

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 _____ 8.34 sq mi
 Design Discharge (Q50) _____ 645 cfs
 Check Discharge (Q100) _____ 745 cfs
 Headwater Elevation (Q100) _____ 142.3 ft

MATERIALS

Concrete:
 Precast _____ Class "P"
 All Other _____ Class "A1"
 Reinforcing:
 Plain Reinforcing Steel _____ ASTM A615, Grade 60

BASIC DESIGN STRESSES

Concrete:
 Class "A1" _____ f 'c = 4,000 psi
 Class "P" _____ f 'c = 5,000 psi
 Reinforcing:
 Plain Reinforcing Steel _____ f y = 60,000 psi

RICHMOND SAGADAHOC COUNTY JOSH BRIDGE OVER ABAGADASSET RIVER LANGDON ROAD FEDERAL AID PROJECT NO. 2722800 BRIDGE NO. 0976

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UTILITIES

Central Maine Power
 Charter Communications
 Consolidated Communications

TRAFFIC DATA

Current (2023) AADT	430
Future (2043) AADT	470
DHV - % of AADT	16%
Design Hour Volume	75
Heavy Trucks (% of AADT)	15%
Heavy Trucks (% of DHV)	5%
Directional Distribution (% of DHV)	51%
18 kip Equivalent P 2.0	31
18 kip Equivalent P 2.5	30
Design Speed (mph)	45

MAINTENANCE OF TRAFFIC

Road closure with off-site detour.

WIN 27228.00

STATE OF MAINE DEPARTMENT OF TRANSPORTATION
APPROVED
DATE
COMMISSIONER: _____
4-6-26
CHIEF ENGINEER: _____
4-3-2026

STATE OF MAINE
 GARRETT A. GUSTAFSON
 13553
 4-1-26
 PROFESSIONAL ENGINEER

DATE	DEC 2025
BY	MP
S. ZIMMERMAN	
L. FRAIL	
CHECKED-REVIEWED	
DESIGN-DETAILED	
DESIGN-DETAILED	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

RICHMOND
JOSH BRIDGE
TITLE SHEET

<u>PROJECT LOCATION</u>	Josh Bridge (#0976) over Abagadasset River. Located 0.41 of a mile west of Savage Road. Lat./Long. 44°06'40" N 69°50'21" W
<u>OUTLINE OF WORK</u>	Bridge Culvert replacement of Josh Bridge carrying Langdon Road over the Abagadasset River

SHEET NUMBER
1
OF 22

Date: 4/1/2026
Username: Mark.Poulin

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.19	REMOVING EXISTING BRIDGE	1	LS
202.202	REMOVING PAVEMENT SURFACE	860	SY
203.20	COMMON EXCAVATION	650	CY
203.2318	DISPOSAL OF SPECIAL WASTE	622	T
203.24	COMMON BORROW	50	CY
203.25	GRANULAR BORROW	276	CY
203.4338	LIGHTWEIGHT FOAMED GLASS AGGREGATE	210	CY
203.55	CULVERT BEDDING STONE	90	CY
206.061	STRUCTURAL EARTH EXCAVATION - DRAINAGE AND MINOR STRUCTURES, BELOW GRADE	50	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	770	CY
403.208	HOT MIX ASPHALT 12.5 MM HMA SURFACE	170	T
403.213	HOT MIX ASPHALT 12.5 MM BASE	160	T
409.15	BITUMINOUS TACK COAT - APPLIED	80	G
502.261	STRUCTURAL CONCRETE ROADWAY & SIDEWALK SLAB ON CONCRETE BRIDGE (45 CY)	1	LS
502.49	STRUCTURAL CONCRETE CURBS AND SIDEWALKS (22 CY)	1	LS
503.12	REINFORCING STEEL - FABRICATED & DELIVERED	7,650	LB
503.13	REINFORCING STEEL - PLACING	7,650	LB
503.17	MECHANICAL/WELDED SPLICE	52	EA
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE (105 SY)	1	LS
511.07	COFFERDAM: UPSTREAM	1	LS
511.07	COFFERDAM: DOWNSTREAM	1	LS
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES (100 SY)	1	LS
526.301	PORTABLE CONCRETE BARRIER TYPE I (60 LF)	1	LS
534.71	PRECAST CONCRETE BOX CULVERT (230 CY)	1	LS
606.1301	31" W-BM GR, MID-WAY SPLICE-SGL FACED	287.5	LF
606.1305	31" W-BM GR, MID-WAY SPLICE FLARED TERMINAL	4	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	8	EA
606.74	GUARDRAIL TYPE 3 - SINGLE RAIL BRIDGE MOUNTED	50	LF
610.08	PLAIN RIPRAP	400	CY
610.18	STONE DITCH PROTECTION	20	CY
613.319	EROSION CONTROL BLANKET	70	SY
615.07	LOAM	60	CY
618.14	SEEDING METHOD NUMBER 2	10	UN
619.12	MULCH	10	UN
619.14	EROSION CONTROL MIX	110	CY
620.58	EROSION CONTROL GEOTEXTILE	500	SY
620.65	REINFORCEMENT GEOGRID	260	SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	1,575	LF
629.05	HAND LABOR, STRAIGHT TIME	40	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	20	HR
639.19	FIELD OFFICE TYPE B	1	EA
652.312	TYPE III BARRICADE	6	EA
652.33	DRUM	25	EA
652.34	CONE	50	EA
652.35	CONSTRUCTION SIGNS	315	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	1	LS
652.38	FLAGGER	100	HR
652.41	PORTABLE CHANGEABLE MESSAGE SIGN	3	EA
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL CONSTRUCTION NOTES

- For easements, construction limits, and right of way lines, refer to the Right of Way Map.
- The clearing limits as shown on the plans are approximate. The exact limits will be established in the field by the Resident. Payment for clearing will be considered incidental to Contract items.
- All utility facilities shall be adjusted by the respective utilities unless otherwise noted.
- Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.
- 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.
- All embankment material shall be Granular Borrow meeting the requirements of Standard Specifications Subsection 703.19, Granular Borrow, for Material for Underwater Backfill.
- Place loam 2 inches deep on all new or reconstructed sideslopes or as directed by the Resident.
- 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.
- Place a 24 inch wide strip of Erosion Control Blanket on the sideslopes along the top of the riprap and behind the wingwalls.
- A MASH compliant guardrail end treatment shall be installed concurrently with the placement of each section of beam guardrail.
- 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.
- Protective Coating for Concrete Surfaces shall be applied to the following areas:

All exposed surfaces of concrete curbs and cast in place concrete slabs on top of the box culvert,

On all concrete box surfaces that are exposed and to limit lines one foot beyond intersections of surfaces and ground.

- Project information referred to below may be accessed at the following MaineDOT web address: <http://www.maine.gov/mdot/contractors/>
- 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.
- The project geotechnical design report titled: Geotechnical Design Report, Josh Bridge Culvert Replacement, Bridge No. 0976, Richmond, Maine, dated March 2026, Soils Report 2026-07, may be accessed at the MaineDOT web address.
- 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.
- 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.

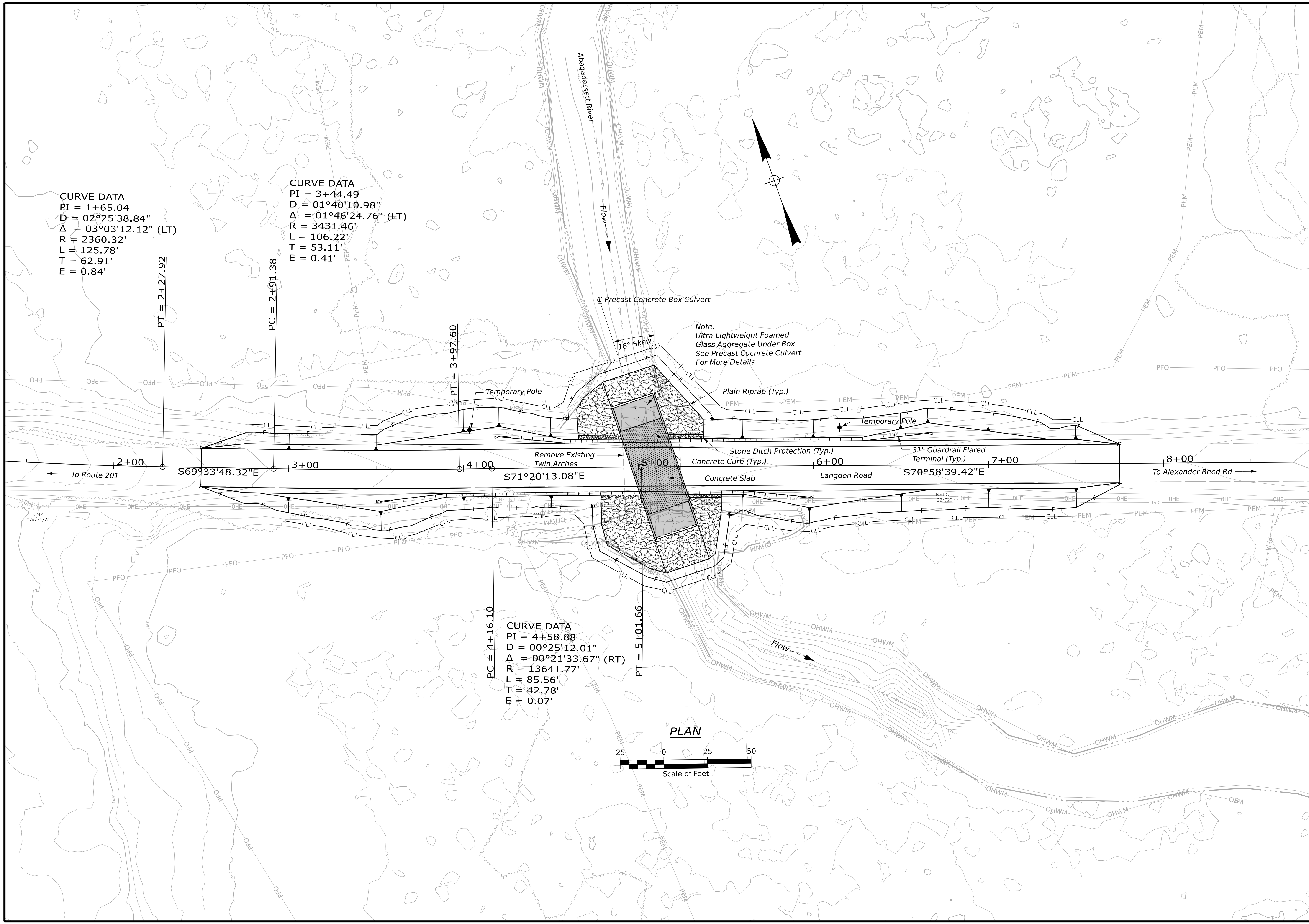
c. If a design change results in changes to estimated quantities for Lump Sum pay items, price adjustments will be made in accordance with Standard Specifications Section 109.7, Equitable Adjustments to Compensation and Time.
- During construction, the contractor shall make every effort to minimize inducing vibration into the subsurface soils and the new concrete box culvert in order to prevent any differential settlement of the new box culvert sections. For example, the contractor shall take great care in removing the cofferdams once the new box culvert is in place if that activity involves the use of a vibratory pile driving device. Any damage to, or settlement of, the new box culvert sections caused by the contractor's means and methods shall be addressed by repairing and/or resetting the box culvert sections to the satisfaction of the Resident, at no additional cost to the Department.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 2722800
WIN 027228.00

PROJ. MANAGER	S. ZIMMERMAN	DATE	
DESIGN-DETAILED	J. FRANK	BY	
CHECKED-REVIEWED		DATE	DEC 2025
DESIGN-DETAILED02			
DESIGN-DETAILED03			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

JOSH BRIDGE #0976
CROSSING ABAGADASSETT RIVER
RICHMOND
ESTIMATED QUANTITIES &
GENERAL CONSTRUCTION NOTES

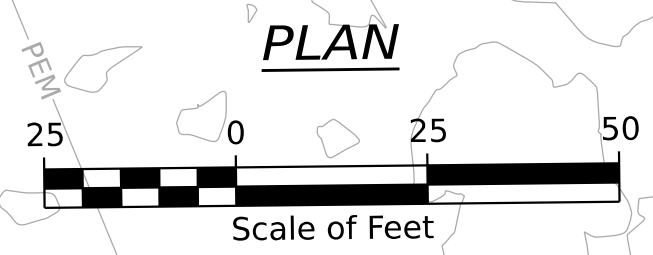
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OF 22



