

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



OTISFIELD
OXFORD COUNTY
COLLEGE SWAMP BRIDGE
OVER
COLLEGE SWAMP BROOK
BOLSTERS MILLS ROAD
FEDERAL AID PROJECT NO. 2599100
PROJECT LENGTH 0.09 mi.
BRIDGE NO. 3475

SPECIFICATIONS

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

DESIGN LOADING

Live Load HL - 93 Modified for Strength I

TRAFFIC DATA

Current (2023) AADT	790
Future (2043) AADT	870
DHV - % of AADT	10%
Design Hour Volume	87
Heavy Trucks (% of AADT)	10%
Heavy Trucks (% of DHV)	11%
Directional Distribution (% of DHV)	65%
18 kip Equivalent P 2.0	34
18 kip Equivalent P 2.5	33
Design Speed (mph)	45

HYDROLOGIC DATA

Drainage Area	3.82 sq mi
Design Discharge (Q50)	472 cfs
Check Discharge (Q100)	549 cfs
Headwater Elevation (Q1.1)	401.5 ft
Headwater Elevation (Q25)	403.2 ft
Headwater Elevation (Q50)	403.6 ft
Headwater Elevation (Q100)	404.0 ft
Headwater Elevation (Q500)	404.9 ft

VELOCITIES

Discharge Velocity (Q1.1)	5.2 fps
Discharge Velocity (Q10)	8.3 fps
Discharge Velocity (Q25)	9.2 fps
Discharge Velocity (Q50)	9.8 fps
Discharge Velocity (Q100)	10.4 fps
Discharge Velocity (Q500)	11.6 fps

MATERIALS

Concrete:	
Curb/Headwall	Class "LP"
Precast	Class "P"
Seal	Class "S"
All Other	Class "A"
Reinforcing Steel	ASTM A 615/A 615M, Grade 60

BASIC DESIGN STRESSES

Concrete:	
Class "A"	f 'c = 4,000 psi
Class "LP"	f 'c = 5,000 psi
Precast Concrete	f 'c = 5,000 psi
Reinforcing Steel	f y = 60,000 psi

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UTILITIES

Central Maine Power Company
Charter Communications
Consolidated Communications
Portland Natural Gas Transmission System
Portland Pipe Line Corporation

MAINTENANCE OF TRAFFIC

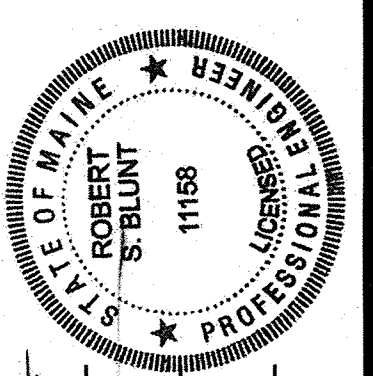
Maintain one lane of alternating one-way traffic on temporary bridge using temporary traffic signals.

PROJECT LOCATION	In Otisfield, on Bolsters Mills Road, 0.40 miles northwest of Route 121. Lat./Long. 44°03'35.5" N 70°33'45.9" W
PROGRAM AREA	Highway Bridges - Minor Spans
OUTLINE OF WORK	Bridge Replacement

WIN 25991.00

2599100

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
COMMISSIONER: <i>[Signature]</i>		12-13-24
CHIEF ENGINEER: <i>[Signature]</i>		12-13-2024



SIGNATURE	P.E. NUMBER	DATE
<i>[Signature]</i>	11168	12/6/2024

PROJECT INFORMATION	BRIDGE
PROGRAM	BRIAN NICHOLS
PROJECT MANAGER	ROBERT S. BLUNT, PE
DESIGNER	VHB
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

OTISFIELD COLLEGE SWAMP BRIDGE	TITLE SHEET
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SHEET NUMBER
1
OF 25

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.19	Removing Existing Bridge	1	LS
202.202	Removing Pavement Surface	460	SY
203.20	Common Excavation	580	CY
203.25	Granular Borrow	145	CY
206.082	Structural Earth Excavation - Major Structures	175	CY
206.092	Structural Rock Excavation - Major Structures	25	CY
304.10	Aggregate Subbase Course - Gravel	540	CY
403.208	Hot Mix Asphalt 12.5 MM HMA Surface	135	T
403.209	Hot Mix Asphalt 9.5 MM HMA (Incid.)	10	T
403.213	Hot Mix Asphalt 12.5 MM HMA Base	100	T
409.15	Bituminous Tack Coat Applied	40	G
461.131	Temporary Pavement	83	T
502.219	Structural Concrete, Abutments and Retaining Walls (45 CY)	1	LS
502.22	Structural Concrete, Abutments and Retaining Walls (Placed Under Water)	10	CY
502.49	Structural Concrete Curbs and Sidewalks (7 CY)	1	LS
503.12	Reinforcing Steel, Fabricated and Delivered	4500	LB
503.13	Reinforcing Steel, Placing	4500	LB
507.0821	Steel Bridge Railing, 3 Bar (48 LF)	1	LS
507.0822	Steel Approach Railing, 3 Bar	4	EA
508.13	Sheet Waterproofing Membrane (112 SY)	1	LS
510.10	Special Detour, 16 Foot Roadway Width Vehicular & Pedestrian Traffic Not Separated	1	LS
511.07	Cofferdam: Upstream	1	LS
511.07	Cofferdam: Downstream	1	LS
512.081	French Drains (107 LF)	1	LS
515.21	Protective Coating for Concrete Surface (35 SY)	1	LS
527.34	Work Zone Crash Cushions	2	UN
534.70	Precast Structural Concrete Arch (40 CY)	1	LS
606.1301	31" W-Beam Guardrail, Mid-Way Splice-Sgl Faced	138	LF
606.1303	31" W-Beam Guardrail, Mid-Way Splice-15' Radius & Less	25	LF
606.1305	31" W-Beam Guardrail, Mid-Way Splice Flared Terminal	3	EA
606.1721	Bridge Transition - Type I	4	EA
606.265	Terminal End-Single Rail - Galvanized Steel	1	EA
606.353	Reflectorized Flexible Guardrail Markers	7	EA
610.16	Heavy Riprap	250	CY
610.18	Stone Ditch Protection	20	CY
613.319	Erosion Control Blanket	75	SY
615.07	Loam	55	CY
618.14	Seeding Method Number 2	5	UN
619.12	Mulch	5	UN
619.14	Erosion Control Mix	55	CY
620.58	Erosion Control Geotextile	390	SY
627.733	4" White or Yellow Painted Pavement Marking Line	1500	LF
627.77	Removing Existing Pavement Markings	125	SF
627.78	Temporary 4 Inch Painted Pavement Marking Line, White or Yellow	1350	LF
629.05	Hand Labor, Straight Time	50	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
643.72	Temporary Traffic Signal	1	LS
652.312	Type III Barricades	4	EA
652.33	Drum	75	EA
652.34	Cone	25	EA
652.35	Construction Signs	400	SF
652.361	Maintenance of Traffic Control Devices	1	LS
652.38	Flaggers	360	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 exact limits will be established in the field by the Resident. Payment for clearing will be considered incidental to Contract items.
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 404 shall be Granular Borrow meeting the requirements of Standard Specifications Subsection 703.19, Granular Borrow, for Material for Underwater Backfill, with the additional requirement that the maximum particle size be limited to 4 inches.
8. Place riprap on sideslopes up to EL 407.
9. Place loam 2 inches deep on all new or reconstructed sideslopes or as directed by the Resident.
10. 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.
11. Place a 24 inch wide strip of Erosion Control Blanket on the sideslopes along the top of the riprap and behind the wingwalls.
12. Guardrail posts as shown in the Standard Details shall be modified from the indicated length of 7 feet to a length of 8 feet with an embedment of 5.25 feet. Payment will be considered incidental to the guardrail pay items.
13. A MASH compliant guardrail end treatment shall be installed concurrently with the placement of each section of beam guardrail.
14. 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.
15. Protective Coating for Concrete Surfaces shall be applied to the following areas:
- Concrete headwalls, including to one foot inside the box; exposed tops of vertical walls and to one foot below the ground on the back side; exposed faces of vertical walls and to one foot inside the box.
16. Project information referred to below may be accessed at the following MaineDOT web address: <http://www.maine.gov/mdot/contractors/>
17. 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.
18. 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.
19. The project geotechnical report may be accessed at the MaineDOT web address.
20. 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.

GENERAL CONSTRUCTION NOTES CONTINUED

21. 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.
22. The new structure shall be defined as a Major Structure with respect to Structural Excavation. See Standard Specification Section 206, Structural Excavation.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2599100

WIN
25991.00

BRIDGE NO. 3475
BRIDGE PLANS

PROJ. MANAGER
DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN2-DETAILED
DESIGN3-DETAILED

BRIAN NICHOLS
JAN
BAR

DATE
12/9/2024
12/9/2024

BY
BND
RBLNT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
ENGINEER
ROBERT S. BLUNT
11158

SIGNATURE
11158

P.E. NUMBER
12/9/2024

DATE

COLLEGE SWAMP BRIDGE BOLSTERS MILLS ROAD
OVER COLLEGE SWAMP BROOK
OTISFIELD
OXFORD COUNTY

ESTIMATED QUANTITIES
AND GENERAL NOTES

SHEET NUMBER

2

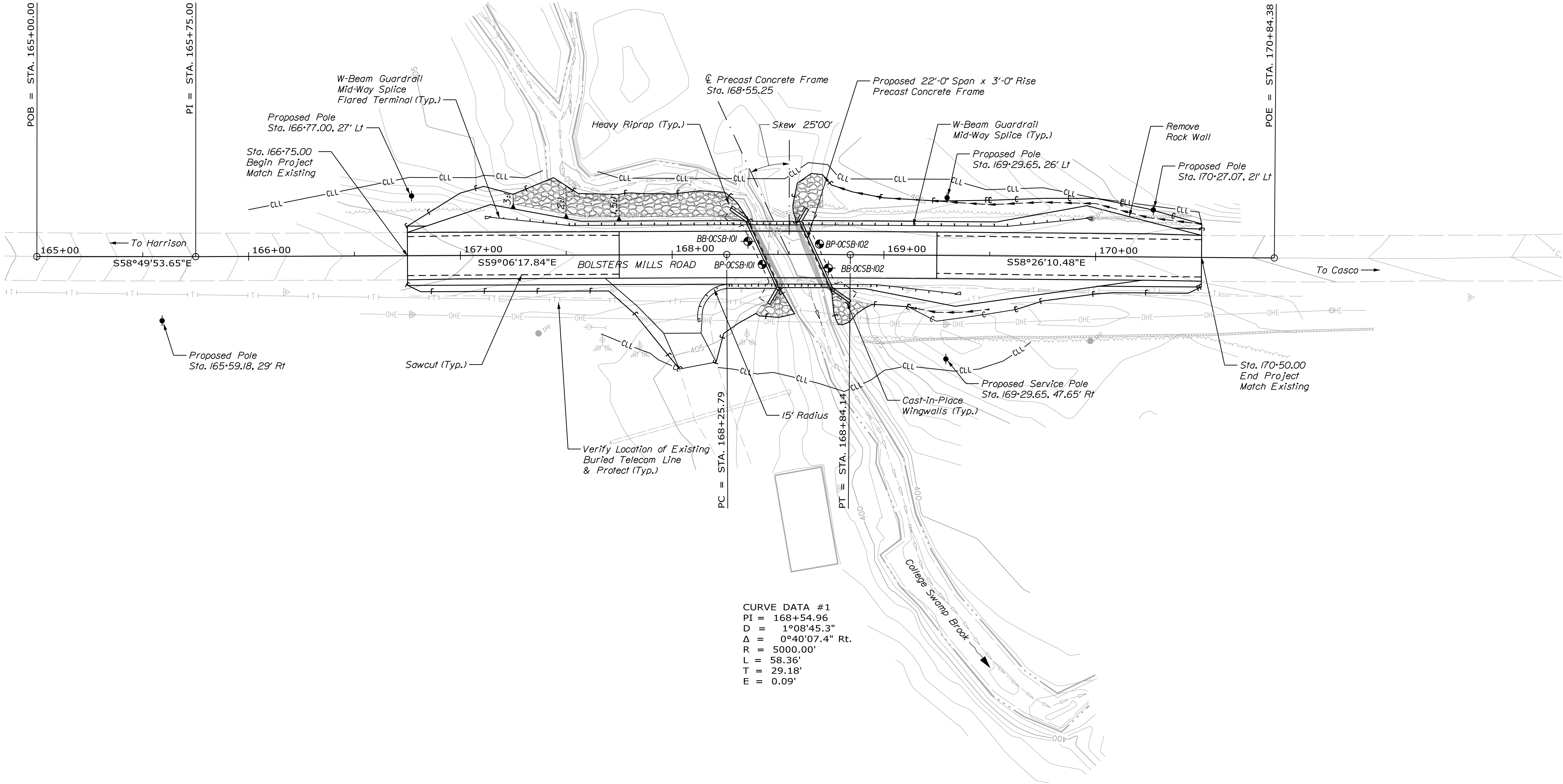
OF 25

Date: 12/9/2024

Username:

Division: HIGHWAY

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PLAN



STATE OF MAINE DEPARTMENT OF TRANSPORTATION
2599100
WIN 25991.00
BRIDGE NO. 3475
BRIDGE PLANS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
PROFESSIONAL ENGINEER

ROBERT S. BLUNT
11158

SIGNATURE
11158

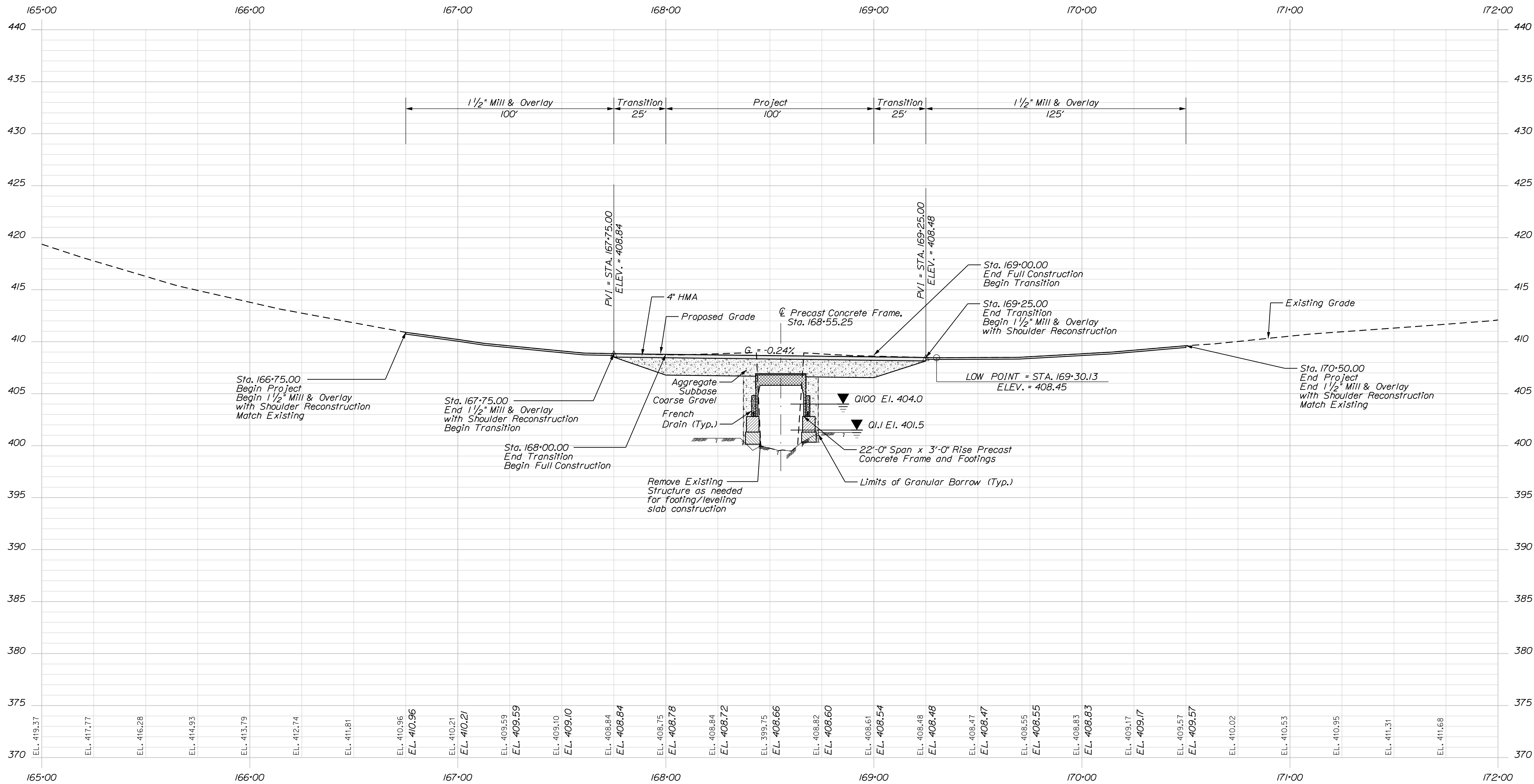
P.E. NUMBER
11158

DATE
12/9/2024

PROJ. MANAGER	DESIGN-DETAILED	CHECKED-REVIEWED	BY	DATE
BRIAN NICHOLS	JAN	JAN	BY	12/9/2024
			RSBLUNT	12/9/2024

COLLEGE SWAMP BRIDGE BOLSTERS MILLS ROAD OVER COLLEGE SWAMP BROOK	OXFORD COUNTY
OTISFIELD	
GENERAL PLAN	

SHEET NUMBER
3
OF 25



PROFILE



STATE OF MAINE DEPARTMENT OF TRANSPORTATION	2599100	WIN	25991.00
BRIDGE NO. 3475			

Professional Engineer Seal for Robert S. Blunt, State of Maine, License No. 11158. Includes signature and date 12/9/2024.

