STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

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 (2020) AADT	4680
Future (2040) AADT	5260
DHV - % of AADT	13%
Design Hour Volume	731
Heavy Trucks (% of AADT)	4%
Heavy Trucks (% of DHV)	3%
Directional Distribution (% of DHV)	69%
18 kip Equivalent P 2.0	123
18 kip Equivalent P 2.5	118
Design Speed (mph)	25 MPH

MATERIALS

Concrete:
- Curbs ..... Class "LP"
- All Other ..... Class "A"

Reinforcing Steel
- Deck Bars, Curb Bars, End Diaphragm and Wingwalls ..... ASTM A1035, Alloy Type CS, Grade 100
- All Others ..... ASTM A615/A615M, Grade 60

BASIC DESIGN STRESSES

CONCRETE:
- Class "LP" ..... f 'c = 5000 psi
- Class "A" ..... f 'c = 4000 psi

REINFORCING STEEL:
- ASTM A1035, Grade 100 ..... f y = 100,000 psi
- ASTM A615, Grade 60 ..... f y = 60,000 psi

KENNEBUNK
YORK COUNTY
NASH MILL BRIDGE
OVER
MOUSAM RIVER
MILL STREET
FEDERAL PROJECT NO. 2362900
PROJECT LENGTH 0.076 mi.
BRIDGE NO. 5756

LIST OF DRAWINGS

UTILITIES

Kennebunk Light and Power Company
Kennebunk, Kennebunkport & Wells Water District

MAINTENANCE OF TRAFFIC

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

PROJECT LOCATION	Nash Mill Bridge carrying Mill Street over Mousam River in Kennebunk, ME Latitude: 43°24' 13.54" N, Longitude: 70°35' 9.78" W
PROGRAM AREA	Bridge Program
OUTLINE OF WORK	Bridge deck replacement and wingwall modifications.

WIN 023629.00

2362900

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
APPROVED	
COMMISSIONER:	10-30-23
CHIEF ENGINEER: Angela Wall Taylor	10/30/2023

STATE OF MAINE — Adam Stockton — 12202 — PROFESSIONAL ENGINEER — 10/23/23

PROJECT INFORMATION	
PROGRAM	BRIDGE
PROJECT MANAGER	D. EATON
DESIGNER	A. STOCKTON
CONSULTANT	WSP
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

KENNEBUNK
NASH MILL BRIDGE

TITLE SHEET

SHEET NUMBER
1
OF 26

Date:10/25/2023
Username:
Division: BRIDGE
Filename:\Codd\BRIDGE\MSTA\001_Title.dgn