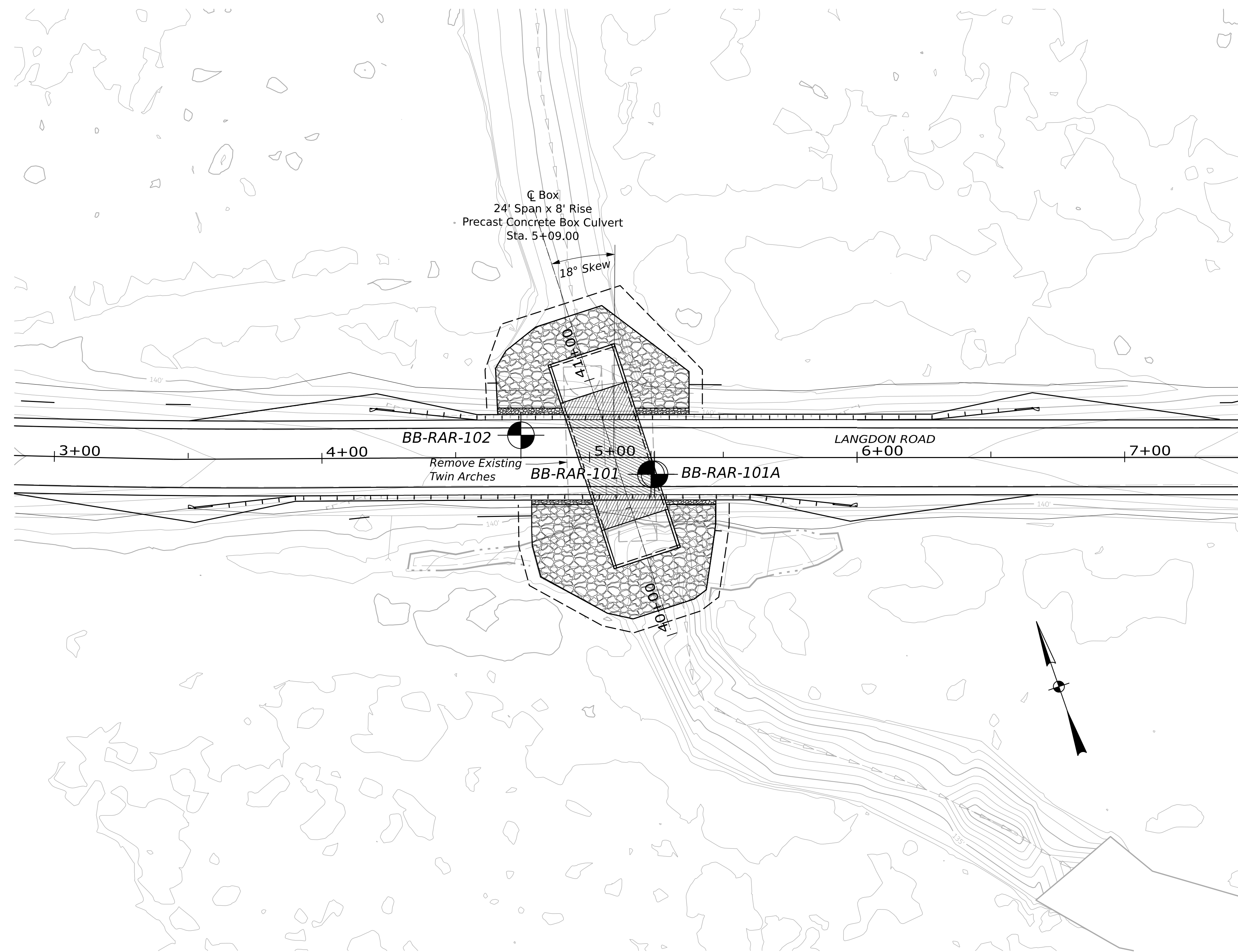
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 D = 02°25'38.84"
 Δ = 03°03'12.12" (LT)
 R = 2360.32'
 L = 125.78'
 T = 62.91'
 E = 0.84'

CURVE DATA
 PI = 3+44.49
 D = 01°40'10.98"
 Δ = 01°46'24.76" (LT)
 R = 3431.46'
 L = 106.22'
 T = 53.11'
 E = 0.41'

CURVE DATA
 PI = 4+58.88
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 Δ = 00°21'33.67" (RT)
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 E = 0.07'



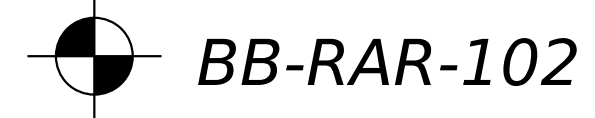
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FEDERAL PROJECT NO. 2722800		WIN 027228.00	
PROJ. MANAGER	S. ZIMMERMAN	BY	J. PRAUL
CHECKED-REVIEWED		DATE	DEC 2025
DESIGN-REVIEWED		SIGNATURE	
DESIGN-REVIEWED		P.E. NUMBER	
REVISIONS 1		DATE	
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
JOSH BRIDGE #0976 CROSSING ABAGADASSETT RIVER RICHMOND			
GENERAL PLANS			
SHEET NUMBER			
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OF 22			



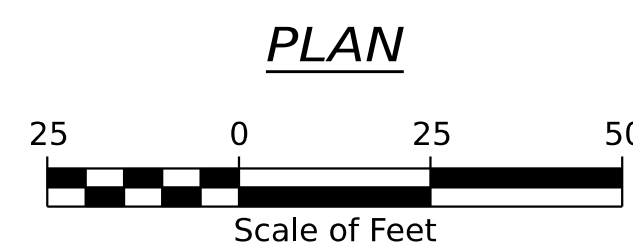
NOTES

- 1) Base map developed from electronic files (WIN 27228.00) provided by MaineDOT.
- 2) The as-drilled locations of the test borings were surveyed and provided by MaineDOT in an electronic file (2D BORINGS SEPTEMBER 24 027228.00.DGN).

BORING LOCATION PLAN LEGEND



Location and designation of BB-RAR-100 borings performed by MaineDOT of Augusta, Maine and observed by GZA personnel between August 21 and September 3, 2024



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 2722800
WIN 027228.00
BRIDGE PLANS

SIGNATURE
P.E. NUMBER
DATE

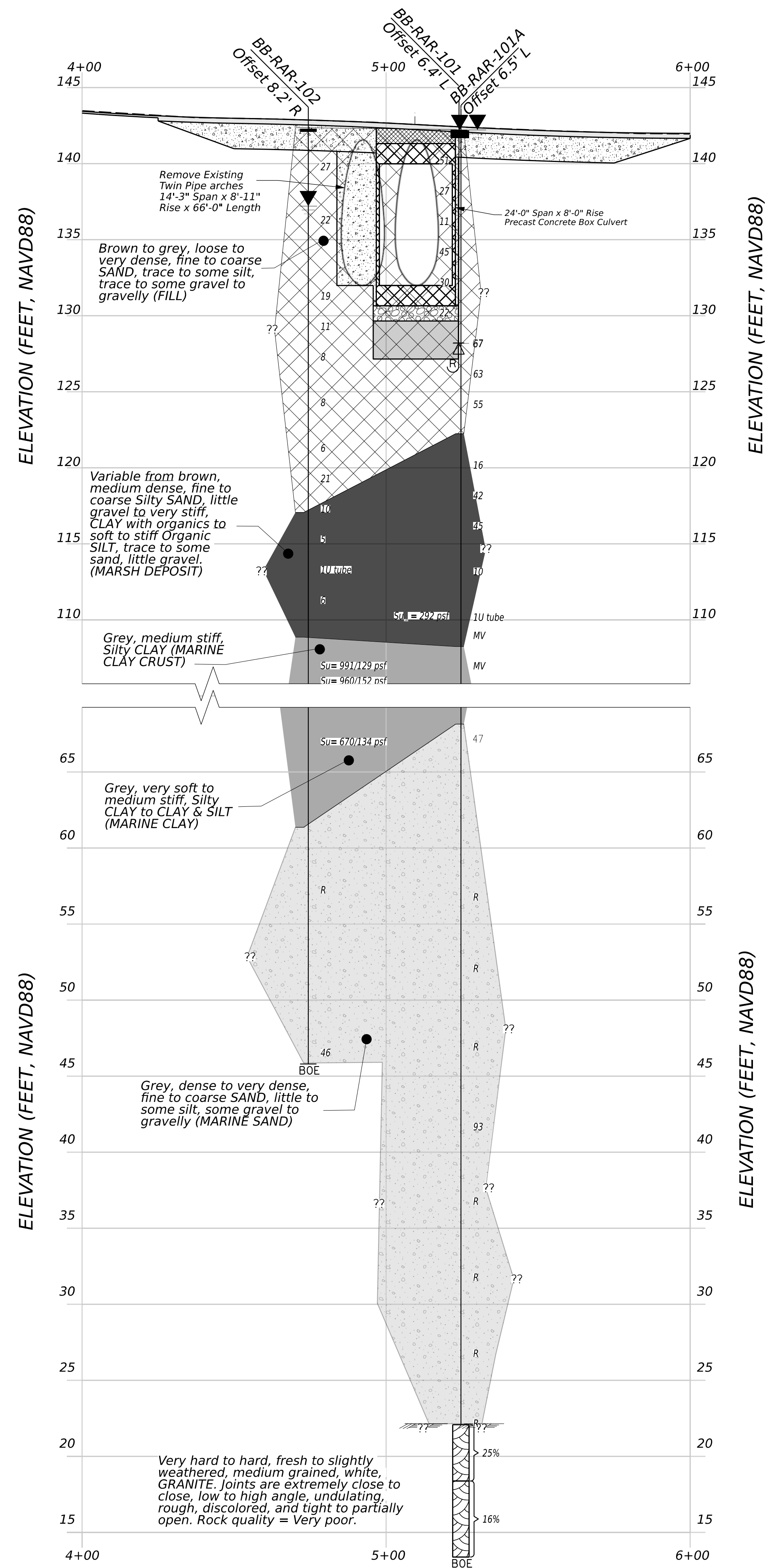
PROJ. MANAGER	S. ZIMMERMAN	BY	DATE
DESIGN-DETAILED	JNB	JNB	JAN 2025
CHECKED-REVIEWED	NWB	RAB	JAN 2025
DESIGN-DETAILED02			
DESIGN-DETAILED03			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

LANGDON ROAD BRIDGE NO. 0976
CROSSING ABAGADASSET RIVER
RICHMOND
BORING LOCATION PLAN

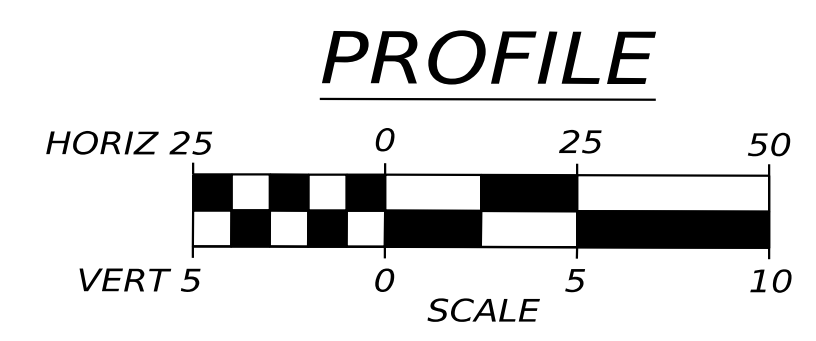
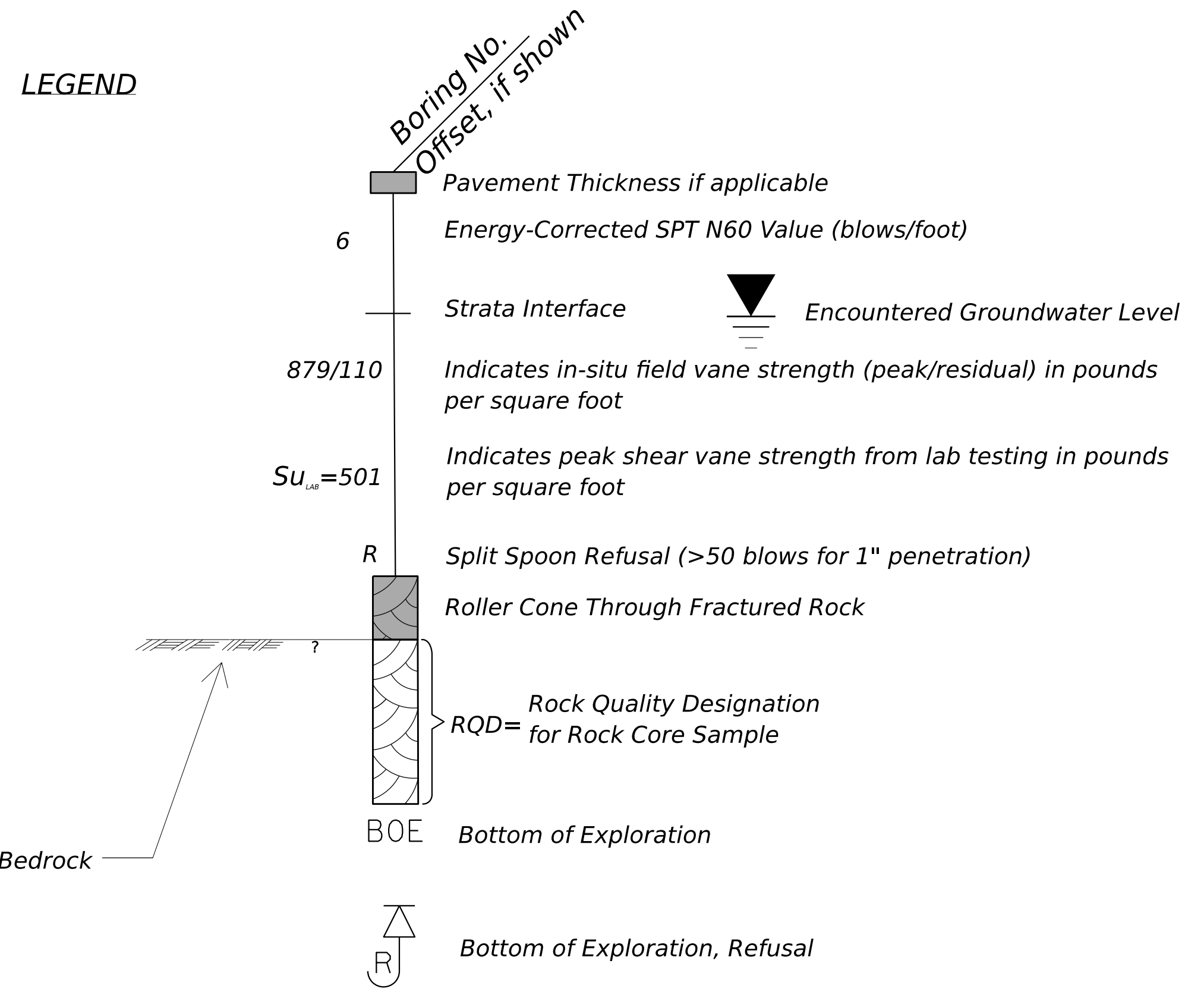
SHEET NUMBER

5
OF 22





- NOTES:**
- 1) Profile developed from electronic files (WIN 27228.00 Workset).
 - 2) The as-drilled boring locations were surveyed by MaineDOT survey crew and provided to GZA in an electronic file (2D BORINGS SEPTEMBER 24 027228.00.DGN).
 - 3) BB-RAR-100 series borings were performed by MaineDOT and observed by GZA personnel between August 21 and September 3, 2024.
 - 4) This generalized interpretive soil and rock profile is intended to convey trends in the 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 specific information, refer to the boring logs.



STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
Federal Project No. 2722800		WIN 027228.00	
BRIDGE PLANS		BRIDGE PLANS	
PROJ. MANAGER	BY	DATE	SIGNATURE
S. ZIMMERMAN	E. TOME	JAN 2026	
DESIGN-DETAILED	CHECKED-REVIEWED	JAN 2026	
N. WILLIAMS	A. BLANDELL		
DESIGN-DETAILED02			
DESIGN-DETAILED03			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
LANGDON ROAD BRIDGE NO. 0976		INTERPRETIVE SUBSURFACE PROFILE	
CROSSING ABAGADASSET RIVER		RICHMOND	
SHEET NUMBER		OF 22	
6		PREPARED BY	
GZA			

Maine Department of Transportation Boring Log BB-RAR-101. Includes header with project info, logs, and a detailed data table with columns for depth, sample info, and visual description.

Notes: 1. Automatic Hammer Method, ETR = 0.962. 2. Water level observed flush with casing during... 3. Fine-grained soil descriptions on this log are based on plasticity estimated using visual/manual classification techniques...

Maine Department of Transportation Boring Log BB-RAR-101A. Includes header with project info, logs, and a detailed data table with columns for depth, sample info, and visual description.

Notes: 1. Automatic Hammer Method, ETR = 0.962. 2. Water level observed flush with casing during... 3. Fine-grained soil descriptions on this log are based on plasticity estimated using visual/manual classification techniques...

Maine Department of Transportation Boring Log BB-RAR-101A. Includes header with project info, logs, and a detailed data table with columns for depth, sample info, and visual description.

Notes: 1. Automatic Hammer Method, ETR = 0.962. 2. Water level observed flush with casing during... 3. Fine-grained soil descriptions on this log are based on plasticity estimated using visual/manual classification techniques...

Maine Department of Transportation Boring Log BB-RAR-101A. Includes header with project info, logs, and a detailed data table with columns for depth, sample info, and visual description.

Notes: 1. Automatic Hammer Method, ETR = 0.962. 2. Water level observed flush with casing during... 3. Fine-grained soil descriptions on this log are based on plasticity estimated using visual/manual classification techniques...

Maine Department of Transportation Boring Log BB-RAR-101A. Includes header with project info, logs, and a detailed data table with columns for depth, sample info, and visual description.

Notes: 1. Automatic Hammer Method, ETR = 0.962. 2. Water level observed flush with casing during... 3. Fine-grained soil descriptions on this log are based on plasticity estimated using visual/manual classification techniques...

Maine Department of Transportation Boring Log BB-RAR-102. Includes header with project info, logs, and a detailed data table with columns for depth, sample info, and visual description.

Notes: 1. Automatic Hammer Method, ETR = 0.962. 2. Water level observed flush with casing during... 3. Fine-grained soil descriptions on this log are based on plasticity estimated using visual/manual classification techniques...

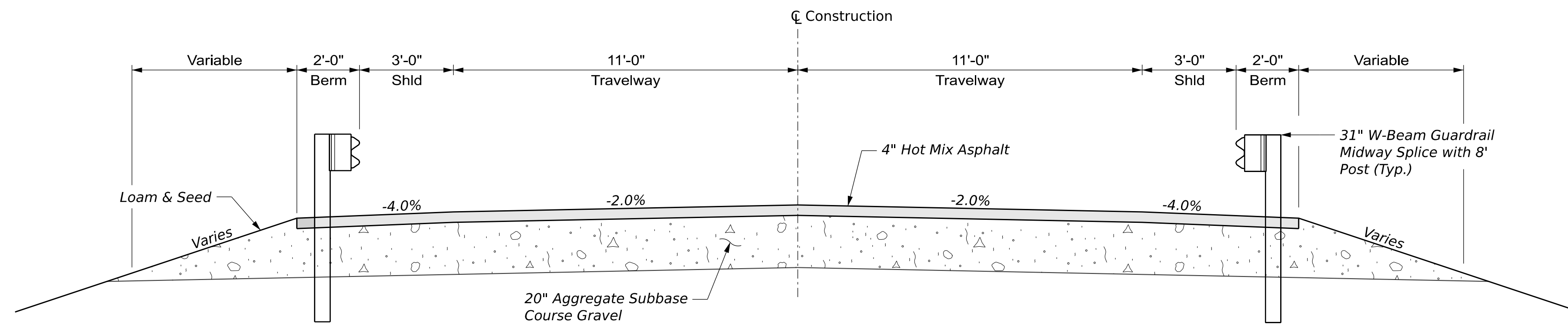
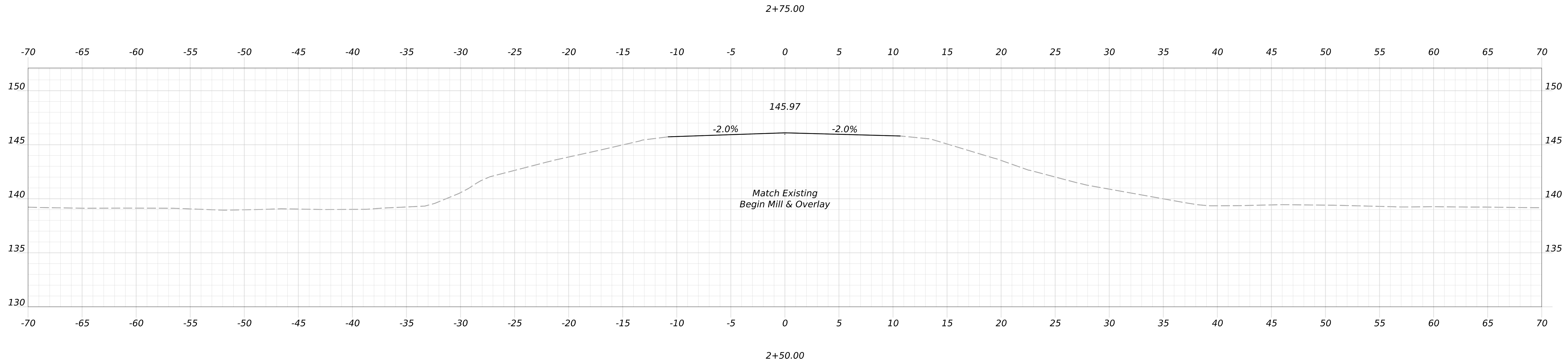
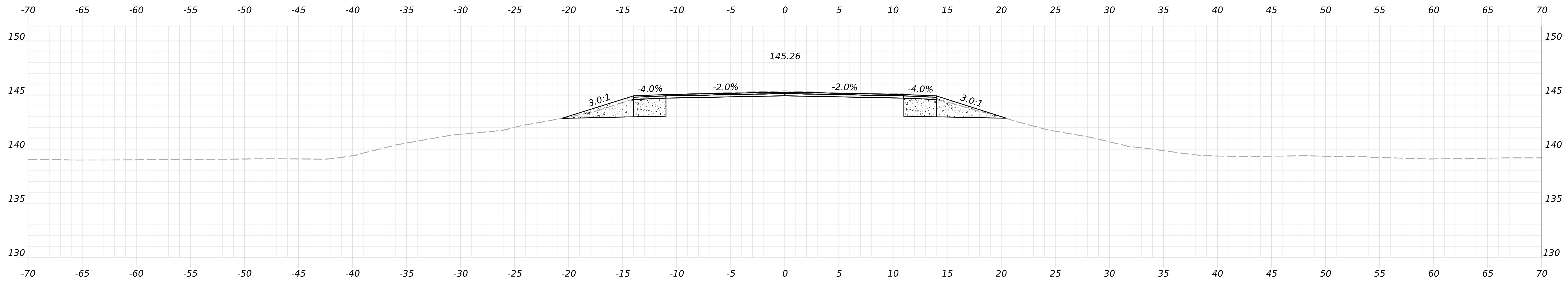
Maine Department of Transportation Boring Log BB-RAR-102. Includes header with project info, logs, and a detailed data table with columns for depth, sample info, and visual description.

Notes: 1. Automatic Hammer Method, ETR = 0.962. 2. Water level observed flush with casing during... 3. Fine-grained soil descriptions on this log are based on plasticity estimated using visual/manual classification techniques...

Maine Department of Transportation Boring Log BB-RAR-102. Includes header with project info, logs, and a detailed data table with columns for depth, sample info, and visual description.

Notes: 1. Automatic Hammer Method, ETR = 0.962. 2. Water level observed flush with casing during... 3. Fine-grained soil descriptions on this log are based on plasticity estimated using visual/manual classification techniques...

STATE OF MAINE DEPARTMENT OF TRANSPORTATION Federal Project No. 2722800. Includes signature lines for project manager, designers, reviewers, and field changes, along with sheet and page numbers.



TYPICAL APPROACH SECTION

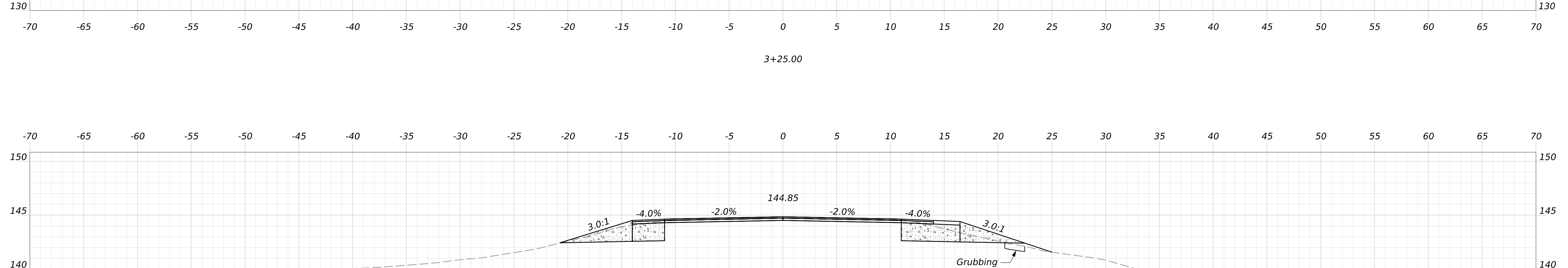
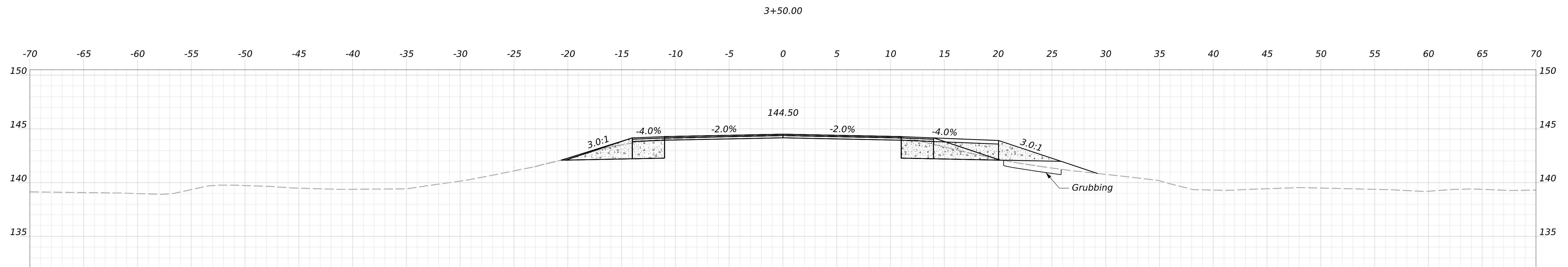
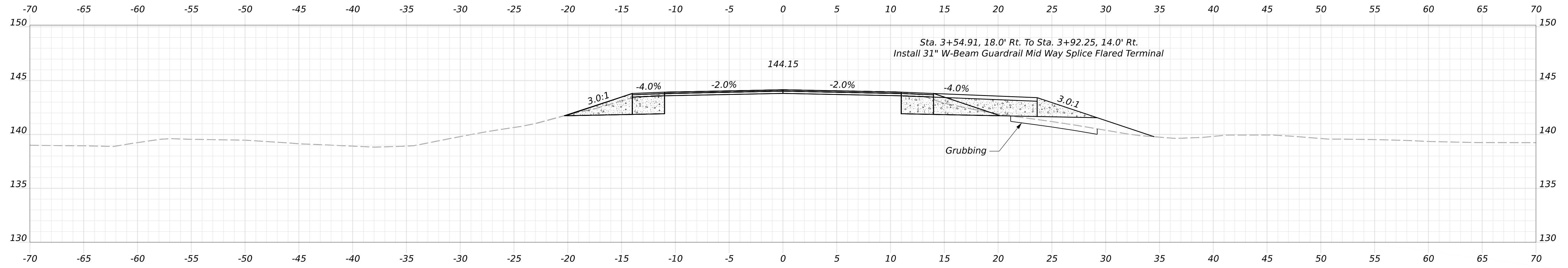
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 2722800
BRIDGE NO. 0976 WIN 27228.00 BRIDGE PLANS

PROJ. MANAGER	S. ZIMMERMAN	DATE	DEC 2025
DESIGN-DETAILED	J. PRAUL	BY	MRP
CHECKED-REVIEWED		SIGNATURE	
DESIGN-DETAILED02		P.E. NUMBER	
DESIGN-DETAILED03		DATE	
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