PROJ. MANAGER	DESIGN-DETAILED	JAH	BMD	BY	DATE
	CHECKED-REVIEWED	BJR			12/9/2024
	DESIGN2-DETAILED2		RSBLUNT		12/9/2024
	DESIGN3-DETAILED3				
	REVISIONS 1				
	REVISIONS 2				
	REVISIONS 3				
	REVISIONS 4				
	FIELD CHANGES				

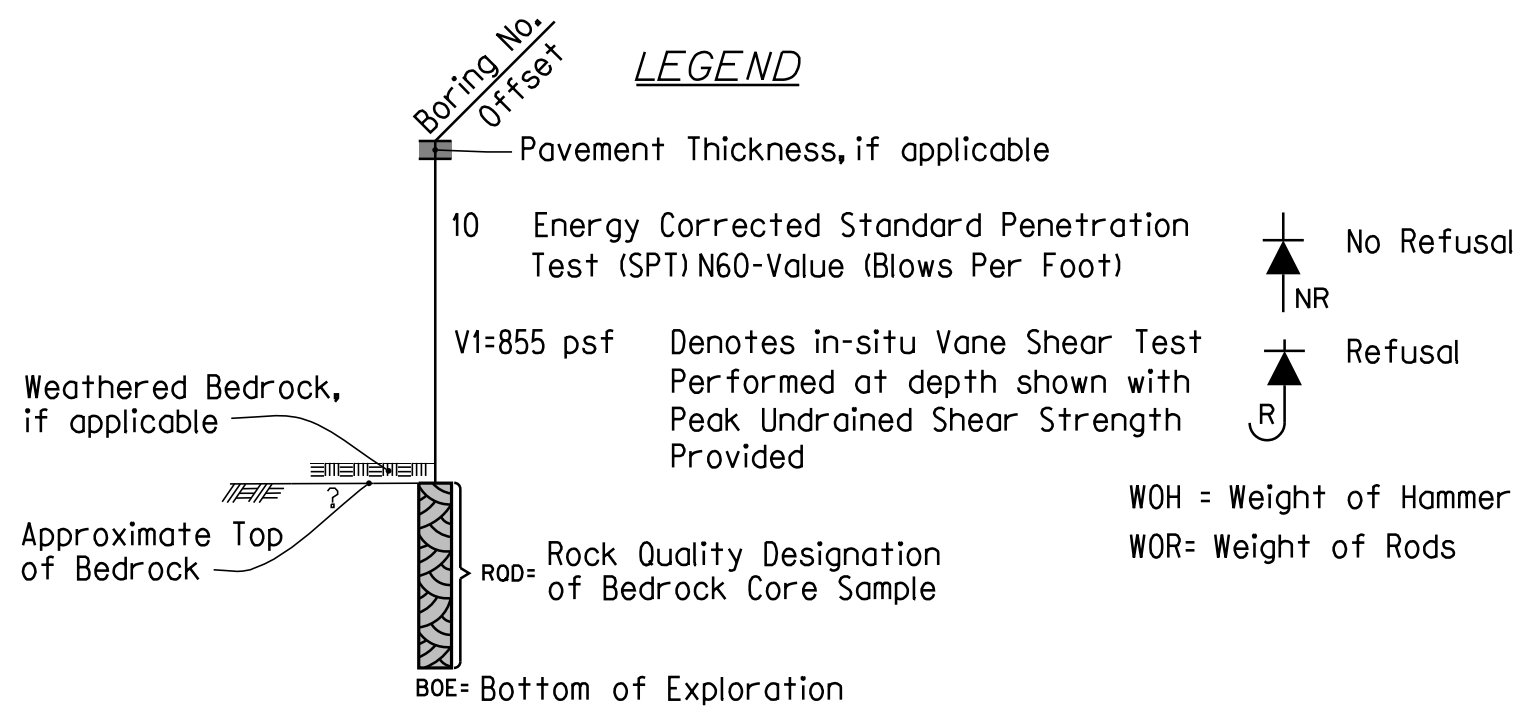
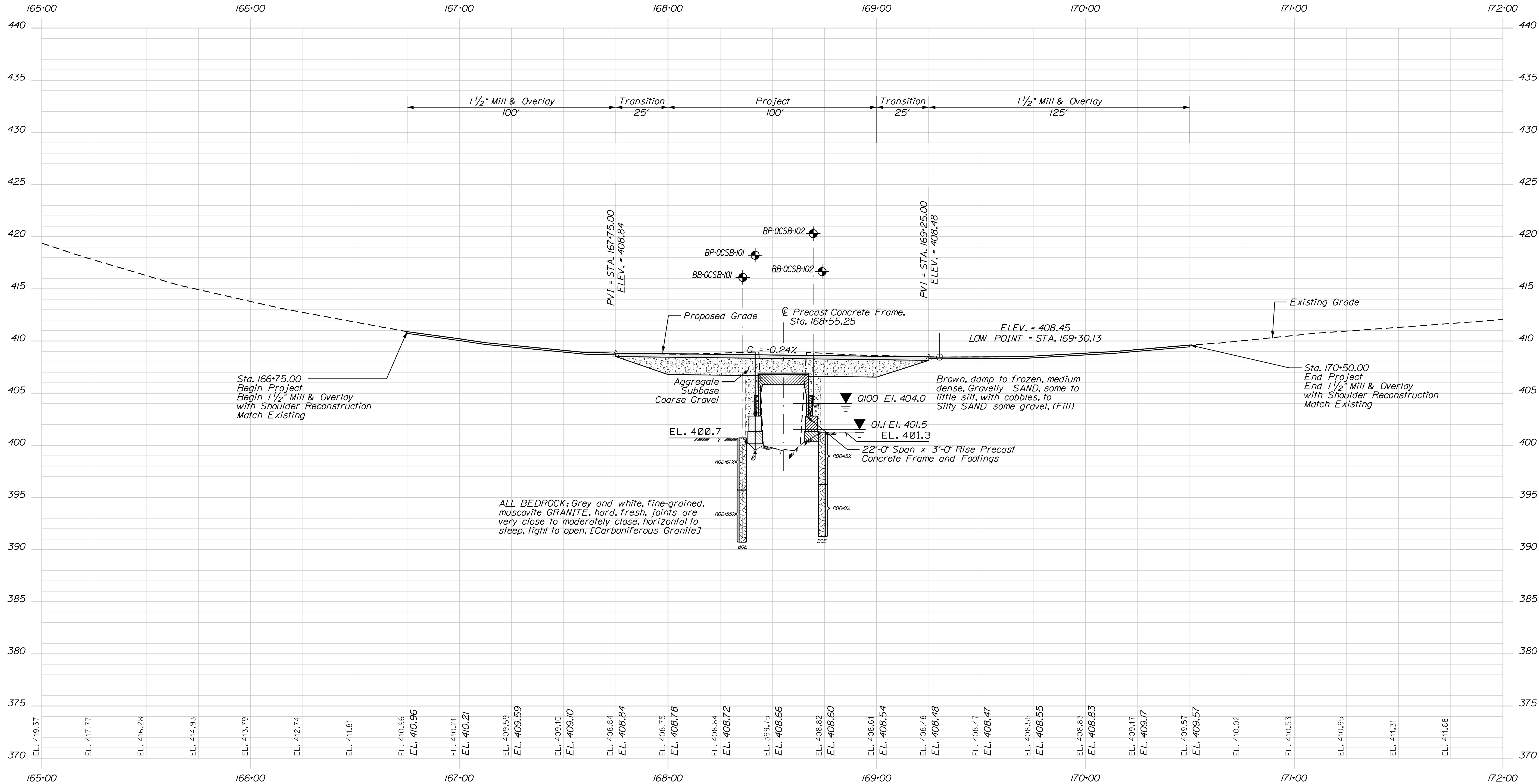
COLLEGE SWAMP BRIDGE BOLSTERS MILLS ROAD OVER COLLEGE SWAMP BROOK	OXFORD COUNTY
OTISFIELD	
PROFILE	

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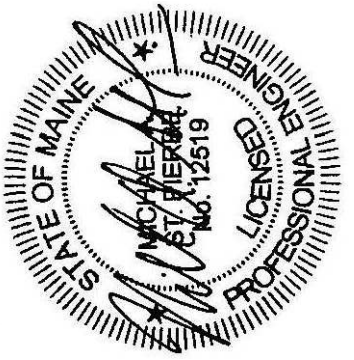
Date:12/9/2024

Username:

Division: HIGHWAY



PROFILE



PROJ. MANAGER	BY	DATE
BRIAN NICHOLS		12/9/2024
CHECKED-DETAILED		12/9/2024
CHECKED-REVIEWED		12/9/2024
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

Maine Department of Transportation Soil/Rock Exploration Log US_CUSTOMARY_UNITS				Project: College Swamp Bridge •3475 Location: carries Bolsters Mills Road over Otisfield, Maine				Boring No.: BB-OCSB-101																																																																																																																																																																																																																
Driller: S. W. Cole Explorations, LLC				Elevation (ft.): 408.9				Auger ID/OD: 5" Solid-Stem																																																																																																																																																																																																																
Operator: J. Lee				Datum: NAVD83				Sampler: Standard Split-Spoon																																																																																																																																																																																																																
Logged By: M. St. Pierre				Rig Type: Track-mounted CME 850				Hammer Wt./Fall: 140 lbs / 30"																																																																																																																																																																																																																
Date Start/Finish: 1/27/2023				Drilling Method: Cased-Wash				Core Barrel: NQ2 / 2"																																																																																																																																																																																																																
Boring Location: Sta. 168+35.8, 6.2 ft Lt				Casing ID/OD: HW 4" / 4.5"				Water Level *: 6.4 ft (after drilling)																																																																																																																																																																																																																
Hammer Efficiency Factor: 0.82				Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐																																																																																																																																																																																																																				
Definitions: R = Rock Core Sample D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WH = Weight of 140lb. Hammer WOP = Weight of Rods or Casing WOP = Weight of One Person S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S_u(_{avg}) = Lab Vane Undrained Shear Strength (psf) q_p = Unconfined Compressive Strength (psf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N₆₀ = Hammer Efficiency Factor/60/N-uncorrected T_u = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test																																																																																																																																																																																																																								
<table><thead><tr><th colspan="10">Sample Information</th><th rowspan="2">Graphic Log</th><th rowspan="2">Visual Description and Remarks</th><th rowspan="2">Laboratory Testing Results/ AASHTO and Unified Class.</th></tr><tr><th>Depth (ft.)</th><th>Sample No.</th><th>Pen./Rec. (in.)</th><th>Sample Depth (ft.)</th><th>Blows (6 in.) Shear Strength of RQD (%)</th><th>N-uncorrected</th><th>N₆₀</th><th>Casing</th><th>Blows</th><th>Elevation (ft.)</th></tr></thead><tbody><tr><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>408.2</td><td>8.5" of Pavement</td><td>0.7</td></tr><tr><td></td><td>1D</td><td>24/4</td><td>1.00 - 3.00</td><td>16-7-3-2</td><td>10</td><td>14</td><td></td><td></td><td></td><td></td><td>Brown, frozen to damp, medium dense, Gravelly SAND, some to little silt, (FI#).</td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Brown, moist, loose, Silty SAND, some gravel, (FI#).</td><td></td></tr><tr><td></td><td>2D</td><td>24/3</td><td>5.00 - 7.00</td><td>2-2-3-2</td><td>5</td><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td>R1</td><td>60/52</td><td>8.20 - 13.20</td><td>RQD = 67%</td><td></td><td></td><td></td><td></td><td></td><td>400.7</td><td>Concrete at ±7.8 ft. Top of Bedrock at Elev. 400.7 ft. R1: Grey and white, fine-grained, muscovite GRANITE, hard, fresh, joints are very close to moderately close, horizontal to low angle, tight to open, no infilling, [Carboniferous Granite]. Rock Quality = Fair R1: Core Times (min:sec) 8.2-9.2 ft (3:37) 9.2-10.2 ft (3:42) 10.2-11.2 ft (3:05) 11.2-12.2 ft (4:59) 12.2-13.2 ft (3:33) 87% Recovery. R2: Similar to R1. Rock Quality = Fair R2: Core Times (min:sec) 13.2-14.2 ft (2:12) 14.2-15.2 ft (2:04) 15.2-16.2 ft (2:07) 16.2-17.2 ft (3:14) 17.2-18.2 ft (3:52) 85% Recovery.</td><td>14641A qp=12,380 psi</td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td>R2</td><td>60/57</td><td>13.20 - 18.20</td><td>RQD = 55%</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>15</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>390.7</td><td>Bottom of Exploration at 18.2 feet below ground surface.</td><td>18.2</td></tr><tr><td>20</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>25</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>30</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table>												Sample Information										Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.	Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength of RQD (%)	N-uncorrected	N ₆₀	Casing	Blows	Elevation (ft.)	0										408.2	8.5" of Pavement	0.7		1D	24/4	1.00 - 3.00	16-7-3-2	10	14					Brown, frozen to damp, medium dense, Gravelly SAND, some to little silt, (FI#).		5											Brown, moist, loose, Silty SAND, some gravel, (FI#).			2D	24/3	5.00 - 7.00	2-2-3-2	5	7								R1	60/52	8.20 - 13.20	RQD = 67%						400.7	Concrete at ±7.8 ft. Top of Bedrock at Elev. 400.7 ft. R1: Grey and white, fine-grained, muscovite GRANITE, hard, fresh, joints are very close to moderately close, horizontal to low angle, tight to open, no infilling, [Carboniferous Granite]. Rock Quality = Fair R1: Core Times (min:sec) 8.2-9.2 ft (3:37) 9.2-10.2 ft (3:42) 10.2-11.2 ft (3:05) 11.2-12.2 ft (4:59) 12.2-13.2 ft (3:33) 87% Recovery. R2: Similar to R1. Rock Quality = Fair R2: Core Times (min:sec) 13.2-14.2 ft (2:12) 14.2-15.2 ft (2:04) 15.2-16.2 ft (2:07) 16.2-17.2 ft (3:14) 17.2-18.2 ft (3:52) 85% Recovery.	14641A qp=12,380 psi	10														R2	60/57	13.20 - 18.20	RQD = 55%									15																							390.7	Bottom of Exploration at 18.2 feet below ground surface.	18.2	20																										25																										30												
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	R1	60/52	8.20 - 13.20	RQD = 67%						400.7	Concrete at ±7.8 ft. Top of Bedrock at Elev. 400.7 ft. R1: Grey and white, fine-grained, muscovite GRANITE, hard, fresh, joints are very close to moderately close, horizontal to low angle, tight to open, no infilling, [Carboniferous Granite]. Rock Quality = Fair R1: Core Times (min:sec) 8.2-9.2 ft (3:37) 9.2-10.2 ft (3:42) 10.2-11.2 ft (3:05) 11.2-12.2 ft (4:59) 12.2-13.2 ft (3:33) 87% Recovery. R2: Similar to R1. Rock Quality = Fair R2: Core Times (min:sec) 13.2-14.2 ft (2:12) 14.2-15.2 ft (2:04) 15.2-16.2 ft (2:07) 16.2-17.2 ft (3:14) 17.2-18.2 ft (3:52) 85% Recovery.	14641A qp=12,380 psi																																																																																																																																																																																																												
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Maine Department of Transportation Soil/Rock Exploration Log US_CUSTOMARY_UNITS				Project: College Swamp Bridge •3475 Location: carries Bolsters Mills Road over Otisfield, Maine				Boring No.: BB-OCSB-102																																																																																																																																																																																																																
Driller: S. W. Cole Explorations, LLC				Elevation (ft.): 408.8				Auger ID/OD: 5" Solid-Stem																																																																																																																																																																																																																
Operator: J. Lee				Datum: NAVD83				Sampler: Standard Split-Spoon																																																																																																																																																																																																																
Logged By: M. St. Pierre				Rig Type: Track-mounted CME 850				Hammer Wt./Fall: 140 lbs / 30"																																																																																																																																																																																																																
Date Start/Finish: 1/27/2023				Drilling Method: Cased-Wash				Core Barrel: NQ2 / 2"																																																																																																																																																																																																																
Boring Location: Sta. 168+73.8, 6.4 ft Rt				Casing ID/OD: HW 4" / 4.5"				Water Level *: 8.2 ft (after drilling)																																																																																																																																																																																																																
Hammer Efficiency Factor: 0.82				Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐																																																																																																																																																																																																																				
Definitions: R = Rock Core Sample D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WH = Weight of 140lb. Hammer WOP = Weight of Rods or Casing WOP = Weight of One Person S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S_u(_{avg}) = Lab Vane Undrained Shear Strength (psf) q_p = Unconfined Compressive Strength (psf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N₆₀ = Hammer Efficiency Factor/60/N-uncorrected T_u = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test																																																																																																																																																																																																																								
<table><thead><tr><th colspan="10">Sample Information</th><th rowspan="2">Graphic Log</th><th rowspan="2">Visual Description and Remarks</th><th rowspan="2">Laboratory Testing Results/ AASHTO and Unified Class.</th></tr><tr><th>Depth (ft.)</th><th>Sample No.</th><th>Pen./Rec. (in.)</th><th>Sample Depth (ft.)</th><th>Blows (6 in.) Shear Strength of RQD (%)</th><th>N-uncorrected</th><th>N₆₀</th><th>Casing</th><th>Blows</th><th>Elevation (ft.)</th></tr></thead><tbody><tr><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>408.1</td><td>8" of Pavement</td><td>0.7</td></tr><tr><td></td><td>1D</td><td>24/9</td><td>1.00 - 3.00</td><td>16-10-7-8</td><td>17</td><td>23</td><td></td><td></td><td></td><td></td><td>Brown, frozen to damp, medium dense, Gravelly SAND, some silt, (FI#).</td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Cobble. Brown, moist, medium dense, Silty SAND, some gravel, (FI#).</td><td></td></tr><tr><td></td><td>2D</td><td>21/7</td><td>5.00 - 6.75</td><td>25-8-20-50/3"</td><td>28</td><td>38</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td>R1</td><td>60/46</td><td>7.60 - 12.60</td><td>RQD = 15%</td><td></td><td></td><td></td><td></td><td></td><td>401.2</td><td>Top of Bedrock at Elev. 401.2 ft. R1: Grey and white, fine-grained, muscovite GRANITE, hard, fresh, joints are very close to moderately close, horizontal to low angle, tight to open, no infilling, [Carboniferous Granite]. Rock Quality = Very Poor R1: Core Times (min:sec) 8.2-9.2 ft (3:37) 9.2-10.2 ft (3:42) 10.2-11.2 ft (3:05) 11.2-12.2 ft (4:59) 12.2-13.2 ft (3:33) 87% Recovery. R2: Similar to R1 except joints are very close to close, low angle to steep, with some silt, little sand infilling on joint faces. Rock Quality = Very Poor. R2: Core Times (min:sec) 12.6-13.6 ft (2:33) 13.6-14.6 ft (0:24) 14.6-15.6 ft (0:42) 15.6-16.6 ft (1:46) 16.6-17.6 ft (2:05) 77% Recovery.</td><td>14642A qp=13,250 psi</td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td>R2</td><td>60/60</td><td>12.60 - 17.60</td><td>RQD = 0%</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>15</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>391.2</td><td>Bottom of Exploration at 17.6 feet below ground surface.</td><td>17.6</td></tr><tr><td>20</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>25</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>30</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table>												Sample Information										Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.	Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength of RQD (%)	N-uncorrected	N ₆₀	Casing	Blows	Elevation (ft.)	0										408.1	8" of Pavement	0.7		1D	24/9	1.00 - 3.00	16-10-7-8	17	23					Brown, frozen to damp, medium dense, Gravelly SAND, some silt, (FI#).		5											Cobble. Brown, moist, medium dense, Silty SAND, some gravel, (FI#).			2D	21/7	5.00 - 6.75	25-8-20-50/3"	28	38								R1	60/46	7.60 - 12.60	RQD = 15%						401.2	Top of Bedrock at Elev. 401.2 ft. R1: Grey and white, fine-grained, muscovite GRANITE, hard, fresh, joints are very close to moderately close, horizontal to low angle, tight to open, no infilling, [Carboniferous Granite]. Rock Quality = Very Poor R1: Core Times (min:sec) 8.2-9.2 ft (3:37) 9.2-10.2 ft (3:42) 10.2-11.2 ft (3:05) 11.2-12.2 ft (4:59) 12.2-13.2 ft (3:33) 87% Recovery. R2: Similar to R1 except joints are very close to close, low angle to steep, with some silt, little sand infilling on joint faces. Rock Quality = Very Poor. R2: Core Times (min:sec) 12.6-13.6 ft (2:33) 13.6-14.6 ft (0:24) 14.6-15.6 ft (0:42) 15.6-16.6 ft (1:46) 16.6-17.6 ft (2:05) 77% Recovery.	14642A qp=13,250 psi	10														R2	60/60	12.60 - 17.60	RQD = 0%									15																							391.2	Bottom of Exploration at 17.6 feet below ground surface.	17.6	20																										25																										30												
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OVER COLLEGE SWAMP BROOK

