Username: Richard.Moyer Date:1/15/2025
Division: BRIDGE
Filename:\00\BRIDGE\MSTA\001_Title.dgn

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CHARLOTTE
WASHINGTON COUNTY
ROUND POND BRIDGE
OVER
ROUND POND OUTLET
CHARLOTTE ROAD
FEDERAL AID PROJECT NUMBER 2610500
PROJECT LENGTH 0.118 mi.
BRIDGE NO. 3787

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

MATERIALS

Concrete:	
Curbs	Class "LP"
Precast	Class "P"
All Other	Class "A"
Reinforcing:	
Plain Reinforcing Steel	ASTM A615, Grade 60
Glass Fiber Reinforcing Polymer (GFRP)	ASTM D7957
Low-Carbon Chromium Steel	ASTM A1035, Type CS, Grade 100
Prestressing Strands	AASHTO M 203 (ASTM A416), Grade 270, Low Relaxation
Structural Steel:	
H-Piles	ASTM A572, Grade 50

BASIC DESIGN STRESSES

Concrete:	
Class "A"	f 'c = 4,000 psi
Class "LP"	f 'c = 5,000 psi
Class "P"	f 'c = 8,000 psi
	f 'ci = 6,500 psi
Reinforcing:	
Plain Reinforcing Steel	f y = 60,000 psi
Glass Fiber Reinforced Polymer	
Minimum Tensile Strength	f fu = 100,000 psi
Minimum Elastic Modulus	E f = 8,700,000 psi
Minimum Nominal Design Tensile Strain	e fu = 1.1%
Low-Carbon Chromium Steel:	f y = 100,000 psi
Prestressing Strand	F μ = 270,000 psi
Structural Steel:	
H-Piles	F y = 50,000 psi

LIST OF DRAWINGS

UTILITIES

Eastern Maine Electric Coop
Consolidated Communications

TRAFFIC DATA

Current (2023) AADT	810
Future (2043) AADT	890
DHV - % of AADT	11
Design Hour Volume	98
Heavy Trucks (% of AADT)	5
Heavy Trucks (% of DHV)	5
Directional Distribution (% of DHV)	54
18 kip Equivalent P 2.0	32
18 kip Equivalent P 2.5	31
Design Speed (mph)	45 South of Bridge, 35 North of Bridge

MAINTENANCE OF TRAFFIC

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

PROJECT LOCATION	Round Pond Bridge (#3787) over Round Pond Outlet. Located 1.10 miles northeast of Ayers Junction Road. Lat./Long. 45°00'50.7" N 67°15'22.4" W
PROGRAM AREA	Highway-Bridges
OUTLINE OF WORK	Bridge Replacement with Associated Approach Work

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
APPROVED
COMMISSIONER: DATE 2-7-25
CHIEF ENGINEER: DATE 2-4-2025

STATE OF MAINE · Benjamin Bartlett 16323 · LICENSED PROFESSIONAL ENGINEER
SIGNATURE
P.E. NUMBER 16323
DATE 01/22/2025

PROJECT INFORMATION

PROGRAM	BRIDGE
PROJECT MANAGER	M. PARLIN
DESIGNER	B. BARTLETT
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

WIN 026105.00
2610500

CHARLOTTE
ROUND POND BRIDGE

TITLE SHEET

SHEET NUMBER
1
OF 26

Filename: ...\MSTA\002_Estimate-GCN.dgn Division: BRIDGE Username: Richard.Moyer Date:1/15/2025

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.19	REMOVING EXISTING BRIDGE (200 CY)	1	LS
202.202	REMOVING PAVEMENT SURFACE	130	SY
203.20	COMMON EXCAVATION	1,800	CY
203.25	GRANULAR BORROW	340	CY
206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES	470	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	1,310	CY
403.208	HOT MIX ASPHALT 12.5 MM HMA SURFACE	191	T
403.213	HOT MIX ASPHALT 12.5 MM BASE	299	T
409.15	BITUMINOUS TACK COAT - APPLIED	91	G
461.131	TEMPORARY PAVEMENT	110	T
501.231	DYNAMIC LOADING TEST	2	EA
501.50	STEEL H-BEAM PILES 89 LBS/FT, DELIVERED	900	LF
501.501	STEEL H-BEAM PILES 89 LBS/FT, IN PLACE	850	LF
501.90	PILE TIPS	10	EA
501.91	PILE SPLICES	20	EA
501.92	PILE DRIVING EQUIPMENT MOBILIZATION	1	LS
502.219	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS (83 CY)	1	LS
502.261	STRUCTURAL CONCRETE ROADWAY & SIDEWALK SLAB ON CONCRETE BRIDGE (65 CY)	1	LS
502.291	SAW CUT GROOVING (1,660 SF)	1	LS
502.31	STRUCTURAL CONCRETE APPROACH SLABS (21 CY)	1	LS
502.49	STRUCTURAL CONCRETE CURBS AND SIDEWALKS (6 CY)	1	LS
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	15,400	LB
503.13	REINFORCING STEEL, PLACING	15,400	LB
503.19	LOW-CARBON, CHROMIUM REINFORCEMENT - FABRICATED & DELIVERED	9,300	LB
503.20	LOW-CARBON, CHROMIUM REINFORCEMENT - PLACING	9,300	LB
507.0821	STEEL BRIDGE RAILING, 3 BAR (118 LF)	1	LS
507.0822	STEEL APPROACH RAILING, 3 BAR	4	EA
510.10	SPECIAL DETOUR 18 FOOT ROADWAY WIDTH VEHICULAR & PEDESTRIAN TRAFFIC NOT SEPARATED	1	LS
511.07	COFFERDAM: ABUTMENT NO. 1	1	LS
511.07	COFFERDAM: ABUTMENT NO. 2	1	LS
512.081	FRENCH DRAINS (140 LF)	1	LS
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES (281 SY)	1	LS
526.301	PORTABLE CONCRETE BARRIER TYPE 1 (60 LF)	1	LS
527.34	WORK ZONE CRASH CUSHIONS	4	UN
530.30	GFRP, REINFORCEMENT BARS, FAB & DEL	11,180	LF
530.31	GFRP, REINFORCEMENT BARS, PLACING	11,180	LF
535.622	PRESTRESSED STRUCTURAL CONCRETE NEXT BEAM (53 CY)	1	LS
606.1301	31" W-BM GR, MID-WAY SPLICE-SGL FACED	388	LF
606.1305	31" W-BM GR, MID-WAY SPLICE FLARED TERMINAL	4	EA
606.1721	BRIDGE TRANSITION - TYPE 1	4	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	8	EA
610.08	PLAIN RIPRAP	648	CY
610.18	STONE DITCH PROTECTION	5	CY
613.319	EROSION CONTROL BLANKET	190	SY
615.07	LOAM	49	CY
618.14	SEEDING METHOD NUMBER 2	8	UN
619.12	MULCH	8	UN
619.14	EROSION CONTROL MIX	98	CY
620.58	EROSION CONTROL GEOTEXTILE	1,000	SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	1,950	LF
627.77	REMOVING PAVEMENT MARKINGS	332	SF
627.78	TEMPORARY 4 INCH PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW	1,065	LF
629.05	HAND LABOR, STRAIGHT TIME	10	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	10	HR
631.14	GRADER (INCLUDING OPERATOR)	10	HR
631.15	ROLLER, EARTH AND BASE COURSE (INCLUDING OPERATOR)	10	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	10	HR
639.19	FIELD OFFICE TYPE B	1	EA
643.72	TEMPORARY TRAFFIC SIGNAL	1	LS
652.312	TYPE III BARRICADE	6	EA
652.33	DRUM	25	EA
652.34	CONE	50	EA
652.35	CONSTRUCTION SIGNS	400	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES (120 CD)	1	LS
652.38	FLAGGER	100	HR
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. 76.0 shall be Granular Borrow meeting the requirements of Standard Specifications Subsection 703.19, Granular Borrow, for Material for Underwater Backfill.

8. Construct the riprap shelf at each abutment at EL. 77.5.

9. Stones which cannot be rolled or compacted into the surface of the shoulder shall be removed by hand raking. Payment for hand raking will be considered incidental to Pay Item 304.10, Aggregate Subbase Course - Gravel.

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

11. 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.

12. Place a 24 inch wide strip of Erosion Control Blanket on the sideslopes along the top of the riprap and behind the wingwalls.

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:

All exposed surfaces of concrete curbs.
Fascias down to the drip notch.
Concrete wearing surfaces.
Top of abutment backwalls and wingwalls, and
To one foot below the ground on vertical walls against earth.

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. The project geotechnical report titled: Geotechnical Design Report for the Replacement of Round Pond Bridge, Charlotte, Maine, Soils Report 2024-19, dated October 29, 2024, may be accessed at the MaineDOT web address.

19. 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.

20. 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

21. Existing abutments shall be removed in their entirety, except that the existing piles may be left in place.

22. Contractor shall install "No Parking" signs along both sides of the roadway starting at Station 9+50 going North for 150'. Spacing to be determined by the Resident. Payment shall be made under Item 652.35 Construction Signs.

23. The Contractor shall not block access to or park in the beach area to the north of the bridge, near the intersection with Station Road. The Contractor shall not use the beach area for storage of materials and equipment.

24. Excavation required outside of the Limits of Structural Earth Excavation and Granular Borrow and outside of the existing abutments shall be paid for as Common Excavation.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE NO. 3787

BRIDGE PLANS

PROJ. MANAGER	M. PARLIN	BY	DATE
DESIGN-DETAILED	B. BARTLETT	D. SHAW	OCT. 2023
CHECKED-REVIEWED	D-REVIEWED	T. WHITE	JUL 2024
DESIGN2-DETAILED2	N.PUKAY		
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

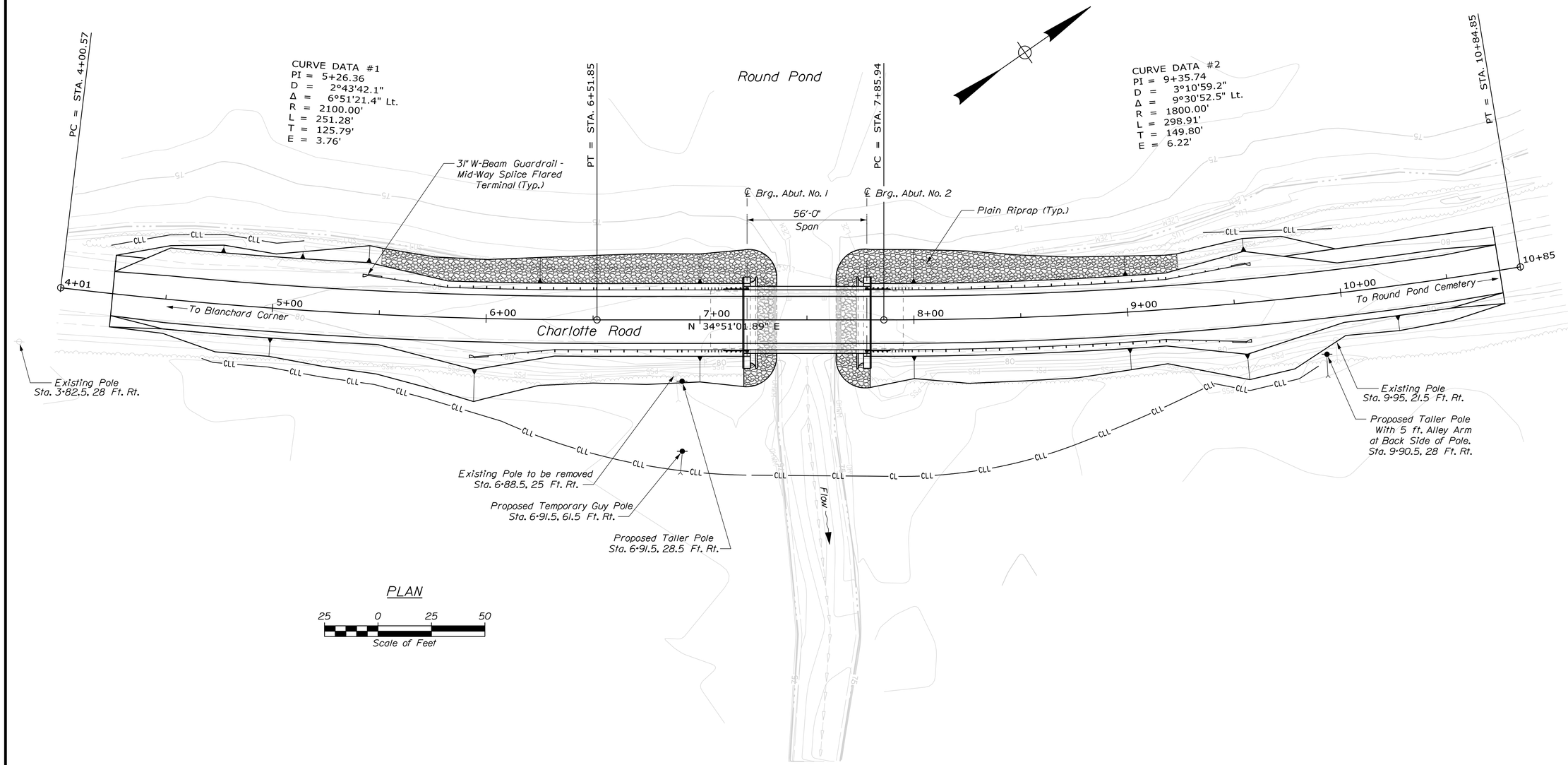
ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

ESTIMATED QUANTITIES &
GENERAL CONSTRUCTION NOTES

SHEET NUMBER

2

OF 26



Filename: ...\00\BRIDGE\MSTA\003_GenPlan.dgn Division: BRIDGE Username: Richard.Moyer Date:1/15/2025

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE NO. 3787 BRIDGE PLANS

PROJ. MANAGER	M. PARLIN		
DESIGN-DETAILED	B. BARTLETT	D. SHAW	OCT. 2023
CHECKED-REVIEWED	N.PUKAY	T. WHITE	JUL 2024
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

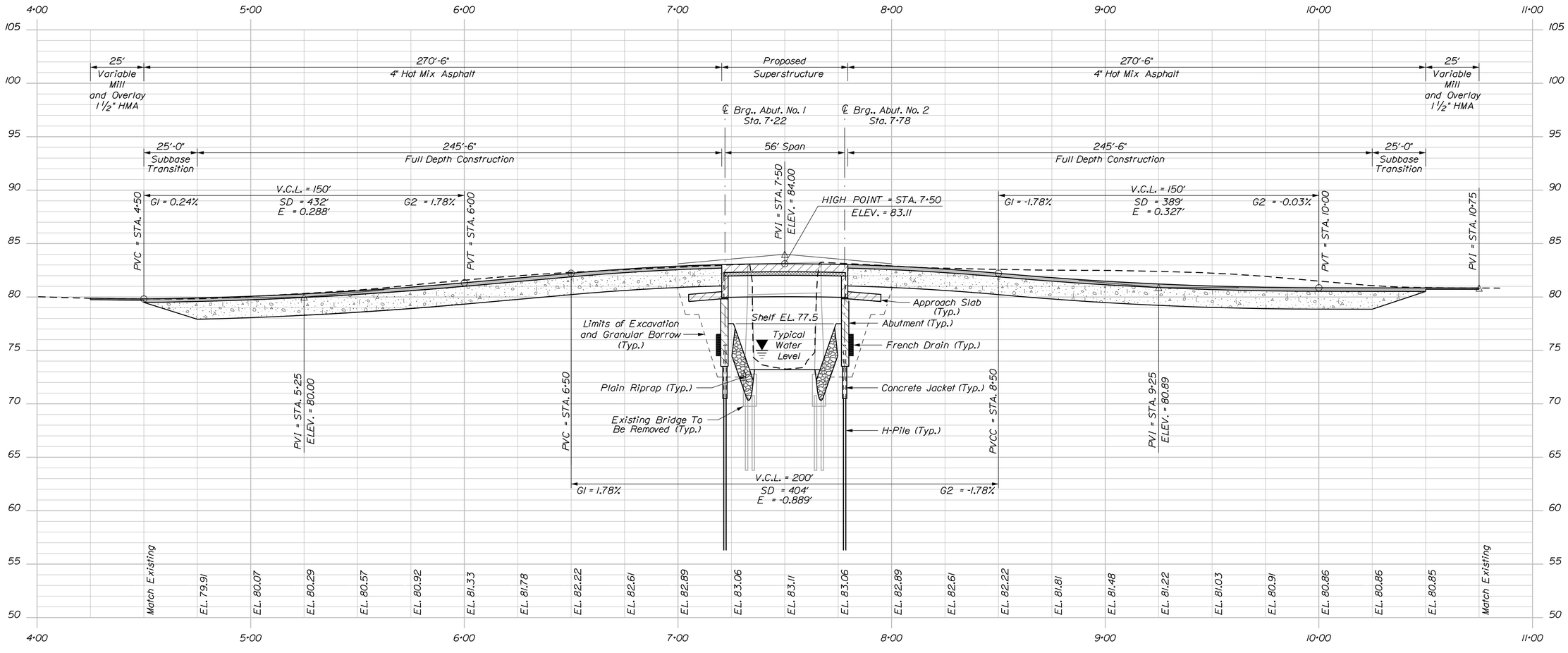
ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

GENERAL PLAN

SHEET NUMBER

3

OF 26



PROFILE - CHARLOTTE ROUND POND

Filename: ...\00\BRIDGE\MSTA\004_Profile.dgn Division: BRIDGE Username: Richard.Moyer Date:1/15/2025

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE NO. 3787

BRIDGE PLANS

PROJ. MANAGER	M. PARLIN
DESIGN-DETAILED	B. BARTLETT
CHECKED-REVIEWED	D. SHAW
DESIGN2-DETAILED2	N.PUKAY
DESIGN3-DETAILED3	T. WHITE
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

BY	DATE
D. SHAW	OCT. 2023
T. WHITE	JUL 2024

SIGNATURE

P.E. NUMBER

DATE

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

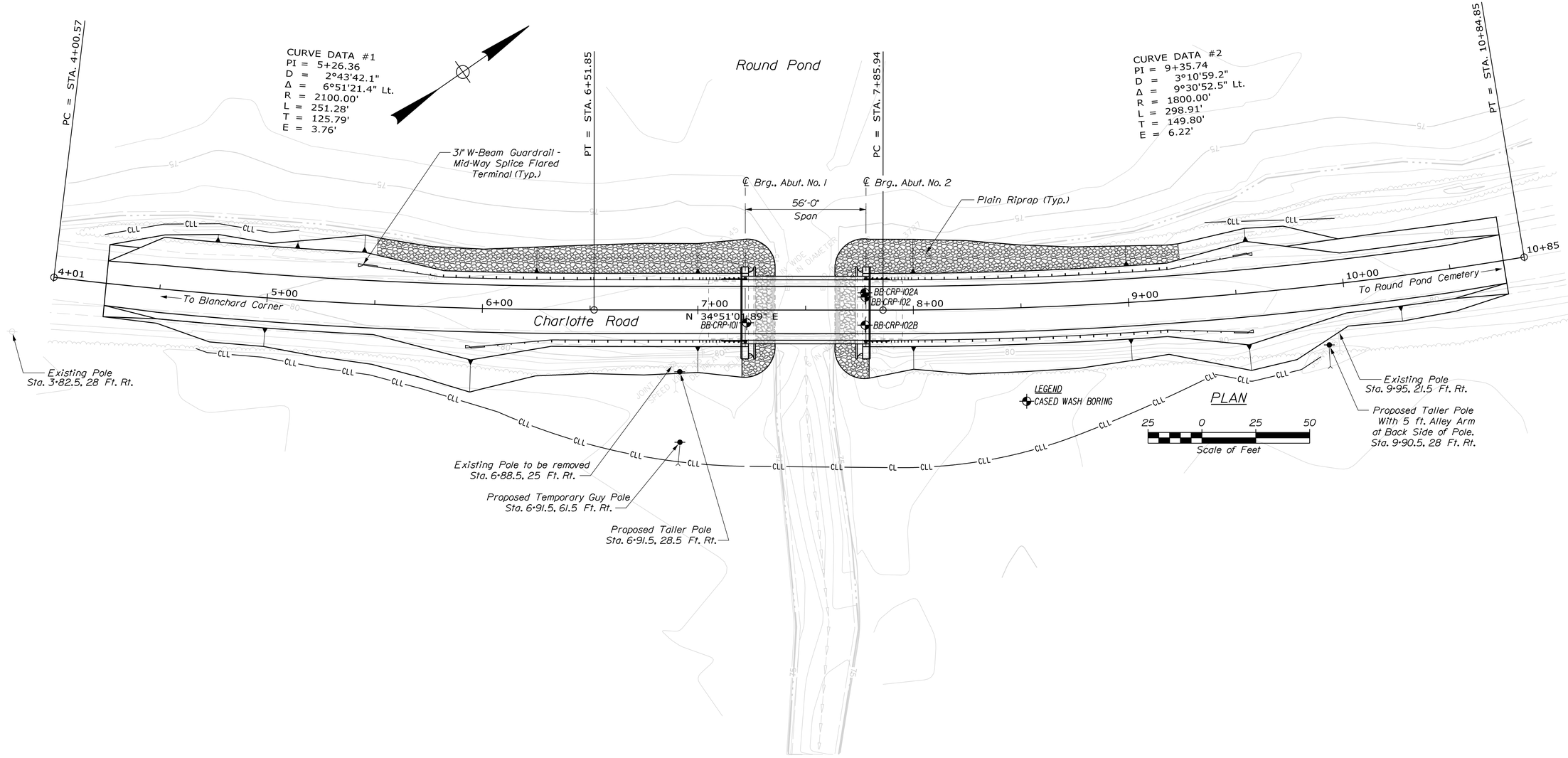
PROFILE

SHEET NUMBER

4

OF 26

Filename: ...\00\GEOTECH\MSTA\005_BLP1.dgn Division: BRIDGE Username: Richard.Moyer Date:1/15/2025