JOSH BRIDGE
ABAGADASSETT RIVER
RICHMOND SAGadahoc COUNTY
CROSS SECTIONS

SHEET NUMBER
8
OF 22

Username: MarkPoulin Date: 4/1/2026



Sta. 3+54.91, 18.0' Rt. To Sta. 3+92.25, 14.0' Rt.
Install 31" W-Beam Guardrail Mid Way Splice Flared Terminal

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 2722800

BRIDGE NO. 0976 WIN 27228.00 BRIDGE PLANS

SIGNATURE
P.E. NUMBER
DATE

PROJ. MANAGER	BY	DATE
S. ZIMMERMAN	MRP	DEC 2025
DESIGN-DETAILED		
CHECKED-REVIEWED		
DESIGN-DETAILED02		
DESIGN-DETAILED03		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

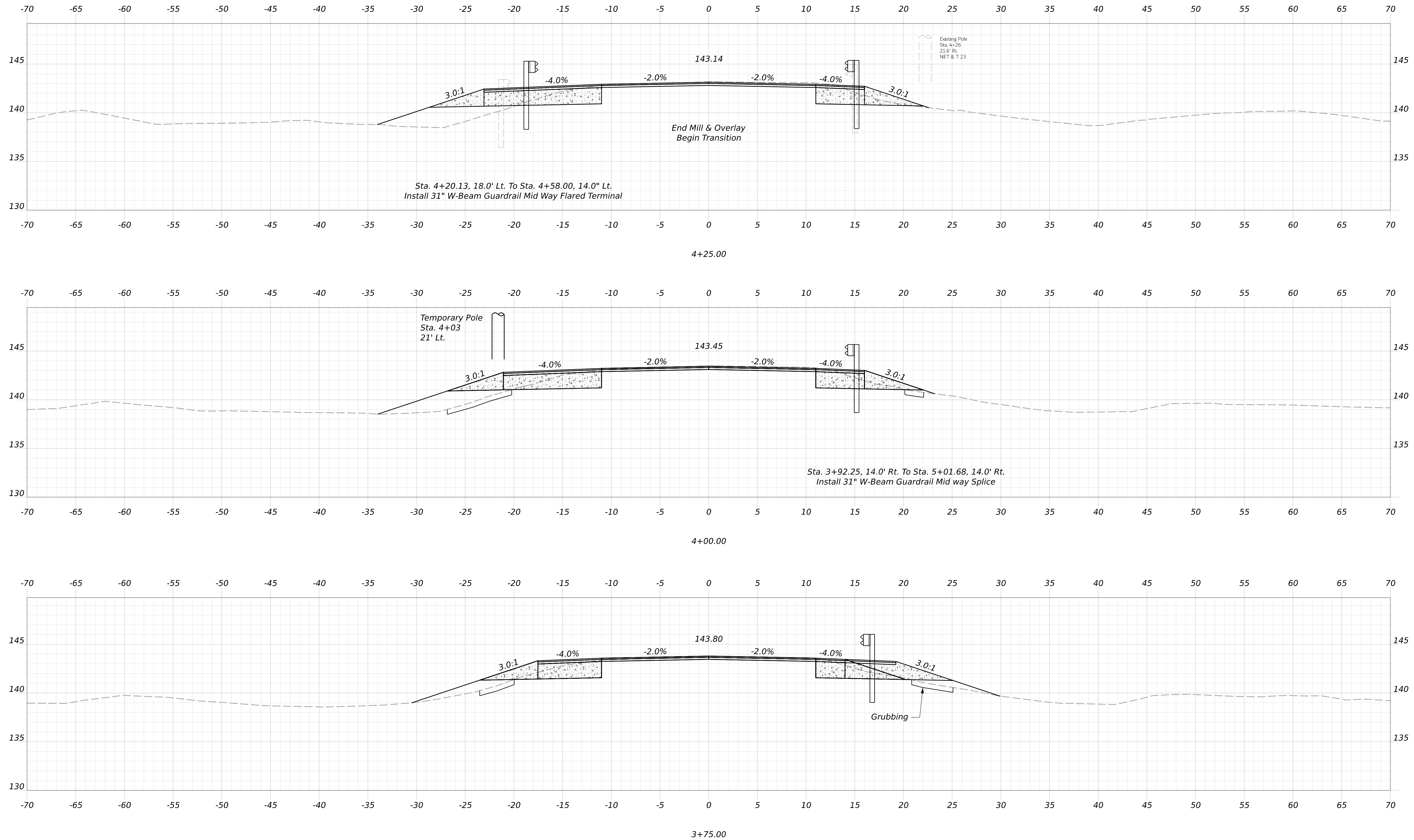
JOSH BRIDGE
ABAGADASSETT RIVER
RICHMOND SAGadahoc COUNTY
CROSS SECTIONS

SHEET NUMBER

9

OF 22

Username: MarkPoulin Date: 4/1/2026



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 2722800

BRIDGE NO. 0976 WIN 27228.00 BRIDGE PLANS

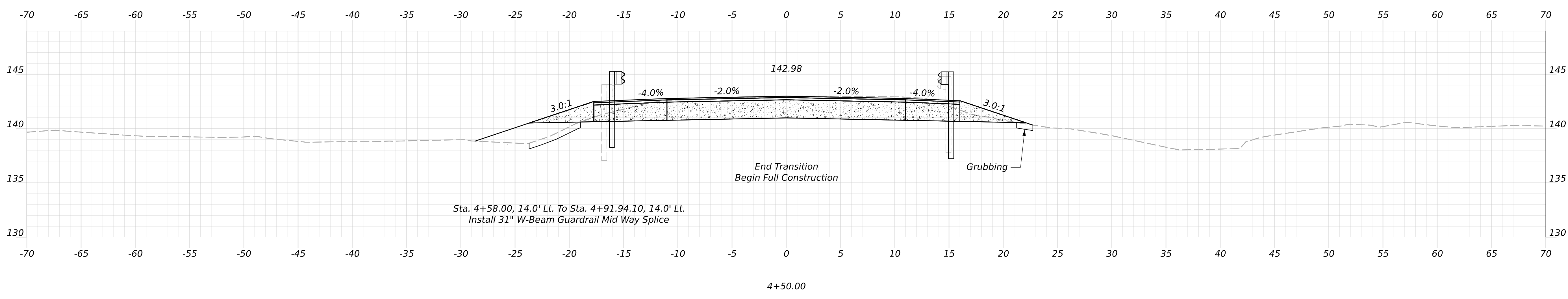
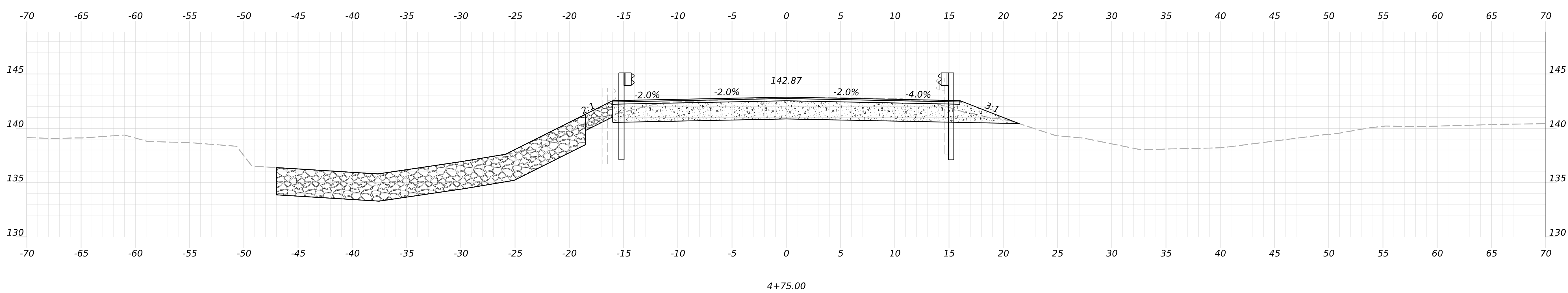
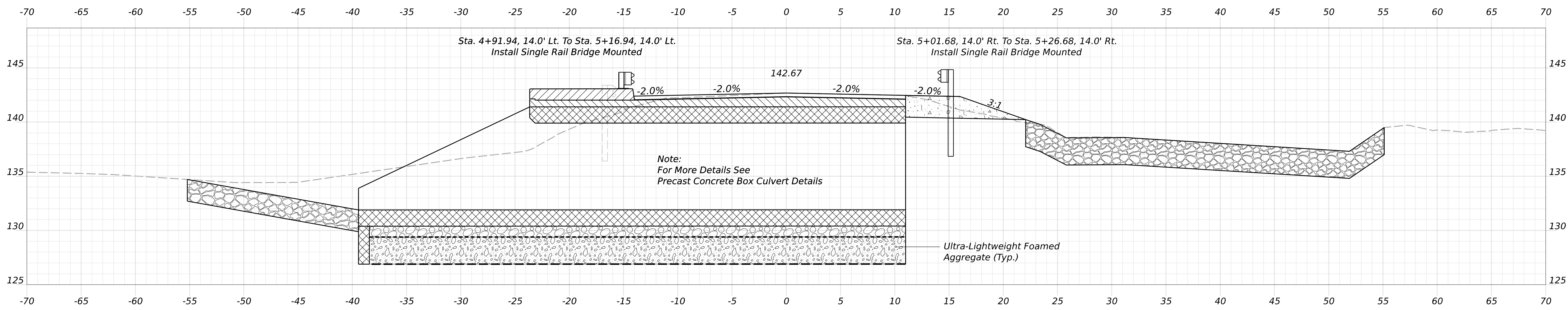
PROJ. MANAGER	BY	DATE
S. ZIMMERMAN	MRP	DEC 2025

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

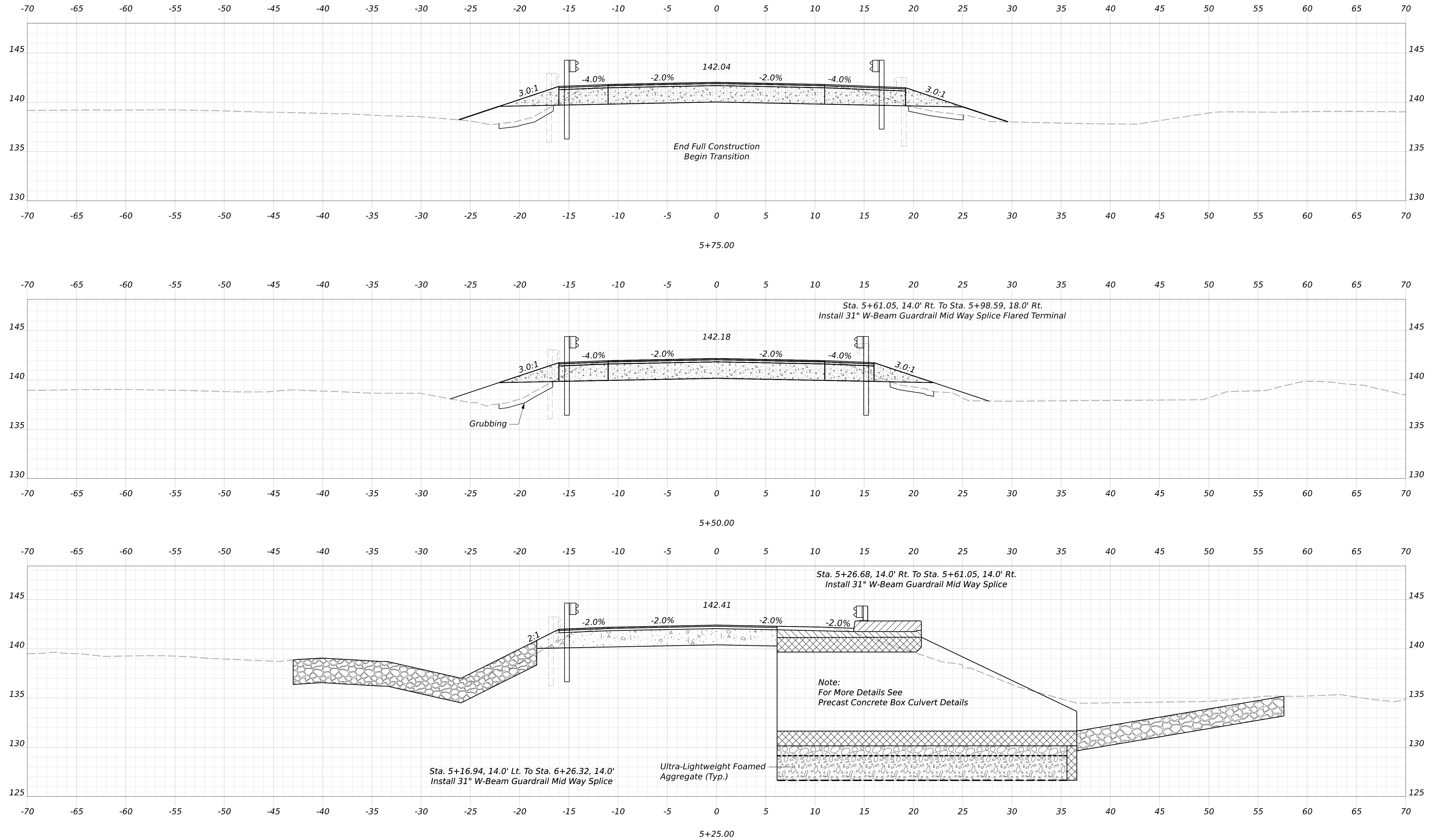
JOSH BRIDGE
ABAGADASSETT RIVER
RICHMOND SAGadahoc COUNTY
CROSS SECTIONS