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION		QUANTITY	UNIT
202.10	REMOVING EXISTING SUPERSTRUCTURE PROPERTY OF CONTRACTOR	(47 CY)	1	LS
202.12	REMOVING EXISTING STRUCTURAL CONCRETE		31	CY
202.202	REMOVING PAVEMENT SURFACE		690	SY
203.20	COMMON EXCAVATION		310	CY
203.25	GRANULAR BORROW		133	CY
206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES, PLAN QUANTITY		153	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL		320	CY
403.2081	12.5 MM POLYMER MODIFIED HOT MIX ASPHAULT		96	T
403.209	HOT MIX ASPHALT 9.5 MM (INCIDENTALS)		5	T
403.211	HOT MIX ASPHALT (SHIM)		25	T
403.2131	12.5 MM POLYMER MODIFIED HOT MIX ASPHAULT BASE		65	T
409.15	BITUMINOUS TACK COAT - APPLIED		59	G
424.304	HIGH MOLECULAR WEIGHT METHACRYLATE CRACK SEALER		35	G
502.219	STRUCTURAL CONCRETE, ABUTMENTS & RETAINING WALLS	(11 CY)	1	LS
502.26	STRUCTURAL CONCRETE ROADWAY AND SIDEWALK SLAB ON STEEL BRIDGES	(93 CY)	1	LS
502.291	SAW CUT GROOVING	(2091 SF)	1	LS
502.31	STRUCTURAL CONCRETE APPROACH SLABS	(21 CY)	1	LS
502.49	STRUCTURAL CONCRETE CURBS AND SIDEWALKS	(7 CY)	1	LS
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED		4350	LB
503.13	REINFORCING STEEL, PLACING		4350	LB
503.17	MECHANICAL/WELDED SPLICE		724	EA
503.19	LOW-CARBON CHROMIUM REINFORCEMENT, FABRICATED AND DELIVERED		30900	LB
503.20	LOW CARBON CHROMIUM REINFORCEMENT, PLACING		30900	LB
505.08	SHEAR CONNECTORS	(810 EA)	1	LS
507.0821	STEEL BRIDGE RAILING, 3-BAR	(154 LF)	1	LS
507.0822	STEEL APPROACH RAIL, 3-BAR		4	EA
508.13	SHEET WATERPROOFING MEMBRANE	(38 SY)	1	LS
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES	(65 SY)	1	LS
518.60	REPAIR OF VERTICAL SURFACES < 8 INCHES		160	SF
518.80	CRACK REPAIR		40	LF
520.233	EXPANSION DEVICE - SILICONE COATED PRECOMPRESSED FOAM		43	LF
524.301	TEMPORARY STRUCTURAL SUPPORT - LATERAL BRACING		1	LS
524.301	TEMPORARY STRUCTURAL SUPPORT (ROADWAY SUPPORT DURING STAGED CONSTRUCTION)		1	LS
526.305	PORTABLE CONCRETE BARRIER, BRACED TYPE I	(180 LF)	1	LS
527.34	WORK ZONE CRASH CUSHIONS		2	UN
606.1301	31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, SINGLE FACED)		260	LF
606.1303	31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, 15' RADIUS AND LESS)		32	LF
606.1304	31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, OVER 15' RADIUS)		41	LF
606.1721	BRIDGE TRANSITION - TYPE I		4	EA
606.265	TERMINAL END - SINGLE RAIL - GALVANIZED STEEL		2	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER		8	EA
606.78	LOW VOLUME GUARDRAIL END		2	EA
613.319	EROSION CONTROL BLANKET		210	SY
615.07	LOAM		13	CY
618.14	SEEDING, METHOD NUMBER 2		2	UN
619.12	MULCH		2	UN
619.14	EROSION CONTROL MIX		25	CY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE		1390	LF
627.77	REMOVE EXISTING PAVEMENT MARKING		780	SF
627.78	TEMPORARY PAVEMENT MARKING LINE, WHITE OR YELLOW		1100	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 BASE COURSE (INCLUDING OPERATOR)		10	HR
631.172	TRUCK-LARGE (INCLUDING OPERATOR)		10	HR
631.21	ROAD BROOM (INCLUDING OPERATOR & HAULER)		10	HR
639.19	FIELD OFFICE TYPE B		1	EA
643.72	TEMPORARY TRAFFIC SIGNAL		1	LS
652.33	DRUM		23	EA
652.34	CONE		46	EA
652.35	CONSTRUCTION SIGNS		400	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES		1	LS
652.38	FLAGGER		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

Filename: ...\Cadd\BRIDGE\MSTA\002_Estimate Division: BRIDGE Username: Date:10/25/2023

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE PLANS

BRIDGE NO. 5756

SIGNATURE
12202
P.E. NUMBER
10/23/2023
DATE

		BY	DATE
PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	G. ERICKSON	W. GERHOLD	9/2023
CHECKED-REVIEWED	N. GOMEZ	T. POLSON	9/2023
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

ESTIMATED QUANTITIES

wsp

SHEET NUMBER

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

5. 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.

6. Unless otherwise noted, place loam 2 inches deep on all new or reconstructed side slopes or as directed by the Resident.

7. Guardrail end treatments shall be installed concurrently with the placement of each section of beam guardrail. No exposed ends are allowed.

8. 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.

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

   All exposed surfaces of concrete curbs, fascias down to the drip notch, top of abutment backwalls and wingwalls, and to one foot below the ground on vertical walls against earth.