OTISFIELD
OXFORD COUNTY

BORING LOGS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2599100

WIN
25991.00

BRIDGE NO. 3475

BRIDGE PLANS

COLLEGE SWAMP BRIDGE BOLSTERS MILLS ROAD
OVER COLLEGE SWAMP BROOK

OTISFIELD
OXFORD COUNTY

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OXFORD COUNTY

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OXFORD COUNTY

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OVER COLLEGE SWAMP BROOK

OTISFIELD
OXFORD COUNTY

BORING LOGS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2599100

WIN
25991.00

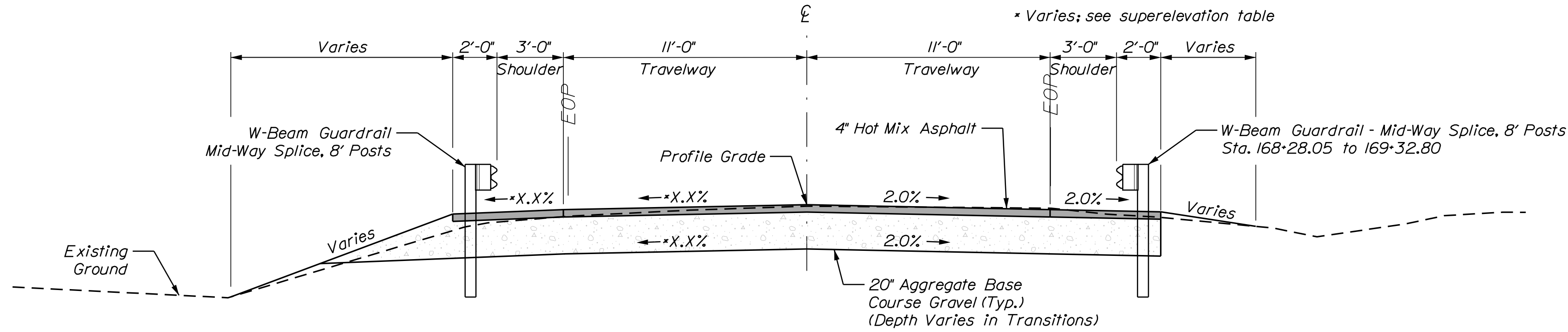
BRIDGE NO. 347

Date: 12/9/2024

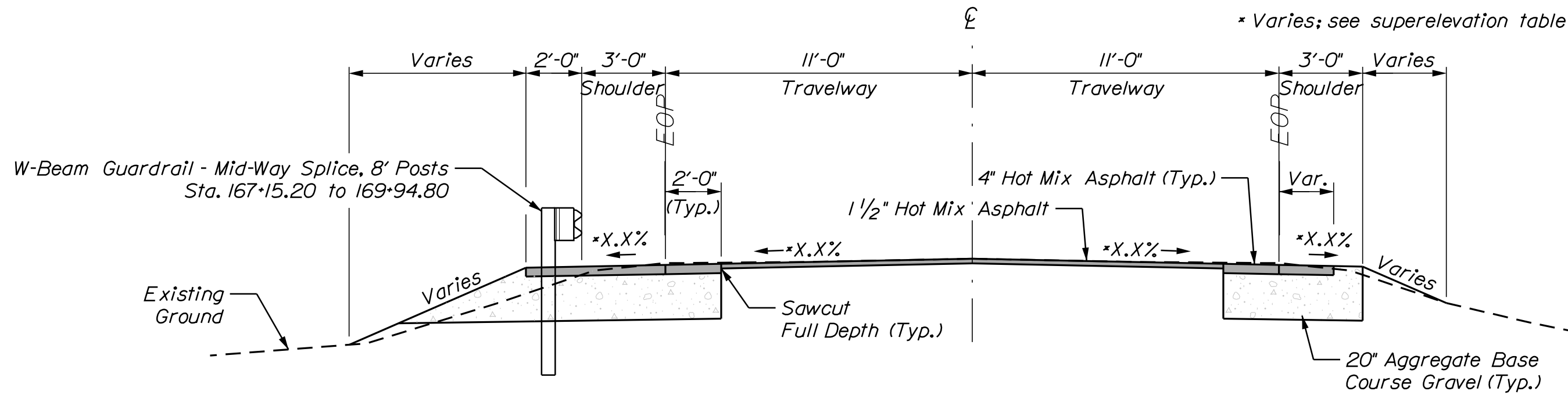
Username:

Division: HIGHWAY

Filename: ...\\MSTA\\007_RoadwayTypicals.dgn



Bolsters Mills Road
Full Construction
Sta. 167+75.00 to 169+25.00



Bolsters Mills Road
1 1/2" Mill & Overlay with Shoulder Reconstruction
Sta. 166+75.00 to 167+75.00
Sta. 169+25.00 to 170+50.00

BOLSTERS MILLS ROAD				
SUPERELEVATION TABLE				
LT SHLDR %	TW %	STATION	TW %	RT SHLDR %
SHOULDER	TRAVELWAY	START	TRAVELWAY	SHOULDER
MATCH	MATCH	166+75.00	MATCH	MATCH
-5.0%	-5.0%	167+00.00	-3.0%	-3.0%
		TO		
-5.0%	-5.0%	167+50.00	-3.0%	-3.0%
-4.0%	-4.0%	167+75.00	-2.0%	-2.0%
-3.0%	-3.0%	168+00.00	-2.0%	-2.0%
-2.0%	-2.0%	168+25.00	-2.0%	-2.0%
		TO		
-2.0%	-2.0%	169+75.00	-2.0%	-2.0%
-2.0%	-2.0%	170+00.00	-3.0%	-3.0%
-2.0%	-2.0%	170+25.00	-4.0%	-4.0%
MATCH	MATCH	170+50.00	MATCH	MATCH
		END		

NOTES

1. The pavement depths as shown on the plans are intended to be nominal.
2. Crowns for all courses of subbase and pavement shall be straight.
3. The stationing shown under each typical is approximate.
4. 4" of loam shall be used on all disturbed slopes unless otherwise directed.



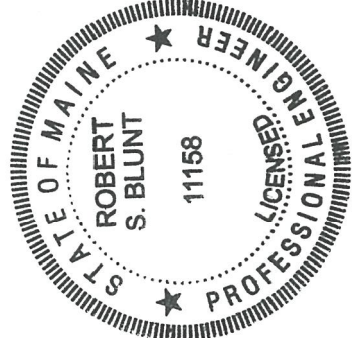
NOT TO SCALE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2599100

BRIDGE NO. 3475
WIN
25991.00

BRIDGE PLANS



Robert S. Blunt
SIGNATURE
11158
P.E. NUMBER
12/9/2024
DATE

PROJ. MANAGER	BY	DATE
BRIAN NICHOLS	BY	12/9/2024
DESIGN-DETAILED	BY	12/9/2024
CHECKED-REVIEWED	BY	12/9/2024
DESIGN-DETAILED	BY	12/9/2024
DESIGN-DETAILED	BY	12/9/2024
REVISIONS 1	BY	12/9/2024
REVISIONS 2	BY	12/9/2024
REVISIONS 3	BY	12/9/2024
REVISIONS 4	BY	12/9/2024
FIELD CHANGES	BY	12/9/2024

COLLEGE SWAMP BRIDGE BOLSTERS MILLS ROAD
OVER COLLEGE SWAMP BROOK
OXFORD COUNTY
OTISFIELD
TYPICAL ROADWAY SECTIONS

SHEET NUMBER

7

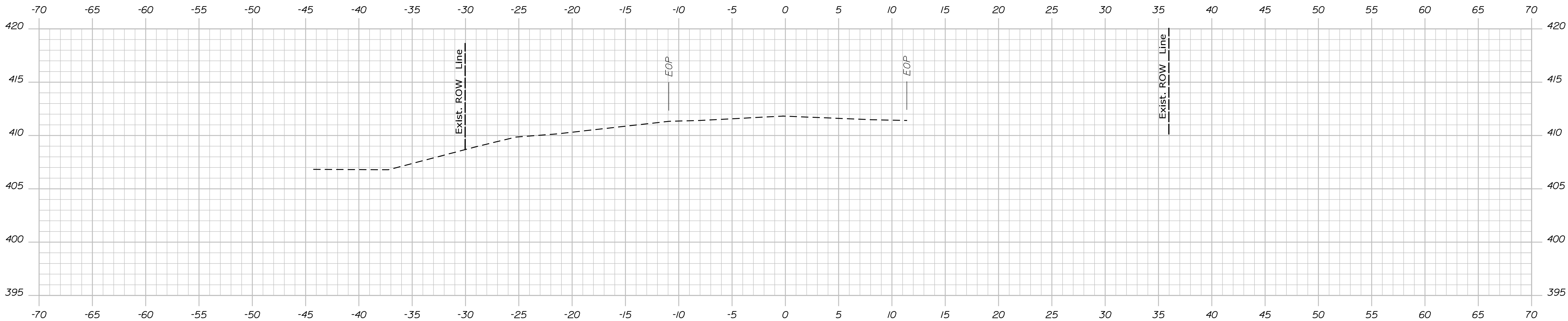
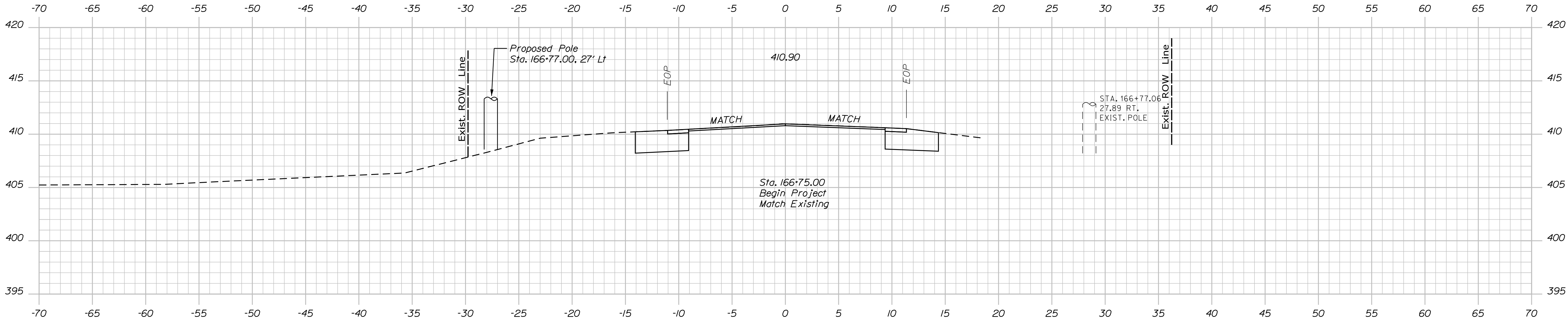
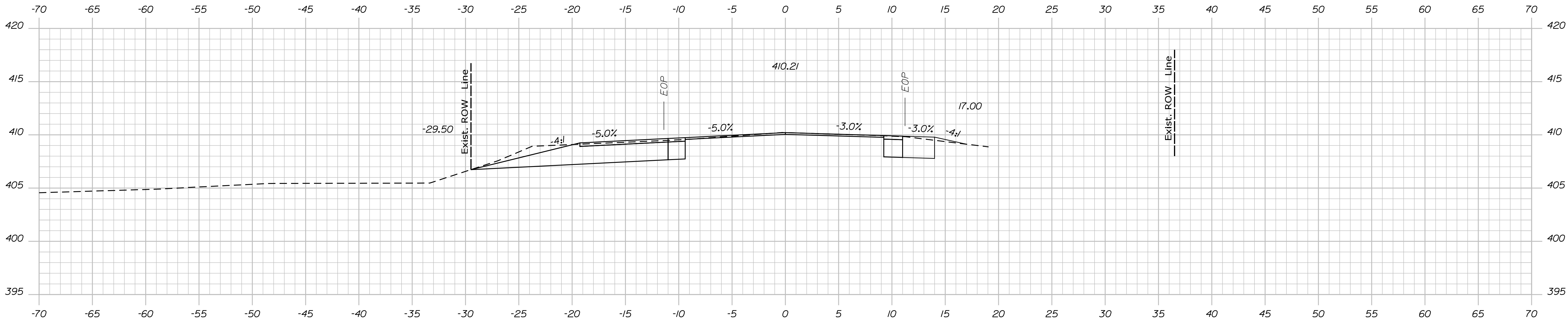
OF 25

Date:12/9/2024

Username:

Division: HIGHWAY

Filename: ... \BRIDGE\WSTA\040_Xsect.dgn

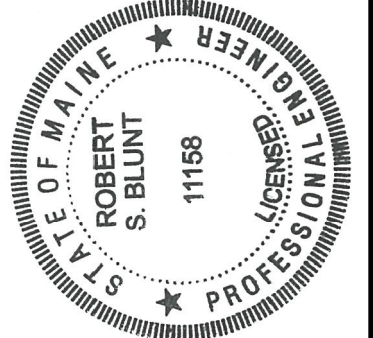


STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2599100

BRIDGE NO. 3475WIN25991.00

BRIDGE PLANS



Signature: Robert S. Blunt
P.E. Number: 11158
Date: 12/9/2024

PROJ. MANAGER	BRIAN NICHOLS	BY	DATE
DESIGN-DETAILED	JAN	BY	DATE
CHECKED-REVIEWED	BJR	BY	DATE
DESIGN-DETAILED	BJR	BY	DATE
DESIGN-DETAILED	BJR	BY	DATE
REVISIONS 1		BY	DATE
REVISIONS 2		BY	DATE
REVISIONS 3		BY	DATE
REVISIONS 4		BY	DATE
FIELD CHANGES		BY	DATE