SHEET NUMBER
10
OF 22

Username: MarkPoulin Date: 4/1/2026

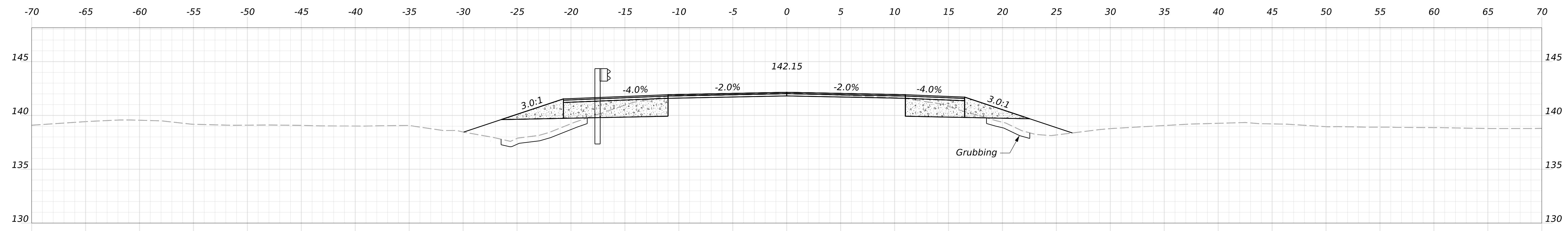


STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		Federal Project No. 2722800	
BRIDGE NO. 0976		WIN 27228.00		BRIDGE PLANS	
PROJ. MANAGER	S. ZIMMERMAN	BY	DATE	SIGNATURE	P.E. NUMBER
DESIGN-DETAILED	J. PRAUL	MRP	DEC 2025		
CHECKED-REVIEWED					
DESIGN-DETAILED02					
DESIGN-DETAILED03					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					
JOSH BRIDGE ABAGADASSETT RIVER RICHMOND SAGadahoc COUNTY			CROSS SECTIONS		
SHEET NUMBER					
11					
OF 22					

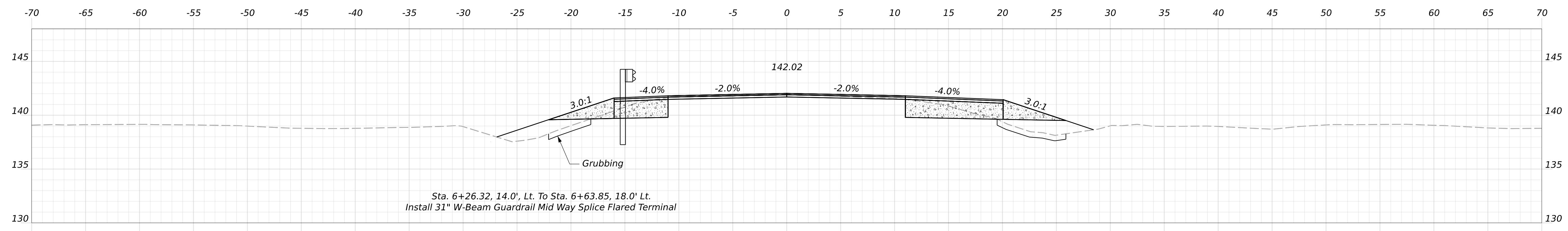


PROJ. MANAGER	BY	DATE
S. ZIMMERMAN	J. PRAUL	DEC 2025

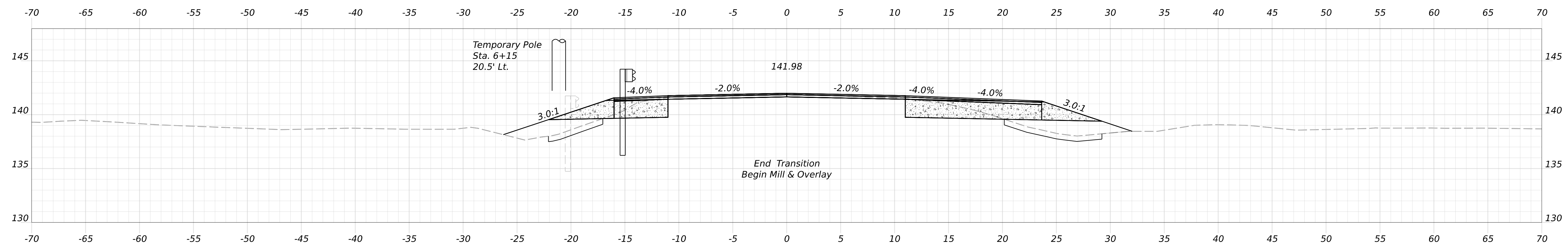
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6+50.00



6+25.00



6+00.00

DATE	SIGNATURE	P.E. NUMBER	DATE
DEC 2025			

PROJ. MANAGER	BY	DATE
S. ZIMMERMAN	MRP	DEC 2025

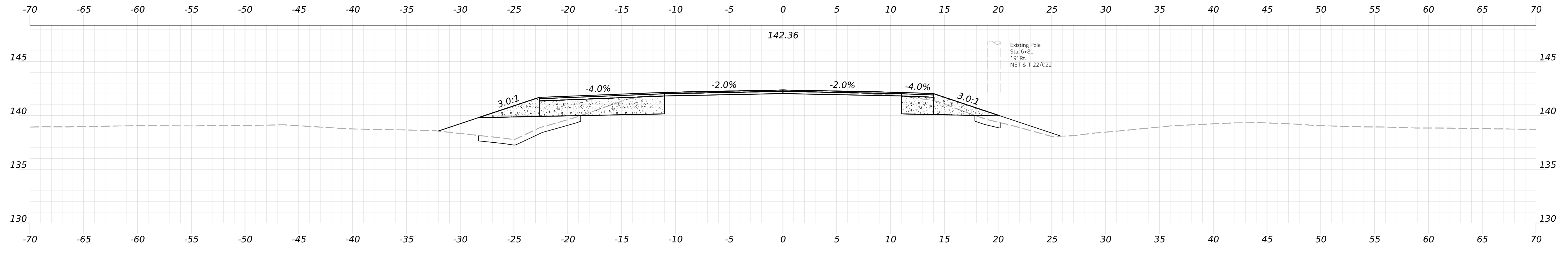
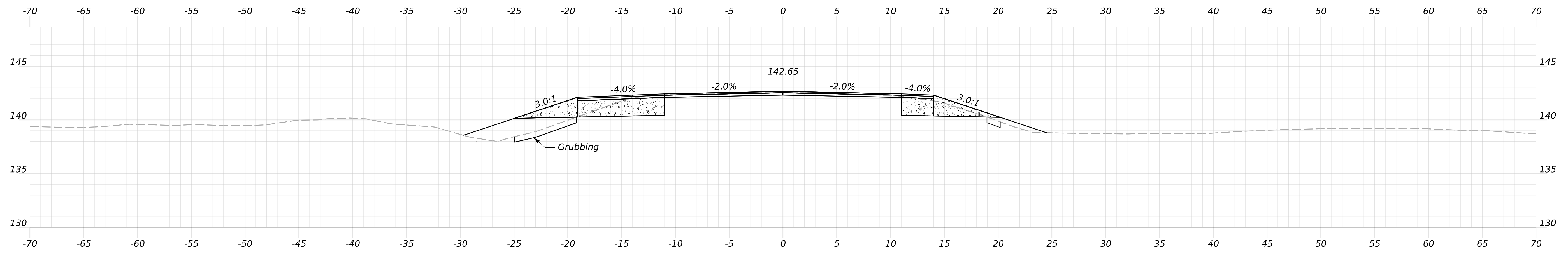
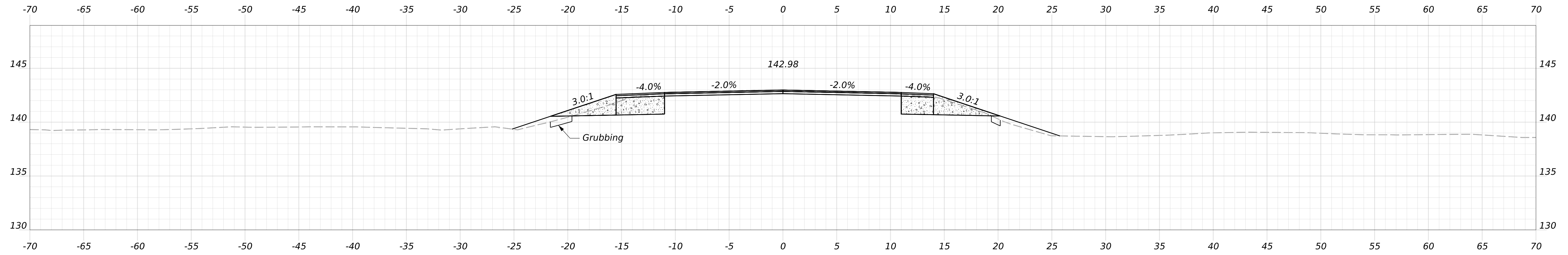
DESIGN-DETAILED	CHECKED-REVIEWED	DESIGN-DETAILED	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES
J. PRAUL							

JOSH BRIDGE
ABAGADASSETT RIVER
RICHMOND
SAGadahoc COUNTY
CROSS SECTIONS

SHEET NUMBER
13
OF 22

Username: MarkPoulin Date: 4/1/2026

Username: MarkPoulin Date: 4/1/2026



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 2722800

SIGNATURE
P.E. NUMBER
DATE

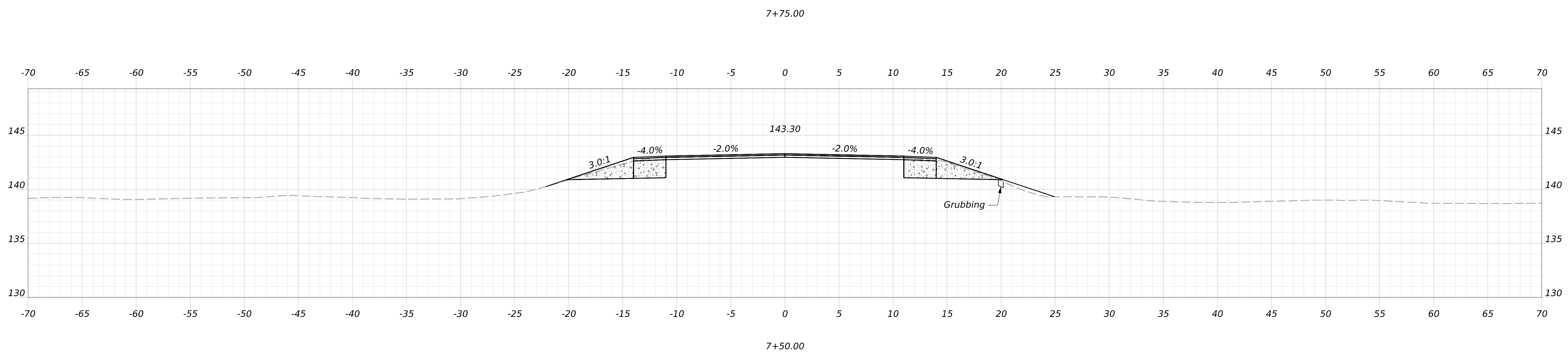
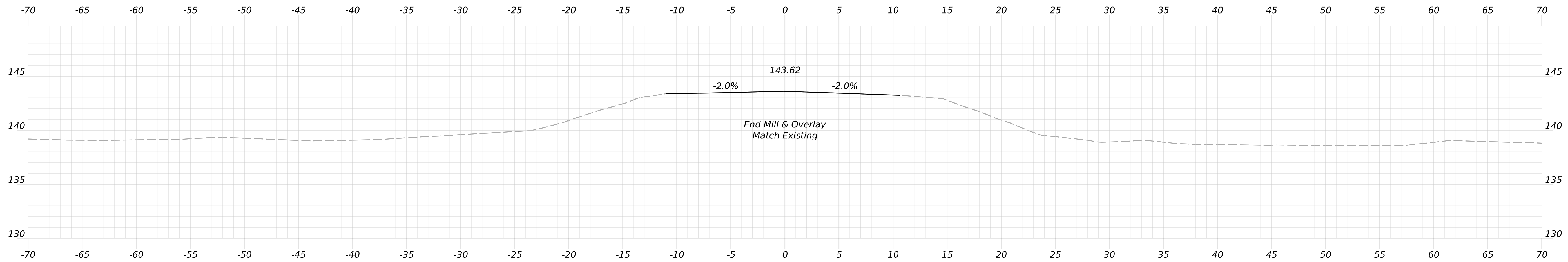
PROJ. MANAGER
DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