10. Apply High Molecular Weight Methacrylate Crack Sealer to concrete curbs and concrete wearing surface. Apply to curb faces with a brush. This work will be paid under Pay Item 424.304, High Molecular Weight Methacrylate Crack Sealer.

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

12. 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.

13. Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for additional informational purposes only. Lump Sum pay items will be paid for at 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.

14. The Contractor shall submit a bridge deck removal plan to the Resident at least 10 days prior to the start of demolition work. The plan shall outline the methods and equipment to be used to remove and dispose of all materials included in the existing bridge deck. No work related to the removal of the bridge deck shall be undertaken by the Contractor until MaineDOT has reviewed the bridge deck removal plan for appropriateness and completeness. Payment for all work necessary developing, submitting and finalizing the removal plan will be considered incidental to the bridge deck removal pay item.

15. The steel portions of the existing bridge may be coated with a lead-based paint system. the Contractor is responsible for the containment, proper management and disposal of all lead-contaminated hazardous waste generated by the process of rehabilitating the bridge. The Contractor is responsible for implementing appropriate OSHA mandated personal protection standards related to this process. Payment for all labor, materials, equipment and other costs required to remove and dispose of lead-contaminated waste will be considered incidental to Contract related items.

16. The Contractor shall plan and conduct the work accordingly so that upon final completion of the project there is no drop-off from the edge of shoulder pavement. All remaining or disturbed material on slopes or in ditches on the project shall be capable of attaining a growth of grass that is acceptable according to Standard Specification 618.10. No separate payment will be made for this work.

17. 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 Specification Section 619, Mulch. Payment will be made under Item 619.14, Erosion Control Mix.

18. 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.

19. Place a 24 inch wide strip of Erosion Control Blanket on the sideslopes adjacent to the edge of pavement and behind the wingwalls.

20. Where new pavement joins existing pavement the existing pavement shall be sawcut along a smooth line to a neat, even, vertical joint, as directed by the Resident. Broken or raveled edges will not be permitted. All work necessary for the preparation of this joint will be considered incidental to the related contract items.

21. Concrete repairs are required at the abutments and will be paid under Item 518.60. The areas and limits of repair shall be established in the field by the Resident.

22. When removing existing bridge drains, the Contractor shall remove the tack welds flush with the existing girder.

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

24. Clean off existing bearings and have Resident inspect prior to placing any reinforcing in any end diaphragm or forming of concrete end diaphragm.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE NO. 5766

BRIDGE PLANS

STATE OF MAINE — Adam Stolnicki — 12202 — PROFESSIONAL ENGINEER — 10/23/23

SIGNATURE			
12202			
P.E. NUMBER			
10/23/2023			
DATE			

PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	N. GOMEZ	W. GERHOLD	9/2023
CHECKED-REVIEWED	T. POLSON	T. POLSON	9/2023
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

GENERAL CONSTRUCTION NOTES

SHEET NUMBER

3

OF 26

Filename: ...\BRIDGE\MSTA\004_BDPlan.dgn Username: Division: BRIDGE Date:10/25/2023

SUPERELEVATION TABLE

LT SHOULDER	LT TRAVELWAY	STATION	RT TRAVELWAY	RT SHOULDER
MATCH EXISTING	MATCH EXISTING	21+50	MATCH EXISTING	MATCH EXISTING
-2.1	-3.8	21+75	-6.2	-6.2
-4.0	-3.8	21+85	-6.0	-6.0
-4.0	-3.8	22+35	-4.7	-4.7
-0.4	-3.8	22+75	-3.7	-3.7
-3.1	-3.1	23+00	-3.1	-3.1
-3.1	-3.1	24+25	-3.1	-3.1
-2.4	-2.4	24+50	-3.1	-3.1
-2.4	-2.4	24+75	-3.1	-3.1
MATCH EXISTING	MATCH EXISTING	25+50	MATCH EXISTING	MATCH EXISTING

