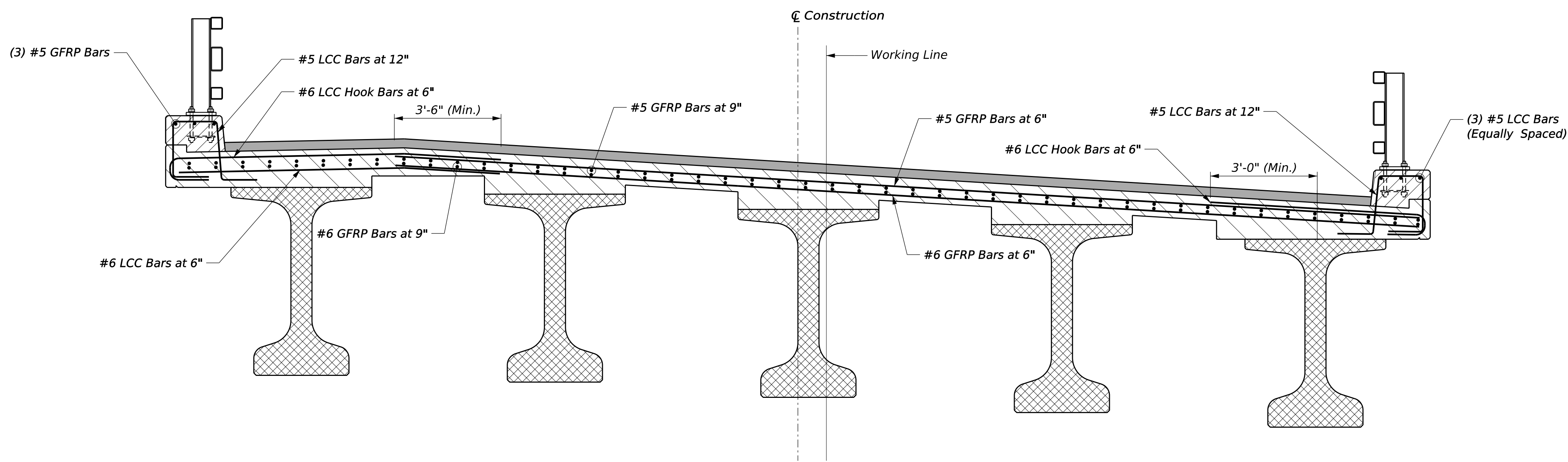
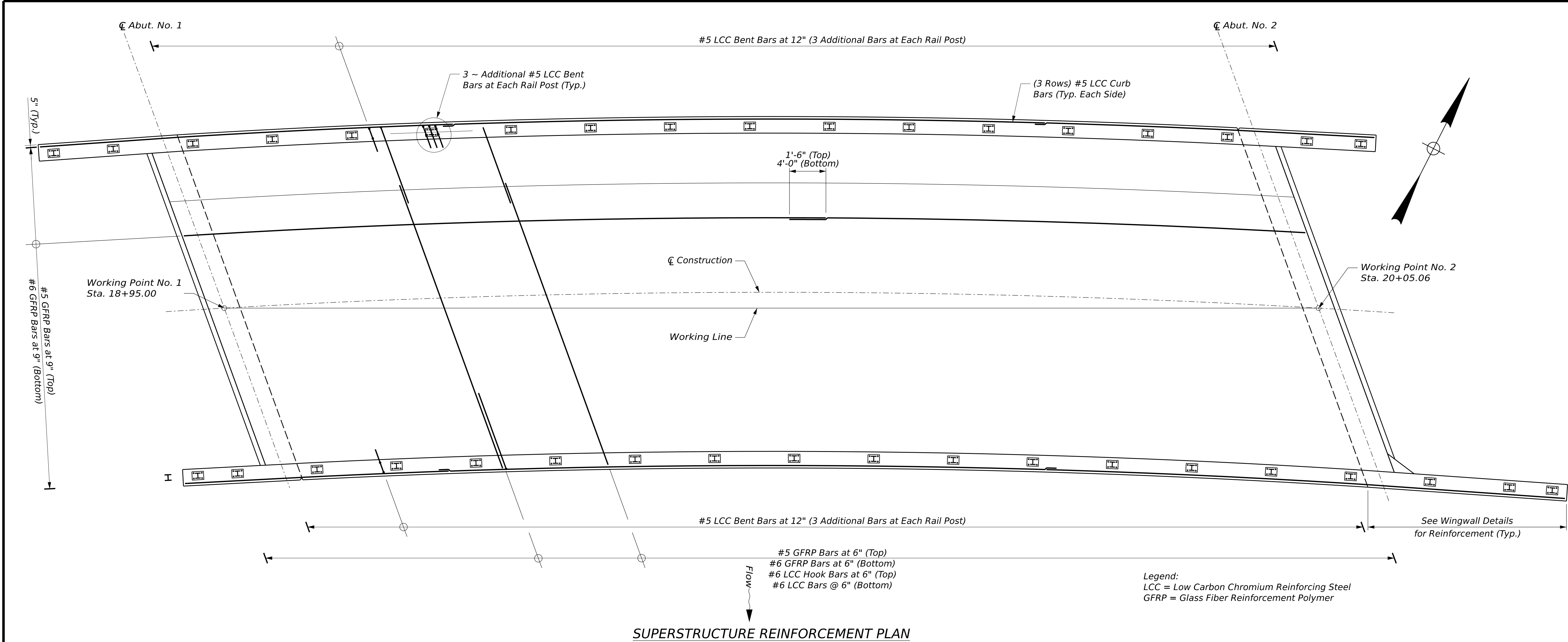
SUPERSTRUCTURE NOTES

1. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.
2. The superstructure slab and end diaphragm shall be placed in one continuous operation and the concrete shall be kept plastic until the entire placement has been made.
3. The theoretical blocking used for design of the structure is 4 1/2 inches at the centerline of bearing of the abutments. Refer to Girder Details for blocking details.
4. Form a one inch V-groove on the fascias at the horizontal joint between the curb and slab.
5. Bar supports for GFRP reinforcement shall be plastic, dielectric material, or other approved material. See Special Provision Subsection 530.05 for additional requirements.
6. Precast Concrete Deck Panels are not allowed on this project.
7. End diaphragm concrete will be paid for under Item No. 506.261, Structural Concrete Roadway and Sidewalk Slabs on Concrete Bridges and shall be placed with the deck.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION		Federal Project No. 02663007		WIN 026630.07	
BRIDGE NO. 2774 CROSSING SMLT BROOK PERRY		SUPERSTRUCTURE PLAN AND TRANSVERSE SECTION			
SHEET NUMBER		31			
OF		35			

PROJ. MANAGER	MARK PARLIN	BY	MARK PARLIN	DATE	8/6/2025
DESIGN-DETAILED	EBROWNELL	CHECKED	EBROWNELL	DATE	8/6/2025
DESIGN-DETAILED	EBROWNELL	CHECKED	EBROWNELL	DATE	8/6/2025
DESIGN-DETAILED	EBROWNELL	CHECKED	EBROWNELL	DATE	8/6/2025
REVISIONS 1		REVISIONS 2		REVISIONS 3	
REVISIONS 4		REVISIONS 5		REVISIONS 6	
FIELD CHANGES		FIELD CHANGES		FIELD CHANGES	

SIGNATURE	
P.E. NUMBER	
DATE	



STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		Federal Project No. 02663007		WIN 026630.07	
BRIDGE NO. 2774		CROSSING SMELT BROOK		PERRY		SUPERSTRUCTURE REINFORCEMENT	
SHEET NUMBER		32		OF		35	
PROJ. MANAGER	MARK PARLIN	BY	MARK PARLIN	DATE	8/6/2025	SIGNATURE	
DESIGN-DETAILED	EBROWNELL	BY	EBROWNELL	DATE	8/6/2025	P.E. NUMBER	
CHECKED-REVIEWED	EBROWNELL	BY	EBROWNELL	DATE		DATE	
DESIGN-DETAILED	EBROWNELL	BY	EBROWNELL	DATE			
DESIGN-DETAILED	EBROWNELL	BY	EBROWNELL	DATE			
REVISIONS 1							
REVISIONS 2							
REVISIONS 3							
REVISIONS 4							
FIELD CHANGES							