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE NO. 3787

BRIDGE PLANS

PROJ. MANAGER	M. PARLIN	BY	DATE
DESIGN-DETAILED	B. BARTLETT	D. SHAW	OCT. 2023
CHECKED-REVIEWED	-----	-----	-----
DESIGN2-DETAILED2	N.PUKAY	T. WHITE	DEC 2024
DESIGN3-DETAILED3	-----	-----	-----
REVISIONS 1	-----	-----	-----
REVISIONS 2	-----	-----	-----
REVISIONS 3	-----	-----	-----
REVISIONS 4	-----	-----	-----
FIELD CHANGES	-----	-----	-----

SIGNATURE

P.E. NUMBER

DATE

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

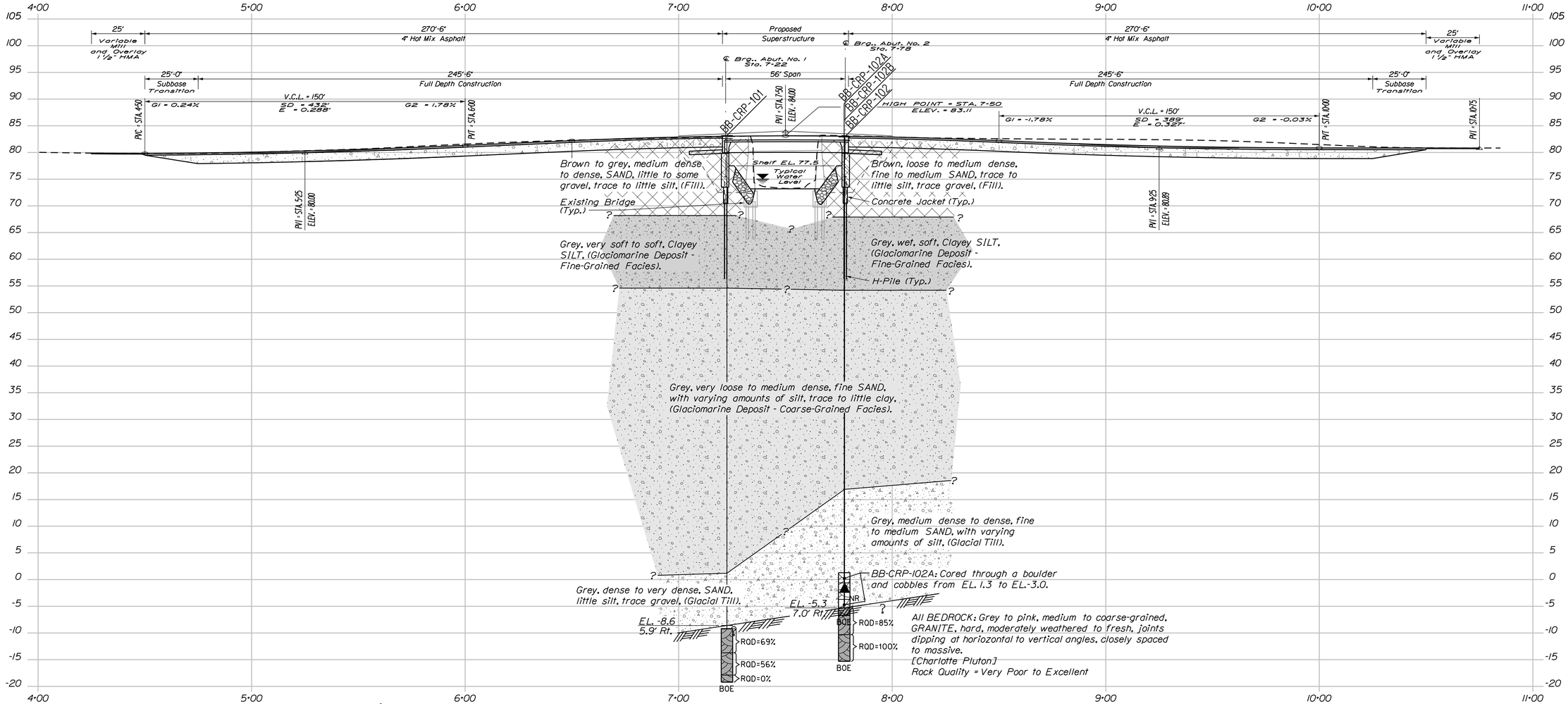
BORING LOCATION PLAN

SHEET NUMBER

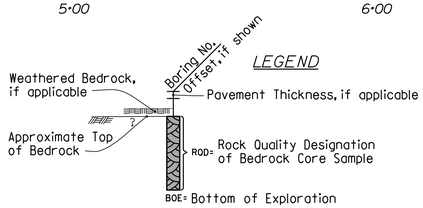
5

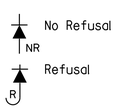
OF 26

Filename: ...\00\GEOTECH\MSTA\006_ISP1.dgn Username: Richard.Moyer Date:1/15/2025 Division: BRIDGE



LEGEND





PROFILE

Notes:

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

2. "Varying Amounts" term = Portion is 0 to 50 percent of Total.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE NO. 3787

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	M. PARLIN		
DESIGN-DETAILED	B. BARTLETT	D. SHAW	OCT. 2023
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DESIGN2-DETAILED2	N.PUKAY	T. WHITE	DEC 2024
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REVISIONS 1	-----	-----	-----
REVISIONS 2	-----	-----	-----
REVISIONS 3	-----	-----	-----
REVISIONS 4	-----	-----	-----
FIELD CHANGES	-----	-----	-----

SIGNATURE

P.E. NUMBER

DATE

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

INTERPRETIVE SUBSURFACE PROFILE

SHEET NUMBER

6

OF 26

Filename: ...\MSTA\007_BORING LOGS1.dgn   Division: BRIDGE   Username: Richard.Mayer   Date:1/15/2025

Maine Department of Transportation

Soil/Rock Exploration Log

US CUSTOMARY UNITS

Project: Round Pond Bridge #3787 carries Charlotte Road over Round Pond
Location: Charlotte, Maine

Boring No.: BB-CRP-101
WIN: 26105.00

Driller:	S.W. Cole	Elevation (ft.)	83.2	Auger ID/OD:	5" Solid Stem
Operator:	Kevin/Brian	Datum:	NAVD88	Sampler:	Standard Split Spoon
Logged By:	N. Pukay	Rig Type:	Diedrich D-50	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	3/20/23-3/21/2023	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	7+22.6, 5.9 ft Rt.	Casing ID/OD:	HW(4.0"/4.5")	Water Level*:	6.5 ft bgs.
Hammer Efficiency Factor: 0.92		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
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
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
T_v = 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

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	82.6	7" HMA. (0.6)	
5	1D	24/20	5.00 - 7.00	7/18/10/60	28	43	56		Brown, damp, dense, SAND, some gravel, trace silt, (Fill).	G#380907 A-1-b, SP WC=4.5%
							95		Cobble from 6.8-7.0 ft bgs.	
							106			
							90		Roller Coned ahead to 10.0 ft bgs., hole caved back to 5.0 ft bgs.	
							53			
10	2D	24/2	10.00 - 12.00	12/8/6/4	14	21	44		Grey, wet, medium dense, fine to medium SAND, little silt, little gravel, trace organics, (Fill).	
							57			
							65			
							55			
							49			
15	3D	24/23	15.00 - 17.00	WOR/WOR/WOH/WOH	0	0	HP	68.2	(15.0) Grey, wet, soft, Clayey SILT, (Glaciomarine Deposit - Fine-Grained Facies).	
	V1		17.00 - 18.00	Su=335/112 psf					55x110 mm vane raw torque readings: V1: 7.5/2.5 ft-lbs V2: 7.5/3.0 ft-lbs	
	V2		18.00 - 19.00	Su=335/134 psf						
20	4D V3	24/20	20.00 - 22.00 20.00 - 21.00	WOR/WOR/WOR/WOH Su=192/55 psf	0	0			Grey, wet, very soft, Clayey SILT, trace sand, (Glaciomarine Deposit - Fine-Grained Facies). 65x130 mm vane raw torque readings: V3: 7.0/2.0 ft-lbs V4: 9.0/3.0 ft-lbs	G#380908 A-4, CL WC=37.1% LL=28 PL=19 PI=9
	V4		21.00 - 22.00	Su=247/82 psf						
25	5D V5	24/19	25.00 - 27.00 25.00 - 26.00	WOR/WOR/WOR/WOR Su=233/55 psf	0	0			Grey, wet, very soft, Clayey SILT, (Glaciomarine Deposit - Fine-Grained Facies). 65x130 mm vane raw torque readings: V5: 8.5/2.0 ft-lbs V6: 8.5/2.0 ft-lbs	
	V6		26.00 - 27.00	Su=233/55 psf						
							a19	54.6	(28.6) a19 blows for 0.4 ft.	
							50			
30	6D	24/15	30.00 - 32.00	1/1/1/3	2	3	56		Grey, wet, very loose, Silty, fine SAND, little clay, (Glaciomarine Deposit - Coarse-Grained Facies).	
							50			
							59			
							58			
							95			
35	7D	24/10	35.00 - 37.00	1/2/1/1	3	5	56		Grey, wet, loose, fine SAND, some silt, trace clay, (Glaciomarine Deposit - Coarse-Grained Facies).	G#380909 A-4, SC-SM WC=28.6%
							43			
							49			
							40			
							44			
40	8D	24/13	40.00 - 42.00	2/2/3/2	5	8	48		Similar to 7D.	
							46			
							48			
							53			
							58			
45	9D	24/14	45.00 - 47.00	1/1/1/2	2	3	54		Grey, wet, very loose, fine SAND, some silt, trace clay, (Glaciomarine Deposit - Coarse-Grained Facies).	
							45			
							47			
							52			
							54			
50	10D	24/18	50.00 - 52.00	1/1/WOR/2	1	2	59		Grey, wet, very soft, Clayey SILT, some sand, (Glaciomarine Deposit - Coarse- Grained Facies).	
							56			
							61			
							75			
							57			
55	11D	24/18	55.00 - 57.00	WOR/4/3/6	7	11	55		Grey, wet, medium dense, Silty, fine SAND, little clay, (Glaciomarine Deposit - Coarse-Grained Facies).	
							51			
							61			
							79			
							102			
60	12D	24/13	60.00 - 62.00	3/5/4/6	9	14	73		Grey, wet, medium dense, fine SAND, trace silt, (Glaciomarine Deposit - Coarse-Grained Facies).	
							66			
							98			
							119			
							137			
65	13D	24/13	65.00 - 67.00	3/3/6/3	9	14	70		Grey, wet, medium dense, fine SAND, little silt, (Glaciomarine Deposit - Coarse-Grained Facies).	G#380910 A-2-4, SM WC=25.4%
							76			
							98			
							124			
							139			
70	14D	24/16	70.00 - 72.00	3/5/7/5	12	18	88		Grey, wet, medium dense, Silty, fine SAND, little clay, (Glaciomarine Deposit - Coarse-Grained Facies).	
							76			
							79			
							94			
75							107			

Remarks:

1. Auto Hammer #367
2. HP = Hydraulic Push

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 2

Boring No.: BB-CRP-101

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS
Project: Round Pond Bridge #3787 carries Charlotte Road over Round Pond
Location: Charlotte, Maine
Boring No.: BB-CRP-101
WIN: 26105.00
Driller: S.W. Cole | Elevation (ft.) 83.2 | Auger ID/OD: 5" Solid Stem
Operator: Kevin/Brian | Datum: NAVD88 | Sampler: Standard Split Spoon
Logged By: N. Pukay | Rig Type: Diedrich D-50 | Hammer Wt./Fall: 140#/30"
Date Start/Finish: 3/20/23-3/21/2023 | Drilling Method: Cased Wash Boring | Core Barrel: NQ-2"
Boring Location: 7+22.6, 5.9 ft Rt. | Casing ID/OD: HW(4.0"/4.5") | Water Level*: 6.5 ft bgs.
Hammer Efficiency Factor: 0.92 | Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐
Definitions: 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; WOH = Weight of 140 lb. Hammer; WOR/C = Weight of Rods or Casing; WO1P = Weight of One Person; S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf); $S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf); q_p = Unconfined Compressive Strength (ksf); N-uncorrected = Raw Field SPT N-value; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency; N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected; T_v = 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

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
75	15D	24/18	75.00 - 77.00	6/6/6/5	12	18	74		Similar to 14D.	
							64			
							63			
							101			
							186			
80	16D	24/7	80.00 - 82.00	WOH/2/4/5	6	9	163		Grey, wet, loose, fine to medium SAND, little silt, (Glaciomarine Deposit - Coarse-Grained Facies). Roller Coned ahead to 85.0 ft bgs.	
							65			
							112	1.2	(82.0)	
							133			
							167			
85	17D	24/24	85.00 - 87.00	9/10/18/22	28	43	110		Grey, wet, dense, fine to medium SAND, little silt, (Glacial Till). Roller Coned ahead to 90.0 ft bgs.	
							122			
							148			
							192			
							310			
90	18D	24/21	90.00 - 92.00	22/30/39/51	69	106	210		Grey, wet, very dense, SAND, little silt, trace gravel (bedrock fragments), (Glacial Till).	
							237	-8.6	(91.8)	
	R1	54/51	92.40 - 96.90	RQD = 69%			a124 NQ-2		Top of Bedrock at Elev. -8.6 ft. a124 blows for 0.4 ft. Roller Coned ahead to 92.4 ft bgs. R1: Grey to pink, medium to coarse-grained, porphyritic textured, GRANITE, hard, slightly weathered, joints dipping at horizontal to vertical angles, closely spaced, iron-oxide staining and rock flour observed on joint faces. [CHARLOTTE PLUTON] Rock Quality = Fair. R1: Core Times (min:sec) 92.4-93.4 ft (3:42) 93.4-94.4 ft (4:22) 94.4-95.4 ft (3:48) 95.4-96.4 ft (4:10) 96.4-96.9 ft (4:50) 94% Recovery	
95										
	R2	50/50	96.90 - 101.07	RQD = 56%					R2: Similar to R1, except massive from 97.4 to 99.7 ft bgs. [CHARLOTTE PLUTON] Rock Quality = Fair. R2: Core Times (min:sec) 96.9-97.4 t (1:51) 97.4-98.4 ft (4:12) 98.4-99.4 ft (4:30) 99.4-100.4 ft (5:17) 100.4-101.1 ft (3:39) 100% Recovery	
100										
	R3	16/12	101.10 - 102.43	RQD = 0%				-19.2	R3: Grey to pink, medium to coarse-grained, porphyritic textured, GRANITE, hard, moderately weathered, joints dipping at horizontal to steep angles, closely spaced. [CHARLOTTE PLUTON] Rock Quality = Very Poor. R3: Core Times (min:sec) 101.1-101.4 ft (1:45) 101.4-102.4 ft (3:15) 75% Recovery (102.4) Bottom of Exploration at 102.4 feet below ground surface.	
105										
110										
115										
120										
125										

Remarks:

1. Auto Hammer #367
2. HP = Hydraulic Push

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 2 of 2

Boring No.: BB-CRP-101

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS
Project: Round Pond Bridge #3787 carries Charlotte Road over Round Pond
Location: Charlotte, Maine

Boring No.: BB-CRP-102
WIN: 26105.00

Driller:	S.W. Cole	Elevation (ft.)	82.9	Auger ID/OD:	5" Solid Stem
Operator:	Kevin/Brian	Datum:	NAVD88	Sampler:	Standard Split Spoon
Logged By:	N. Pukay	Rig Type:	Diedrich D-50	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	3/21/23-3/22/2023	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	7+77.7, 6.1 ft Lt.	Casing ID/OD:	HW(4.0"/4.5")	Water Level*:	7.0 ft bgs.
Hammer Efficiency Factor: 0.92		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions: 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; WOH = Weight of 140lb. Hammer; WOR/C = Weight of Rods or Casing; WO1P = Weight of One Person; S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf); $S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf); q_p = Unconfined Compressive Strength (ksf); N-uncorrected = Raw Field SPT N-value; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency; N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected; T_v = 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

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	82.3	7" HMA. (0.6)	
									Occasional Cobble.	
5	1D	24/13	5.00 - 7.00	9/5/4/3	9	14			Brown, damp, medium dense, fine to medium SAND, little silt, trace gravel, (Fill).	G#380911 A-2-4, SM WC=10.4%
10	2D	24/11	10.00 - 12.00	1/1/2/4	3	5	HP		Brown, wet, loose, fine to medium SAND, trace silt, (Fill).	
15	MD	24/0	15.00 - 17.00	WOH/WOH/1/1	1	2		67.9	(15.0)	
	3D V1	24/20	17.00 - 19.00 17.00 - 18.00	WOR/WOR/WOR/WOR Su=302/110 psf	0	0			Grey, wet, soft, Clayey SILT, (Glaciomarine Deposit - Fine-Grained Facies). 65x130 mm vane raw torque readings: V1: 11.0/4.0 ft-lbs V2: 12.0/4.0 ft-lbs	G#380912 A-6, CL WC=34.5% LL=31 PL=20 PI=11
	V2		18.00 - 19.00	Su=330/110 psf						
20	MU	24/0	20.00 - 22.00	WOR/WOR						
	V3		22.00 - 23.00	Su=247/82 psf					65x130 mm vane raw torque readings: V3: 9.0/3.0 ft-lbs	
	V4		23.00 - 24.00	Su=247/82 psf					V4: 9.0/3.0 ft-lbs Similar to 3D, except very soft.	
25	4D V5	24/24	25.00 - 27.00 25.00 - 26.00	WOR/WOR/WOR/WOR Su=275/82 psf	0	0			Grey, wet, soft, Clayey SILT, (Glaciomarine Deposit - Fine-Grained Facies). 65x130 mm vane raw torque readings: V5: 10.0/3.0 ft-lbs V6: 11.0/3.0 ft-lbs	G#380913 A-6, CL WC=36.7% LL=30 PL=20 PI=10
	V6		26.00 - 27.00	Su=302/82 psf						
							a16	54.2	(28.7) a16 blows for 0.3 ft.	
							30			
30	5D	24/7	30.00 - 32.00	WOH/2/3/3	5	8	30		Grey, wet, loose, Silty, fine SAND, little clay, (Glaciomarine Deposit - Coarse-Grained Facies).	
							33			
							42			
							50			
							61			
35	6D	24/12	35.00 - 37.00	3/3/3/3	6	9	30		Grey, wet, loose, fine SAND, some silt, trace clay, (Glaciomarine Deposit - Coarse-Grained Facies).	
							37			
							35			
							37			
							51			
40	7D	24/12	40.00 - 42.00	WOR/WOR/2/2	2	3	RC&HP		Grey, wet, very loose, fine SAND, some silt, (Glaciomarine Deposit - Coarse- Grained Facies). Roller Coned ahead to 50.0 ft bgs then advanced casing to 50.0 ft bgs with Hydraulic Push.	G#380914 A-2-4, SM WC=26.4%
45	8D	24/16	45.00 - 47.00	1/1/2/2	3	5			Similar to 7D, except loose.	
50	9D	24/23	50.00 - 52.00	2/WOH/1/2	1	2			Grey, wet, soft, SILT, some clay, little sand, (Glaciomarine Deposit - Coarse-Grained Facies). Roller Coned ahead to 60.0 ft bgs then advanced casing to 50.0 ft bgs with Hydraulic Push.	G#380915 A-4, CL WC=21.4%
55										
60	10D	24/17	60.00 - 62.00	5/8/7/7	15	23			Grey, wet, medium dense, Silty, fine SAND, little clay, (Glaciomarine Deposit - Coarse-Grained Facies). Roller Coned ahead to 70.0 ft bgs. Hole collapsed back to 65.0 ft bgs. Advanced casing to 70.0 ft bgs with Hydraulic Push.	
65							50			
							92	16.9	(66.0)	
							209			
							320			
							368			
70	11D	24/20	70.00 - 72.00	2/5/7/7	12	18	112		Grey, wet, medium dense, fine SAND, some silt, (Glacial Till). Roller Coned ahead to 80.0 ft bgs. Hole collapsed back to 73.0 ft bgs.	
							112			
							118			
							162			
75							150			

Remarks:

1. Auto Hammer #3637
2. 3 feet of broken drill rod and carbide bit left in hole from 80.5-83.5 ft bgs (El. 2.9 ft to -0.6 ft).
3. HP = Hydraulic Push

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 2

Boring No.: BB-CRP-102

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS
Project: Round Pond Bridge #3787 carries Charlotte Road over Round Pond
Location: Charlotte, Maine
Boring No.: BB-CRP-102
WIN: 26105.00
Driller: S.W. Cole | Elevation (ft.) 82.9 | Auger ID/OD: 5" Solid Stem
Operator: Kevin/Brian | Datum: NAVD88 | Sampler: Standard Split Spoon
Logged By: N. Pukay | Rig Type: Diedrich D-50 | Hammer Wt./Fall: 140#/30"
Date Start/Finish: 3/21/23-3/22/2023 | Drilling Method: Cased Wash Boring | Core Barrel: NQ-2"
Boring Location: 7+77.7, 6.1 ft Lt. | Casing ID/OD: HW(4.0"/4.5") | Water Level*: 7.0 ft bgs.
Hammer Efficiency Factor: 0.92 | Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐
Definitions: 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; WOH = Weight of 140 lb. Hammer; WOR/C = Weight of Rods or Casing; WO1P = Weight of One Person; S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf); $S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf); q_p = Unconfined Compressive Strength (ksf); N-uncorrected = Raw Field SPT N-value; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency; N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected; T_v = 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