JOSH BRIDGE
ABAGADASSETT RIVER
RICHMOND
SAGadahoc COUNTY
CROSS SECTIONS

SHEET NUMBER
14
OF 22

BRIDGE NO. 0976 WIN 27228.00 BRIDGE PLANS

Username: MarkPoulin Date: 4/1/2026



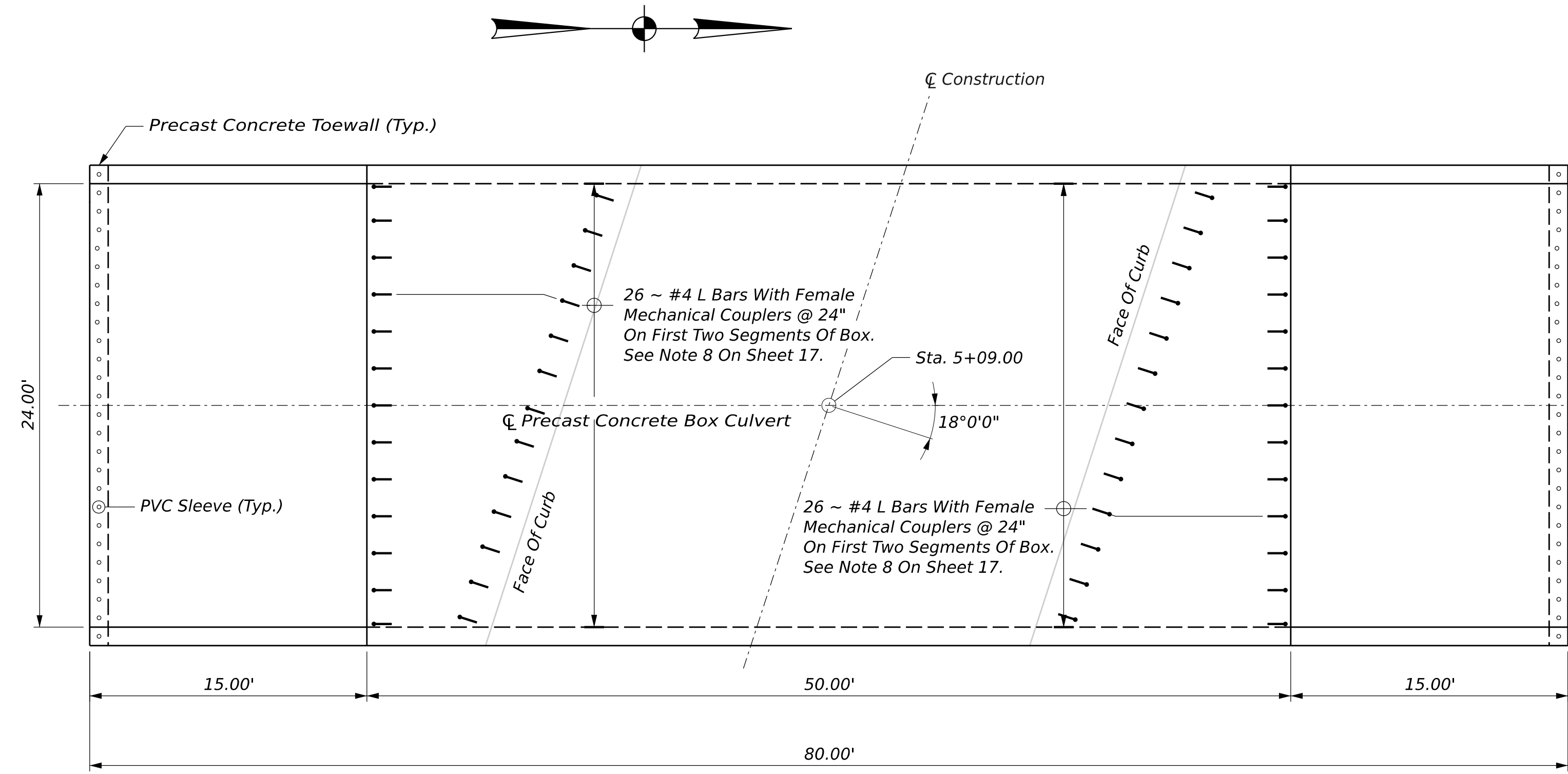
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 2722800
BRIDGE NO. 0976 WIN 27228.00 BRIDGE PLANS

SIGNATURE
P.E. NUMBER
DATE

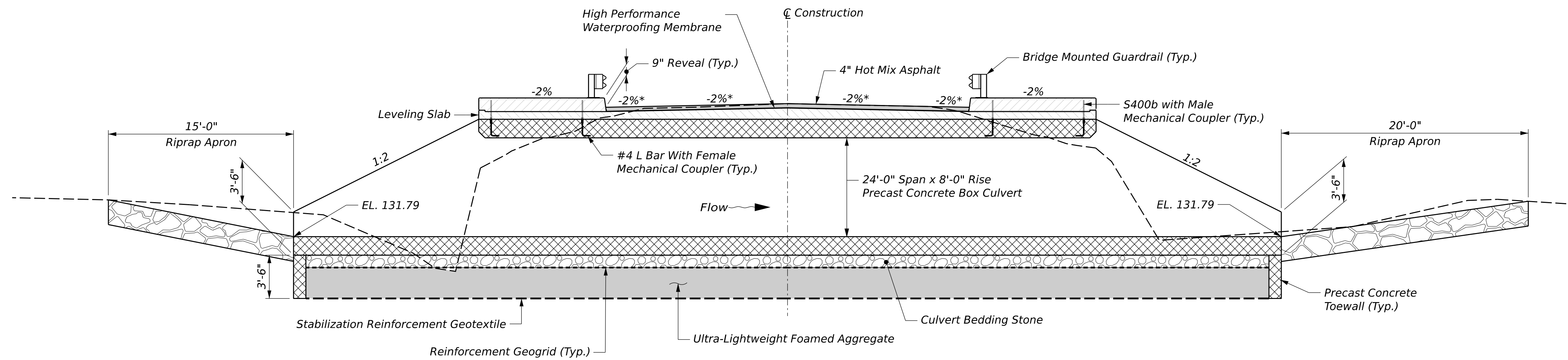
PROJ. MANAGER	BY	DATE
S. ZIMMERMAN	MRP	DEC 2025
CHECKED-REVIEWED		
DESIGN-REVIEWED		
DESIGN-REVIEWED		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

JOSH BRIDGE
ABAGADASSETT RIVER
SAGadahoc COUNTY
RICHMOND
CROSS SECTIONS

SHEET NUMBER
15
OF 22



PROPOSED PRECAST CONCRETE BOX PLAN

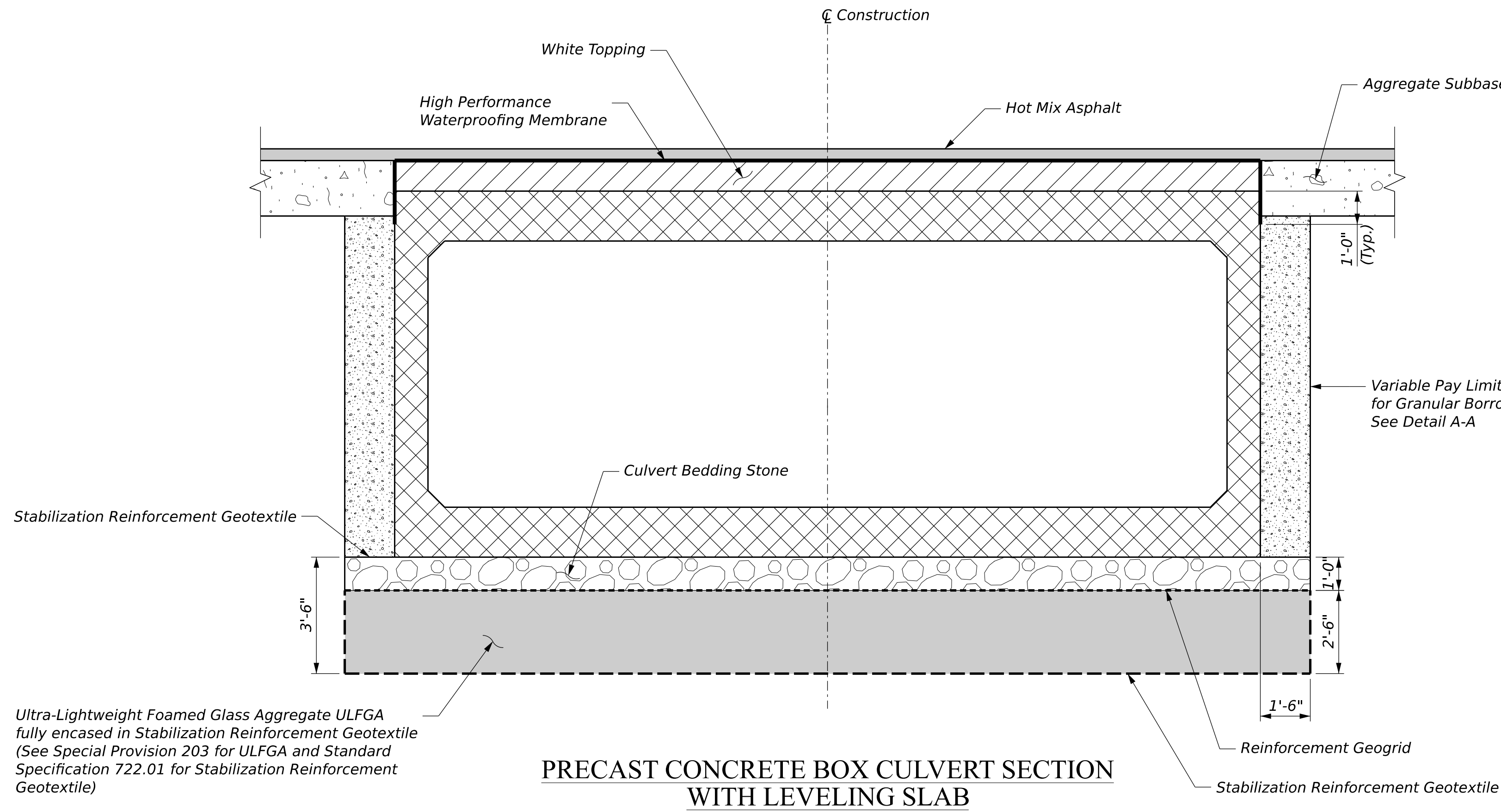


PRECAST CONCRETE BOX CULVERT LONGITUDINAL SECTION & LEVELING SLAB

* Perpendicular To Centerline Of Construction

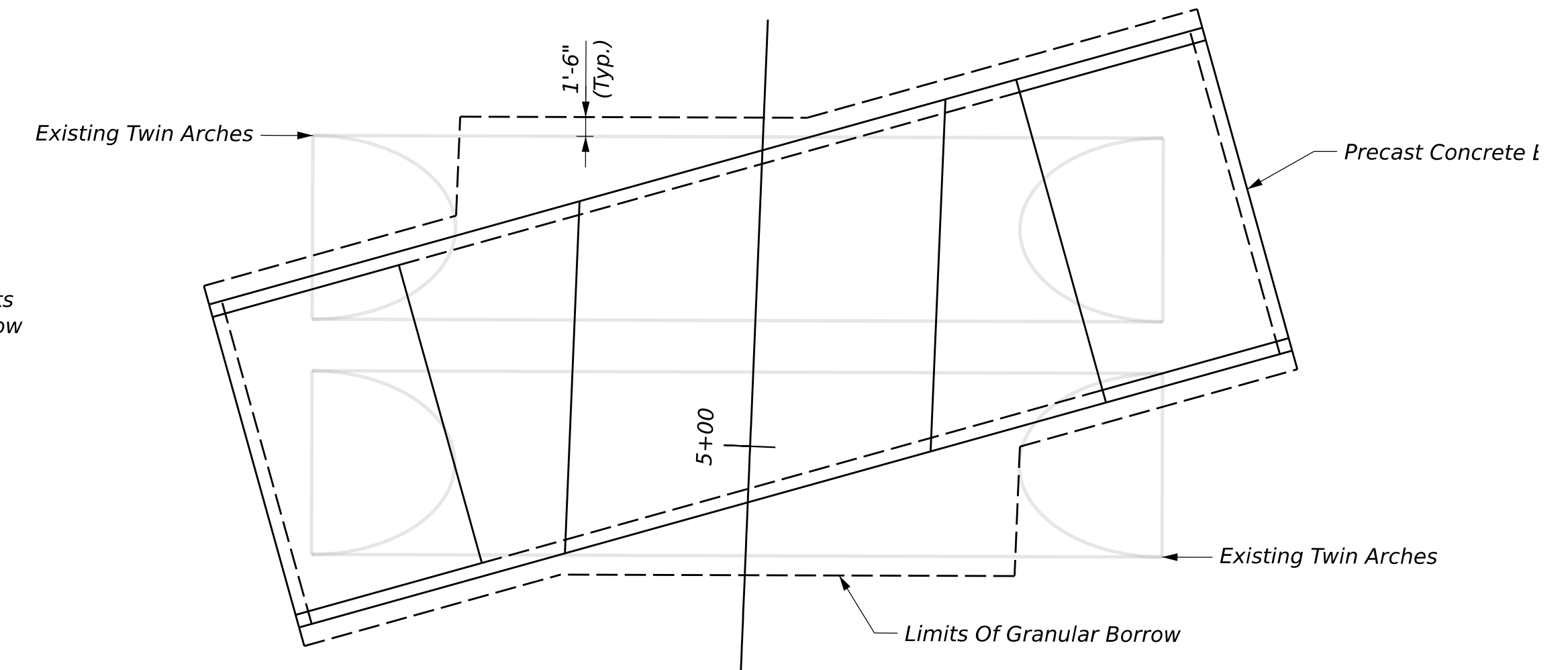
PROJ. MANAGER	BY	DATE
S. ZIMMERMAN	J. PRAUL	DEC 2025
DESIGN-DETAILED		
CHECKED-REVIEWED		
DESIGN-DETAILED02		
DESIGN-DETAILED03		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

LANGDON ROAD BRIDGE NO. 0976
CROSSING ABAGADASSETT RIVER
RICHMOND
PRECAST CONCRETE BOX (1 OF 2)