COLLEGE SWAMP BRIDGE BOLSTERS MILLS ROAD
OVER COLLEGE SWAMP BROOK

OTISFIELD

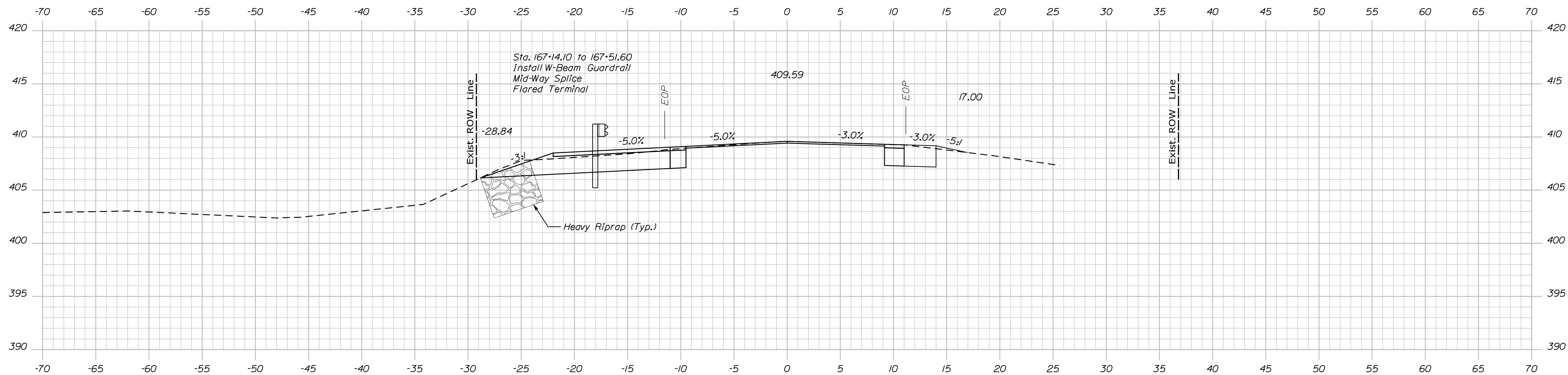
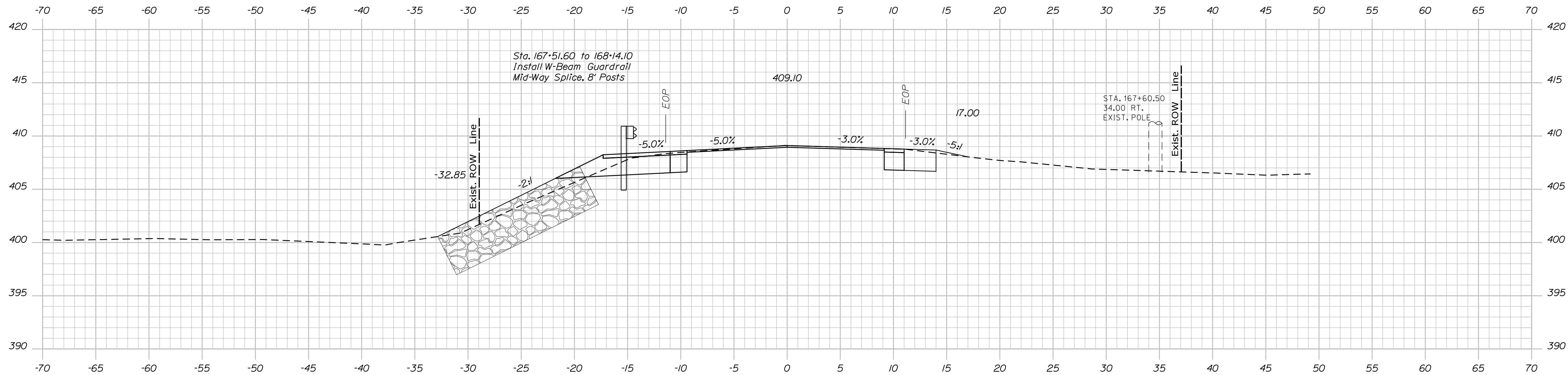
OXFORD COUNTY

CROSS SECTIONS

SHEET NUMBER
8
OF 25

Sta. 166+50.00 to Sta. 167+00.00

Filename: ... \BRIDGE\MSTA\Plot\040_Xsect.dgn



Sta. 167+25.00 to Sta. 167+50.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

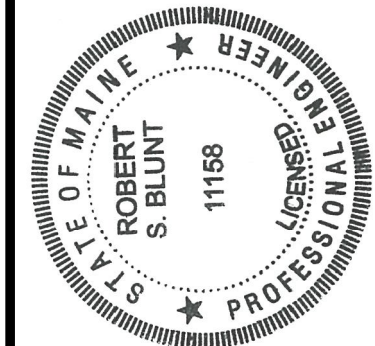
2599100

WIN
25991 00

BRIDGE NO. 3475

25991 00

BRIDGE NO. 3475



<i>Robert J. Bala</i>
SIGNATURE
11158
P.E. NUMBER
12/9/2024
DATE

[illegible][illegible]

NICHOLS	
BND	
RSD	

[illegible]

OJ. MANAGEE	SIGN-DETAIN	CHECKED-REV	SIGN2-DETAIN	SIGN3-DETAIN	VISIONS 1	VISIONS 2	VISIONS 3	VISIONS 4	VISIONS 5
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AD	PR
NTY	DE
	CH
	DE
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COLLEGE SWAMP BRIDGE BOLSTERS MILLS ROAD
OVER COLLEGE SWAMP BROOK

OTISFIELD
OXFORD COUNTY

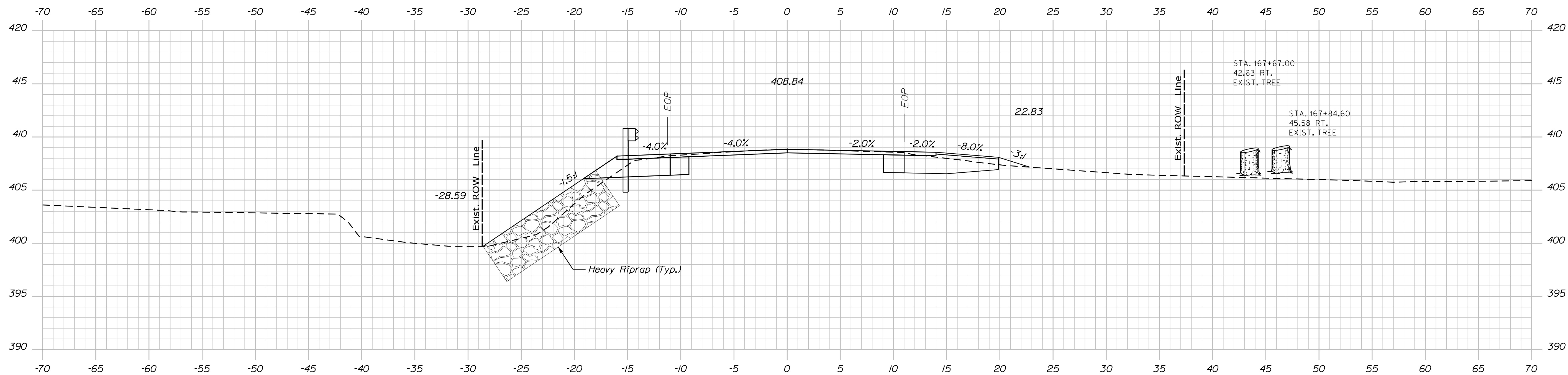
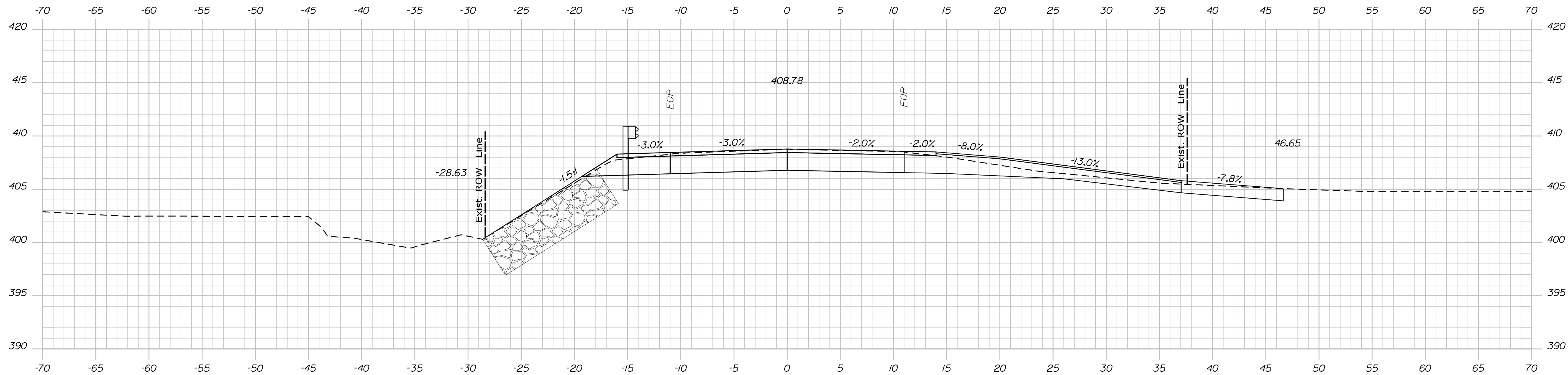
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SHEET NUMBER

9

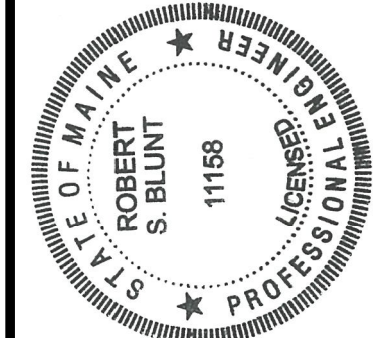
OF 25

Filename: ... \BRIDGE\MSTA\Plot\040_Xsect.dgn



Sta. 167+75.00 to Sta. 168+00.00

BRIDGE NO. 3475	WIN	25991.00	BRIDGE PLANS
		2599100	
STATE OF MAINE			
DEPARTMENT OF TRANSPORTATION			



SIGNATURE	1158
P.P.E. NUMBER	12/9/2024
DATE	

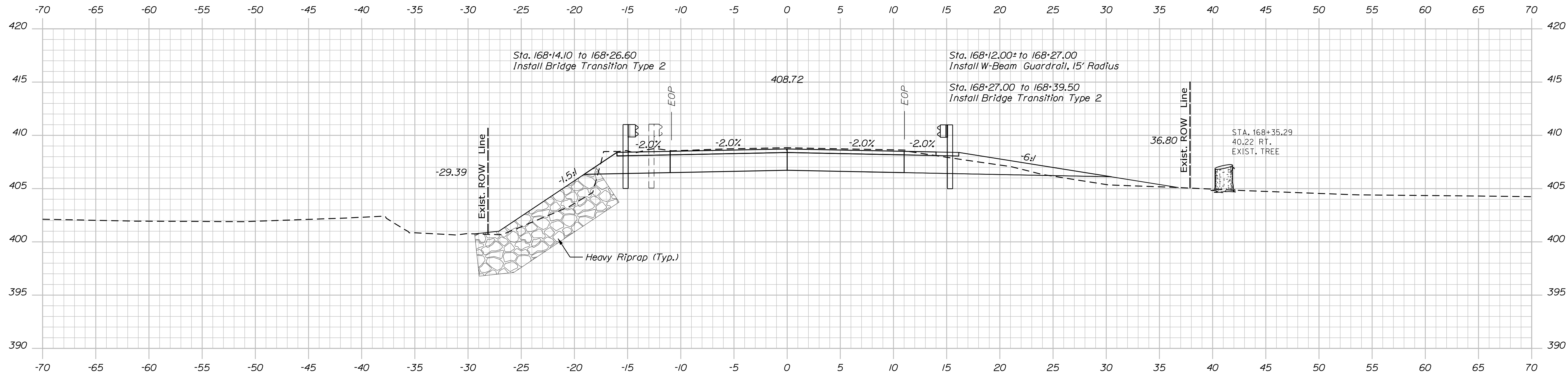
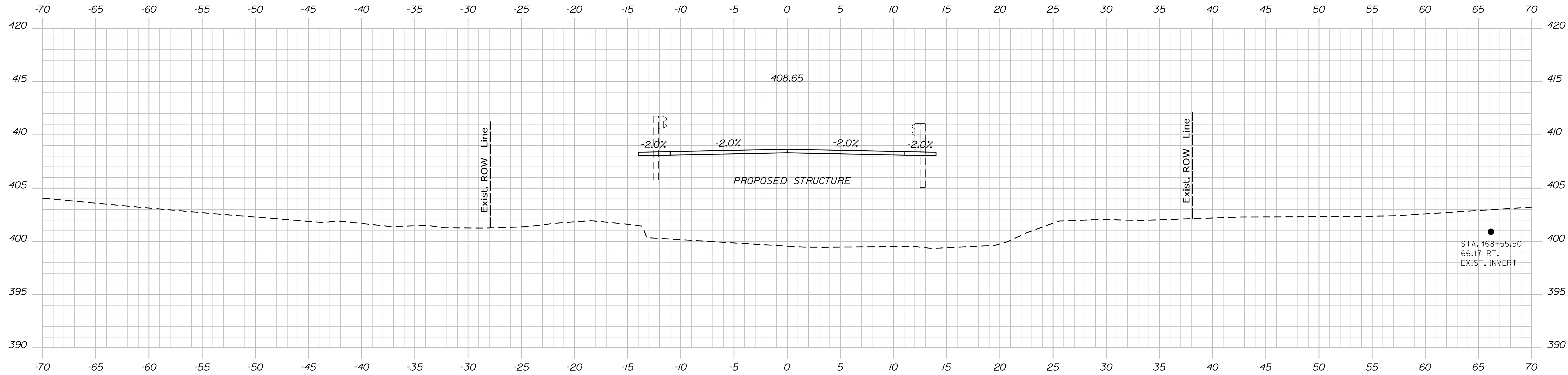
PROJ. MANAGER	BRIAN NICHOLS	BY	DATE
DESIGN-DETAILED	JAH	BMD	12/9/2024
CHECKED-REVIEWED	BJR	RSBLUNT	12/9/2024
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

CROSS SECTIONS

OTISFIELD OXFORD COUNTY

SHEET NUMBER
10
OF 25

Filename: ... \BRIDGE\MSTA\Plot\040_Xsect.dgn



A circular professional engineer seal for the State of Maine. The outer ring contains the text "STATE OF MAINE" on the left and "PROFESSIONAL ENGINEER" on the right, separated by two stars. The inner circle contains the name "ROBERT S. BLUNT" and the license number "11158".

SIGNATURE	11158
P.P.E. NUMBER	12/9/2024
DATE	

DATE	BY	BRIAN NICHOLS	PROJ. MANAGER
12/9/2024	BMD	JAH	DESIGN-DETAILED
12/9/2024	RSBLNT	BJR	CHECKED-REVIEWED
			DESIGN2-DETAILED2
			DESIGN3-DETAILED3
			REVISIONS 1
			REVISIONS 2
			REVISIONS 3
			REVISIONS 4
			FIELD CHANGES

COLLEGE SWAMP BRIDGE BOLSTERS MILLS ROAD
OVER COLLEGE SWAMP BROOK
OTISFIELD OXFORD COUNTY

CROSS SECTIONS

SHEET NUMBER

11

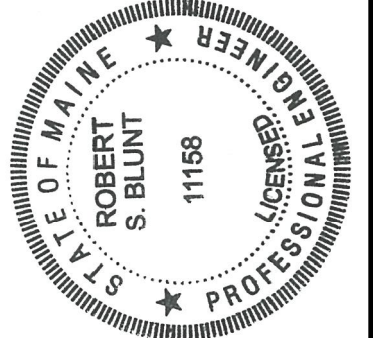
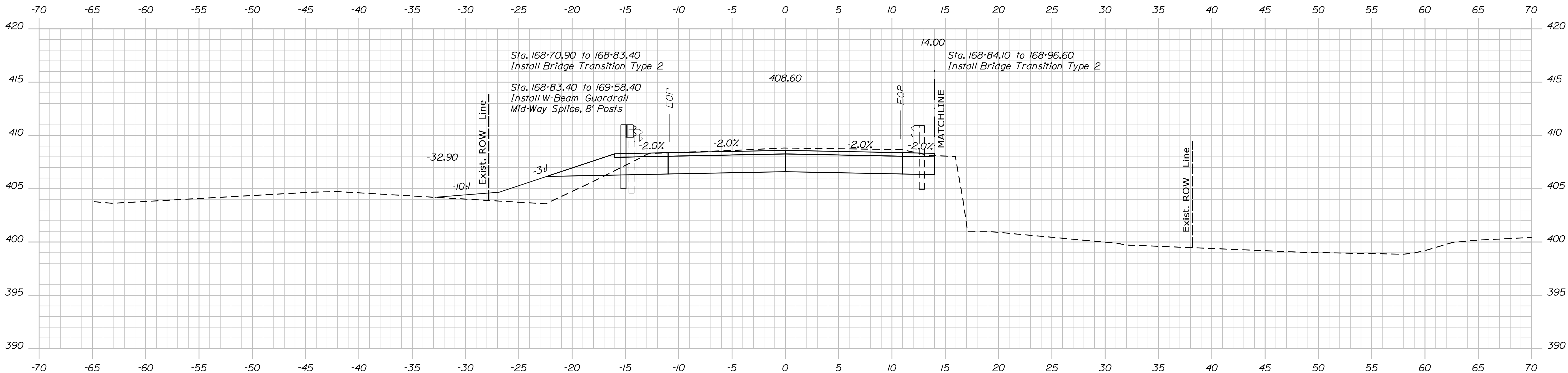
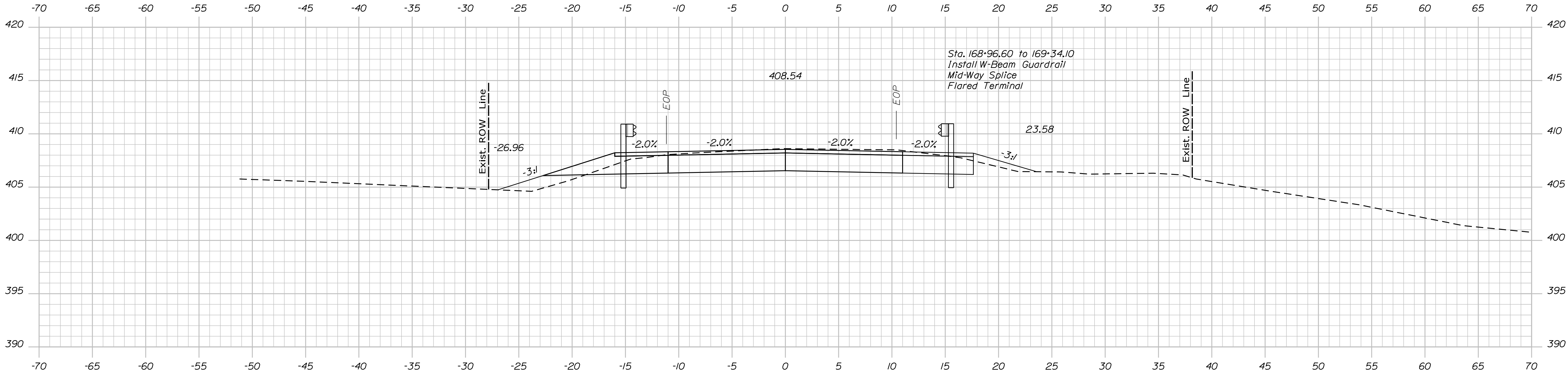
OF 25