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
75							103			
							145			
							215			
							b256		b256 blows for 0.6 ft.	
80	12D	24/24	80.00 - 82.00	4/6/15/40	21	32			Grey, wet, dense, Silty, fine to medium SAND, (Glacial Till). Roller Coned ahead to 83.5 ft bgs.	
								-0.6	(83.5) Bottom of Exploration at 83.5 feet below ground surface. 3 feet of drill rod and carbide drill bit left in hole. See remark 2. Artisan water pressure at 83.5 ft bgs.	
85										
90										
95										
100										

Remarks:

1. Auto Hammer #3637
2. 3 feet of broken drill rod and carbide bit left in hole from 80.5-83.5 ft bgs (El. 2.9 ft to -0.6 ft).
3. HP = Hydraulic Push

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 2 of 2

Boring No.: BB-CRP-102

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

BRIDGE NO. 3787   WIN 026105.00   BRIDGE PLANS

PROJ. MANAGER	M. PARLIN	BY	DATE
DESIGN-DETAILED	B. BARTLETT	D. SHAW	OCT. 2023
CHECKED-REVIEWED	-------	------	------
DESIGN2-DETAILED2	N.PUKAY	T.WHITE	DEC 2024
DESIGN3-DETAILED3	-------	------	------
REVISIONS 1	-------	------	------
REVISIONS 2	-------	------	------
REVISIONS 3	-------	------	------
REVISIONS 4	-------	------	------
FIELD CHANGES	-------	------	------

SIGNATURE

P.E. NUMBER

DATE

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE   WASHINGTON COUNTY

BBORING LOGS

Filename: ...\MSTA\008_BORING LOGS2.dgn   Division: BRIDGE   Username: Richard.Mayer   Date:1/15/2025

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Round Pond Bridge #3787 carries Charlotte Road over Round Pond
Location: Charlotte, Maine

Boring No.: BB-CRP-102A   WIN: 26105.00

Driller:	MaineDOT	Elevation (ft.)	82.9	Auger ID/OD:	5" Solid Stem
Operator:	Daggett/Andrle	Datum:	NAVD88	Sampler:	N/A
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	N/A
Date Start/Finish:	12/26/2023-12/27/2023	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	7+77.5, 8.1 ft Lt.	Casing ID/OD:	NW(3.0"/3.5")	Water Level*:	9.5 ft bgs.
Hammer Efficiency Factor: 0.962		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
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
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
T_v = 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

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA			Reference BB-CRP-102 for subsurface exploration information up to 81.6 bgs.	
10							HP				
65							Drive NW				

Remarks:
1) HP = Hydraulic Push

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 2   Boring No.: BB-CRP-102A

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Round Pond Bridge #3787 carries Charlotte Road over Round Pond
Location: Charlotte, Maine

Boring No.: BB-CRP-102A   WIN: 26105.00

Driller:	MaineDOT	Elevation (ft.)	82.9	Auger ID/OD:	5" Solid Stem
Operator:	Daggett/Andrle	Datum:	NAVD88	Sampler:	N/A
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	N/A
Date Start/Finish:	12/26/2023-12/27/2023	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	7+77.5, 8.1 ft Lt.	Casing ID/OD:	NW(3.0"/3.5")	Water Level*:	9.5 ft bgs.
Hammer Efficiency Factor: 0.962		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
81.6	R1	60/58	81.60 - 86.60				NQ-2	1.3		R1: Boulder (81.6-85.9 ft bgs) and cobbles. R1: Core Times (min:sec) 81.6-82.6 ft (2:00) 82.6-83.6 ft (3:06) 83.6-84.6 ft (3:50) 84.6-85.6 ft (4:13) 3" Drop 85.6-86.6 ft (3:33) 97% Recovery	
86.6	R2	36/9	86.60 - 89.60							R2: Cobbles. R2: Core Times (min:sec) 86.6-87.6 ft (0:45) 87.6-88.6 ft (0:31) 88.6-89.6 ft (0:25) 25% Recovery	
89.6								-6.7		Bottom of Exploration at 89.6 feet below ground surface.	

Remarks:
1) HP = Hydraulic Push

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 2 of 2   Boring No.: BB-CRP-102A

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Round Pond Bridge #3787 carries Charlotte Road over Round Pond
Location: Charlotte, Maine

Boring No.: BB-CRP-102B   WIN: 26105.00

Driller:	MaineDOT	Elevation (ft.)	83.0	Auger ID/OD:	5" Solid Stem
Operator:	Daggett/Andrle	Datum:	NAVD88	Sampler:	N/A
Logged By:	N. Pukay	Rig Type:	CME 45C	Hammer Wt./Fall:	N/A
Date Start/Finish:	3/14/2024; 08:20-16:00	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	7+77.7, 7.0 ft Rt.	Casing ID/OD:	NW(3.0"/3.5")	Water Level*:	None Observed
Hammer Efficiency Factor: 0.962		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA			Reference BB-CRP-102 for subsurface exploration information up to 83.5 ft bgs.	
15							HP				
30							DRIVE NW				
40							RC			Roller Coned ahead to 55.0 ft bgs.	
55							NW				
60							RC			Roller Coned ahead to 87.8 ft bgs.	

Remarks:
1) HP = Hydraulic Push

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 2   Boring No.: BB-CRP-102B

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Round Pond Bridge #3787 carries Charlotte Road over Round Pond
Location: Charlotte, Maine

Boring No.: BB-CRP-102B   WIN: 26105.00

Driller:	MaineDOT	Elevation (ft.)	83.0	Auger ID/OD:	5" Solid Stem
Operator:	Daggett/Andrle	Datum:	NAVD88	Sampler:	N/A
Logged By:	N. Pukay	Rig Type:	CME 45C	Hammer Wt./Fall:	N/A
Date Start/Finish:	3/14/2024; 08:20-16:00	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	7+77.7, 7.0 ft Rt.	Casing ID/OD:	NW(3.0"/3.5")	Water Level*:	None Observed
Hammer Efficiency Factor: 0.962		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
87.8										NW Casing depth of 87.8 ft bgs.	
88.3	R1	60/60	88.30 - 93.30	RQD = 85%			NQ-2	-5.3		Top of Bedrock at Elev. -5.3 ft. R1: Bedrock: Grey to pink, medium to coarse-grained, porphyritic textured, GRANITE, hard, fresh, joints dipping at horizontal to moderate angles, closely spaced. [CHARLOTTE PLUTON] Rock Quality = Good R1: Core Times (min:sec) 88.3-89.3 ft (2:38) 89.3-90.3 ft (1:46) 90.3-91.3 ft (3:27) 91.3-92.3 ft (3:40) 92.3-93.3 ft (4:52) 100% Recovery	
93.3	R2	60/60	93.30 - 98.30	RQD = 100%						R2: Bedrock: Top 11" similar to R1 then grey to pink, medium to coarse-grained, porphyritic textured, GRANITE, hard, fresh, massive. [CHARLOTTE PLUTON] Rock Quality = Excellent R2: Core Times (min:sec) 93.3-94.3 ft (5:10) 94.3-95.3 ft (3:49) 95.3-96.3 ft (3:21) 96.3-97.3 ft (3:40) 97.3-98.3 ft (4:20) 100% Recovery	
98.3								-15.3		Bottom of Exploration at 98.3 feet below ground surface.	

Remarks:
1) HP = Hydraulic Push

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 2 of 2   Boring No.: BB-CRP-102B

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2610500
BRIDGE NO. 3787   WIN 026105.00   BRIDGE PLANS

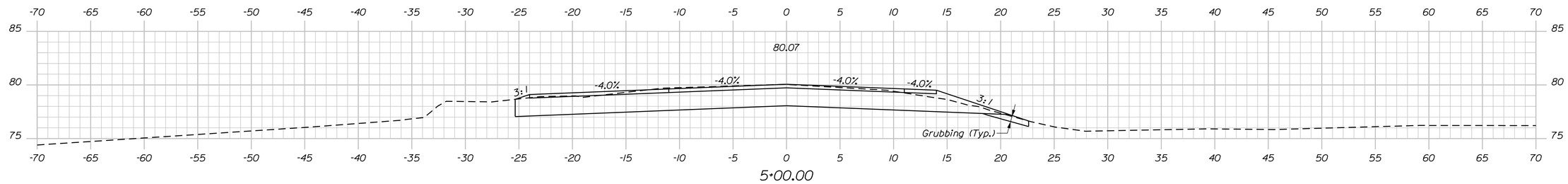
PROJ. MANAGER	M. PARLIN	BY	DATE
DESIGN-DETAILED	B. BARTLETT	D. SHAW	OCT. 2023
CHECKED-REVIEWED	-----	-----	-----
DESIGN2-DETAILED2	N.PUKAY	T.WHITE	DEC 2024
DESIGN3-DETAILED3	-----	-----	-----
REVISIONS 1	-----	-----	-----
REVISIONS 2	-----	-----	-----
REVISIONS 3	-----	-----	-----
REVISIONS 4	-----	-----	-----
FIELD CHANGES	-----	-----	-----

SIGNATURE
P.E. NUMBER
DATE

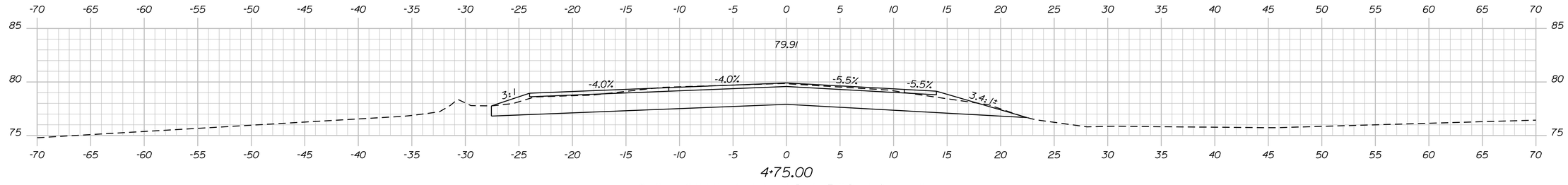
ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

BBORING LOGS

SHEET NUMBER
8
OF 26

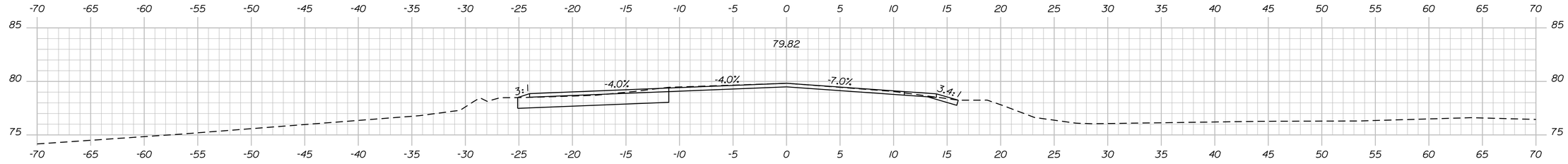


5+00.00



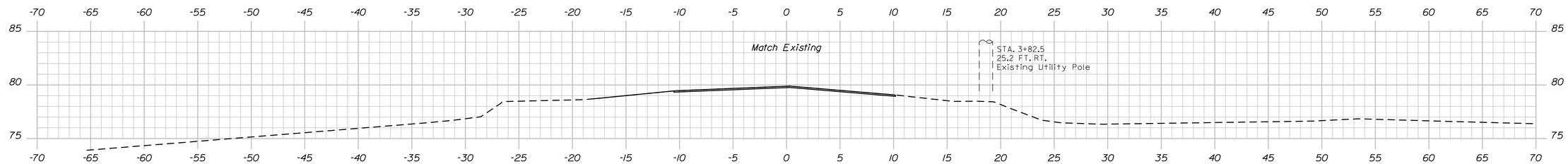
4+75.00

Continue 4" Hot Mix Asphalt and Begin Full Depth Construction



4+50.00

End Variable Mill and Overlay 1 1/2" Hot Mix Asphalt
and Begin 4" Hot Mix Asphalt and Subbase Transition



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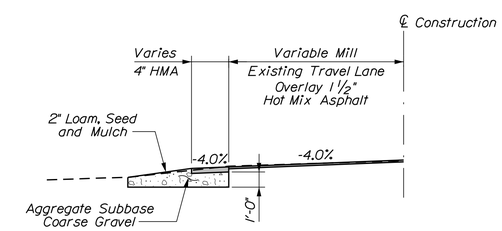
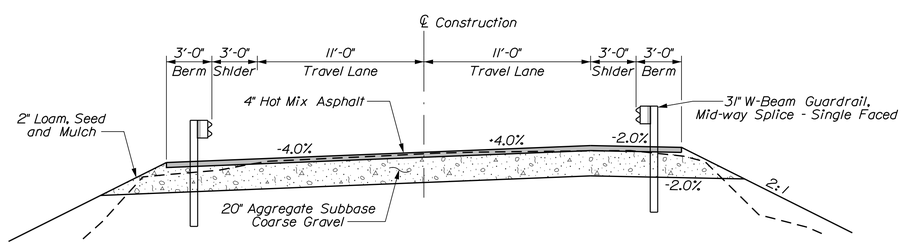
Begin Variable Mill and Overlay 1 1/2" Hot Mix Asphalt



TYPICAL MILL AND OVERLAY SECTION



TYPICAL APPROACH SECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE PLANS

BRIDGE NO. 3787

PROJ. MANAGER	M. PARLIN		
DESIGN-DETAILED	B. BARTLETT	DATE	OCT. 2023
CHECKED-REVIEWED	B. BARTLETT	BY	D. SHAW
DESIGN2-DETAILED2	N.PUKAY	DATE	JUL 2024
DESIGN3-DETAILED3		BY	T. WHITE
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

CROSS SECTIONS

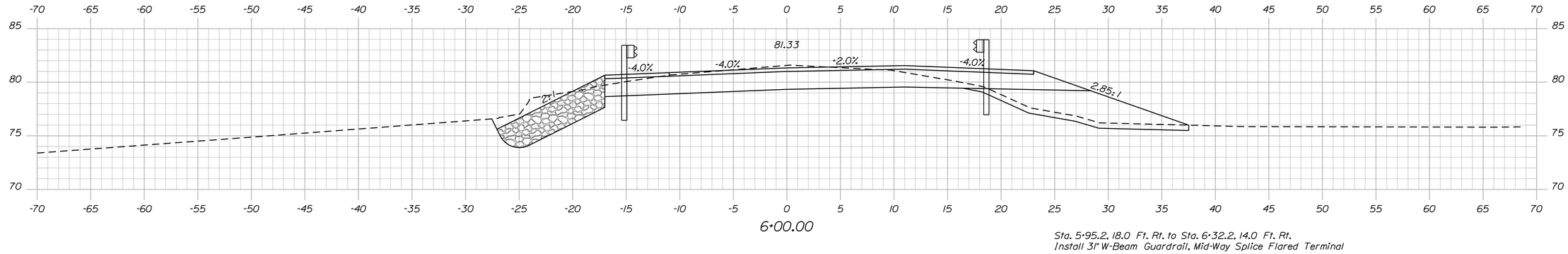
SHEET NUMBER

9

OF 26

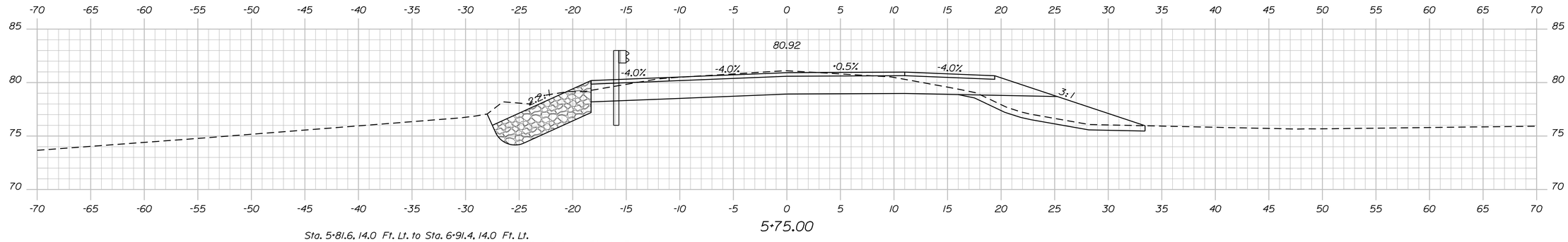
Filename: ...\MSTA\009_XSECT_4+25-5+00.dgn Division: BRIDGE Username: Richard.Moyer Date:1/15/2025

Sta. 4+25 to Sta. 5+00



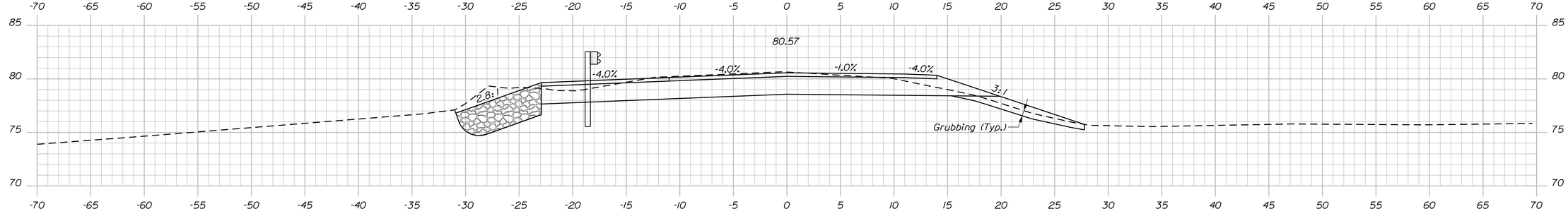
6+00.00

Sta. 5+95.2, 18.0 Ft. Rt. to Sta. 6+32.2, 14.0 Ft. Rt.
Install 31" W-Beam Guardrail, Mid-Way Splice Flared Terminal



5+75.00

Sta. 5+81.6, 14.0 Ft. Lt. to Sta. 6+91.4, 14.0 Ft. Lt.
Install 109.4 L.F. of 31" W-Beam Guardrail, Mid-Way Splice - Single Faced



5+50.00

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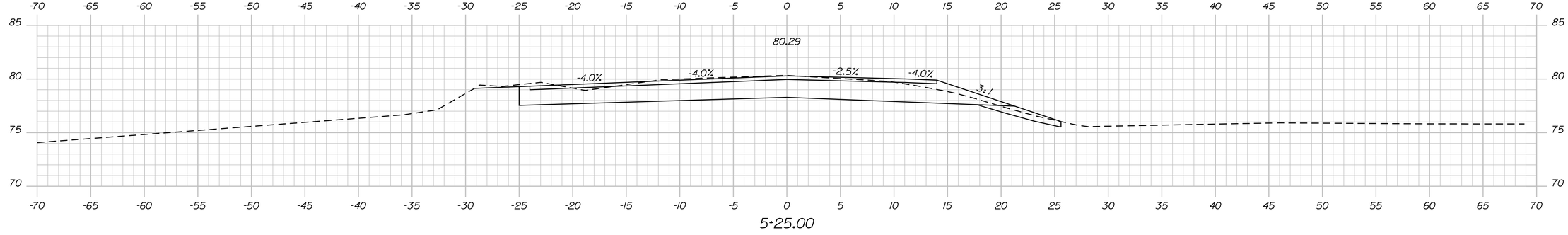


5+25.00

Sta. 5+25 to Sta. 6+00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE NO. 3787

BRIDGE PLANS

PROJ. MANAGER	M. PARLIN		
DESIGN-DETAILED	B. BARTLETT	BY	DATE
CHECKED-REVIEWED	D. SHAW		OCT. 2023
DESIGN2-DETAILED2	N.PUKAY	T. WHITE	JUL 2024
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

CROSS SECTIONS

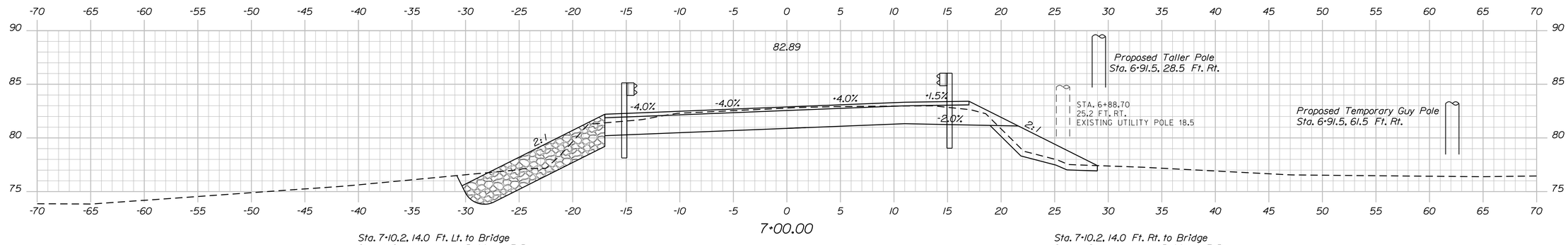
SHEET NUMBER

10

OF 26

Username: Richard.Moyer Date:1/15/2025

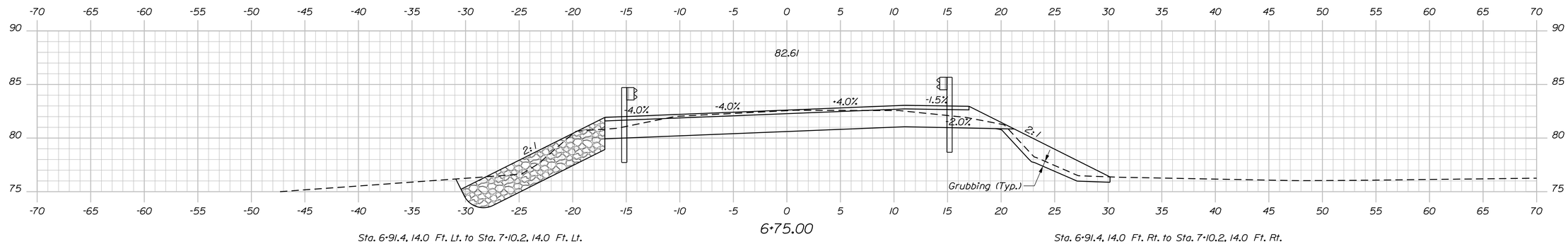
Filename: ...\MSTA\010_XSECT_5+25-6+00.dgn Division: BRIDGE