PRECAST CONCRETE BOX CULVERT SECTION WITH LEVELING SLAB

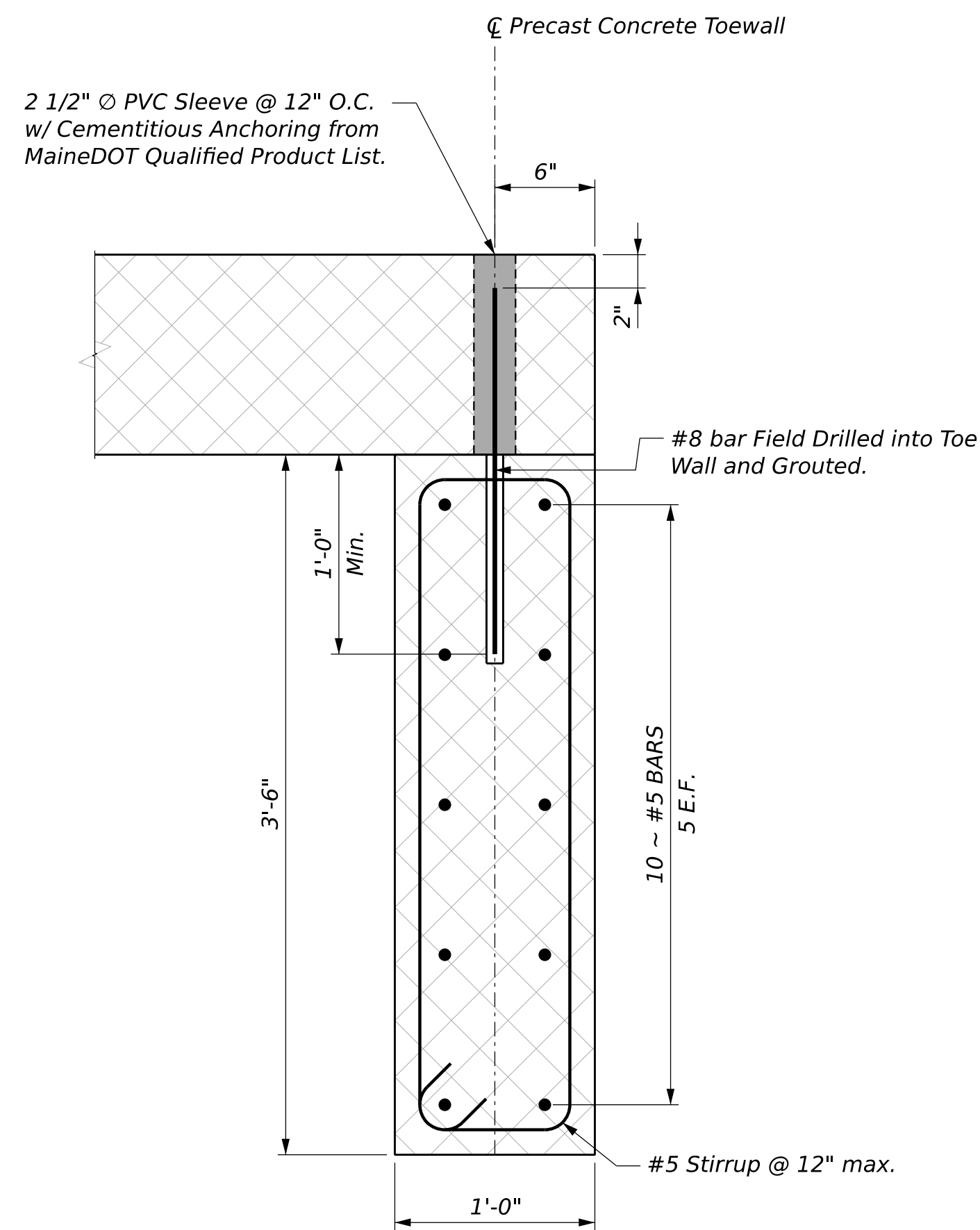
Ultra-Lightweight Foamed Glass Aggregate ULFGA fully encased in Stabilization Reinforcement Geotextile (See Special Provision 203 for ULFGA and Standard Specification 722.01 for Stabilization Reinforcement Geotextile)



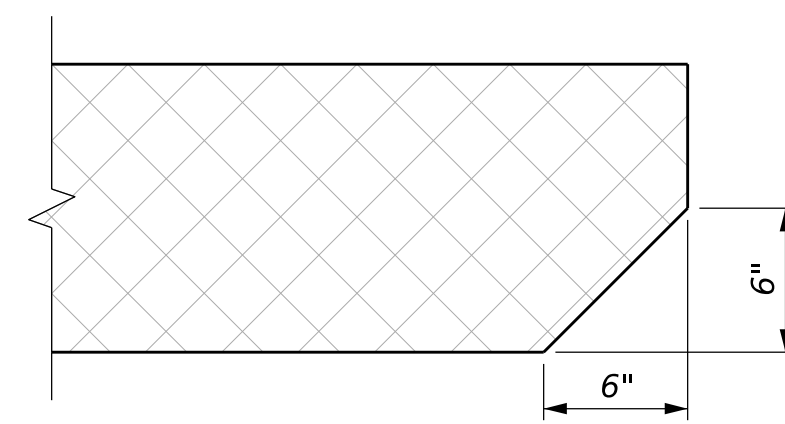
DETAIL A-A

PRECAST CONCRETE BOXES NOTES

1. The precast units shall be designed to carry construction loadings with a minimum fill cover of 18 inches over the top of the units.
2. In accordance with Standard Specification Subsection 534.04, Precast Structural Concrete, the Contractor shall submit design calculations for the precast structure to the Department for review. The calculations shall demonstrate that the factored bearing pressures at the Strength Limit and Service Limit States do not exceed the factored geotechnical bearing resistances provided in the project geotechnical design report.
3. The contractor shall maintain the excavation so that the box culvert and culvert bedding layer are installed in-the-dry. Groundwater shall be controlled by pumping from sumps or other dewatering systems selected by the Contractor. Cofferdams may be required to divert flow away from the excavation during construction.
4. The box culvert will bear on a 2-foot 6-inch thick layer of Ultra-Lightweight Foamed Glass Aggregate which is to be fully encased in Stabilization/Reinforcement Geotextile and topped by Reinforcement Geogrid with an additional 1-foot thick layer of Culvert Bedding Stone above that.
5. The Reinforcement Geogrid shall be deployed on the top of the Ultra-Lightweight Foamed Glass Aggregate which is fully encased in Stabilization/Reinforcement Geotextile. Adjoining sections of the Geogrid shall be overlapped in accordance with Special Provision 620 - Reinforcement Geogrid. The culvert bedding stone shall be placed in 6-inch lifts and each lift compacted with several passes of a walk behind roller or large plate compactor.
6. The existing fill material shall be excavated using a smooth-edged bucket to avoid disturbance of the subgrade. The contractor shall not operate heavy equipment over the excavated subgrade to minimize subgrade disturbance. Limit vibration-induced disturbance to the saturated subgrade. If the subgrade is disturbed, weakened, or over-excavated, the Contractor shall excavate the disturbed material and replace with compacted Culvert Bedding Stone to the subgrade level at the Contractor's expense.
7. The Stabilization/Reinforcement Geotextile shall be deployed onto the prepared subgrade prior to installing the Ultra-Lightweight Foamed Glass Aggregate. Adjoining sections of the geotextile shall be overlapped by a minimum of 2 feet. The Ultra-Lightweight Foamed Glass Aggregate shall be placed and compacted in accordance with Special Provision 203 - Ultra-Lightweight Foamed Glass Aggregate.
8. Dewatering shall be conducted continuously throughout placement of ULFGA as needed to keep the water level at or below the bottom of UFLGA elevation. If UFLGA becomes displaced due to buoyancy, the Contractor shall remove the material and geotextile and re-install the material at no cost to the Department.
9. Place #4 L bars with female mechanical couplers within the precast concrete box culvert segments so that the coupled bars project into the cast in place concrete curb meeting cover requirements.



PRECAST CONCRETE TOEWALL DETAIL

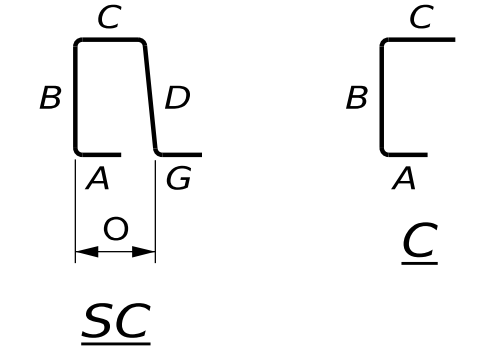


PRECAST CONCRETE Top Edge Detail

PROJ. MANAGER	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
5. ZIMMERMAN	J. PRAUL	DEC 2025			
DESIGN-DETAILED					
CHECKED-REVIEWED					
DESIGN-DETAILED02					
DESIGN-DETAILED03					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

STRAIGHT BARS							BENT BARS																
MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION	
S400b	52	1'-1 1/2"	Setting Bar's					S550b	36	6'-4"	SC	0'-10"	1'-8 1/4"	1'-3 1/2"	1'-8 1/4"			0'-10"			1'-4"		Curb
								S551b	36	6'-1 1/2"	SC	0'-10"	1'-7"	1'-3 1/2"	1'-7"			0'-10"			1'-4"		Curb
								S552b	36	5'-11"	SC	0'-10"	1'-5 3/4"	1'-3 1/2"	1'-5 3/4"			0'-10"			1'-4"		Curb
S500b	54	49'-8"	Concrete Slab					S553b	9	4'-3"	C	0'-10"	1'-5"	2'-0"									Curb
S501b	116	25'-8"	Concrete Slab & Curb					S554b	18	4'-2 1/2"	C	0'-10"	1'-4 1/2"	2'-0"									Curb
S502b	2	3'-3 1/4"	Curb					S555b	9	4'-2"	C	0'-10"	1'-4"	2'-0"									Curb
S503b	2	6'-4 1/4"	Curb					S556b	9	4'-6 1/4"	C	0'-10"	1'-8 1/4"	2'-0"									Curb
S504b	2	9'-6"	Curb					S557b	9	4'-4 1/4"	C	0'-10"	1'-6 1/4"	2'-0"									Curb
S505b	2	12'-5 3/4"	Curb																				
S506b	2	15'-6 3/4"	Curb																				
S507b	2	18'-7 1/2"	Curb																				
S508b	2	21'-8 1/2"	Curb																				
S509b	2	24'-9 1/4"	Curb																				
S510b	2	14'-0 3/4"	Curb																				
S511b	2	13'-9"	Curb																				
S512b	2	13'-5"	Curb																				
S513b	2	13'-1"	Curb																				
S514b	2	12'-9 3/4"	Curb																				
S515b	2	12'-5 1/4"	Curb																				
S516b	2	12'-1 1/4"	Curb																				
S517b	2	11'-9 1/2"	Curb																				
S518b	2	11'-5 1/2"	Curb																				
S519b	2	11'-1 3/4"	Curb																				
S520b	2	10'-9 3/4"	Curb																				
S521b	2	10'-5 3/4"	Curb																				
S522b	2	10'-2"	Curb																				
S523b	2	9'-10"	Curb																				
S524b	2	9'-6"	Curb																				
S525b	2	9'-2 1/4"	Curb																				
S526b	2	8'-10 1/4"	Curb																				
S527b	2	8'-6 1/2"	Curb																				
S528b	2	8'-2 1/2"	Curb																				
S529b	2	7'-10 1/2"	Curb																				
S530b	2	7'-6 3/4"	Curb																				
S531b	2	7'-2 3/4"	Curb																				
S532b	2	6'-10 3/4"	Curb																				
S533b	2	6'-7"	Curb																				
S534b	2	6'-3"	Curb																				
S535b	2	5'-11"	Curb																				
S536b	2	5'-8 1/2"	Curb																				

TYPE - BENDING DIAGRAMS



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.