Date:12/9/2024

Username:

Division: HIGHWAY

Filename: ... \BRIDGE\WSTA\Plot\040_Xsect.dgn



Robert S. Blunt
SIGNATURE
11158
P.E. NUMBER
12/9/2024
DATE

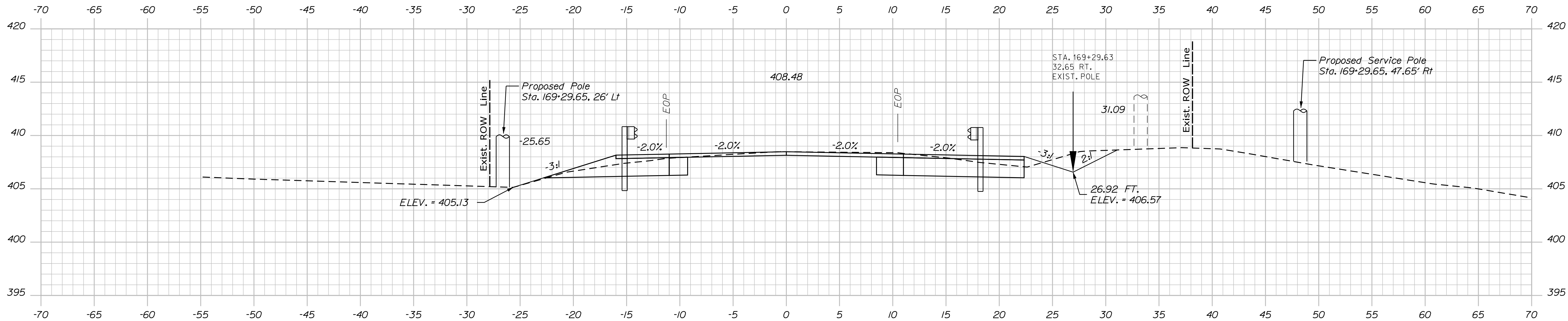
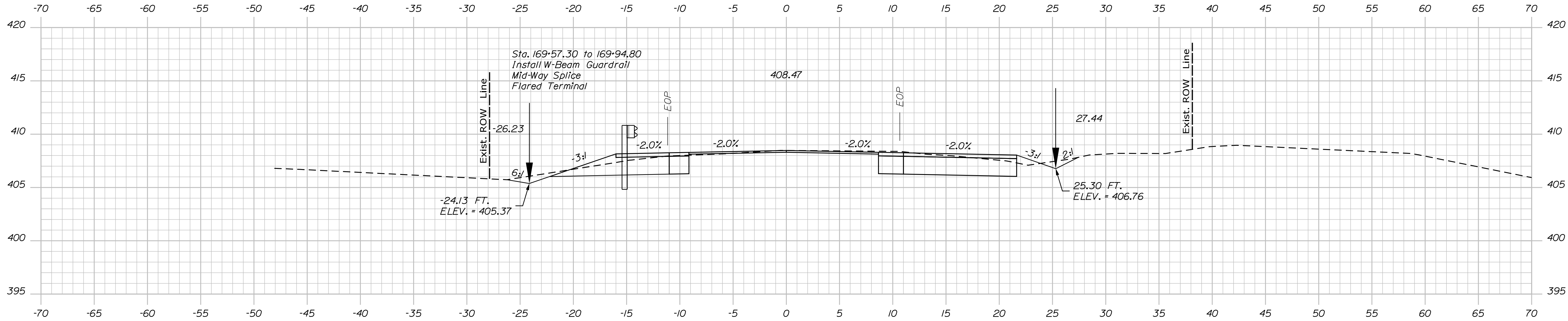
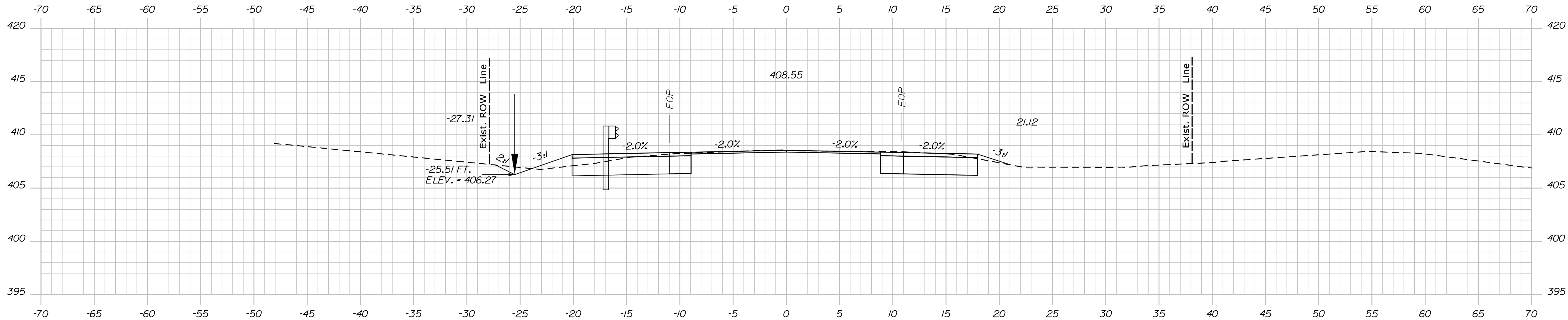
DATE
12/9/2024
BY
BRIAN NICHOLS
DESIGN-Detailed
CHECKED-Reviewed
DESIGN2-Detailed
DESIGN3-Detailed
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

Date:12/9/2024

Username:

Division: HIGHWAY

Filename: ... \BRIDGE\WSTA\Plot\040_Xsect.dgn

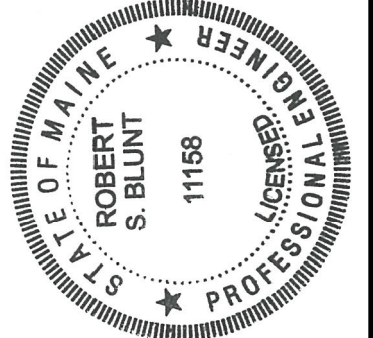


STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2599100

BRIDGE NO. 3475WIN25991.00

BRIDGE PLANS



Robert S. Blunt
SIGNATURE
11158
P.E. NUMBER
12/9/2024
DATE

PROJ. MANAGER	BRIAN NICHOLS	DATE	12/9/2024
CHECKED-DETAILED	JAN	BY	BND
CHECKED-REVIEWED	BJR	REVIEWED	RSBLINT
DESIGN2-DETAILED	ED2		
DESIGN3-DETAILED	ED3		
REVISIONS	1		
REVISIONS	2		
REVISIONS	3		
REVISIONS	4		
FIELD CHANGES			

COLLEGE SWAMP BRIDGE BOLSTERS MILLS ROAD
OVER COLLEGE SWAMP BROOK

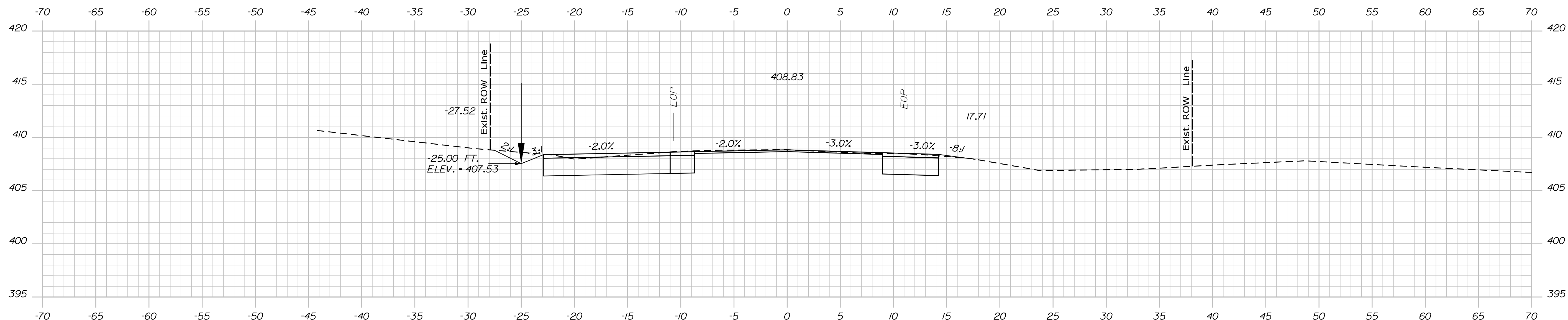
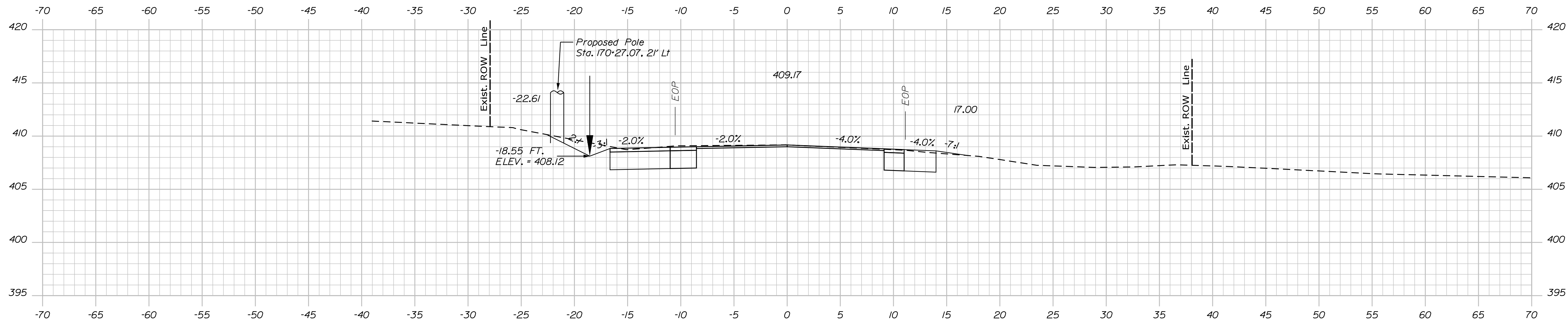
OTISFIELD
OXFORD COUNTY

CROSS SECTIONS

SHEET NUMBER
13
OF 25

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Filename: ... \BRIDGE\MSTA\Plot\040_Xsect.dgn



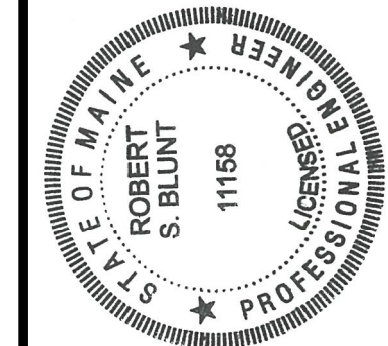
Sta. 170+00.00 to Sta. 170+25.00

BRIDGE NO. 3475

WIN

25991.00

BRIDGE PLANS



<i>Robert J. Blevins</i>	SIGNATURE
11158	
P.E. NUMBER	
12/9/2024	
DATE	

PROJ. MANAGER	BRIAN NICHOLS	BY	DATE
DESIGN-DETAILED	JAH	BMD	12/9/2024
CHECKED-REVIEWED	BAR	PSBLUNT	12/9/2024
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD MANAGER			

CROSS SECTIONS

OTISFIELD OXFORD COUNTY

COLLEGE SWAMP BRIDGE BOLSTERS MILLS ROAD
OVER COLLEGE SWAMP BROOK

SHEET NUMBER	
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14

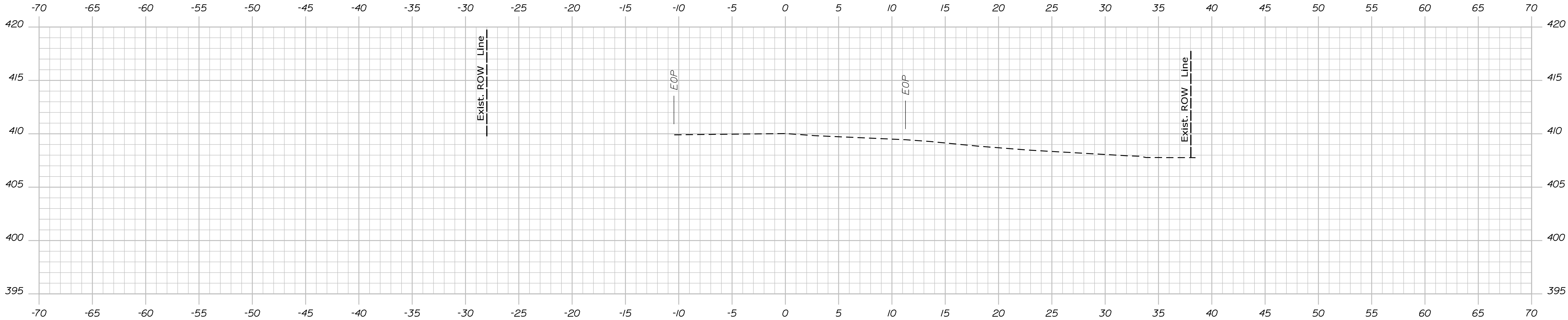
OF 25

CROSS SECTIONS

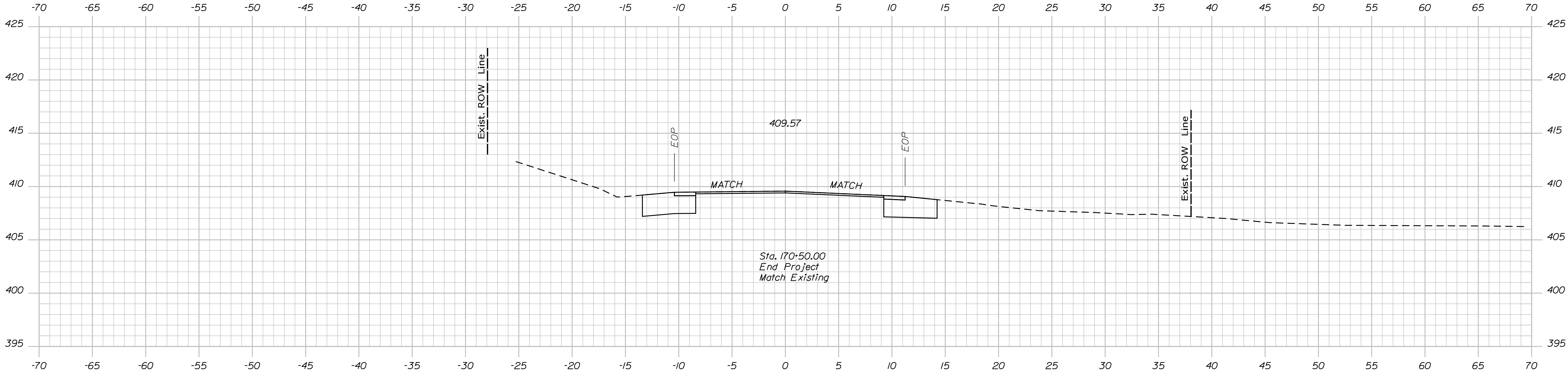
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Date:12/9/2024

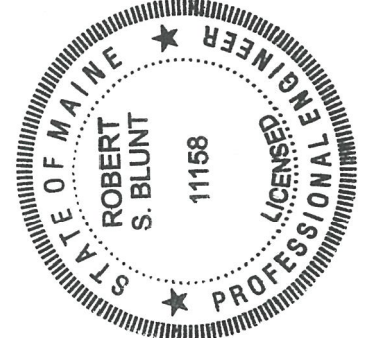
Username: Highway



170+75.00



170+50.00



Signature: [Signature]

11158

P.E. NUMBER

11158

DATE

12/9/2024

PROJ. MANAGER	BRIAN NICHOLS	BY	DATE
DESIGN-DETAILED	JAN	BY	12/9/2024
CHECKED-REVIEWED	FOR	FOR	12/9/2024
DESIGN-DETAILED	FOR	FOR	12/9/2024
REVISIONS	1	REVISIONS	2
REVISIONS	2	REVISIONS	3
REVISIONS	3	REVISIONS	4
REVISIONS	4	REVISIONS	5
FIELD CHANGES		FIELD CHANGES	