7+00.00

Sta. 7+10.2, 14.0 Ft. Lt. to Bridge
Install Steel Approach Railing - 3-Bar

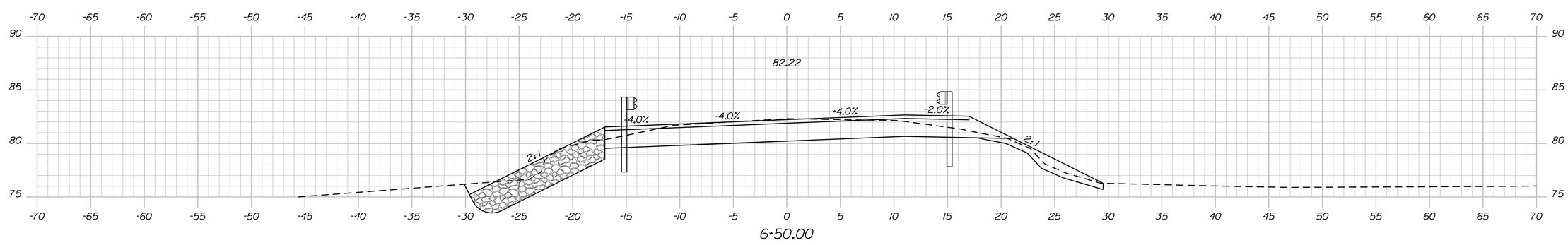
Sta. 7+10.2, 14.0 Ft. Rt. to Bridge
Install Steel Approach Railing - 3-Bar



6+75.00

Sta. 6+91.4, 14.0 Ft. Lt. to Sta. 7+10.2, 14.0 Ft. Lt.
Install Bridge Transtion - Type I

Sta. 6+91.4, 14.0 Ft. Rt. to Sta. 7+10.2, 14.0 Ft. Rt.
Install Bridge Transtion - Type I



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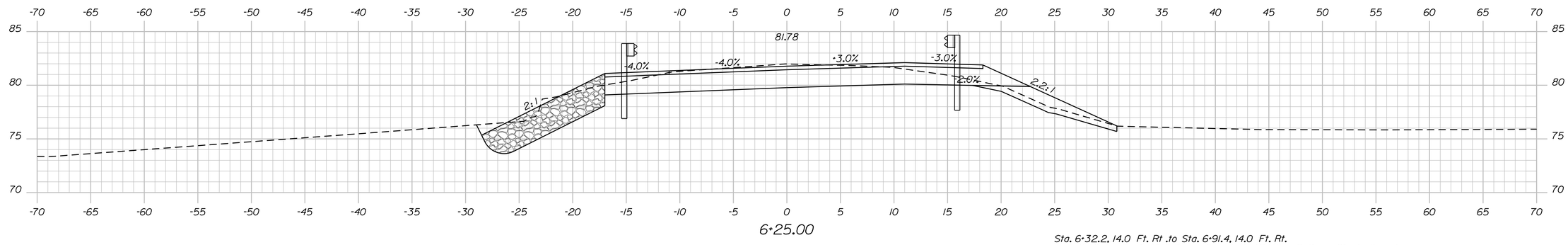


6+25.00

Sta. 6+32.2, 14.0 Ft. Rt .to Sta. 6+91.4, 14.0 Ft. Rt.
Install 59.4 L.F. of 31" W-Beam Guardrail, Mid-Way Splice - Single Faced

Sta. 6+25 to Sta. 7+00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE NO. 3787

BRIDGE PLANS

PROJ. MANAGER	M. PARLIN		
DESIGN-DETAILED	B. BARTLETT	D. SHAW	OCT. 2023
CHECKED-REVIEWED	N.PUKAY	T. WHITE	JUL 2024
DESIGN2-DETAILED2	N.PUKAY		
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

CROSS SECTIONS

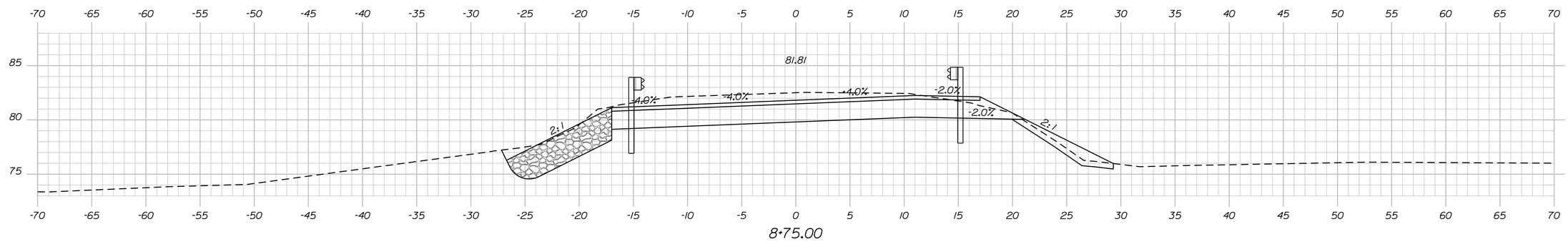
SHEET NUMBER

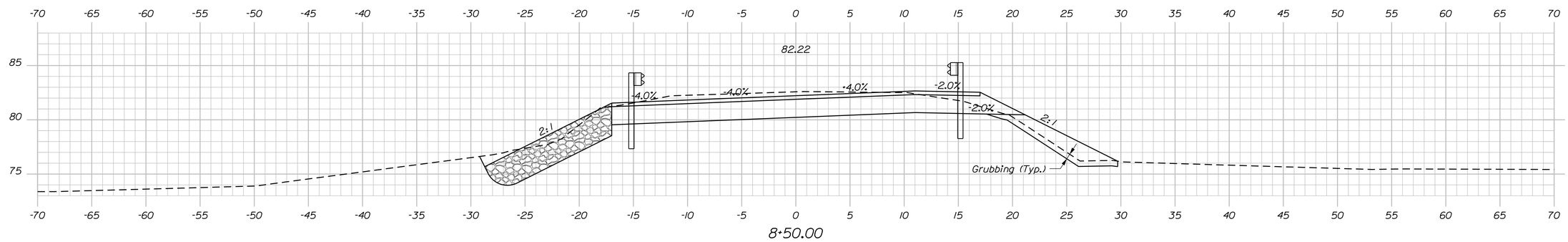
11

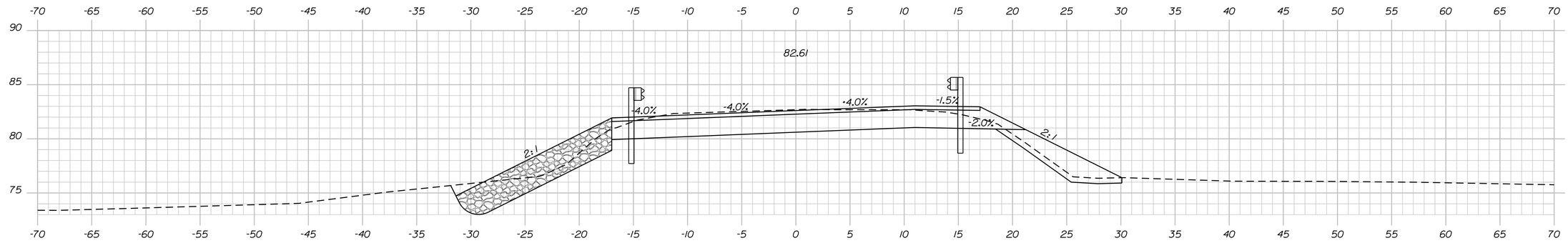
OF 26

Filename: ...\MSTA\011_XSECT_6+25-7+00.dgn Division: BRIDGE Username: Richard.Moyer Date:1/15/2025

Username: Richard.Moyer Date:1/15/2025
Filename: ...\MSTA\012_XSECT_8+00-8+75.dgn Division: BRIDGE

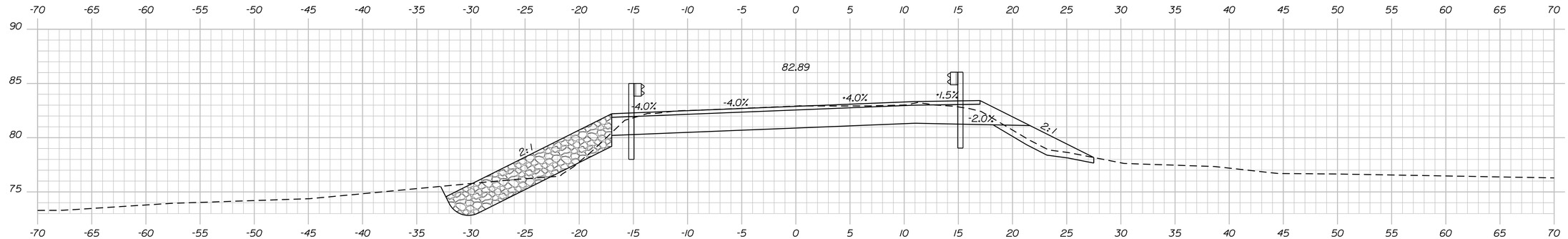






Sta. 8+08.7, 14.0 Ft. Lt. to Sta. 9+19, 14.0 Ft. Lt.
Install 109.4 L.F. of 31" W-Beam Guardrail, Mid-Way Splice - Single Faced

Sta. 8+08.5, 14.0 Ft. Rt. to Sta. 9+16.9, 14.0 Ft. Rt.
Install 109.4 L.F. of 31" W-Beam Guardrail, Mid-Way Splice - Single Faced



Bridge to Sta. 7+89.8, 14.0 Ft. Lt.
Install Steel Approach Railing - 3-Bar
Sta. 7+89.8, 14.0 Ft. Lt. to Sta. 8+08.7, 14.0 Ft. Lt.
Install Bridge Transtion - Type 1

Bridge to Sta. 7+89.8, 14.0 Ft. Rt.
Install Steel Approach Railing - 3-Bar
Sta. 7+89.8, 14.0 Ft. Rt. to Sta. 8+08.5, 14.0 Ft. Rt.
Install Bridge Transtion - Type 1

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE NO. 3787

BRIDGE PLANS

			DATE
PROJ. MANAGER	M. PARLIN	BY	OCT. 2023
DESIGN-DETAILED	B. BARTLETT	D. SHAW	SIGNATURE
CHECKED-REVIEWED	N.PUKAY	T. WHITE	JUL 2024
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			P.E. NUMBER
REVISIONS 1			
REVISIONS 2			DATE
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

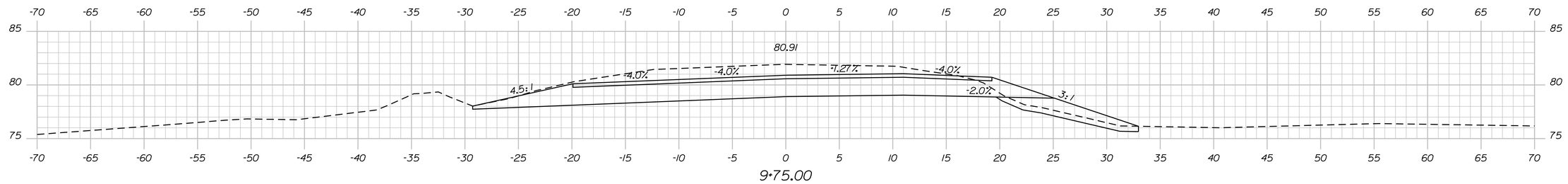
CROSS SECTIONS

SHEET NUMBER

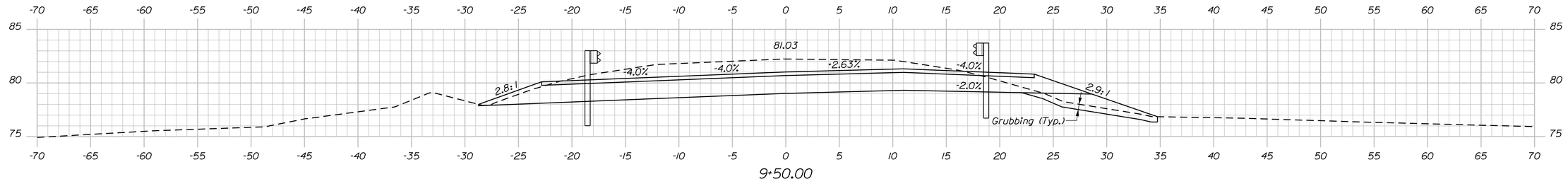
12

OF 26

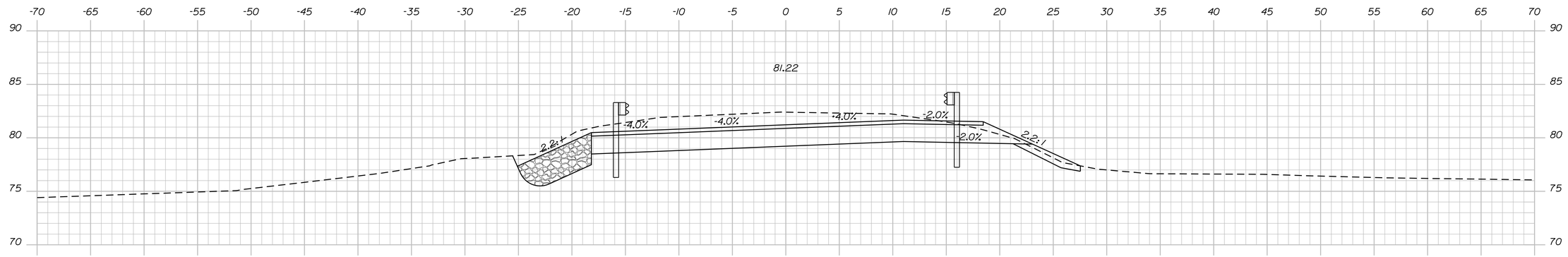
Sta. 8+00 to Sta. 8+75



9+75.00



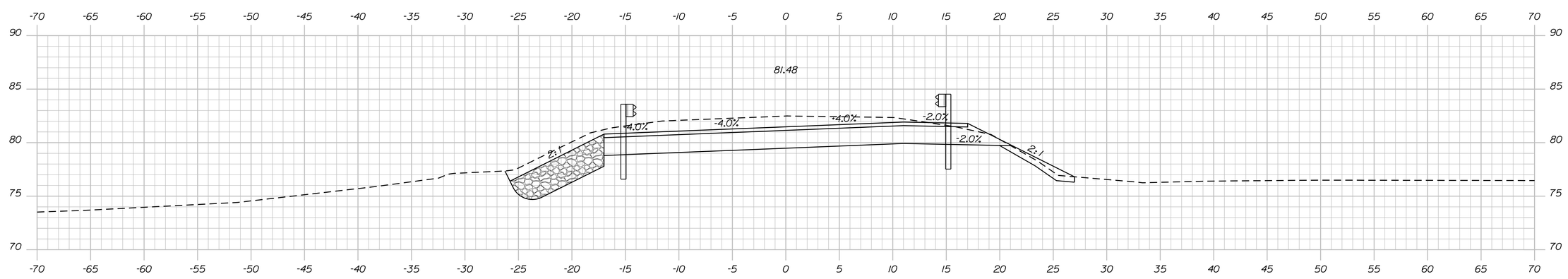
9+50.00



Sta. 9+19, 14.0 Ft. Lt. to Sta. 9+56.6, 18.0 Ft. Lt.
Install 31" W-Beam Guardrail, Mid-Way Splice Flared Terminal

9+25.00

Sta. 9+16.9, 14.0 Ft. Rt. to Sta. 9+53.9, 18.0 Ft. Rt.
Install 31" W-Beam Guardrail, Mid-Way Splice Flared Terminal



9+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE PLANS

BRIDGE NO. 3787

	BY	DATE
PROJ. MANAGER	M. PARLIN	
DESIGN-DETAILED	B. BARTLETT	OCT. 2023
CHECKED-REVIEWED	B. BARTLETT	JUL 2024
DESIGN2-DETAILED2	N.PUKAY	
DESIGN3-DETAILED3	T. WHITE	
REVISIONS 1	D. SHAW	
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

CROSS SECTIONS

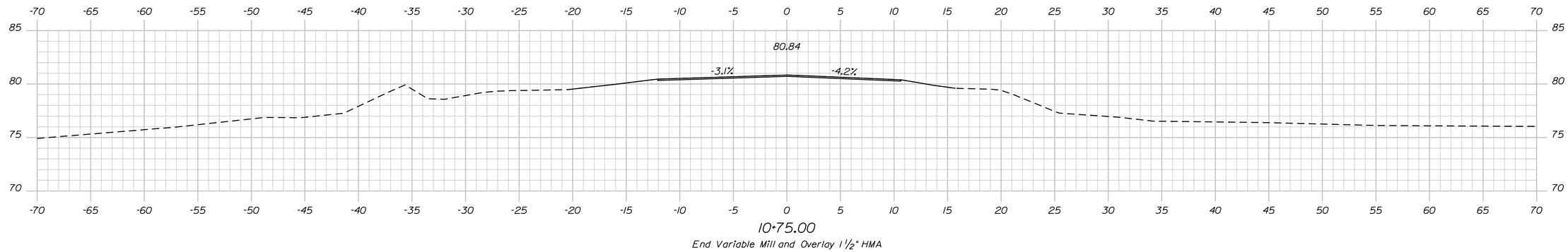
SHEET NUMBER

13

OF 26

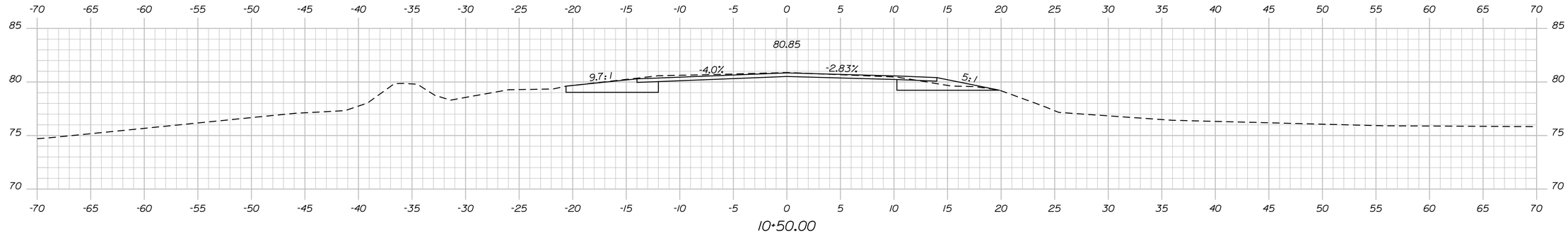
Filename: ...\MSTA\013_XSECT_9+00-9+75.dgn Division: BRIDGE Username: Richard.Moyer Date:1/15/2025

Sta. 9+00 to Sta. 9+75



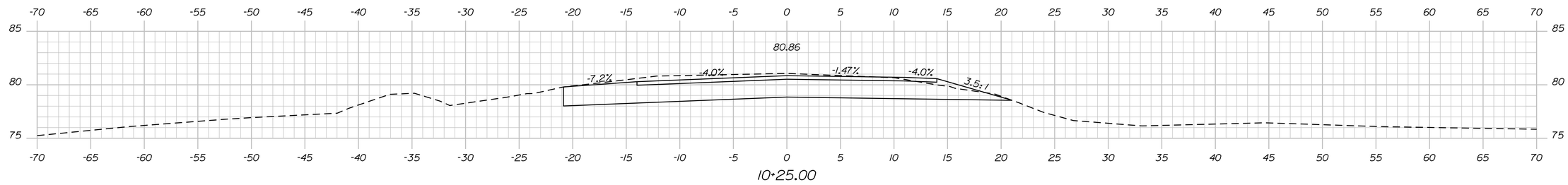
10+75.00

End Variable Mill and Overlay 1 ½" HMA



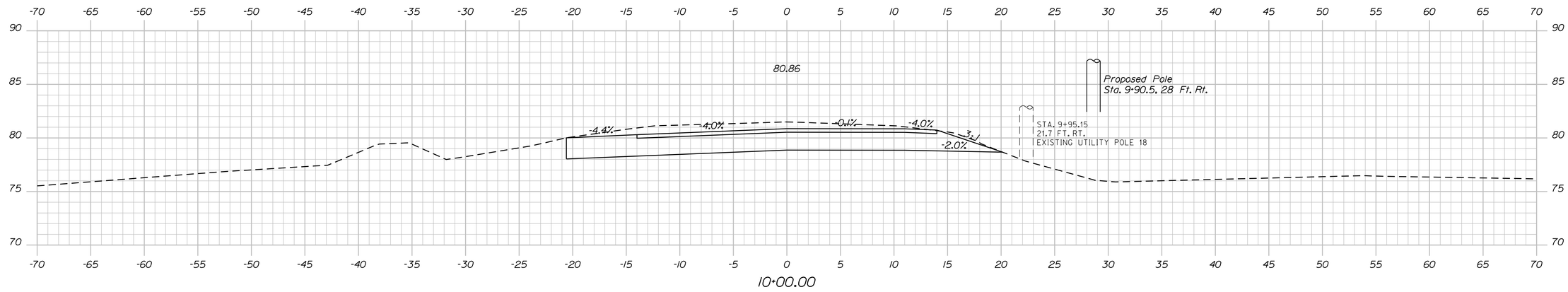
10+50.00

End 4" Hot Mix Asphalt and Subbase Transition
Begin Variable Mill and Overlay 1 ½" Hot Mix Asphalt