ITEM 606.1301 - 31" W-Beam Guardrail - Mid-Way Splice (Steel Post, 8" Offset Blocks, Single Faced)	LF
STA 22+33.9, 14.0'LT TO STA 23+18.7, 14.0'LT	87.5
STA 21+76.5, 26.4'RT TO STA 21+86.6, 23.8'RT	9.38
STA 22+07.0, 21.3'RT TO STA 23+18.7, 14.0'RT	106.25
STA 24+52.3, 14.0'LT TO STA 24+76.9, 14.0'LT	25.0
STA 24+53.2, 14.0'RT TO STA 24+85.0, 14.0'RT	31.25

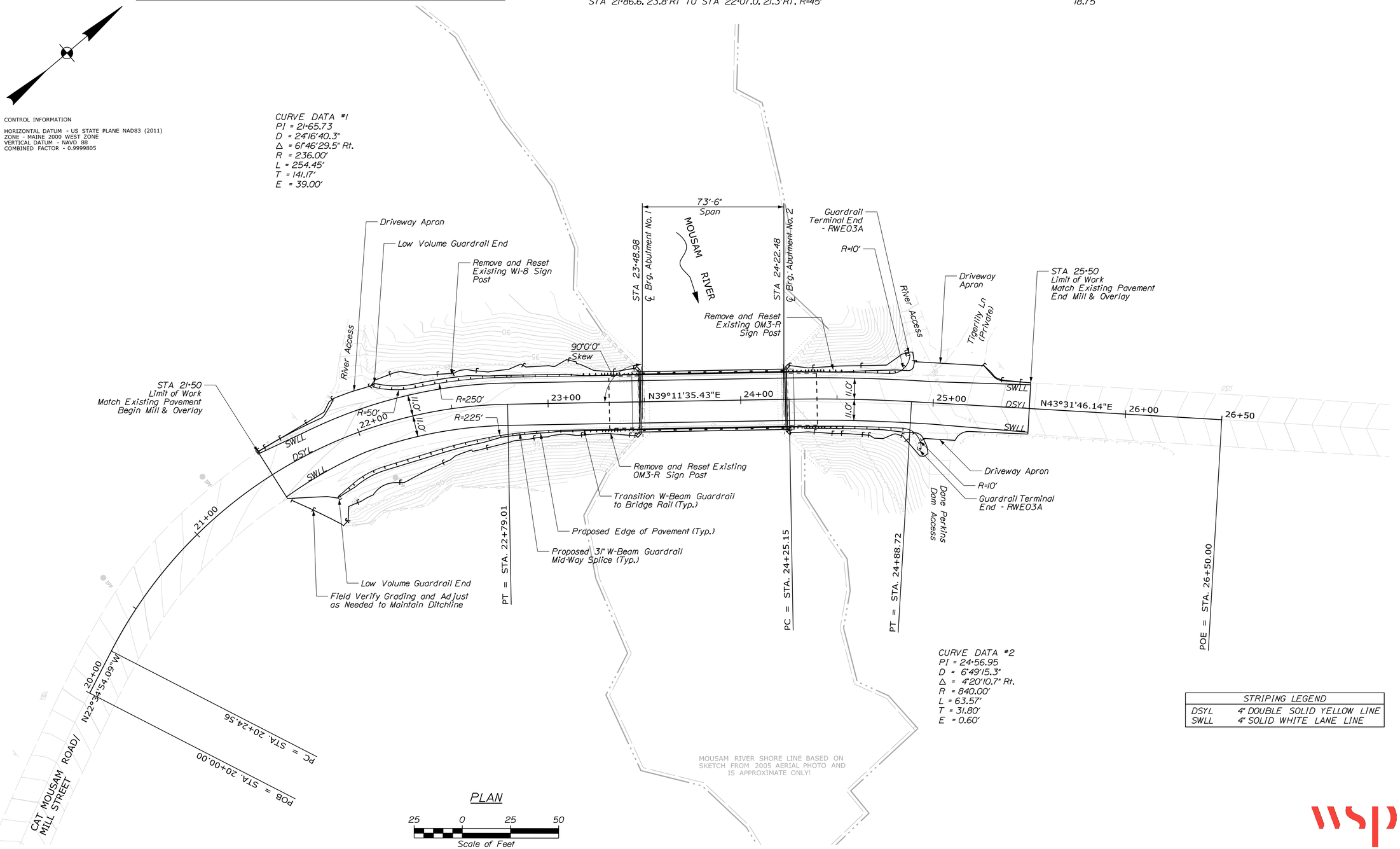
ITEM 606.1303 - 31" W-Beam Guardrail - Mid-Way Splice (Steel Post, 8" Offset Blocks, 15'Radius and Less)	LF
STA 24+76.9, 14.0'LT TO STA 24+86.6, 24.0'LT, R=10'	15.63
STA 24+85.0, 14.0'RT TO STA 24+95.1, 23.9'RT, R=10'	15.63