GENERAL NOTES

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

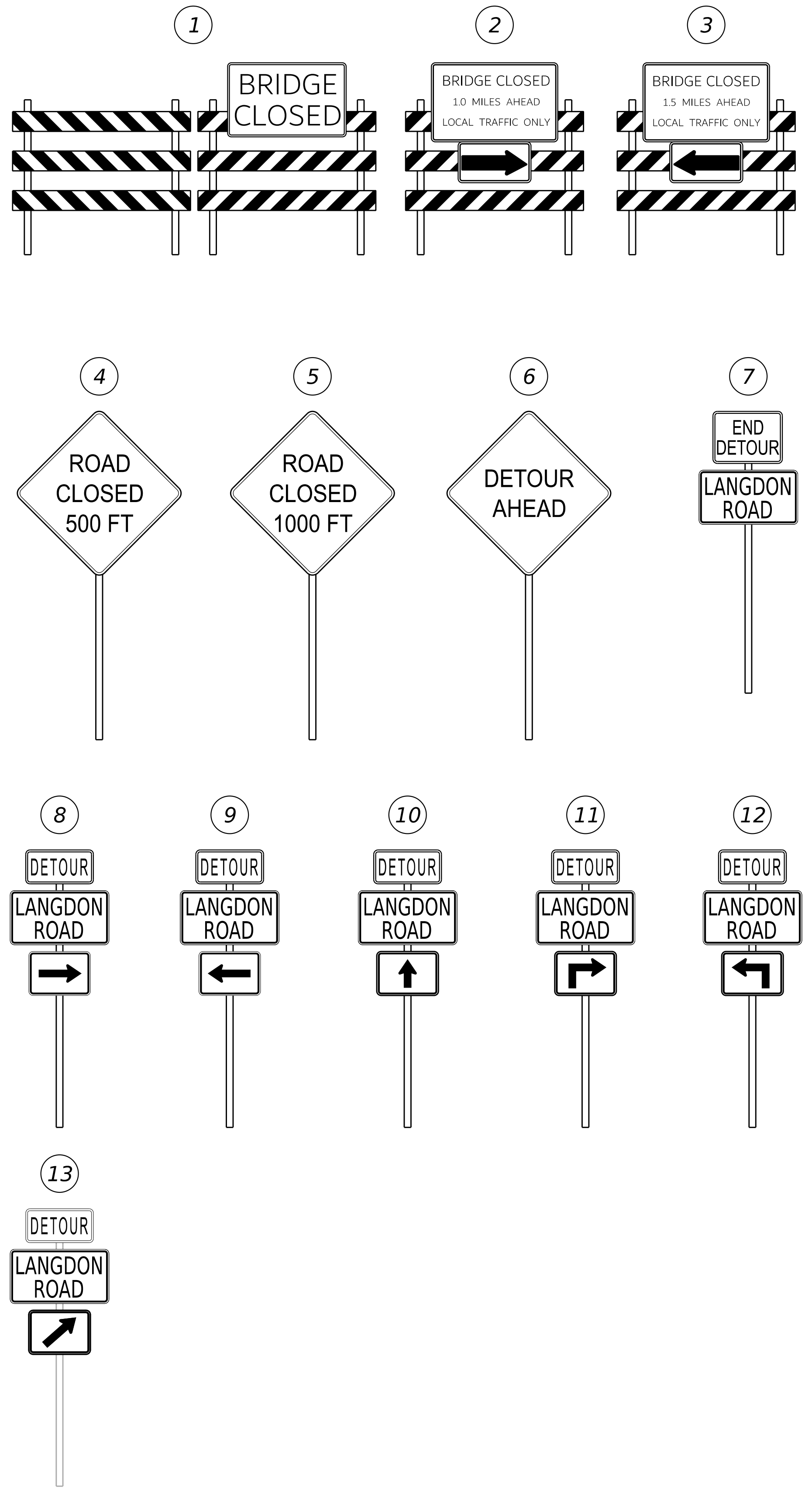
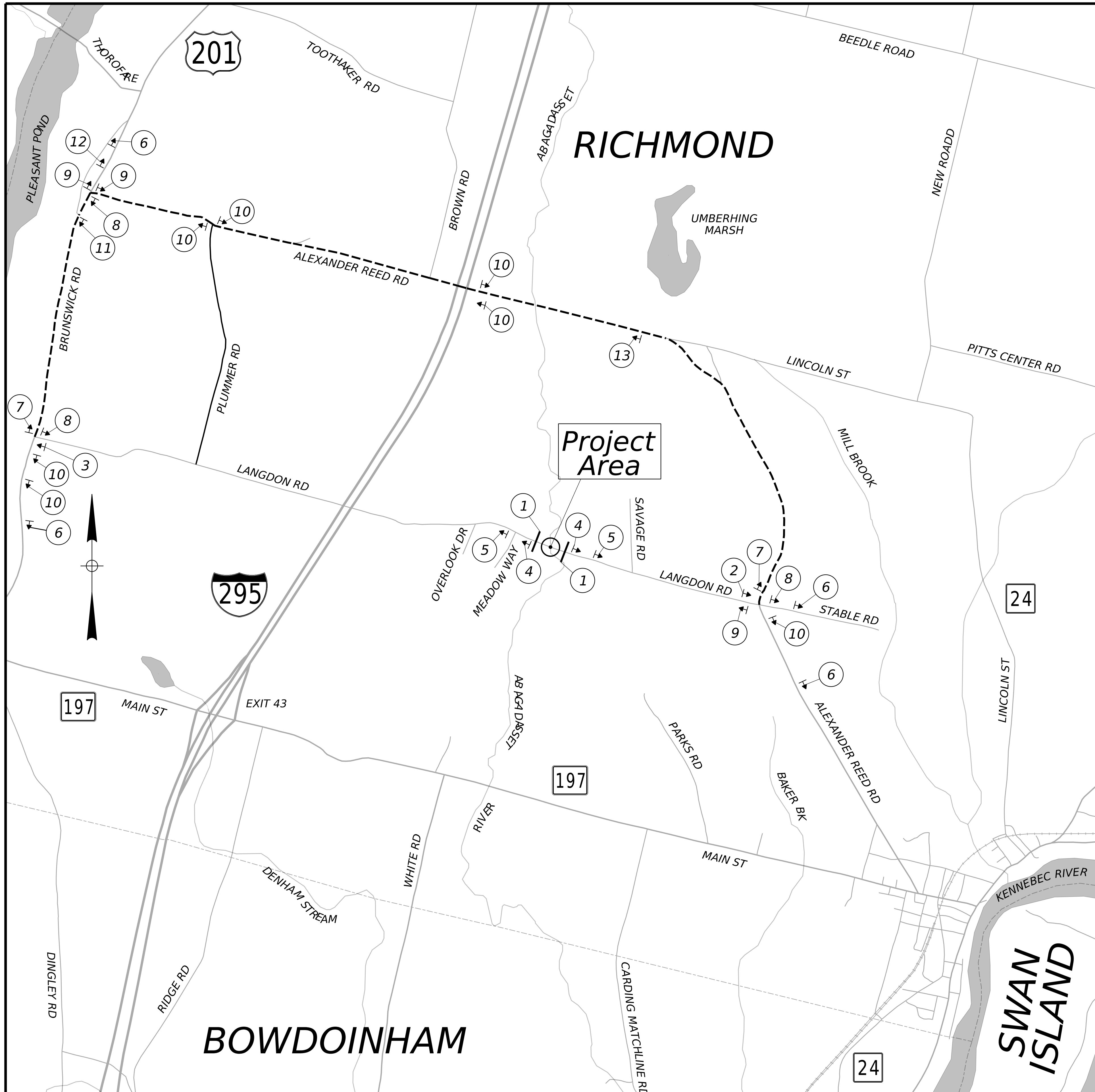
"A500b", b = (Black) Plain Steel
 "A550s", s = Stainless Steel
 "S500p", p = Glass Fiber Reinforced Polymer
 "P510c", c = Low-Carbon Chromium Steel

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 Federal Project No. 2722800

PROJ. MANAGER	S. ZIMMERMAN	BY	J. PRAUL	DATE	DEC 2025
DESIGN-DETAILED	J. PRAUL	CHECKED-REVIEWED		SIGNATURE	
DESIGN-DETAILED 02		DESIGN-DETAILED 03		P.E. NUMBER	
REVISIONS 1		REVISIONS 2		DATE	
REVISIONS 3		REVISIONS 4		FIELD CHANGES	

LANGDON ROAD BRIDGE NO. 0976
 CROSSING ABAGADASSETT RIVER
 RICHMOND
**REINFORCING STEEL
 SCHEDULE**

SHEET NUMBER
20
 OF 22



STATE OF MAINE DEPARTMENT OF TRANSPORTATION		Federal Project No. 2722800		WIN 027228.00	
PROJ. MANAGER S. ZIMMERMAN		BY J. BRAUN		DATE DEC 2025	
DESIGN-DETAILED		CHECKED-REVIEWED		SIGNATURE	
DESIGN-DETAILED02		DESIGN-DETAILED03		P.E. NUMBER	
REVISIONS 1		REVISIONS 2		DATE	
REVISIONS 3		REVISIONS 4		FIELD CHANGES	
JOSH BRIDGE BRIDGE NO. 0976 CROSSING ABAGADASSETT RIVER RICHMOND					
DETOUR MAP					
SHEET NUMBER					
21					
OF 22					

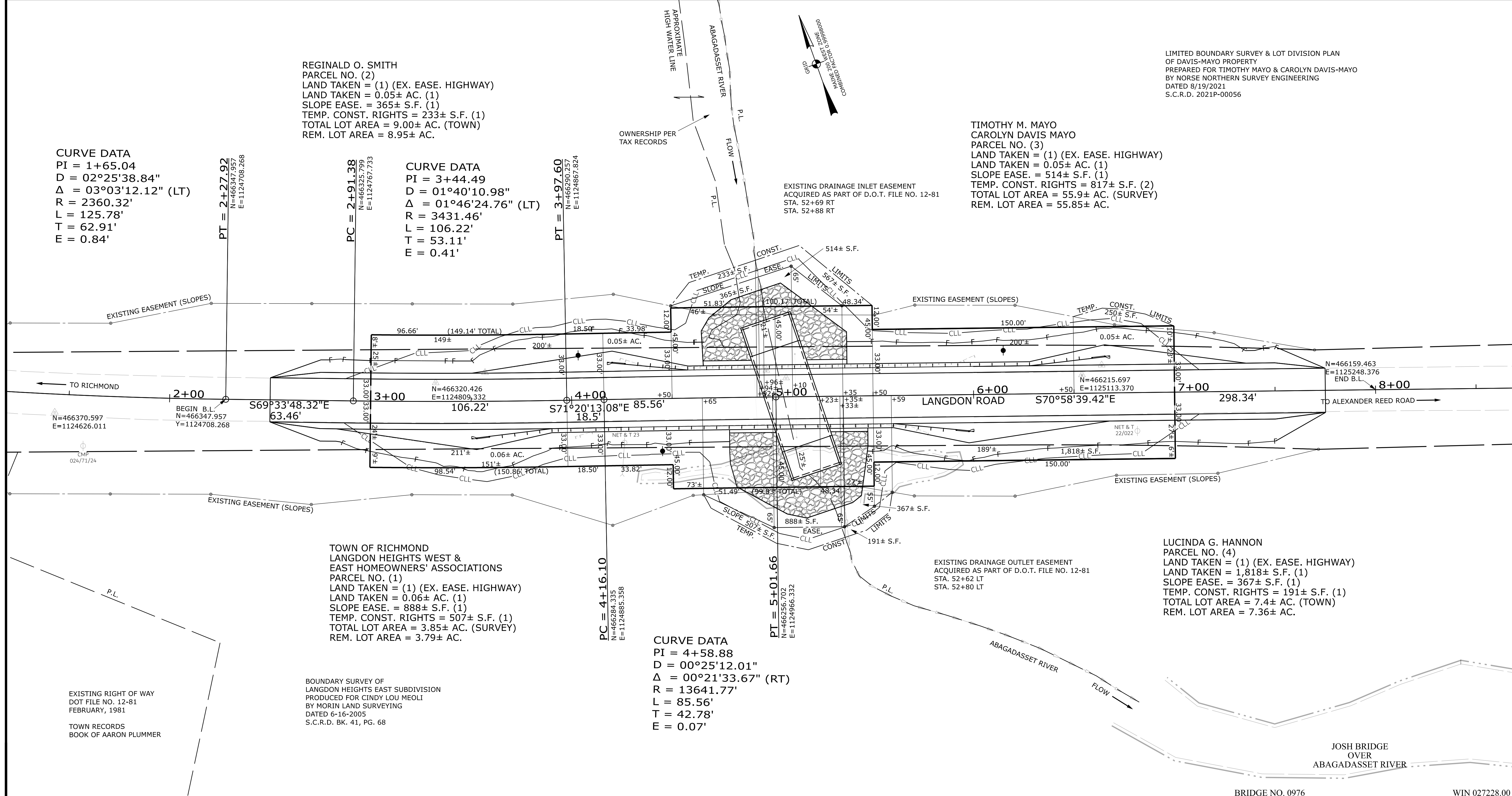
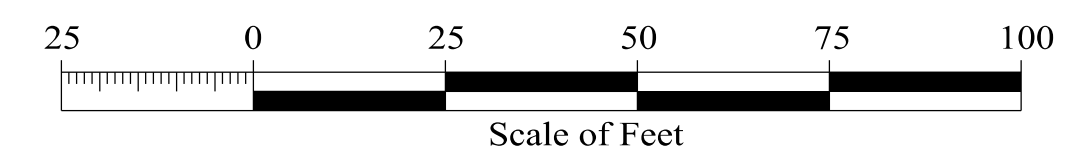
Username: MarkPoulin Date: 4/1/2026

PLAN LEGEND

Town, County, State	New R/W Along Existing R/W	Existing	Proposed	Existing	Proposed	Existing	Proposed
Approx. Property Lines	Building	Sanitary Sewer	SA	Traveled Way	Cut Line	Fill Line	
Existing Right of Way	Clearing Limit Line - CLL	Com. Line UG	UG COMM	Ditch	Stonewall	Retaining Wall	
Limits of Wrought Portion	Trees	Electric Line	UG POW	Catch Basin	Baseline		
Control Of Access	Conifer	Water Line	WL	Manhole	10+00	11+00	12+00
New Right of Way	Deciduous	Underdrain Line		Sewer Manhole			
New Easement	Tree Line	Gas Line	GAS	Utility Pole	Monument	Traverse Point	
New Temporary Rights	Bush Line	Guardrail		Fire Hydrant	Iron Rod Set	Pipe Found	
New R/W Within Existing R/W	Water Edge	Culvert		Curbing			
	Ledge						
	Rock/Boulder						
	Flag Pole						
	Fence						
	CHAIN LINK						
	BARB WIRE						
	STOCKADE						
	Sign						
	Well						
	Mailbox						

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ADJUTING PROPERTY OWNERS.

STATE OF MAINE
REGISTRY OF DEEDS
COUNTY OF _____
RECEIVED _____, 20____
AT _____ HRS. _____ MINS. _____ M.
AND RECORDED IN _____
PLAN BOOK (OR FILE NO.) _____, PAGE _____
ATTEST: _____ REGISTER



LIMITED BOUNDARY SURVEY & LOT DIVISION PLAN OF DAVIS-MAYO PROPERTY PREPARED FOR TIMOTHY MAYO & CAROLYN DAVIS-MAYO BY NORSE NORTHERN SURVEY ENGINEERING DATED 8/19/2021 S.C.R.D. 2021P-00056

CHECKED	J.F.	P.S.	S.A.N.
TECH	KDM	KDM	KDM
ITEM	EXISTING CONDITION PLAN	FINAL RIGHT OF WAY	AREAS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA,
ME 04333-0016 - 207-624-3460
RICHMOND
RIGHT OF WAY MAP

REVISIONS			PLAN FILED IN PLAN BOOK			COUNTY RECORD		
NO.	DATE	DESCRIPTION	NO.	GRANTOR	PAGE	INSTRUMENT	DATE	PAGE

DALE F. DOUGHTY
ACTING COMMISSIONER
WILLIAM A. PULVER
CHIEF ENGINEER
DATE _____

LANGDON ROAD
TOWN WAY
RICHMOND SAGADAHOC COUNTY
WORK IDENTIFICATION NO. (W.I.N.) 027228.00
JANUARY 2026 RIGHT-OF-WAY MAP
SCALE 1" = 25' SHEET 1 OF 1
D.O.T FILE NO. 12-148

SHEET NUMBER
22
OF 22

Username: Kyle.D.McLaggan Date: 1/8/2026