10+25.00

End Full Depth Construction and Begin Subbase Transition



10+00.00

Sta. 10+00 to Sta. 10+75

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE NO. 3787

BRIDGE PLANS

PROJ. MANAGER	M. PARLIN		
DESIGN-DETAILED	B. BARTLETT	BY	D. SHAW
CHECKED-REVIEWED	N.PUKAY	DATE	OCT. 2023
DESIGN2-DETAILED2	N.PUKAY	BY	T. WHITE
DESIGN3-DETAILED3		DATE	JUL 2024
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

CROSS SECTIONS

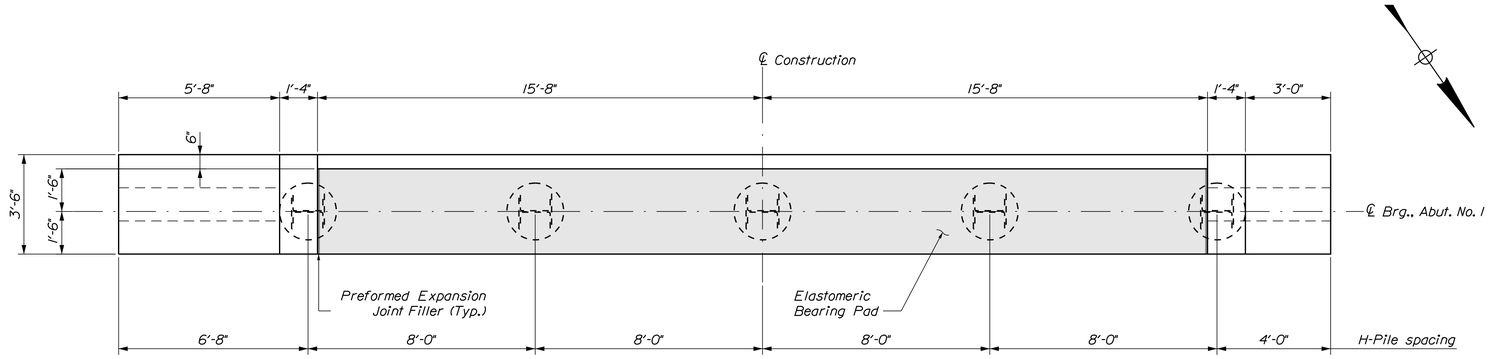
SHEET NUMBER

14

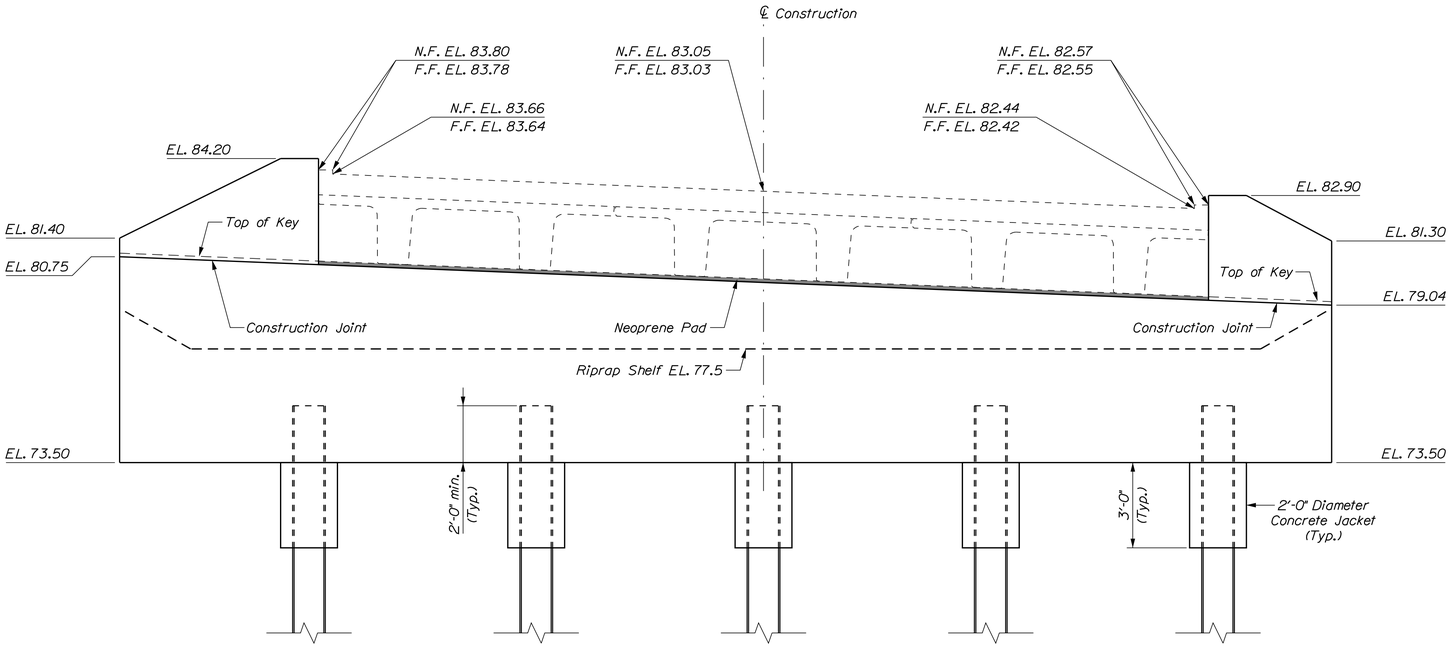
OF 26

Username: Richard.Moyer Date:1/15/2025

Filename: ...\MSTA\014_XSECT_10+00-10+75.dgn Division: BRIDGE



ABUTMENT NO. 1 PLAN



ABUTMENT NO. 1 ELEVATION

ABUTMENT NOTES

1. Abutments, wingwalls, and their footings shall be backfilled with Granular Borrow, meeting the requirements of Material for Underwater Backfill. Pay limits will be the structural excavation limits in cut areas and a vertical plane located 10 feet behind the walls in fill areas.

2. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.

3. Place drains with a 4-inch diameter in the breastwall and wingwalls at 10 feet maximum spacing. The exact location will be determined by the Resident.

4. Cover joints where waterstops are not required in accordance with Standard Details Section 502.

5. Payment for the concrete jackets around the tops of the H-piles will not be paid for directly but will be considered incidental to Pay Item 502.219 Structural Concrete Abutments and Retaining Walls. Fill Concrete may be used for the concrete jackets.

6. Place the parapet portions of the wingwalls after erection of the precast units.

PILE NOTES

1. The maximum factored pile load is 260 kips at the Strength Limit State.

2. Piles shall be driven to the required nominal resistance on or within bedrock in accordance with Standard Specification Section 501.

3. Estimate of piles required (in-place):

   Abutment No. 1: 5 ~ HP 14x89 @ 85 feet
   Abutment No. 2: 5 ~ HP 14x89 @ 81 feet

The order lengths of the piles shall include an additional 5 feet of length for each test pile to accommodate dynamic pile testing equipment and any additional pile length needed to accomodate leads, template and driving system.

4. H-pile material shall be ASTM A572, Grade 50.

5. H-pile splices shall be in accordance with Standard Detail 501(03).

6. All piles shall be equipped with a pile tip in accordance with Standard Specifications Subsections 501.048 , Prefabricated Pile Tips and 711.10 H-Beam Piles, Spliced and Tips.

7. Piles shall not be out of position shown by more than 2 inches in any direction.

8. The Contractor shall perform and submit a wave equation analysis for review and acceptance by the Resident. The maximum allowable driving stress is 0.90 times Fy. The submittal analyses shall include the proposed stopping criteria based on the wave equation analysis and the proposed driving system.

9. The Contractor shall perform 2 dynamic load test(s) with 24-hour (minimum) restrike tests to confirm the nominal resistance of the piles. The required nominal resistance for the pile is the factored axial pile load divided by a resistance factor of 0.65 per LRFD Specifications. The dynamic test shall be performed on the first production pile driven at each abutment.

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WIN 026105.00

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DESIGN-DETAILED	B. BARTLETT	OCT. 2023
CHECKED-REVIEWED	D. SHAW	
DESIGN2-DETAILED2	N.PUKAY	JUL 2024
DESIGN3-DETAILED3	T. WHITE	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

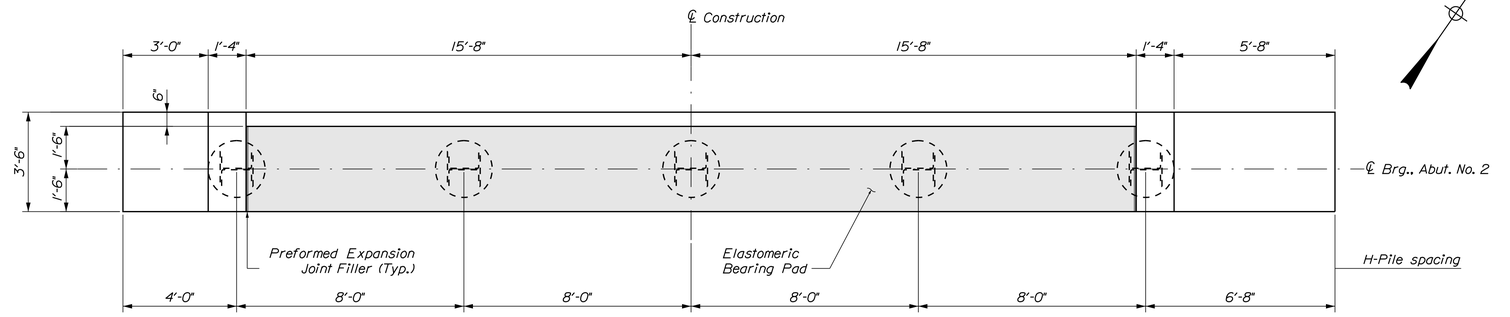
ABUTMENT NO. 1

SHEET NUMBER

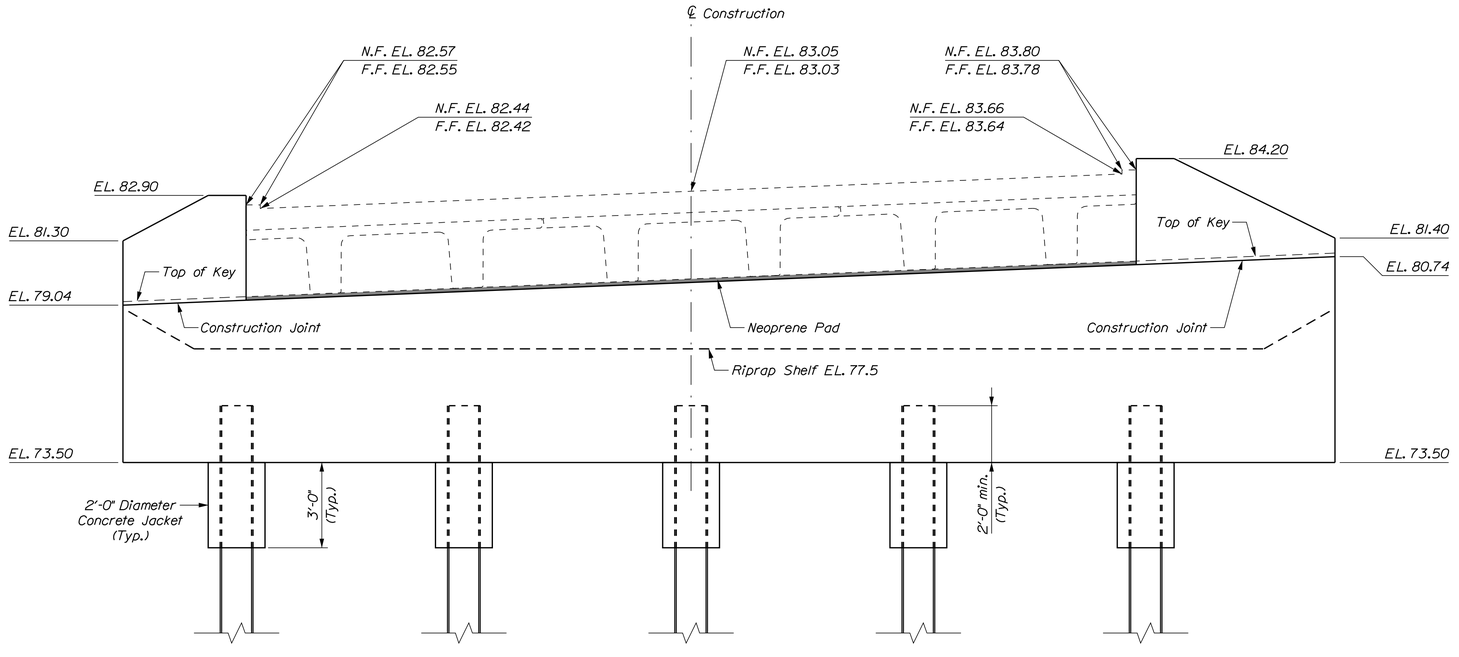
15

OF 26

Filename: ...\MSTA\015_AbutmenI_No1.dgn Division: BRIDGE Username: Richard.Moyer Date:1/15/2025



ABUTMENT NO. 2 PLAN



ABUTMENT NO. 2 ELEVATION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE NO. 3787

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. PARLIN	
DESIGN-DETAILED	B. BARTLETT	OCT. 2023
CHECKED-REVIEWED	D. SHAW	JUL 2024
DESIGN2-DETAILED2	N.PUKAY	T. WHITE
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

ABUTMENT NO. 2

SHEET NUMBER

16

OF 26

Filename: ...\MSTA\016_Abutment_No2.dgn Username: Richard.Moyer Division: BRIDGE Date:1/15/2025

Filename: ...\MSTA\017_Abutment_Details.dgn Division: BRIDGE Username: Richard.Moyer Date:1/15/2025

NOTES:

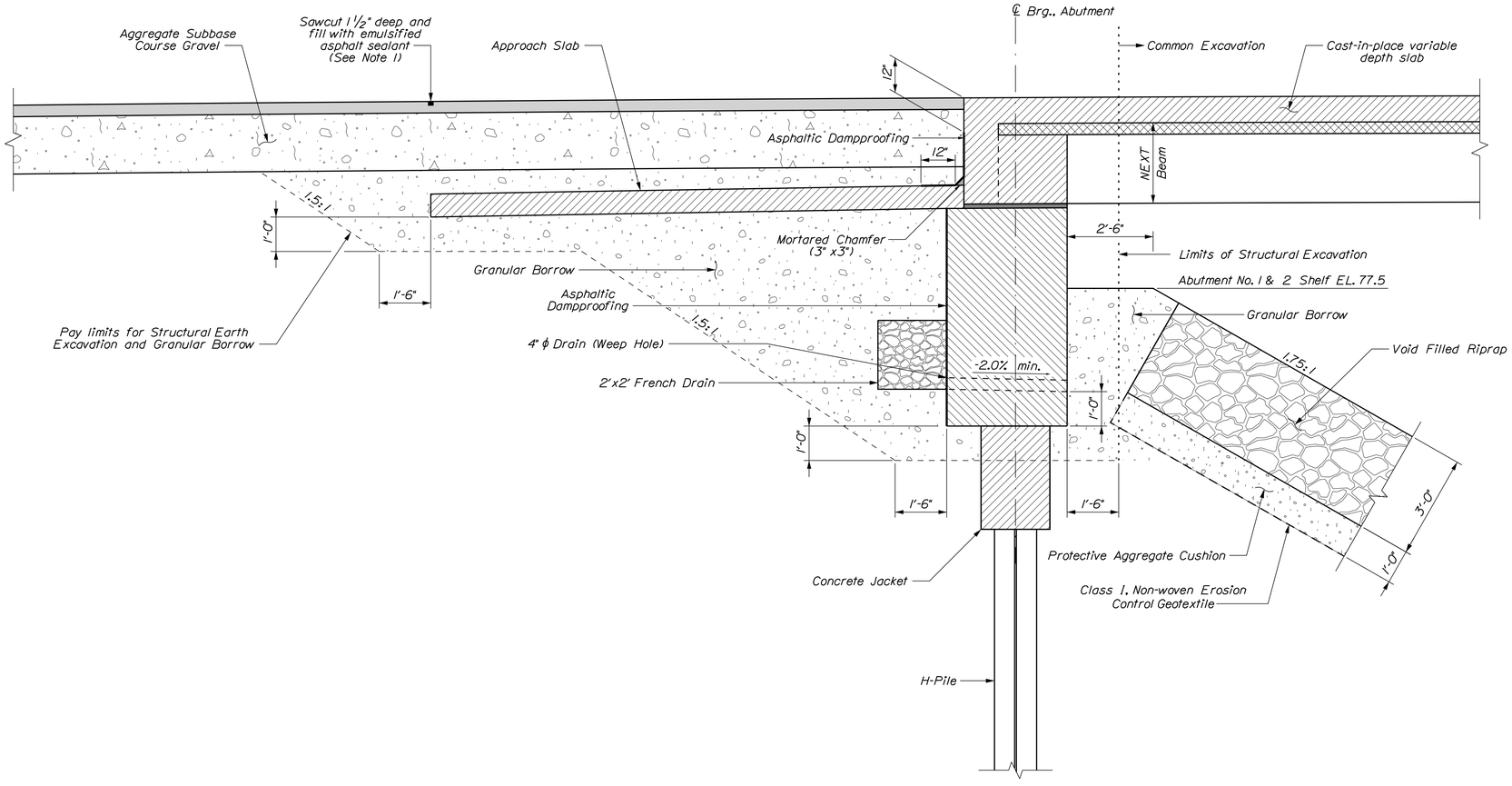
1. Transverse sawcuts in the pavement at the ends of approach slabs shall be sealed with emulsified asphalt sealing compound conforming to Specification 702.12. The sawcut and emulsified asphalt sealing shall not be paid for directly, but considered incidental to related Contract Items.

2. Payment for mortared chamfer at approach slabs shall not be paid for directly, but shall be considered incidental to related Contract Items.

3. Asphalt Dampproofing shall meet the requirements of either ASTM D449 Type II, ASTM D1227 Type II-Class 1, or ASTM D1227 Type III-Class 1. The product shall be applied in accordance with the manufacturer's recommendations.

4. Asphalt Dampproofing shall be applied to the backside of the wingwalls up to 1 foot below grade, in addition to the locations shown in the Abutment Backfill Detail.

5. Payment for Asphalt Dampproofing will not be made directly, but will be considered incidental to related Contract Items.