ITEM 606.1304 - 31" W-Beam Guardrail - Mid-Way Splice (Steel Post, 8" Offset Blocks, Over 15'Radius)	LF
STA 22+14.3, 19.6'LT TO STA 22+33.9, 14.0'LT, R=50'	21.88
STA 21+86.6, 23.8'RT TO STA 22+07.0, 21.3'RT, R=45'	18.75

CONTROL INFORMATION

HORIZONTAL DATUM - US STATE PLANE NAD83 (2011)
ZONE - MAINE 2000 WEST ZONE
VERTICAL DATUM - NAVD 88
COMBINED FACTOR - 0.9999805

CURVE DATA #1
PI = 21+65.73
D = 24°16'40.3"
Δ = 61°46'29.5" Rt.
R = 236.00'
L = 254.45'
T = 141.17'
E = 39.00'



PLAN

25 0 25 50
Scale of Feet

CURVE DATA #2
PI = 24+56.95
D = 6°49'15.3"
Δ = 4°20'10.7" Rt.
R = 840.00'
L = 63.57'
T = 31.80'
E = 0.60'

STRIPING LEGEND	
DSYL	4" DOUBLE SOLID YELLOW LINE
SWLL	4" SOLID WHITE LANE LINE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE PLANS

BRIDGE NO. 5756

STATE OF MAINE TIMOTHY C HIGGINSON No. 12558 REGISTERED PROFESSIONAL ENGINEER

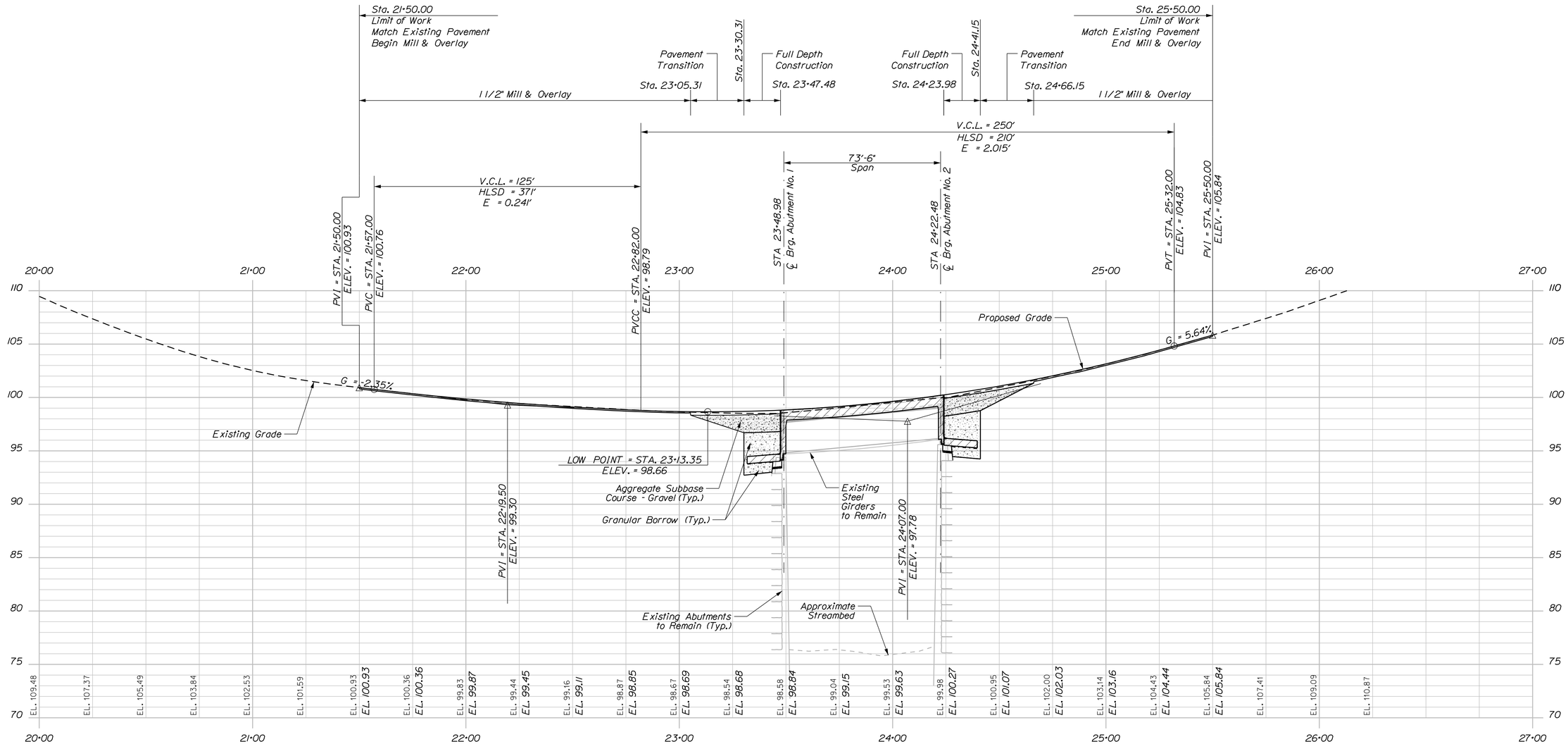
Scott Cliff — SIGNATURE
12558 — P.E. NUMBER
10/23/2023 — DATE

PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	J. KHERA	9/2023	
CHECKED-REVIEWED	T. HIGGINSON	9/2023	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

NASH MILL BRIDGE
MOUSAM RIVER
YORK COUNTY
KENNEBUNK

GENERAL PLAN

SHEET NUMBER
4
OF 26



PROFILE

Horiz. 25 0 25 50
Vert. 5 0 5 10
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE NO. 5756

BRIDGE PLANS

STATE OF MAINE TIMOTHY C. HIGGINSON No. 12558 REGISTERED PROFESSIONAL ENGINEER

	BY	DATE
PROJ. MANAGER	D. EATON	
DESIGN-DETAILED	J. KHERA	9/2023
CHECKED-REVIEWED	T. HIGGINSON	9/2023
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

12558
P.E. NUMBER

10/23/2023
DATE

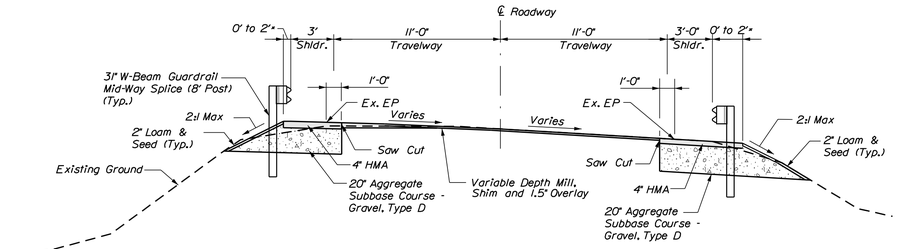
NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

PROFILE

SHEET NUMBER

5

OF 26



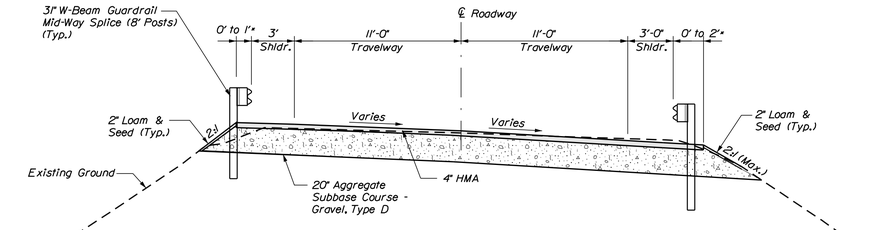
TYPICAL WIDENED SECTION

STA 21+50.00 TO 23+05.31
STA 24+66.15 TO 25+50.00

* Berm hinge point width shall vary to best match existing condition slopes. Field verify and maximize berm grading to 2' where possible.