COLLEGE SWAMP BRIDGE BOLSTERS MILLS ROAD
OVER COLLEGE SWAMP BROOK

OXFORD COUNTY

OTISFIELD

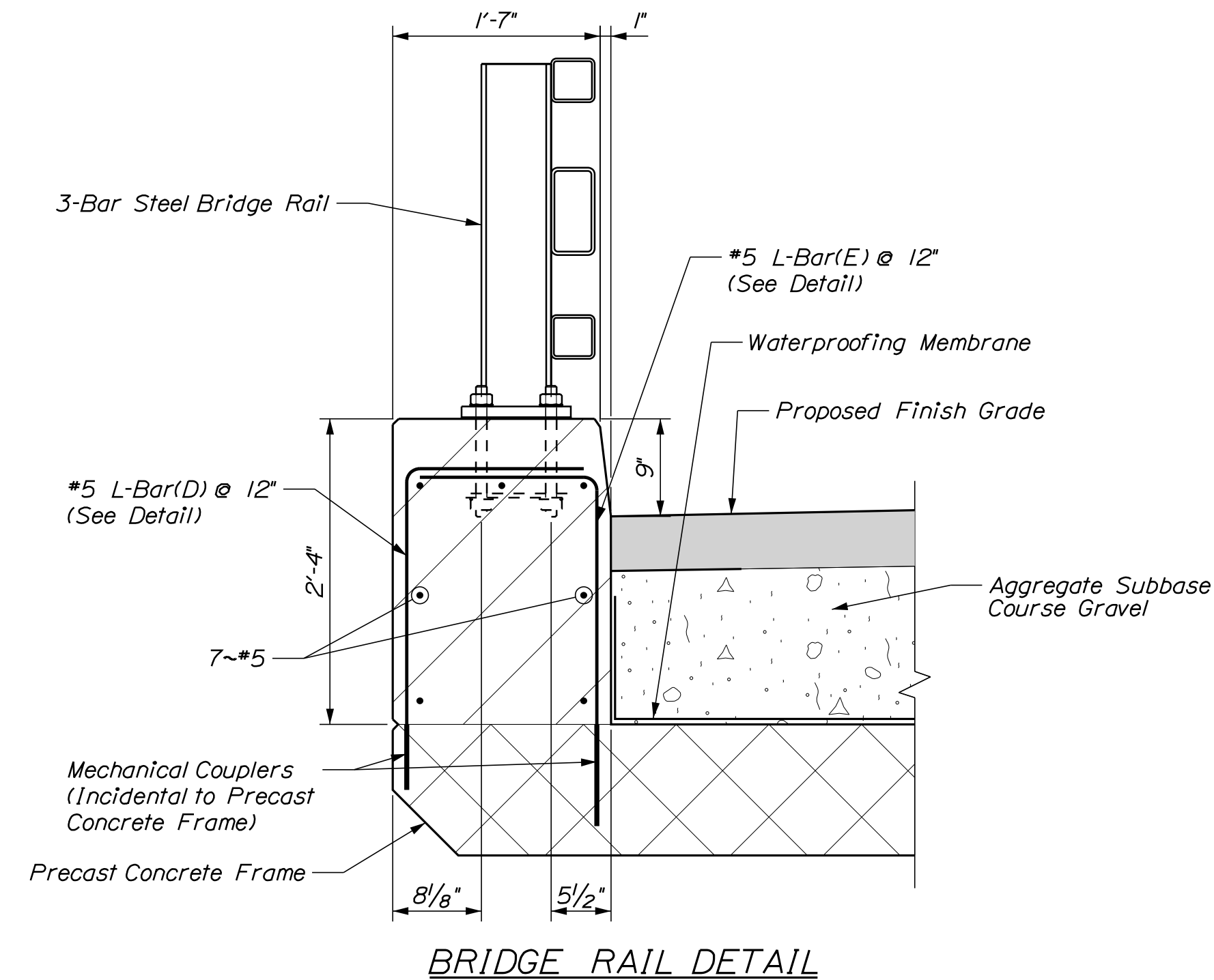
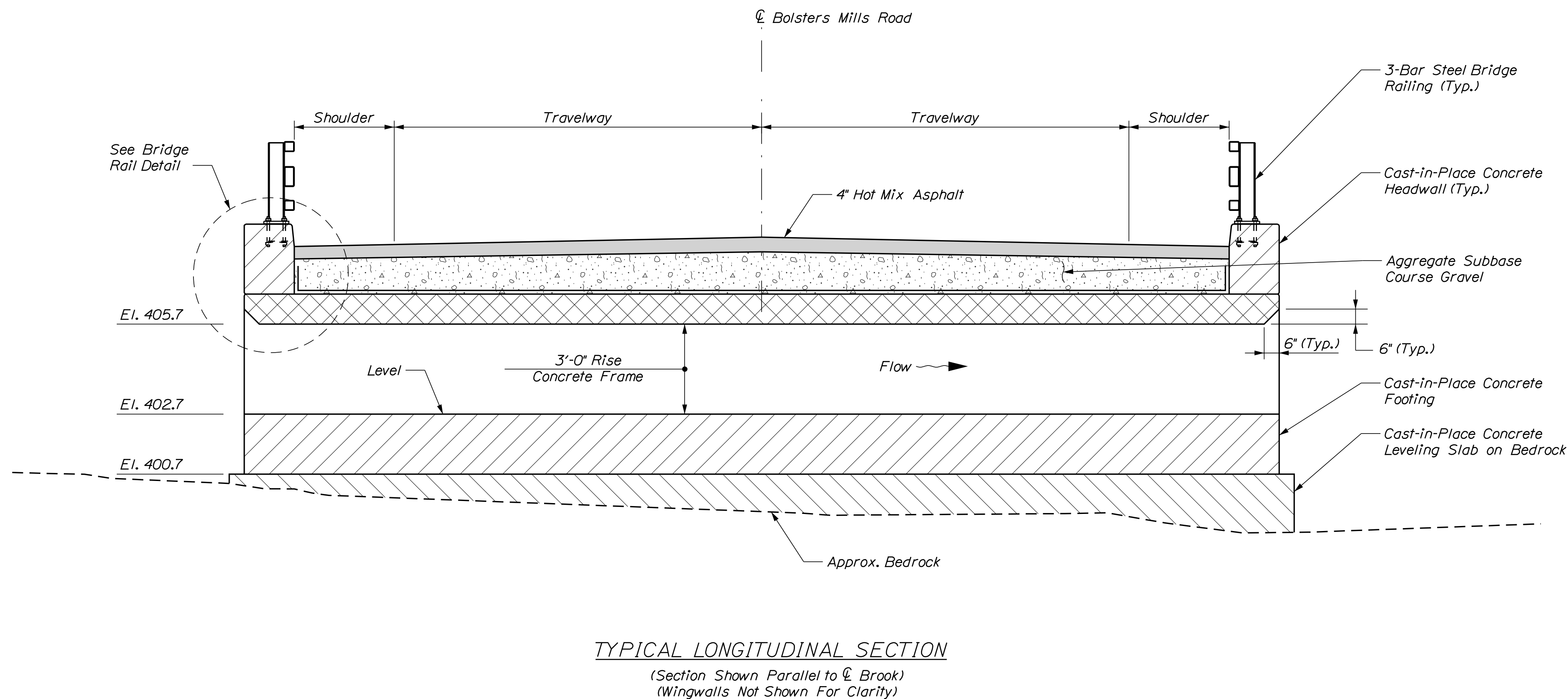
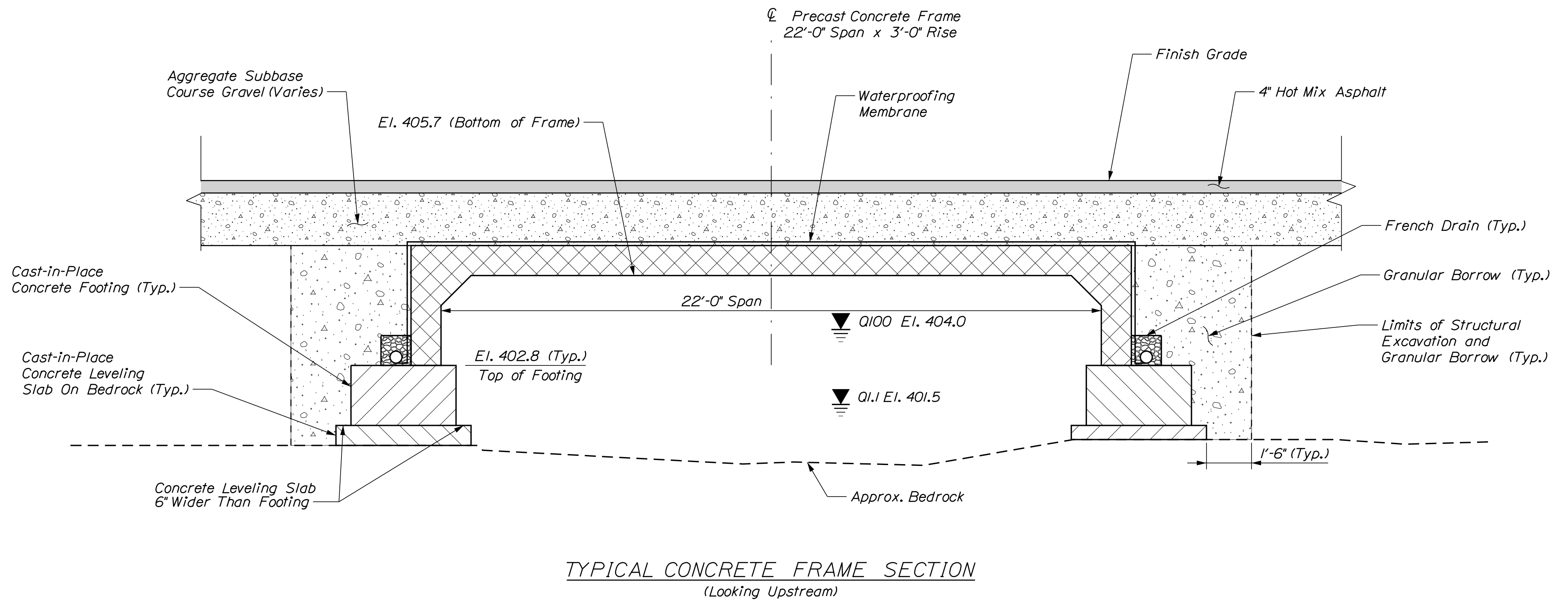
CROSS SECTIONS

Date: 12/9/2024

Username:

Division: HIGHWAY

Filename: ... \BRIDGE\WSTA\023_Btypical.dgn

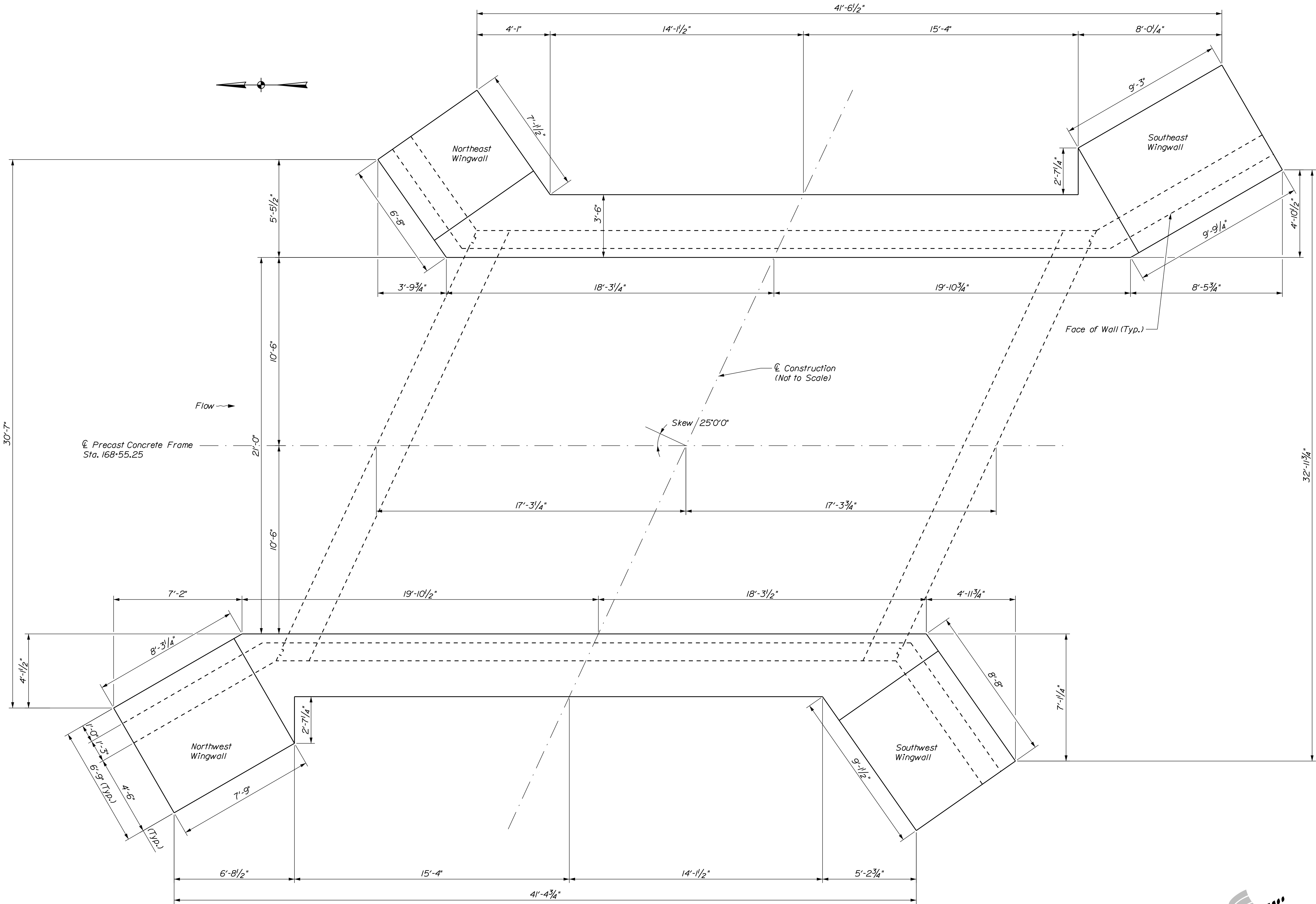


PRECAST CONCRETE FRAME NOTES

- The precast units shall be designed to carry construction loadings with a minimum fill cover of 12 inches over the top of the units.
- The construction, handling, and assembly of the precast units shall be in accordance with Special Provisions Section 534, Precast Structural Concrete, and with the manufacturer's specifications as applicable.
- Install standard membrane waterproofing over the top, down the exterior sides to the footing, and minimum 6" onto the footing. The membrane shall also go up the sides of the curbs as shown on the plans.
- Payment for grout around the keyway in the footing shall not be made directly but shall be considered incidental to related contract items.
- Threaded inserts shall be cast into the ends of the box as shown in the headwall reinforcing details. Payment for threaded inserts shall not be made directly, but shall be considered incidental to related contract items.
- Precast Concrete Frame design shall consider effects from a TL-2 collision load on the bridge rail.