ABUTMENT BACKFILL DETAIL

Abutment No. 1 shown, Abutment No. 2 similar.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE NO. 3787

BRIDGE PLANS

PROJ. MANAGER	M. PARLIN		
DESIGN-DETAILED	B. BARTLETT	D. SHAW	OCT. 2023
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SIGNATURE

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DATE

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

ABUTMENT DETAILS

SHEET NUMBER

17

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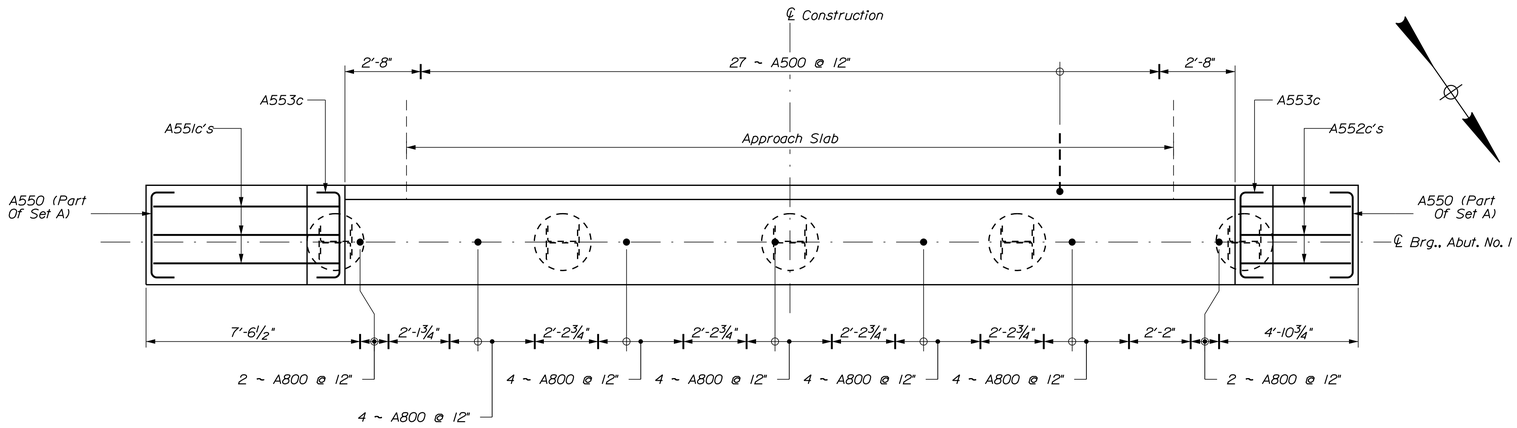
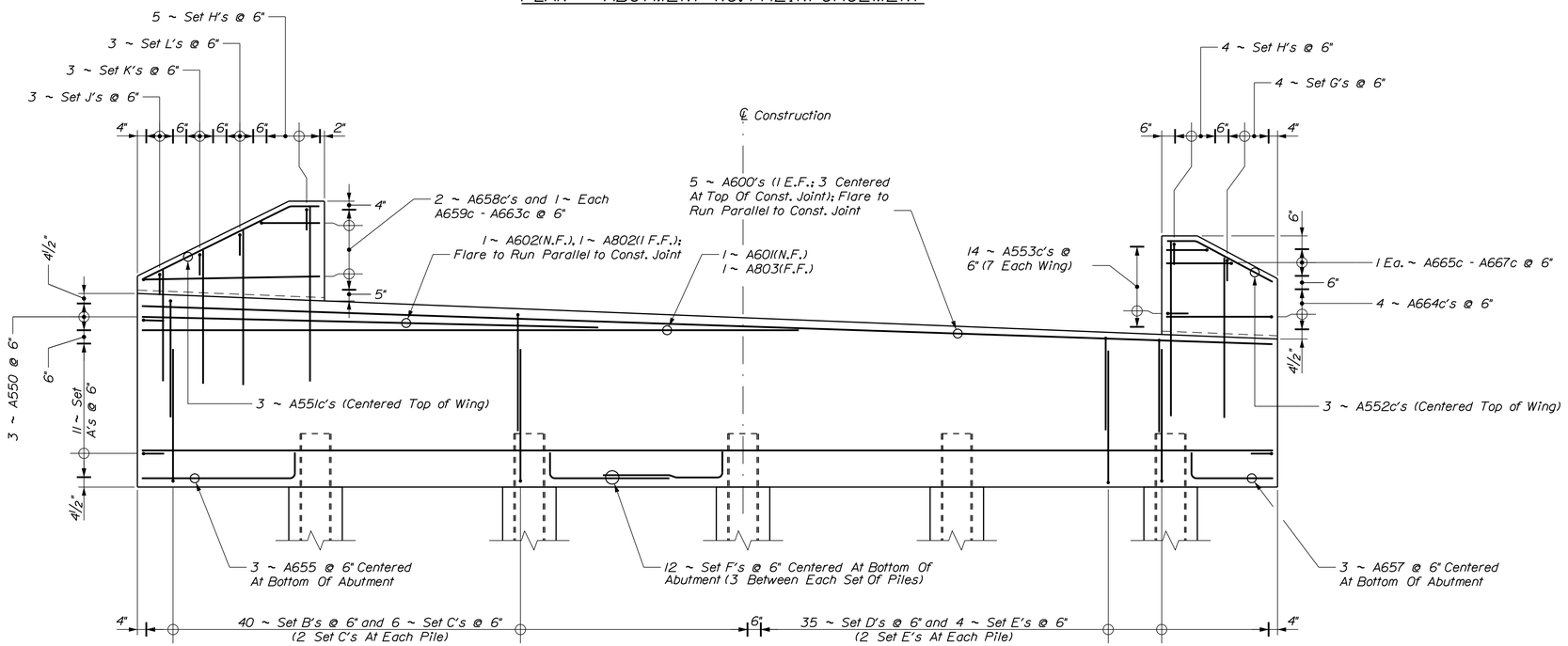
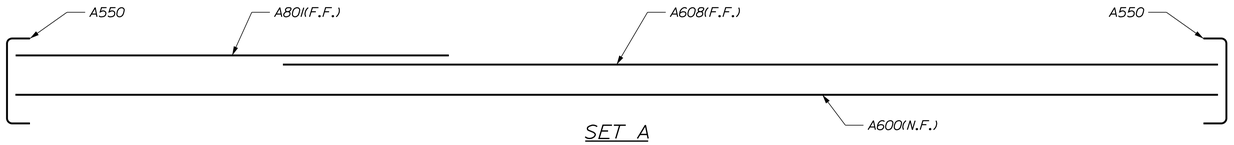


PLAN ~ ABUTMENT NO. 1 REINFORCEMENT



ELEVATION ~ ABUTMENT NO. 1 REINFORCEMENT



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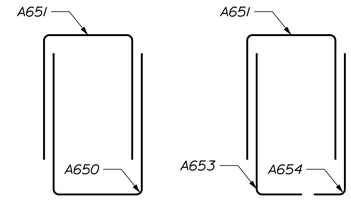

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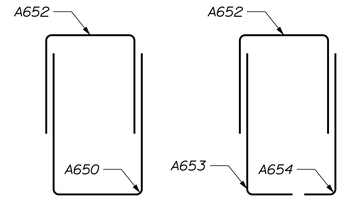

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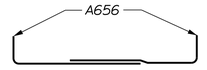

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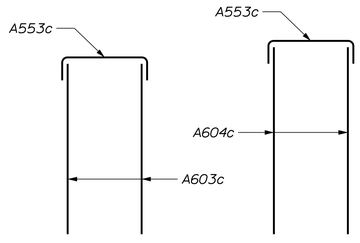

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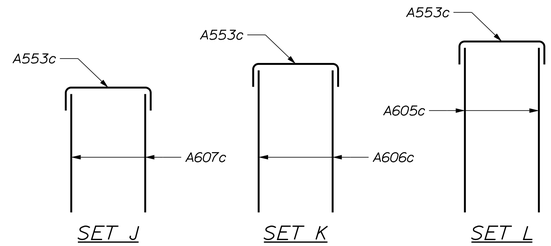


SET J SET K SET L

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE NO. 3787

BRIDGE PLANS

	BY	DATE	SIGNATURE
PROJ. MANAGER	M. PARLIN		
DESIGN-DETAILED	B. BARTLETT	OCT. 2023	
CHECKED-REVIEWED	D. SHAW	JUL 2024	
DESIGN2-DETAILED2	N.PUKAY		P.E. NUMBER
DESIGN3-DETAILED3	T. WHITE		
REVISIONS 1			
REVISIONS 2			DATE
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

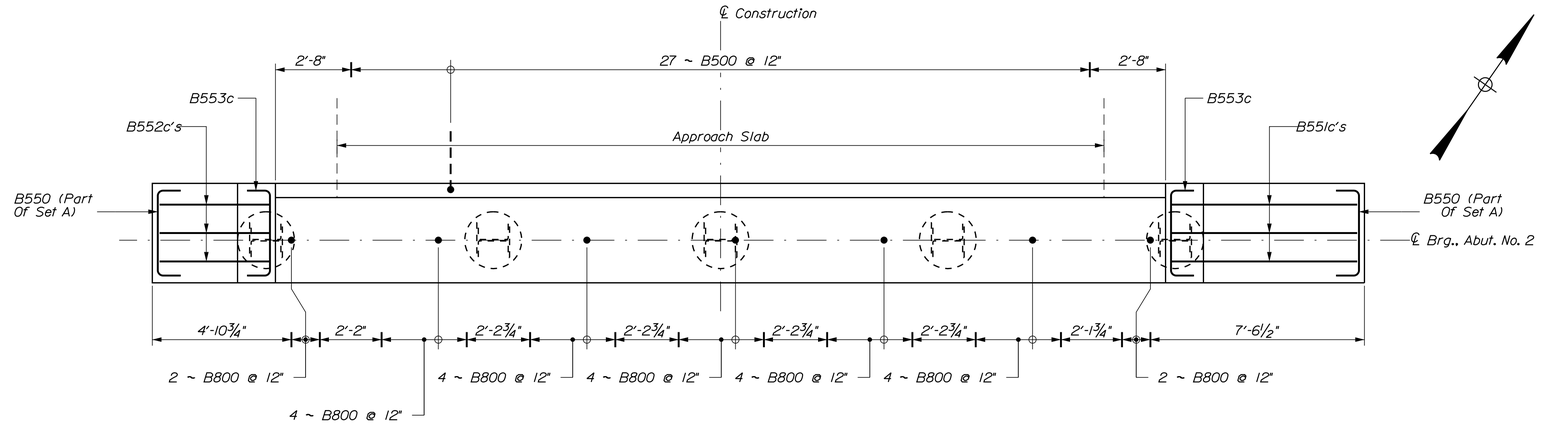
ABUTMENT NO. 1 REINFORCEMENT

SHEET NUMBER

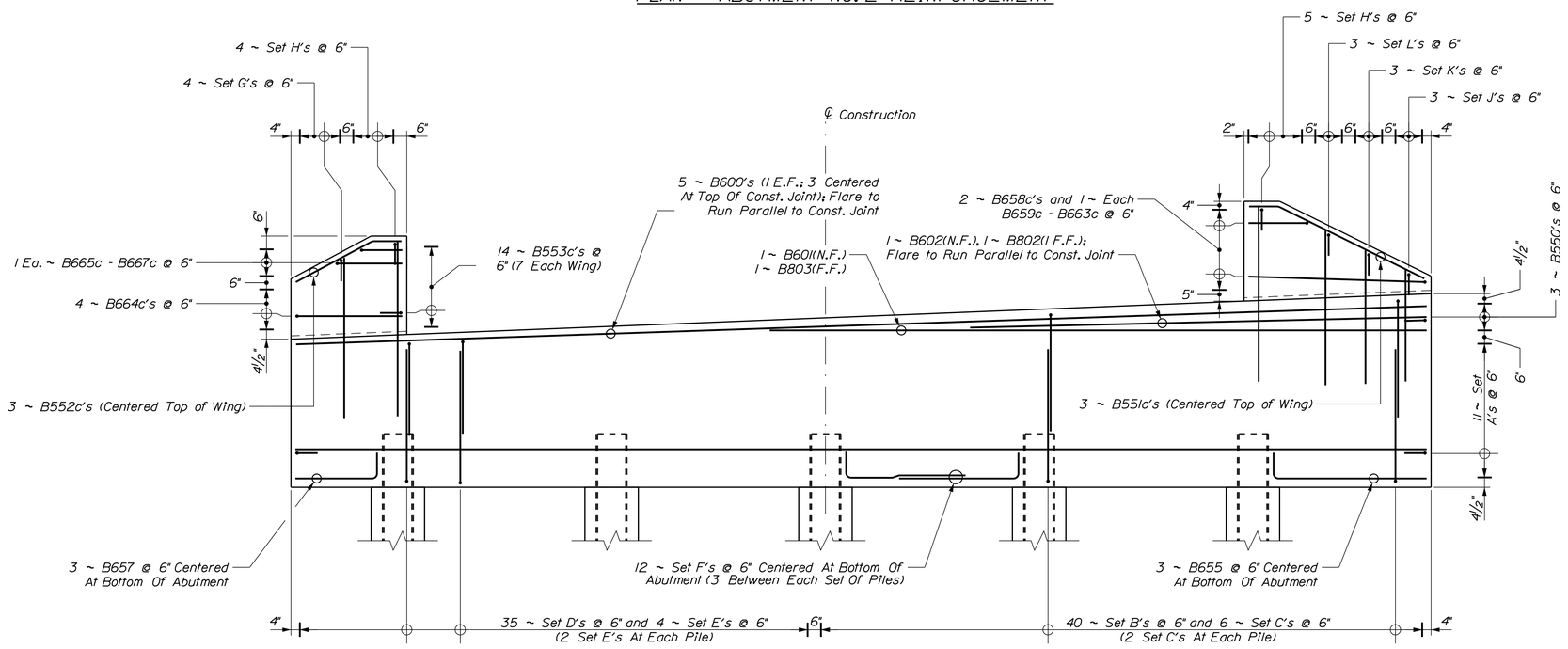
18

OF 26

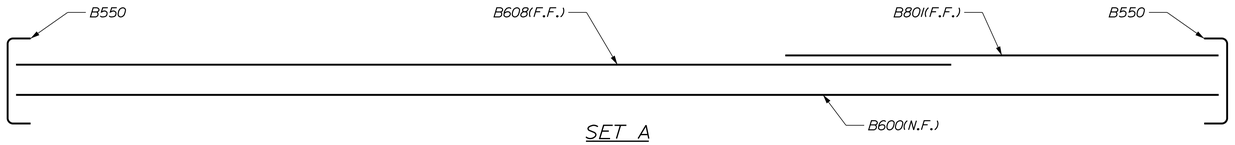
Filename: ...\018_Abutment_No1_Rebor.dgn Division: BRIDGE Username: Richard.Moyer Date:1/15/2025



PLAN ~ ABUTMENT NO. 2 REINFORCEMENT



ELEVATION ~ ABUTMENT NO. 2 REINFORCEMENT



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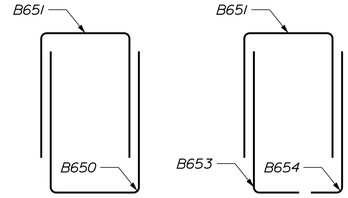

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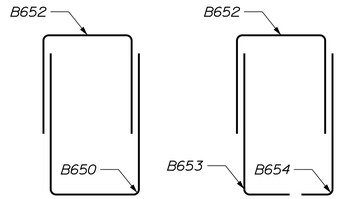

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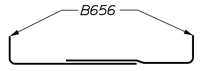

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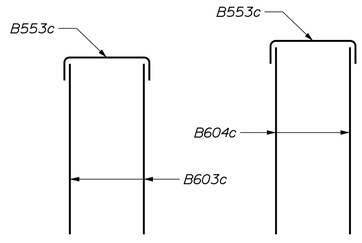

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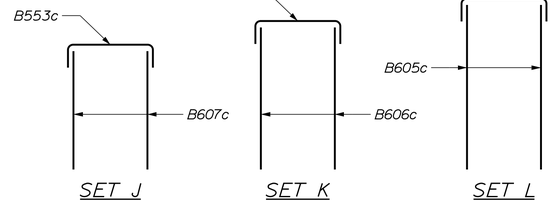

SET J SET K SET L

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE NO. 3787

BRIDGE PLANS

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CHECKED-REVIEWED	D. SHAW	JUL 2024
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FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

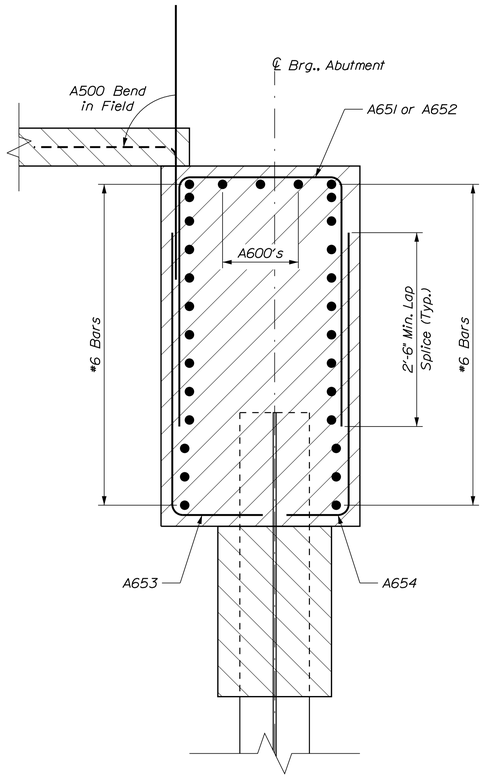
ABUTMENT NO. 2 REINFORCEMENT

SHEET NUMBER

19

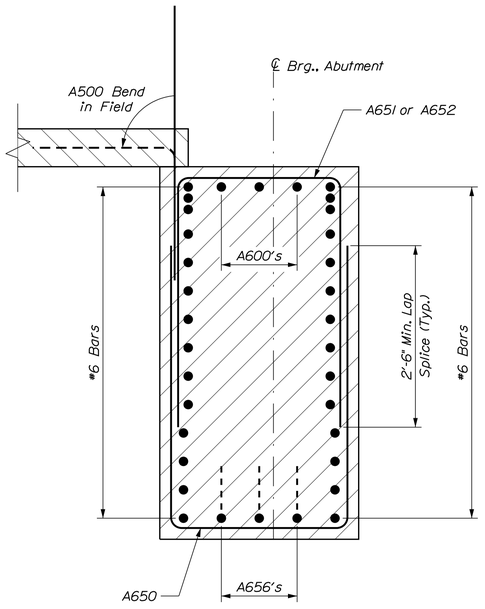
OF 26

Filename: ...\019_Abutment_No2_Rebar.dgn Division: BRIDGE Username: Richard.Moyer Date:1/15/2025



SECTION AT PILE

Abutment No. 1 Rebar shown,
Abutment No. 2 Rebar similar



SECTION BETWEEN PILES

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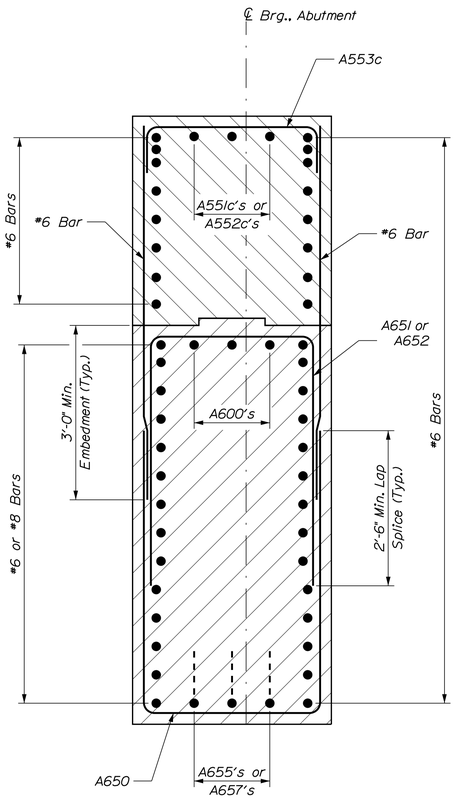
Abutment No. 2 Rebar similar



WINGWALL SECTION

Abutment No. 1 Rebar shown,
Abutment No. 2 Rebar similar

Username: Richard.Moyer Date:1/15/2025

Filename: ...\MSTA\020_Abutment_Sections.dgn Division: BRIDGE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE NO. 3787 BRIDGE PLANS

PROJ. MANAGER	M. PARLIN	BY	DATE
DESIGN-DETAILED	B. BARTLETT	D. SHAW	OCT. 2023
CHECKED-REVIEWED			SIGNATURE
DESIGN2-DETAILED2	N.PUKAY	T. WHITE	JUL 2024
DESIGN3-DETAILED3			P.E. NUMBER
REVISIONS 1			
REVISIONS 2			DATE
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

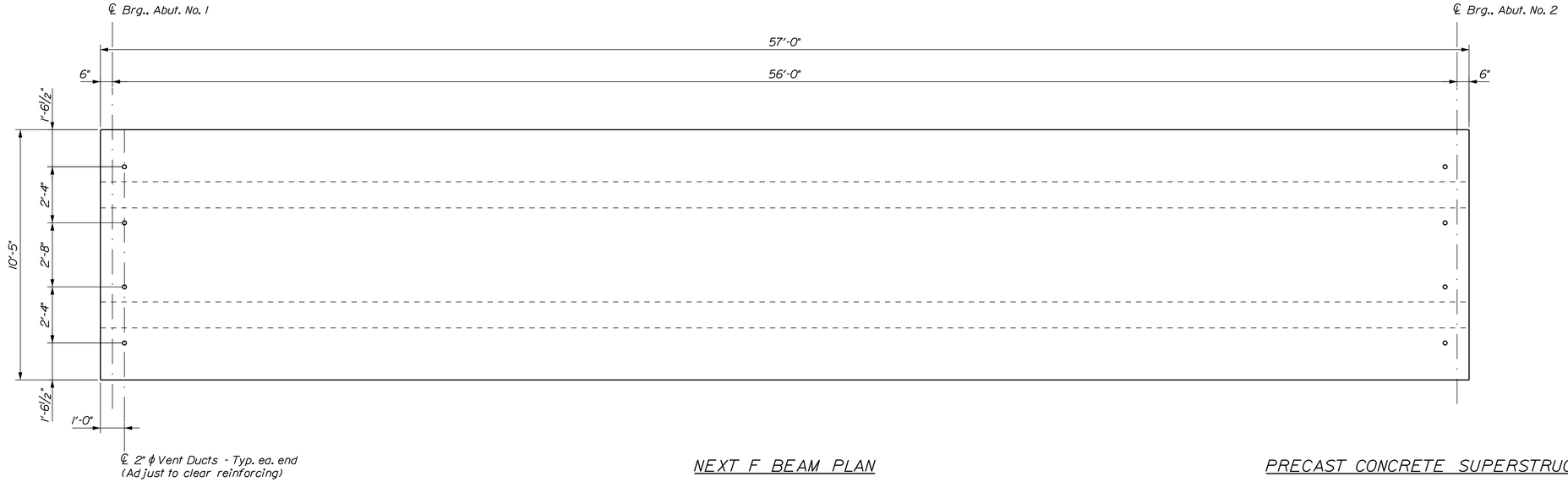
ABUTMENT SECTIONS

SHEET NUMBER

20

OF 26

Filename: ...\MSTA\021_Precast_NEXT_Beam.dgn Division: BRIDGE Username: Richard.Moyer Date:1/15/2025



NEXT F BEAM PLAN

PRECAST CONCRETE SUPERSTRUCTURE NOTES

1. NEXT F Beams are a non - proprietary shape developed by PCI NORTHEAST (PCINE). Standardized section properties and details may be found at http://www.pcine.org.

2. The estimated camber at release is 1½ inches and the estimated camber at erection is 2⅝ inches. Refer to Special Provision Section 535, Precast, Prestressed Concrete Superstructure - Camber.

3. Prestressing strands shall be 0.6 inch diameter. The tensioning force is 44 kips per prestressing strand, including the top strands.

4. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.

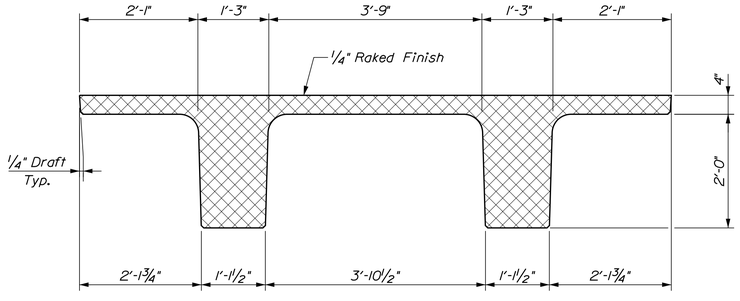
5. Do not drill or use powder actuated tools on the prestressed beams without the approval of the Fabrication Engineer.

6. The top surface of the upper flange of the prestressed beams shall be raked to a surface roughness of ¼ inch, except at 10-ft. increments along the centerline of each beam. At these locations a flattened area of sufficient size shall be left to facilitate taking elevations for setting bottom of slab elevations.

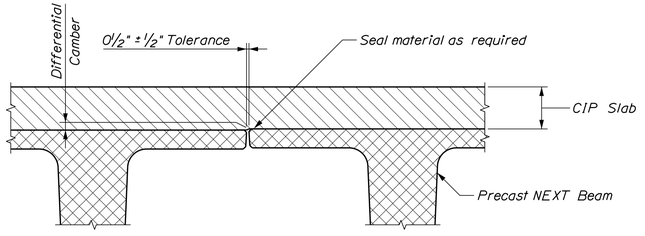
7. Lifting loops and temporary/storage/shipping dunnage shall be a maximum of 2 feet from each beam end.

8. A maximum of 50 percent of the strands in the bottom 5 rows may be debonded 6 inches from the end of the beam. All 4 top row strands shall be fully bonded.

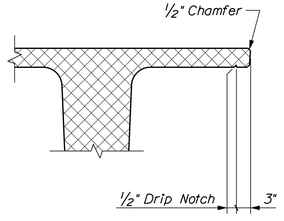
9. Payment for Sheet Waterproofing Membrane over joints between adjacent NEXT Beams will not be made directly, but will be considered incidental to related Contract Items. Alternate methods of sealing the gap between flanges may be submitted to the Resident for approval.



NEXT 28 F BEAM SECTION



NEXT BEAM GAP FORM DETAIL



FASCIA OVERHANG DETAIL

ELASTOMERIC BEARING PAD NOTES

1. Elastomeric Bearing Pads shall be 1" x 3'-0" x 31'-4" per abutment.

2. The elastomer shall have a shear modulus of 95 psi and a Shore A Durometer hardness of 50.

3. Elastomeric Bearing Pads shall conform to the requirements of the latest edition of the AASHTO LRFD Bridge Construction Specifications, Section 18.2.

4. Elastomeric Bearing Pads will not be paid for directly but will be considered incidental to related Contract items. No separate payment will be made.

STATE OF MAINE
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WIN 026105.00

BRIDGE NO. 3787 BRIDGE PLANS

PROJ. MANAGER	M. PARLIN	BY	DATE
DESIGN-DETAILED	B. BARTLETT	D. SHAW	OCT. 2023
CHECKED-REVIEWED	N.PUKAY	T. WHITE	JUL 2024
DESIGN2-DETAILED2			
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FIELD CHANGES			

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ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

PRECAST NEXT BEAM

SHEET NUMBER

21

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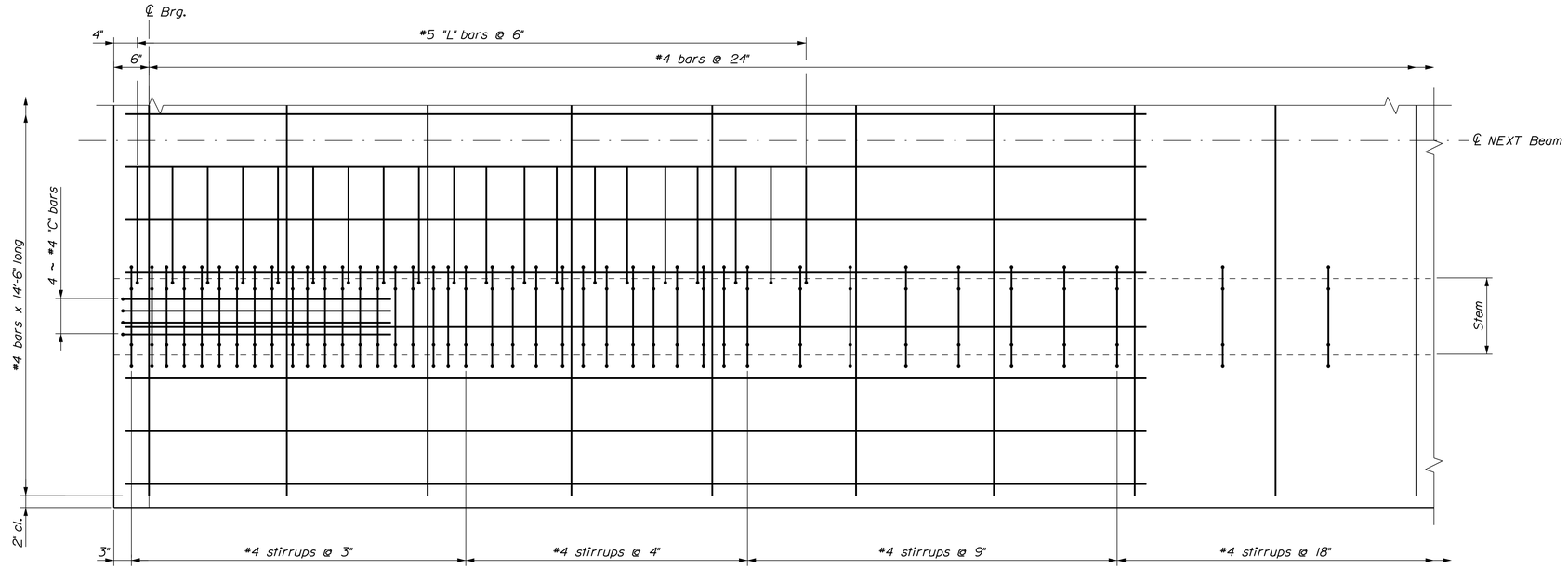
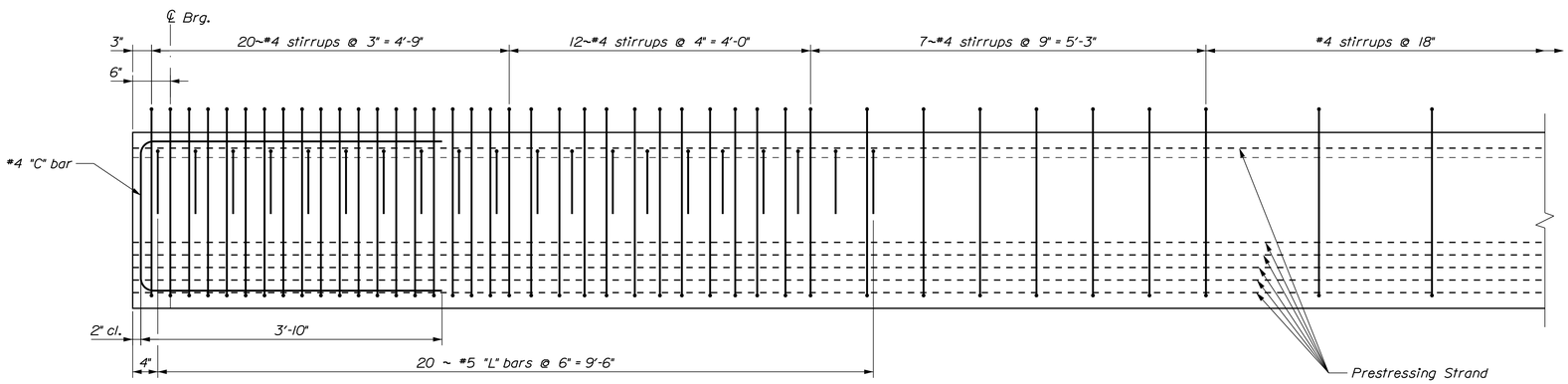


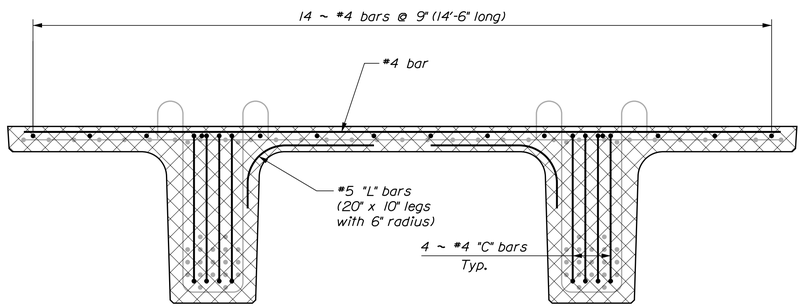
PARTIAL TOP FLANGE REINFORCING PLAN

Welded wire fabric and prestressing strands not shown

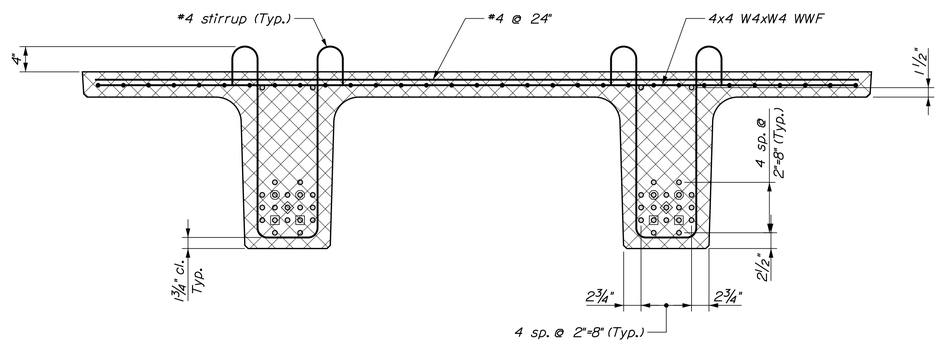


LONGITUDINAL SECTION THROUGH STEM

Top flange reinforcement omitted for clarity



NEXT F BEAM END REINFORCING SECTION



NEXT F BEAM TYPICAL REINFORCING SECTION

◈ Strands debonded 3 ft.

▣ Strands debonded 8 ft.

◎ Strands debonded 14 ft.

WWF Welded Wire Fabric

STATE OF MAINE
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BRIDGE NO. 3787

BRIDGE PLANS

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ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

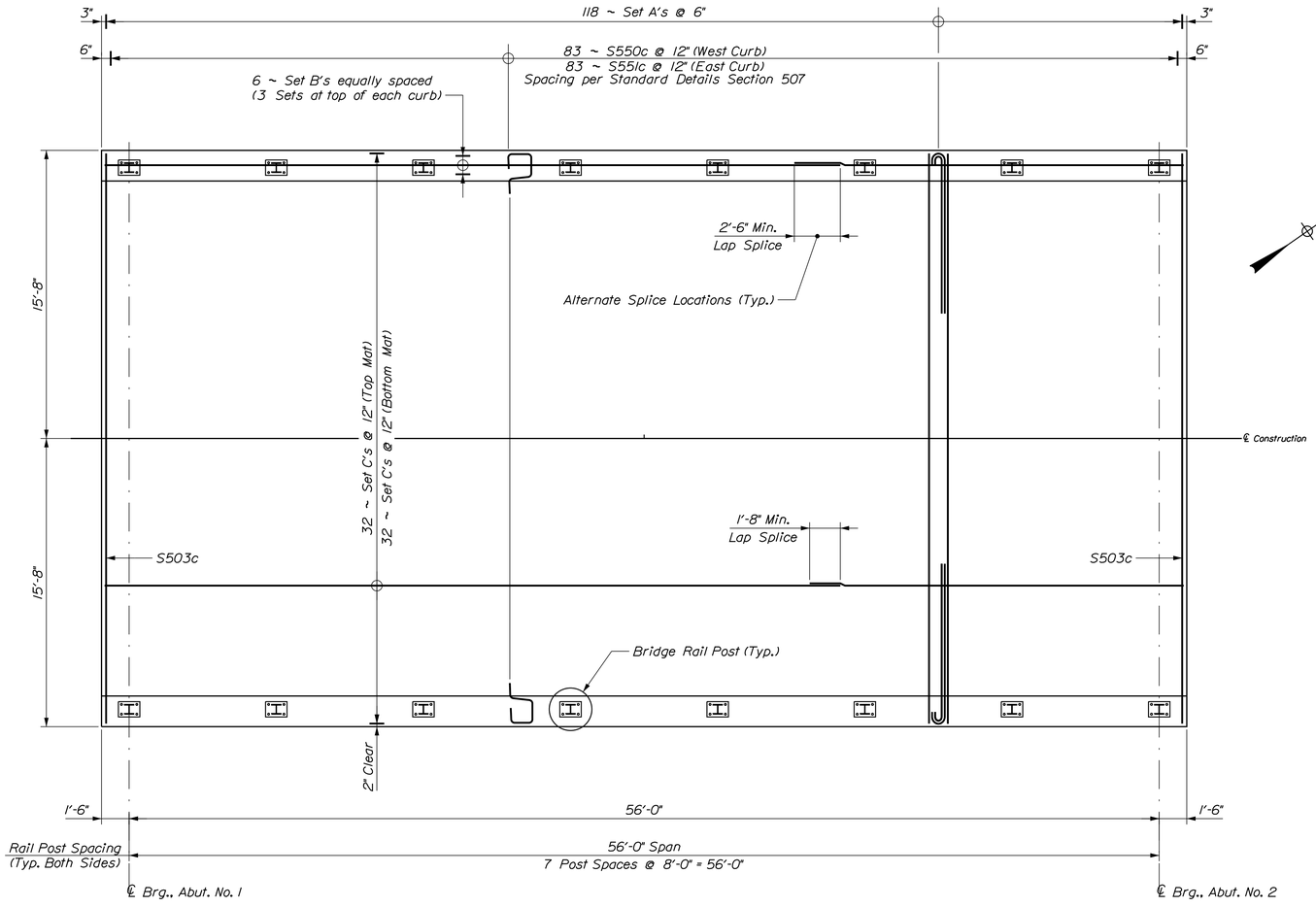
PRECAST NEXT BEAM

SHEET NUMBER

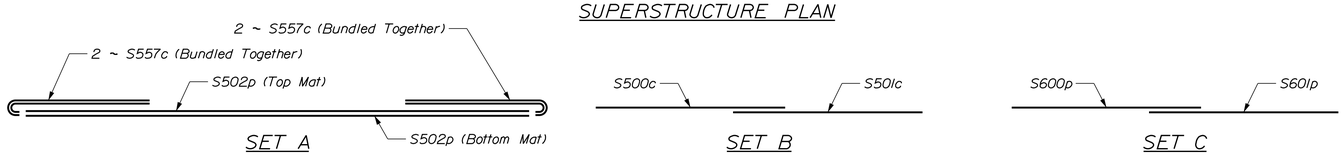
22

OF 26

Filename: ...\022_Precast_NEXT_Beam_Rebor.dgn Division: BRIDGE Username: Richard.Moyer Date:1/15/2025



SUPERSTRUCTURE PLAN



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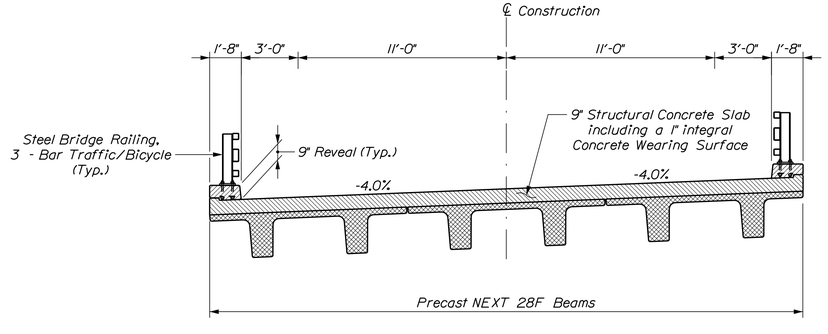

PROPOSED TYPICAL BRIDGE SECTION

SUPERSTRUCTURE NOTES

1. The deck thickness shall be adjusted in accordance with Special Provision Section 535, Precast, Prestressed Concrete Superstructure, Camber.

2. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.

3. Form a one inch V-groove on the fascias at the horizontal joint between the curb and slab.

4. The Saw Cut Grooving shall be in the longitudinal direction.

5. End diaphragm concrete will be paid for under Item No. 502.261, Structural Concrete Roadway and Sidewalk Slabs on Concrete Bridges and shall be placed with the deck.

6. The superstructure slab and end diaphragm shall be placed in one continuous operation and shall be kept plastic until the entire placement has been made.

7. Bar supports for GFRP reinforcement shall be plastic, dieclectric material, or other approved material. See Special Provision Subsection 530.06 for additional requirements.

STATE OF MAINE
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2610500

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FIELD CHANGES			

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P.E. NUMBER

DATE

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

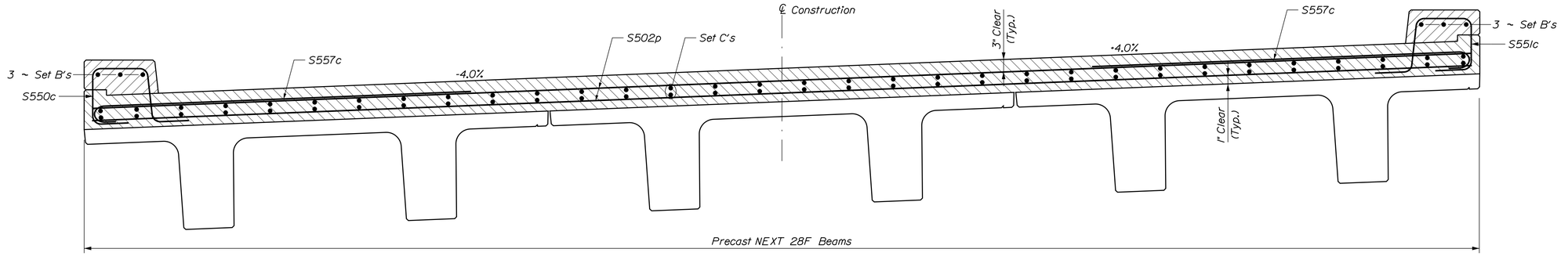
SUPERSTRUCTURE PLAN

SHEET NUMBER

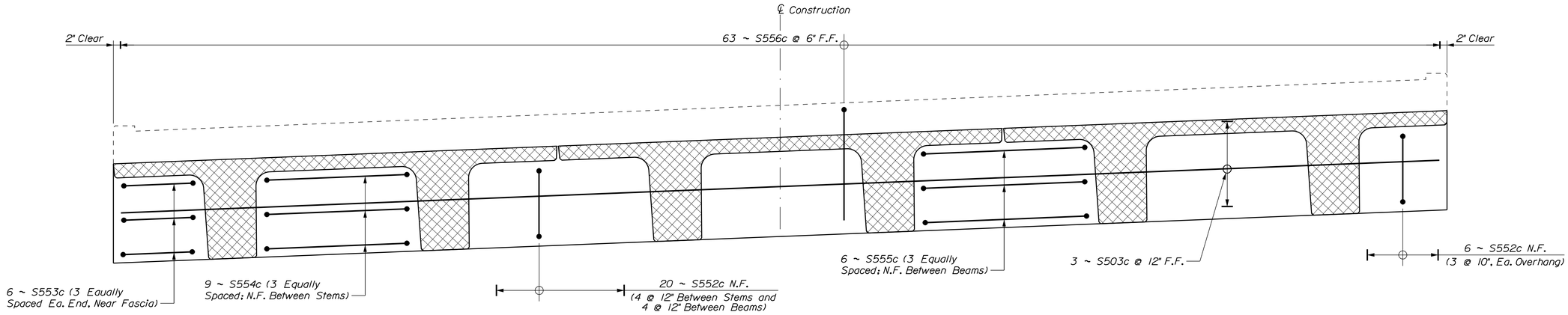
23

OF 26

Username: Richard.Moyer Date:1/15/2025
Division: BRIDGE
Filename: ...\MSTA\023_Superstructure.dgn