STATE OF MAINE DEPARTMENT OF TRANSPORTATION		2599100		BRIDGE NO. 3475		WIN		25991.00		BRIDGE PLANS	
COLLEGE SWAMP BRIDGE BOLSTERS MILLS ROAD OVER COLLEGE SWAMP BROOK		OXFORD COUNTY		OTISFIELD		PRECAST CONCRETE FRAME DETAILS		SHEET NUMBER		16	
DATE		12/9/2024		BY		BRIAN NICHOLS		P.E. NUMBER		11158	
DESIGN-DETAILED		JAN		BND		RBLNT		SIGNATURE		11158	
CHECKED-REVIEWED		BND		RBLNT		RBLNT		P.E. NUMBER		11158	
DESIGN2-DETAILED		BND		RBLNT		RBLNT		DATE		12/9/2024	
DESIGN3-DETAILED		BND		RBLNT		RBLNT		DATE		12/9/2024	
REVISIONS 1		BND		RBLNT		RBLNT		DATE		12/9/2024	
REVISIONS 2		BND		RBLNT		RBLNT		DATE		12/9/2024	
REVISIONS 3		BND		RBLNT		RBLNT		DATE		12/9/2024	
REVISIONS 4		BND		RBLNT		RBLNT		DATE		12/9/2024	
FIELD CHANGES		BND		RBLNT		RBLNT		DATE		12/9/2024	



FOOTING PLAN



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2599100

BRIDGE NO. 3475WIN25991.00

BRIDGE PLANS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
PROFESSIONAL ENGINEER

ROBERT S. BLUNT
11158

SIGNATURE
11158

P.E. NUMBER
12/9/2024

DATE

PROJ. MANAGER	BRIAN NICHOLS	BY	DATE
DESIGN-DETAILED	JAN	BY	12/9/2024
CHECKED-REVIEWED	FOR	FOR	12/9/2024
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

COLLEGE SWAMP BRIDGE BOLSTERS MILLS ROAD
OVER COLLEGE SWAMP BROOK

OXFORD COUNTY

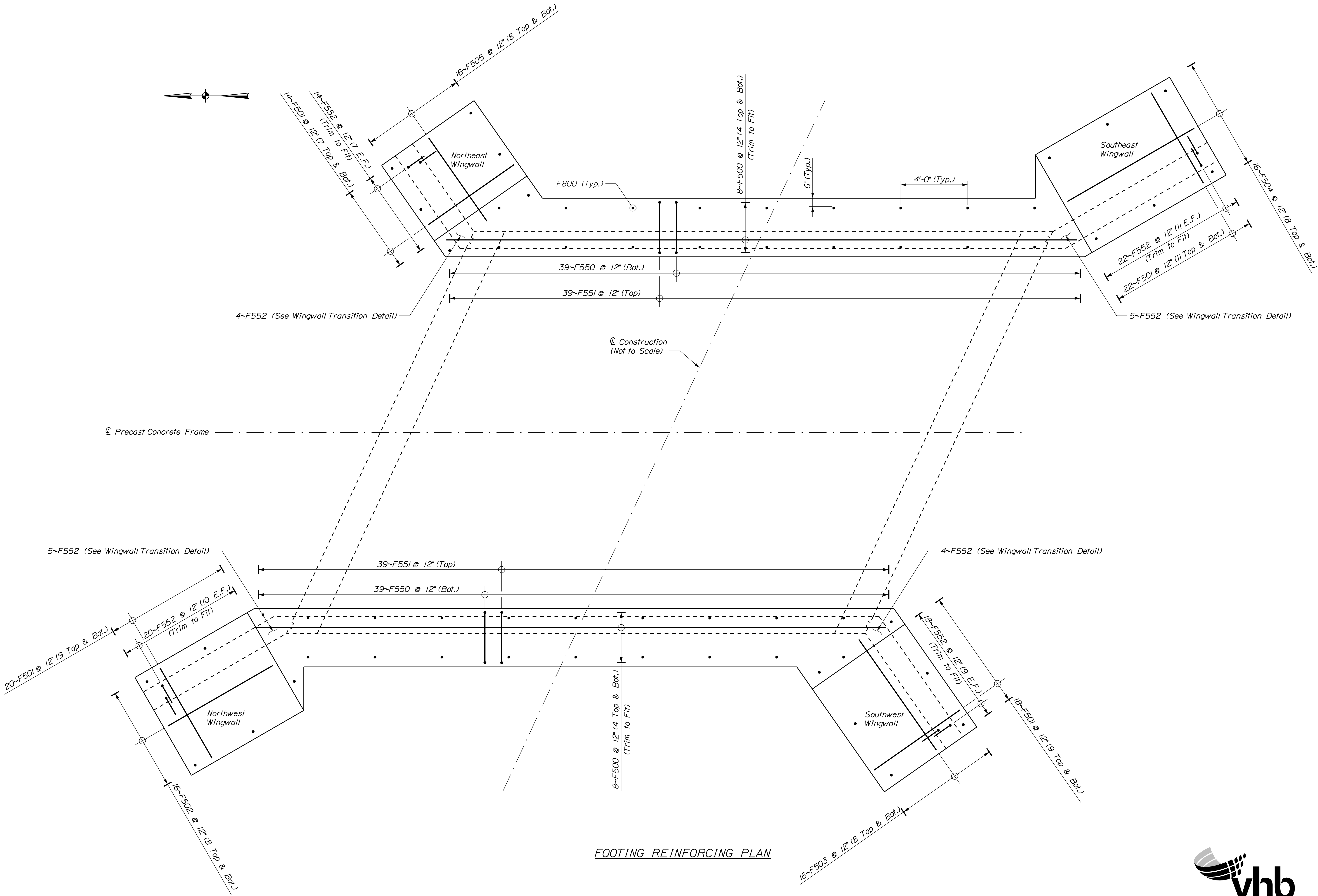
OTISFIELD

FOOTING PLAN

SHEET NUMBER

17

OF 25



FOOTING REINFORCING PLAN



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2599100

BRIDGE NO. 3475WIN25991.00BRIDGE PLANS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
REGISTERED PROFESSIONAL ENGINEER

ROBERT S. BLUNT
11158

SIGNATURE
11158

P.E. NUMBER
12/9/2024

DATE

PROJ. MANAGER	BRIAN NICHOLS	DATE	12/9/2024
DESIGN-DETAILED	JAN	BY	BND
CHECKED-REVIEWED	BJR	BY	RSBLUNT
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

COLLEGE SWAMP BRIDGE BOLSTERS MILLS ROAD
OVER COLLEGE SWAMP BROOK

OTISFIELD OXFORD COUNTY

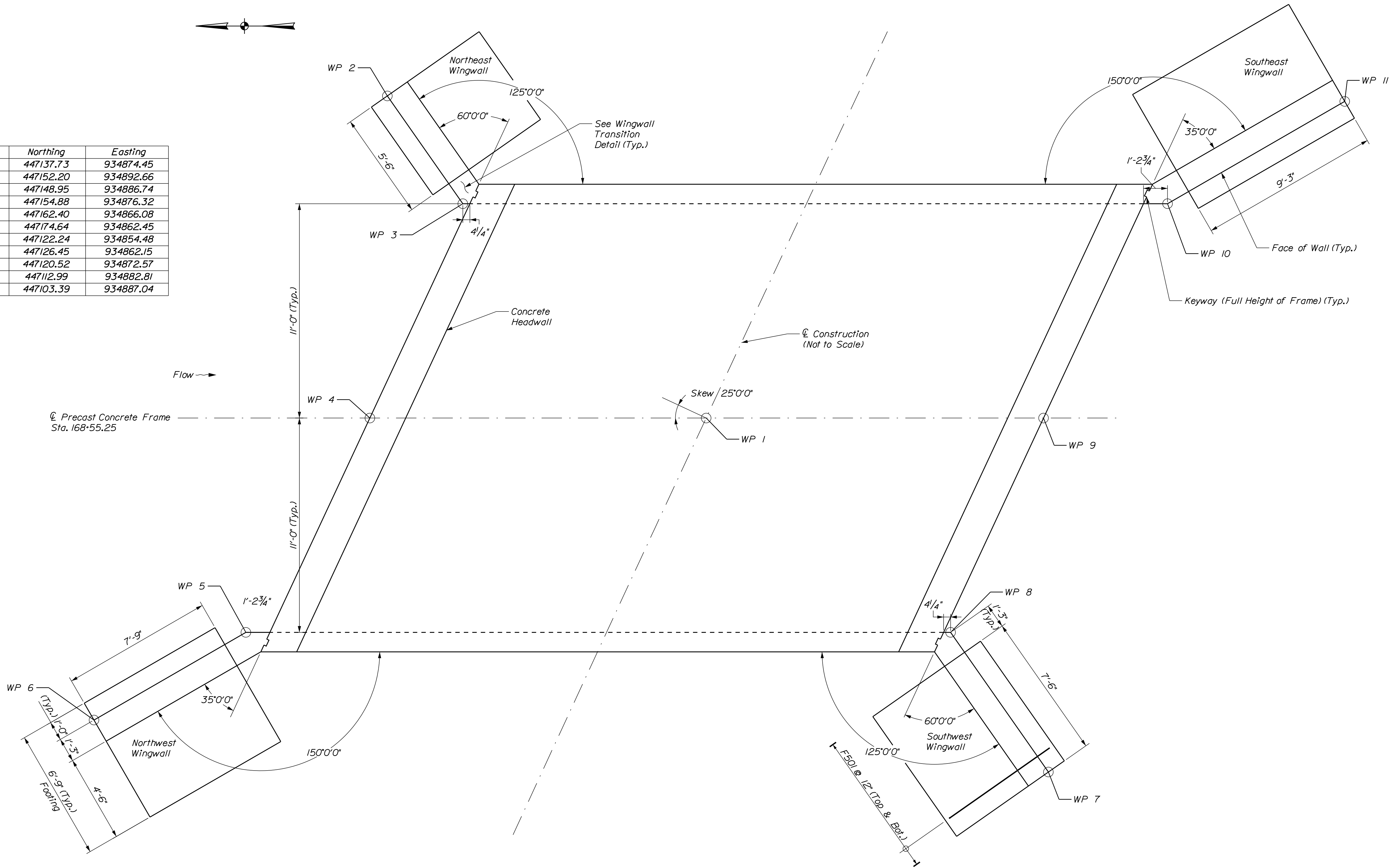
FOOTING REINFORCING PLAN

SHEET NUMBER

18

OF 25

W.P.	Northing	Easting
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2	447152.20	934892.66
3	447148.95	934886.74
4	447154.88	934876.32
5	447162.40	934866.08
6	447174.64	934862.45
7	447122.24	934854.48
8	447126.45	934862.15
9	447120.52	934872.57
10	447112.99	934882.81
11	447103.39	934887.04



FRAME &
WINGWALL LAYOUT



STATE OF MAINE DEPARTMENT OF TRANSPORTATION	2599100	WIN 25991.00	BRIDGE NO. 3475	BRIDGE PLANS
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STATE OF MAINE DEPARTMENT OF TRANSPORTATION PROFESSIONAL ENGINEER ROBERT S. BLUNT 11158	SIGNATURE 11158	P.E. NUMBER 11158	DATE 12/9/2024
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PROJ. MANAGER BRIAN NICHOLS	DATE 12/9/2024	BY BRIAN NICHOLS	DATE 12/9/2024
DESIGN-DETAILED JAN	BY JAN	BY JAN	DATE 12/9/2024
CHECKED-REVIEWED BRIAN NICHOLS	BY BRIAN NICHOLS	BY BRIAN NICHOLS	DATE 12/9/2024
DESIGN-DETAILED BRIAN NICHOLS	BY BRIAN NICHOLS	BY BRIAN NICHOLS	DATE 12/9/2024
REVISIONS 1	BY BRIAN NICHOLS	BY BRIAN NICHOLS	DATE 12/9/2024
REVISIONS 2	BY BRIAN NICHOLS	BY BRIAN NICHOLS	DATE 12/9/2024
REVISIONS 3	BY BRIAN NICHOLS	BY BRIAN NICHOLS	DATE 12/9/2024
REVISIONS 4	BY BRIAN NICHOLS	BY BRIAN NICHOLS	DATE 12/9/2024
FIELD CHANGES	BY BRIAN NICHOLS	BY BRIAN NICHOLS	DATE 12/9/2024

COLLEGE SWAMP BRIDGE BOLSTERS MILLS ROAD OVER COLLEGE SWAMP BROOK OTISFIELD OXFORD COUNTY	WINGWALL PLAN
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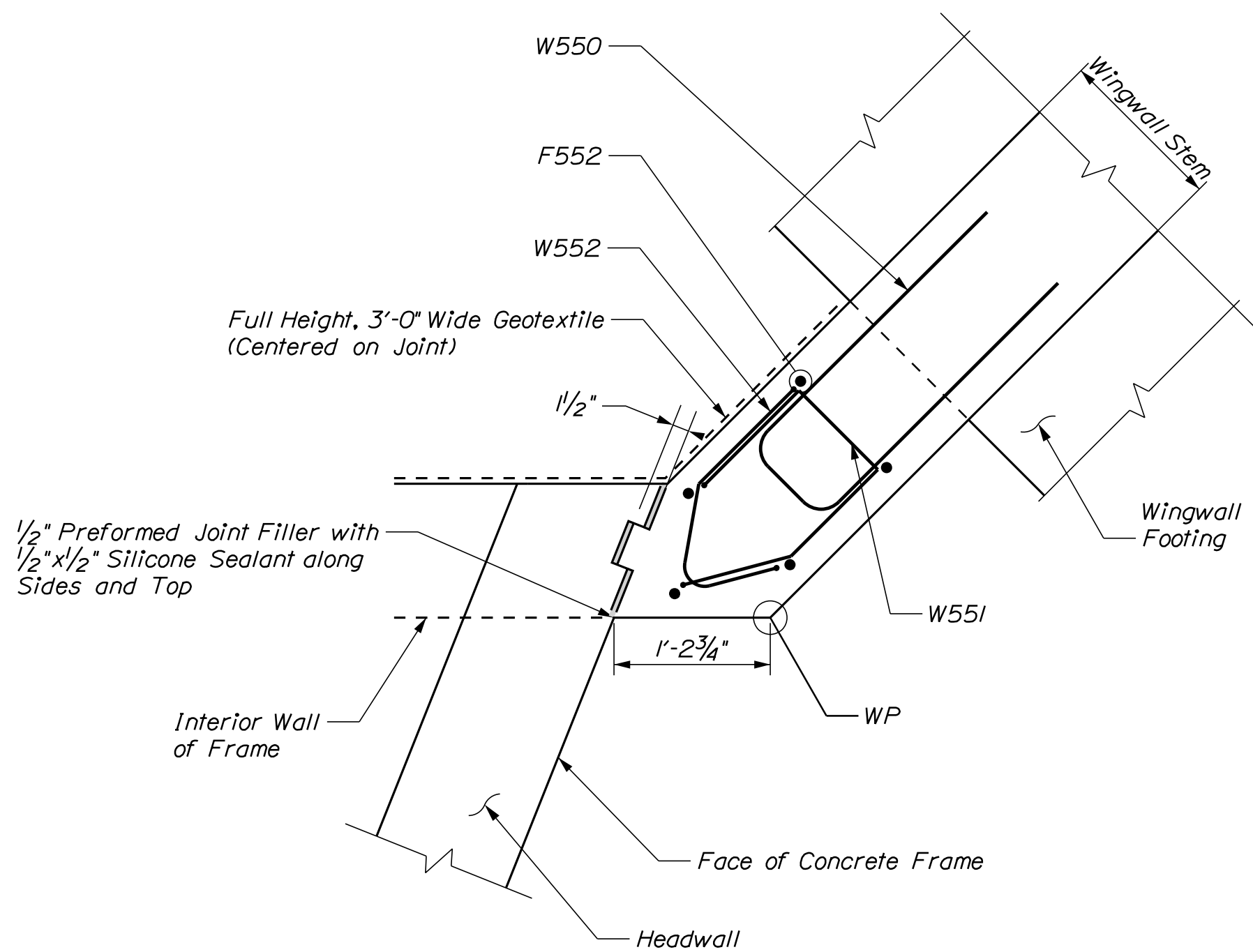
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Date:12/9/2024

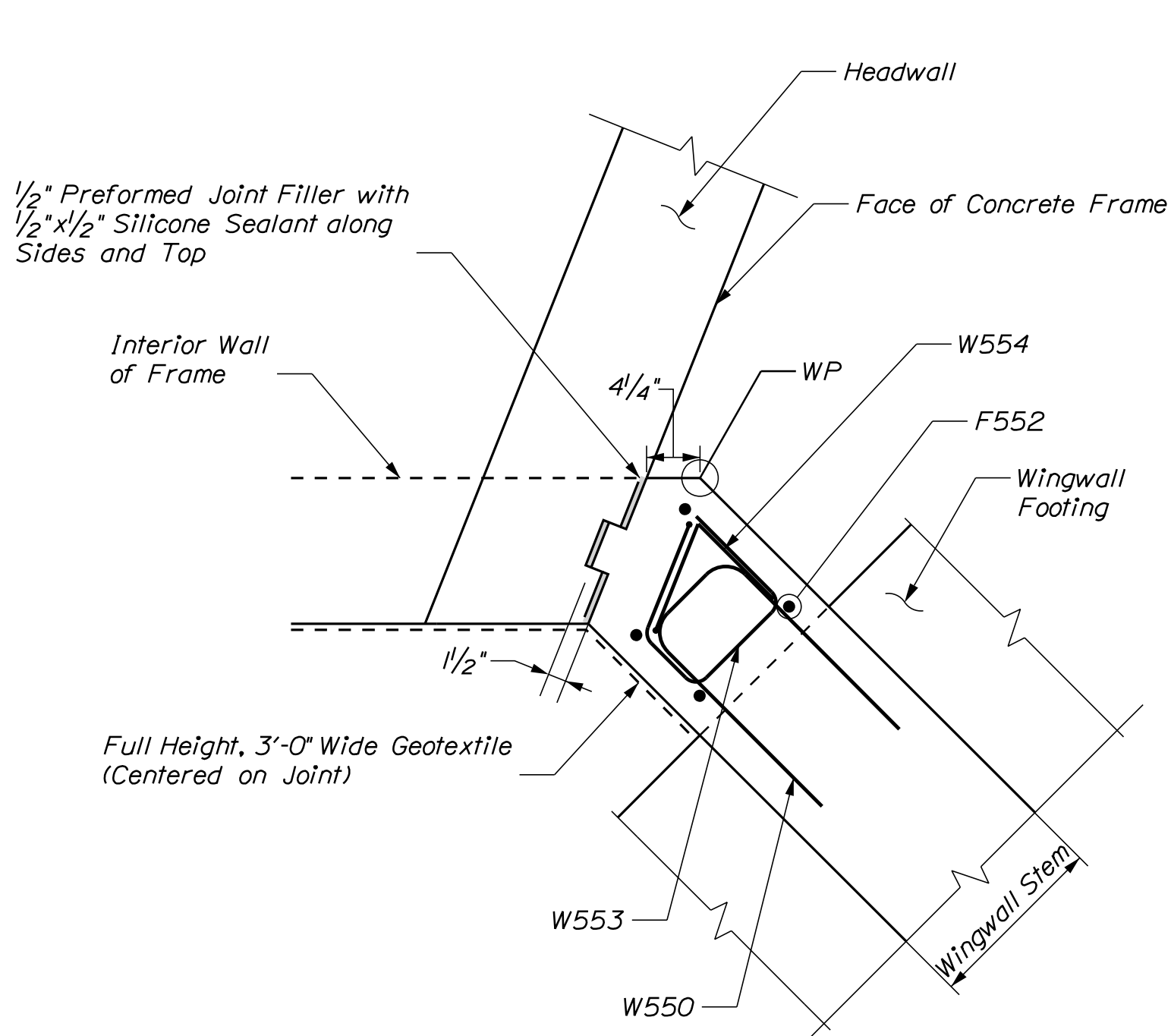
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Division: HIGHWAY