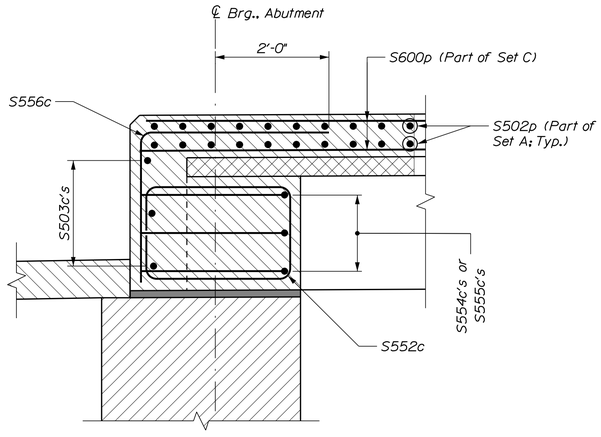


SUPERSTRUCTURE SECTION



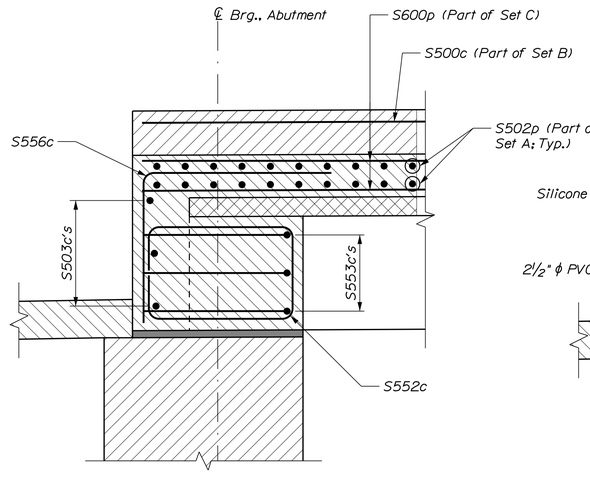
END DIAPHRAGM ELEVATION

Abutment No. 2 End Shown, Abutment No. 1 End, Opposite Hand



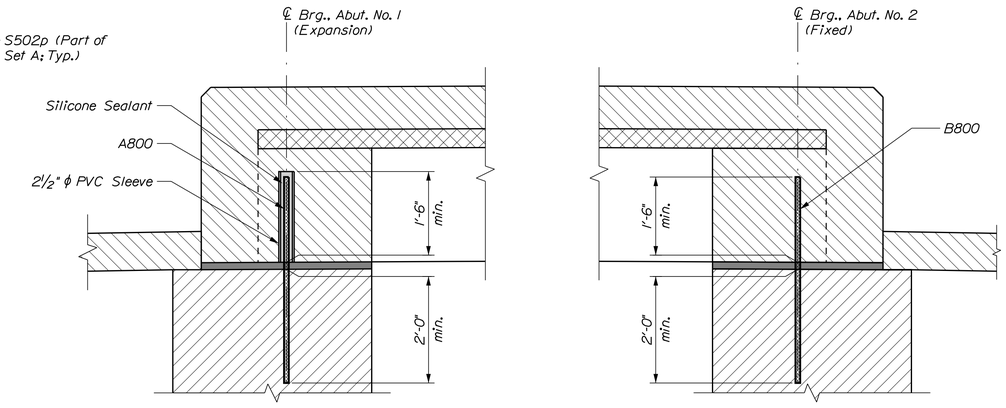
END DIAPHRAGM SECTION AT ROADWAY

Approach Slab Rebar, Abutment Rebar and Curb Stirrups Not Shown For Clarity. (Abutment No. 1 Shown, Abutment No. 2 Similar)



END DIAPHRAGM SECTION AT CURB

Approach Slab Rebar, Abutment Rebar and Curb Stirrups Not Shown For Clarity. (Abutment No. 1 Shown, Abutment No. 2 Similar)



SUPERSTRUCTURE ANCHORAGE DETAIL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE NO. 3787

BRIDGE PLANS

PROJ. MANAGER	M. PARLIN		
DESIGN-DETAILED	B. BARTLETT	D. SHAW	OCT. 2023
CHECKED-REVIEWED	N.PUKAY	T. WHITE	JUL 2024
DESIGN2-DETAILED2	N.PUKAY		
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

SUPERSTRUCTURE SECTION AND END DIAPHRAGM REINFORCEMENT

SHEET NUMBER

24

OF 26

Username: Richard.Moyer Date:1/15/2025

Division: BRIDGE

Filename: ...\024_Superstructure_Section.dgn

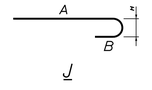
STRAIGHT BARS

MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	LOCATION
			ABUTMENT NO. 1				*ABUTMENT NO. 2*
A500	27	5'-0"	Abt. No. 1 Approach Slab Dowel	B500	27	5'-0"	Abt. No. 1 Approach Slab Dowel
A600	16	42'-4"	Abutment No. 1 Breastwall	B600	16	42'-4"	Abutment No. 1 Breastwall
A601	1	24'-7"	Abutment No. 1 Breastwall	B601	1	24'-7"	Abutment No. 1 Breastwall
A602	1	17'-1"	Abutment No. 1 Breastwall	B602	1	17'-1"	Abutment No. 1 Breastwall
A603c	8	6'-0"	Abutment No. 1 Wingwall	B603c	8	6'-0"	Abutment No. 1 Wingwall
A604c	18	6'-7"	Abutment No. 1 Wingwall	B604c	18	6'-7"	Abutment No. 1 Wingwall
A605c	6	5'-9½"	Abutment No. 1 Wingwall	B605c	6	5'-9½"	Abutment No. 1 Wingwall
A606c	6	5'-0"	Abutment No. 1 Wingwall	B606c	6	5'-0"	Abutment No. 1 Wingwall
A607c	6	4'-2"	Abutment No. 1 Wingwall	B607c	6	4'-2"	Abutment No. 1 Wingwall
A608	11	32'-11"	Abutment No. 1 Backwall	B608	11	32'-11"	Abutment No. 1 Backwall
A800	24	3'-7"	End Diaphragm Dowel	B800	24	3'-7"	End Diaphragm Dowel
A801	11	15'-3"	Abutment No. 1 Backwall	B801	11	15'-3"	Abutment No. 1 Backwall
A802	1	17'-1"	Abutment No. 1 Backwall	B802	1	17'-1"	Abutment No. 1 Backwall
A803	1	24'-7"	Abutment No. 1 Backwall	B803	1	24'-7"	Abutment No. 1 Backwall
			SUPERSTRUCTURE				*APPROACH SLAB*
S500c	6	21'-2"	Superstructure Deck	AS501	32	26'-8"	Approach Slab
S501c	6	40'-0"	Superstructure Deck				
S502p	236	31'-0"	Superstructure Deck	AS601	108	15'-2"	Approach Slab
S503c	6	31'-0"	End Diaphragm				
S600p	64	20'-4"	Superstructure Deck				
S601p	64	40'-0"	Superstructure Deck				

BENT BARS

MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	LOCATION
								ABUTMENT NO. 1					
A550	25	4'-8½"	U	3'-0½"	10"	10"							Abutment No. 1 Wingwall Ends
A551c	3	7'-4"	V				1'-2"	6'-2"			2'-9"		Abutment No. 1 Wingwall Parapet
A552c	3	4'-6"	V				1'-2"	3'-4"			1'-7"		Abutment No. 1 Wingwall Parapet
A553c	36	4'-8½"	U	3'-0½"	10"	10"							Abutment No. 1 Wingwall Parapet
A650	75	13'-2"	U	3'-2"	5'-0"	5'-0"							Abutment No. 1 Breastwall Bottom
A651	46	12'-0"	U	3'-2"	4'-5"	4'-5"							Abutment No. 1 Breastwall Top
A652	39	10'-2"	U	3'-2"	3'-6"	3'-6"							Abutment No. 1 Breastwall Top
A653	10	6'-7½"	L	5'-0"	1'-7½"								Abutment No. 1 Breastwall Bottom
A654	10	6'-11½"	L	5'-0"	1'-11½"								Abutment No. 1 Breastwall Bottom
A655	3	6'-9"	L	1'-0"	5'-9"								Abutment No. 1 Breastwall Bottom
A656	24	5'-6"	L	1'-0"	4'-6"								Abutment No. 1 Breastwall Bottom
A657	3	4'-1"	L	1'-0"	3'-1"								Abutment No. 1 Breastwall Bottom
A658c	2	16'-6"	U	3'-2"	6'-8"	6'-8"							Abutment No. 1 Wingwall Parapet
A659c	1	13'-9"	U	3'-2"	5'-3½"	5'-3½"							Abutment No. 1 Wingwall Parapet
A660c	1	11'-9"	U	3'-2"	4'-3½"	4'-3½"							Abutment No. 1 Wingwall Parapet
A661c	1	9'-8"	U	3'-2"	3'-3"	3'-3"							Abutment No. 1 Wingwall Parapet
A662c	1	7'-8"	U	3'-2"	2'-3"	2'-3"							Abutment No. 1 Wingwall Parapet
A663c	1	5'-8"	U	3'-2"	1'-3"	1'-3"							Abutment No. 1 Wingwall Parapet
A664c	4	11'-2"	U	3'-2"	4'-0"	4'-0"							Abutment No. 1 Wingwall Parapet
A665c	1	10'-1"	U	3'-2"	3'-5½"	3'-5½"							Abutment No. 1 Wingwall Parapet
A666c	1	8'-2"	U	3'-2"	2'-6"	2'-6"							Abutment No. 1 Wingwall Parapet
A667c	1	6'-4"	U	3'-2"	1'-7"	1'-7"							Abutment No. 1 Wingwall Parapet
								ABUTMENT NO. 2					
B550	25	4'-8½"	U	3'-0½"	10"	10"							Abutment No. 2 Wingwall Ends
B551c	3	7'-4"	V				1'-2"	6'-2"			2'-9"		Abutment No. 2 Wingwall Parapet
B552c	3	4'-6"	V				1'-2"	3'-4"			1'-7"		Abutment No. 2 Wingwall Parapet
B553c	36	4'-8½"	U	3'-0½"	10"	10"							Abutment No. 2 Wingwall Parapet
B650	75	13'-2"	U	3'-2"	5'-0"	5'-0"							Abutment No. 2 Breastwall Bottom
B651	46	12'-0"	U	3'-2"	4'-5"	4'-5"							Abutment No. 2 Breastwall Top
B652	39	10'-2"	U	3'-2"	3'-6"	3'-6"							Abutment No. 2 Breastwall Top
B653	10	6'-7½"	L	5'-0"	1'-7½"								Abutment No. 2 Breastwall Bottom
B654	10	6'-11½"	L	5'-0"	1'-11½"								Abutment No. 2 Breastwall Bottom
B655	3	6'-9"	L	1'-0"	5'-9"								Abutment No. 2 Breastwall Bottom
B656	24	5'-6"	L	1'-0"	4'-6"								Abutment No. 2 Breastwall Bottom
B657	3	4'-1"	L	1'-0"	3'-1"								Abutment No. 2 Breastwall Bottom
B658c	2	16'-6"	U	3'-2"	6'-8"	6'-8"							Abutment No. 2 Wingwall Parapet
B659c	1	13'-9"	U	3'-2"	5'-3½"	5'-3½"							Abutment No. 2 Wingwall Parapet
B660c	1	11'-9"	U	3'-2"	4'-3½"	4'-3½"							Abutment No. 2 Wingwall Parapet
B661c	1	9'-8"	U	3'-2"	3'-3"	3'-3"							Abutment No. 2 Wingwall Parapet
B662c	1	7'-8"	U	3'-2"	2'-3"	2'-3"							Abutment No. 2 Wingwall Parapet
B663c	1	5'-8"	U	3'-2"	1'-3"	1'-3"							Abutment No. 2 Wingwall Parapet
B664c	4	11'-2"	U	3'-2"	4'-0"	4'-0"							Abutment No. 2 Wingwall Parapet
B665c	1	10'-1"	U	3'-2"	3'-5½"	3'-5½"							Abutment No. 2 Wingwall Parapet
B666c	1	8'-2"	U	3'-2"	2'-6"	2'-6"							Abutment No. 2 Wingwall Parapet
B667c	1	6'-4"	U	3'-2"	1'-7"	1'-7"							Abutment No. 2 Wingwall Parapet
								SUPERSTRUCTURE					
S550c	83	5'-5¼"	SC	10"	1'-3½"	1'-3"	1'-2¾"			10"		1'-4"	Superstructure Curb
S551c	83	5'-3¾"	SC	10"	1'-2¾"	1'-3"	1'-2"			10"		1'-4"	Superstructure Curb
S552c	52	8'-5"	C	9½"	2'-7"	1'-8"	2'-7"	9½"					End Diaphragm
S553c	12	6'-11"	U	1'-9"	2'-7"	2'-7"							End Diaphragm
S554c	18	8'-7"	U	3'-5"	2'-7"	2'-7"							End Diaphragm
S555c	12	9'-1"	U	3'-11"	2'-7"	2'-7"							End Diaphragm
S556c	126	6'-0"	L	3'-4"	2'-8"								End Diaphragm
S557c	472	9'-1"	J	8'-6"	7"						5"		Superstructure 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.

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

GENERAL NOTES

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

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

2. All bars shall be Plain Reinforcing Steel unless the bar number is followed by a lower case letter. The lower case letter following the bar number indicates the material of the bar.

   "S500p", p = Glass Fiber Reinforced Polymer
   "P510c", c = Low-Carbon Chromium Steel

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2610500

WIN 026105.00

BRIDGE PLANS

BRIDGE NO. 3787

PROJ. MANAGER	M. PARLIN		
DESIGN-DETAILED	B. BARTLETT	BY	D. SHAW
CHECKED-REVIEWED	N.PUKAY	DATE	OCT. 2023
DESIGN2-DETAILED2	N.PUKAY	BY	T. WHITE
DESIGN3-DETAILED3		DATE	JUL 2024
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

ROUND POND BRIDGE
ROUND POND OUTLET
CHARLOTTE WASHINGTON COUNTY

REINFORCING STEEL SCHEDULE

SHEET NUMBER

25

OF 26

Filename: ...\00\BRIDGE\MSTA\025_Rebar.dgn Division: BRIDGE Username: Richard.Moyer Date:1/15/2025

Filename: ...\00\ROW\MSTA\001_RWPLAN1.dgn Division: BRIDGE Username: Richard.Moyer Date:1/15/2025

PLAN LEGEND

Town, County, State	New R/W Along Existing R/W		Existing	Proposed		Existing	Proposed
Approx. Property Lines P.L.	Building	Clearing Limit Line	Sanitary Sewer		Traveled Way		
Existing Right of Way	Trees Conifer	Deciduous	Telephone Line		Ditch		
Limits of Wrought Portion L.O.W.P.	Tree Line	Bush Line	Electric Line		Catch Basin		
Control Of Access C.O.A.	Water Edge		Water Line		Manhole		
New Right of Way	Ledge	Rock/Boulder Flag Pole	Underdrain Line		Sewer Manhole		
New Easement	Fence CHAIN LINK	BARB WIRE STOCKADE	Gas Line		Utility Pole		
New Temporary Rights	Sign	Well WELL Mailbox	Guardrail		Fire Hydrant		
New R/W Within Existing R/W			Culvert		Curbing		

Cut Line, Fill Line, Stonewall, Retaining Wall, Baseline 10+00 11+00 12+00, Monument, Traverse Point, Iron Rod Found IRF, Pipe Found IPF, Replacement Pin Set

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 ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

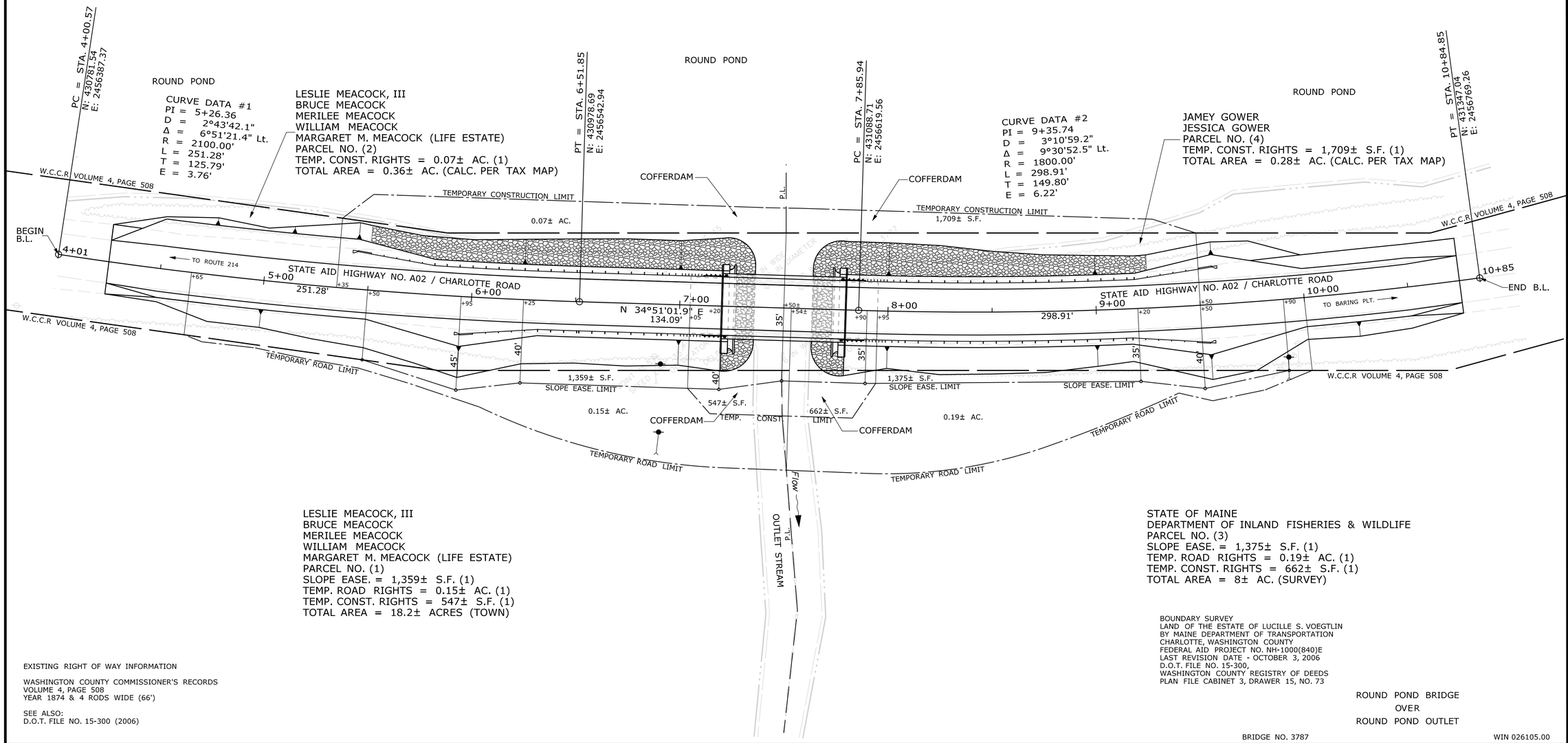
STATE OF MAINE REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h_____m_____M and
recorded in Plan Bk _____, Pg._____
Attest: _____
REGISTER

GRID
MAINE 2000 EAST ZONE

CONTROL INFORMATION

HORIZONTAL DATUM - U.S. STATE PLANE DAD83(2011)
ZONE - MAINE 2000 EAST
VERTICAL DATUM - NAVD 88
COMBINED FACTOR - 1.0000089932



LESLIE MEACOCK, III
BRUCE MEACOCK
MERILEE MEACOCK
WILLIAM MEACOCK
MARGARET M. MEACOCK (LIFE ESTATE)
PARCEL NO. (1)
SLOPE EASE. = 1,359± S.F. (1)
TEMP. ROAD RIGHTS = 0.15± AC. (1)
TEMP. CONST. RIGHTS = 547± S.F. (1)
TOTAL AREA = 18.2± ACRES (TOWN)

STATE OF MAINE
DEPARTMENT OF INLAND FISHERIES & WILDLIFE
PARCEL NO. (3)
SLOPE EASE. = 1,375± S.F. (1)
TEMP. ROAD RIGHTS = 0.19± AC. (1)
TEMP. CONST. RIGHTS = 662± S.F. (1)
TOTAL AREA = 8± AC. (SURVEY)

EXISTING RIGHT OF WAY INFORMATION

WASHINGTON COUNTY COMMISSIONER'S RECORDS
VOLUME 4, PAGE 508
YEAR 1874 & 4 RODS WIDE (66')

SEE ALSO:
D.O.T. FILE NO. 15-300 (2006)

BOUNDARY SURVEY
LAND OF THE ESTATE OF LUCILLE S. VOEGTLIN
BY MAINE DEPARTMENT OF TRANSPORTATION
CHARLOTTE, WASHINGTON COUNTY
FEDERAL AID PROJECT NO. NH-1000(840)E
LAST REVISION DATE - OCTOBER 3, 2006
D.O.T. FILE NO. 15-300,
WASHINGTON COUNTY REGISTRY OF DEEDS
PLAN FILE CABINET 3, DRAWER 15, NO. 73

ROUND POND BRIDGE
OVER
ROUND POND OUTLET

BRIDGE NO. 3787 WIN 026105.00

TECH	CHECKED
ITEM	G.L. C.D.P. D.G. C.D.P. S.N. C.D.P.
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

CHARLOTTE
RIGHT OF WAY MAP

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD

NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE AID HIGHWAY NO. A02
CHARLOTTE ROAD
CHARLOTTE WASHINGTON COUNTY
FEDERAL AID PROJECT NUMBER 2610500

JUNE 2024 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 15-346
SCALE 1" = 25' | SHEET 1 OF 1

SHEET NUMBER
26
OF 26