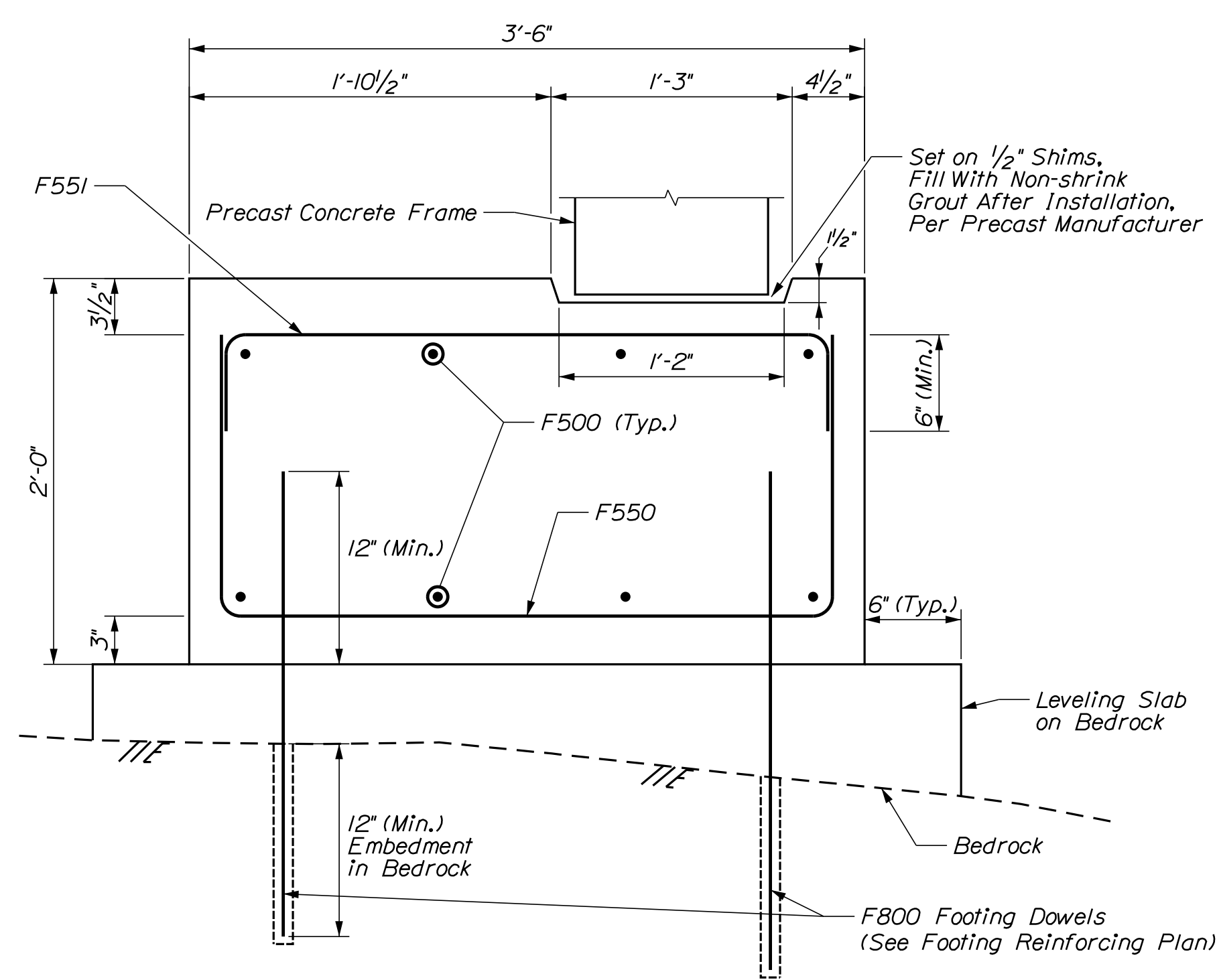
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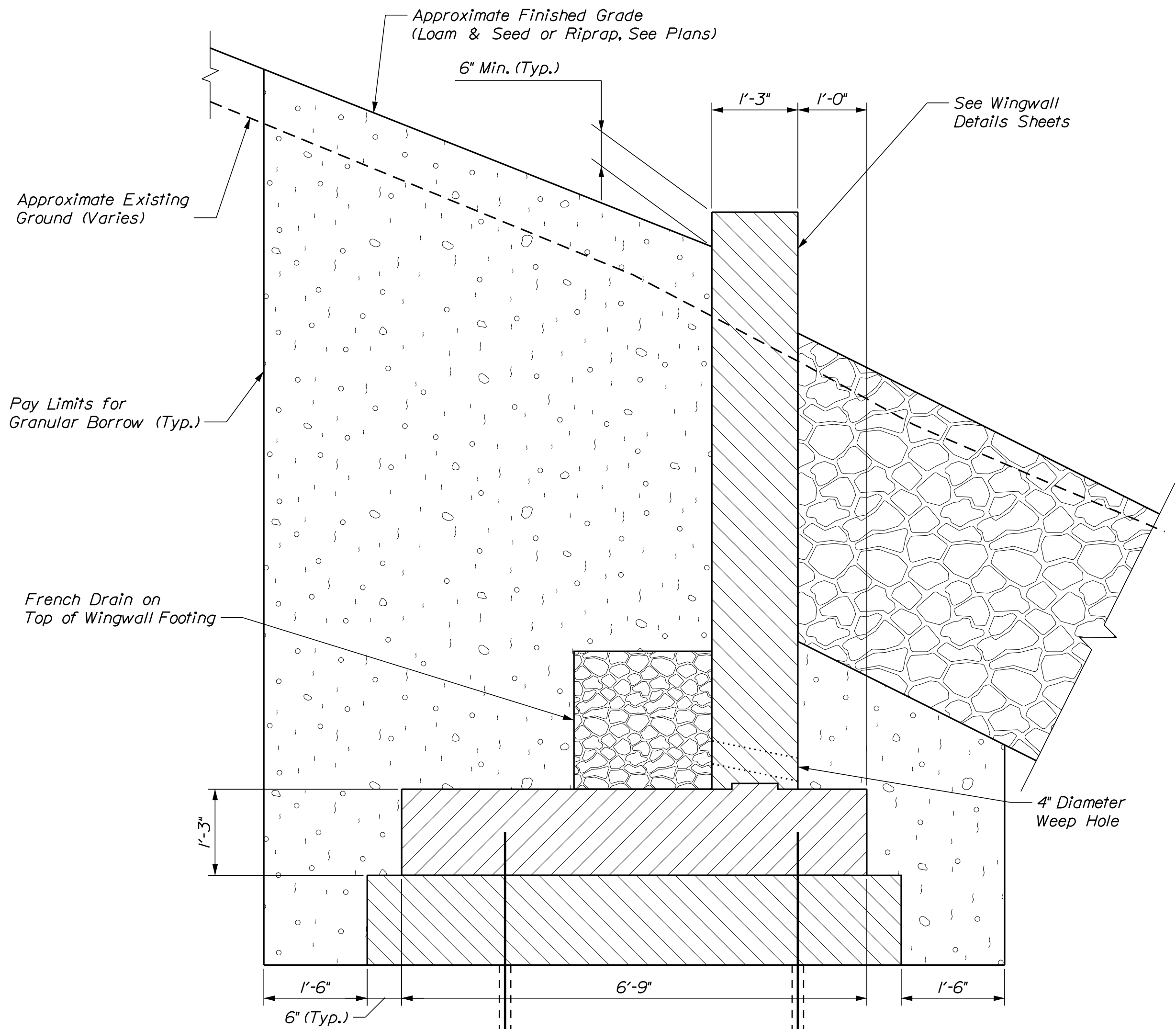
NORTHWEST & SOUTHEAST WINGWALL TRANSITION DETAIL



NORTHEAST & SOUTHWEST WINGWALL TRANSITION DETAIL



FOOTING DETAIL



WINGWALL SECTION

FOOTING / WINGWALL NOTES

1. The maximum factored applied footing pressure is 13.12 ksf for the strength limit state. Thrust on the footing from the precast concrete frame was assumed to be 2 klf.
2. Place 4-inch diameter drains in the wingwalls at 10-foot maximum spacing. The exact location will be determined by the Resident.
3. Construct French Drains along sides of the Precast Concrete Frame and behind the wingwalls in accordance with Standard Specifications Section 512, French Drains.
4. Frame, wingwalls and their footings shall be backfilled with Granular Borrow. Pay limits will be the structural excavation limits in cut areas and a vertical plane located 10 feet behind the walls in fill areas.
5. Footing/leveling slab concrete shall be placed on bedrock cleaned of all loose rock, highly weathered rock and soil. The bedrock subgrade shall be confirmed to be relatively level. Where the bedrock slope exceeds 4H:1V, the bedrock surface shall be benched to create level steps or made completely level. The Resident shall approve the bedrock subgrade prior to the placement of the footing concrete.
6. Footing dowels to be drilled and grouted with an anchoring material on the Qualified Products List a minimum of 12 inches into bedrock and shall be considered incidental to the placement of reinforcing steel dowels.
7. At the option of the Resident, bedrock which protrudes above a horizontal plane 12 inches below the proposed bottom of footing elevation may be removed. Payment for bedrock removal shall be made under item 206.092 Structural Rock Excavation - Major Structures.
8. Cover joints where waterstops are not required in accordance with Standard Detail 502(01).
9. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.
10. Leveling slab concrete shall be paid for under item 502.22.



STATE OF MAINE	BRIDGE PLANS
DEPARTMENT OF TRANSPORTATION	
2599100	WIN
BRIDGE NO. 3475	25991.00

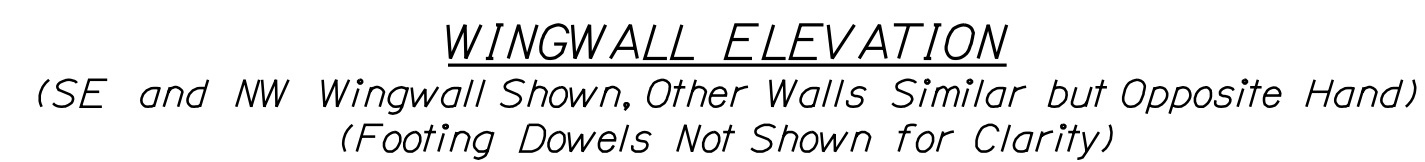
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SIGNATURE	11158	12/9/2024	DATE
P.E. NUMBER	11158	12/9/2024	DATE

PROJ. MANAGER	BRIAN NICHOLS	DATE	12/9/2024
DESIGN-DETAILED	JAH	BY	RSBLINT
CHECKED-REVIEWED	BJR	DATE	12/9/2024
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

COLLEGE SWAMP BRIDGE BOLSTERS MILLS ROAD	OXFORD COUNTY
OVER COLLEGE SWAMP BROOK	
OTISFIELD	
DETAILS	
(1 OF 2)	

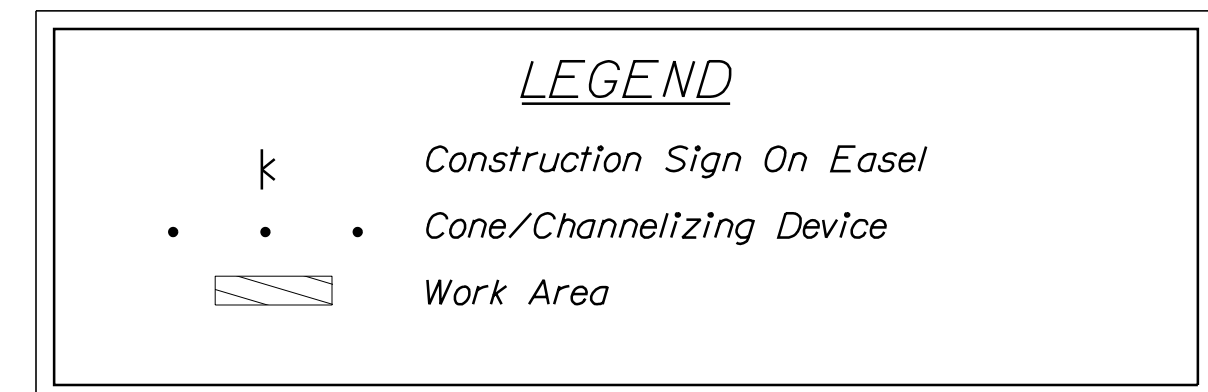
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OF 25

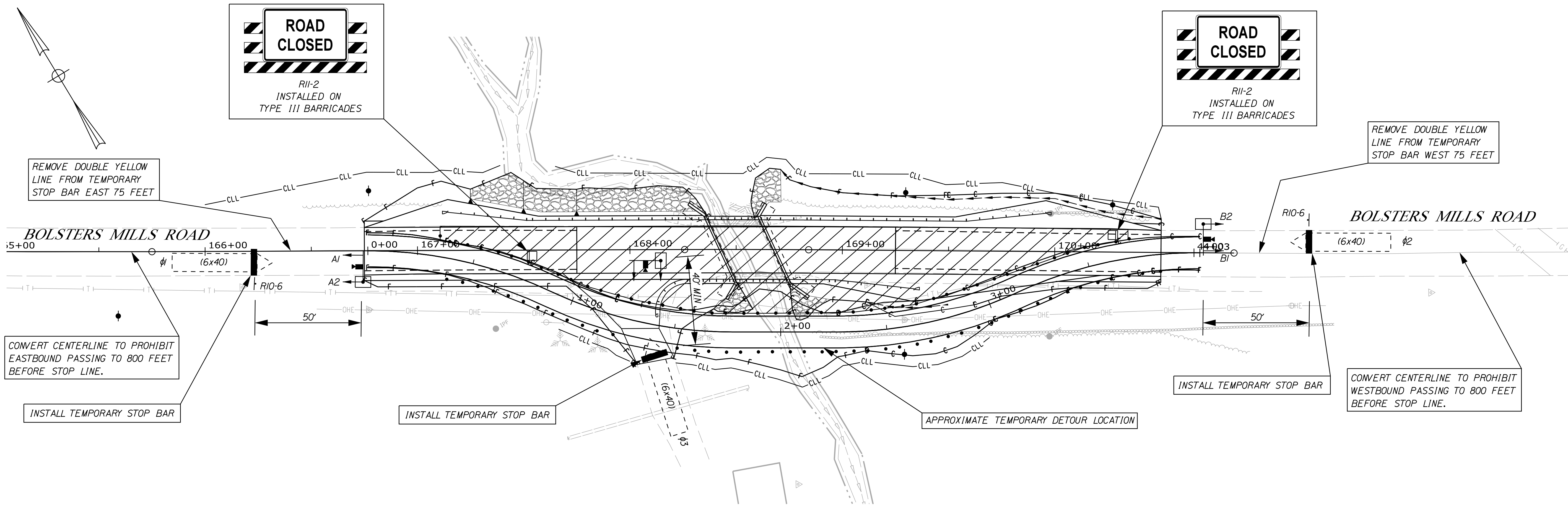


<i>Wingwall</i>	<i>Begin Elevation</i>	<i>End Elevation</i>	<i>Bot. of Ftg. Elevation</i>
<i>Northwest</i>	408.5	405.7	400.7
<i>Southwest</i>	408.5	406.8	400.7
<i>Southeast</i>	408.5	406.5	400.7
<i>Northeast</i>	408.5	407.0	400.7





PLAN



This figure is a detailed engineering plan for a road project, specifically State Aid Highway No. 2 (Bolsters Mills Road) in Otisfield, Maine. The plan shows the proposed road alignment, existing features, and various easements and rights-of-way.

PLAN LEGEND:

- Existing:** Sanitary Sewer, Telephone Line, Electric Line, Water Line, Underdrain Line, Gas Line, Guardrail, Culvert, Traveled Way, Ditch, Catch Basin, Manhole, Sewer Manhole, Utility Pole, Fire Hydrant, Curbing.
- Proposed:** Sanitary Sewer, Telephone Line, Electric Line, Water Line, Underdrain Line, Gas Line, Guardrail, Culvert, Traveled Way, Ditch, Catch Basin, Manhole, Sewer Manhole, Utility Pole, Fire Hydrant, Curbing.
- Other:** Cut Line, Fill Line, Retaining Wall, Baseline, Monument, Iron Rod Found, Replacement Pin Set, Traverse Point, Pipe Found.

CONTROL INFORMATION:

- HORIZONTAL CONTROL - US STATE PLANE NAD(83) 2011
- MAINE 2000 WEST ZONE
- VERTICAL DATUM - NAVD88
- COMBINED SCALE FACTOR: 0.9999674296

RIGHT-OF-WAY REFERENCES:

- CUMBERLAND COUNTY COMMISSIONERS RECORDS VOL. 6, PG. 180, 1832, 4 RODS (66') WIDE.
- STATE HIGHWAY COMMISSION, BRIDGE DIVISION, COLLEGE SWAMP BRIDGE #3475 OVER COLLEGE SWAMP BROOK IN THE TOWN OF OTISFIELD, CUMBERLAND COUNTY, SURVEY, SHEET 1 OF 3, AUGUSTA, MAINE, SEPTEMBER 1936.

REVISIONS:

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK:

NO.	GRANTOR	PAGE	INSTRUMENT	DATE	COUNTY	RECORD	BOOK	PAGE

BRUCE A. VAN NOTE:

COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER

DATE

STATE AID HIGHWAY NO. 2
BOLSTERS MILLS ROAD
OTISFIELD OXFORD COUNTY
FEDERAL AID PROJECT NO. 2599100

NOVEMBER 2024
RIGHT-OF-WAY MAP
SCALE 1" = 25'

D.O.T. FILE NO. 9-429

SHEET NUMBER
25
OF 25