Berm Width Left	
21+50.00 TO 22+60.00	2'
22+60.00 TO 22+70.00	2' TO 1'
22+70.00 TO 23+05.31	1'
24+66.15 TO 24+80.00	1.07' TO 2'
24+80.00 TO 25+50.00	2'

Berm Width Right	
21+50.00 TO 22+65.00	2'
22+65.00 TO 22+75.00	2' TO 1'
22+75.00 TO 23+00.00	1'
23+00.00 TO 23+05.31	1' TO 0.5'
24+66.15 TO 24+75.00	1.25'
24+75.00 TO 24+85.00	1.25' TO 2'
24+75.00 TO 25+50.00	2'

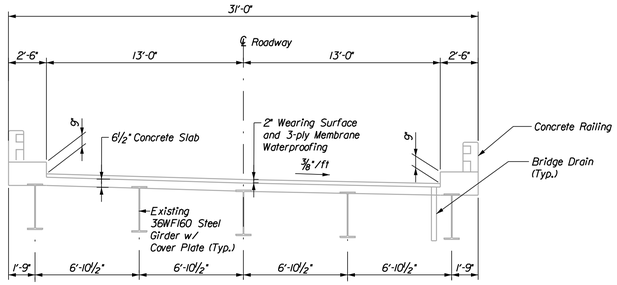


TYPICAL APPROACH SECTION

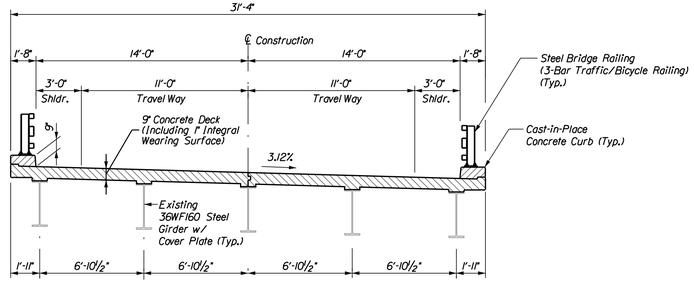
STA 23+05.31 TO 23+47.48
STA 24+23.98 TO 24+66.15

Berm Width Left	
23+05.31 TO 23+10.00	1'
23+10.00 TO 23+20.00	1' TO 0'
23+20.00 TO 23+47.48	0'
24+23.98 TO 24+50.00	0'
24+50.00 TO 24+66.15	0' TO 1.07'

Berm Width Right	
23+05.31 TO 23+47.48	0.5'
24+23.98 TO 24+66.15	1.25'



EXISTING BRIDGE SECTION



PROPOSED BRIDGE SECTION

NOTES

1. The pavement and base depths as shown on the plans are intended to be nominal.
2. When superelevation exceeds the slope of the low side shoulder, the low side shoulder shall have the same slope as the travelway.
3. The algebraic difference between the shoulder and travelway cross slopes "rollover" shall not exceed 8%.
4. Crowns for both normal and superelevated sections for all courses of subbase and pavement shall be straight.
5. The stationing shown under each typical is approximate.
6. Guardrail limits shall be as shown on plan. Guardrail shall be offset minimum 14' from the Roadway CL, regardless of shoulder and berm widths.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE PLANS

BRIDGE NO. 5756

STATE OF MAINE — Adam Stolch — 12202 — REGISTERED PROFESSIONAL ENGINEER — 10/23/23

SIGNATURE

12202
P.E. NUMBER

10/23/2023
DATE

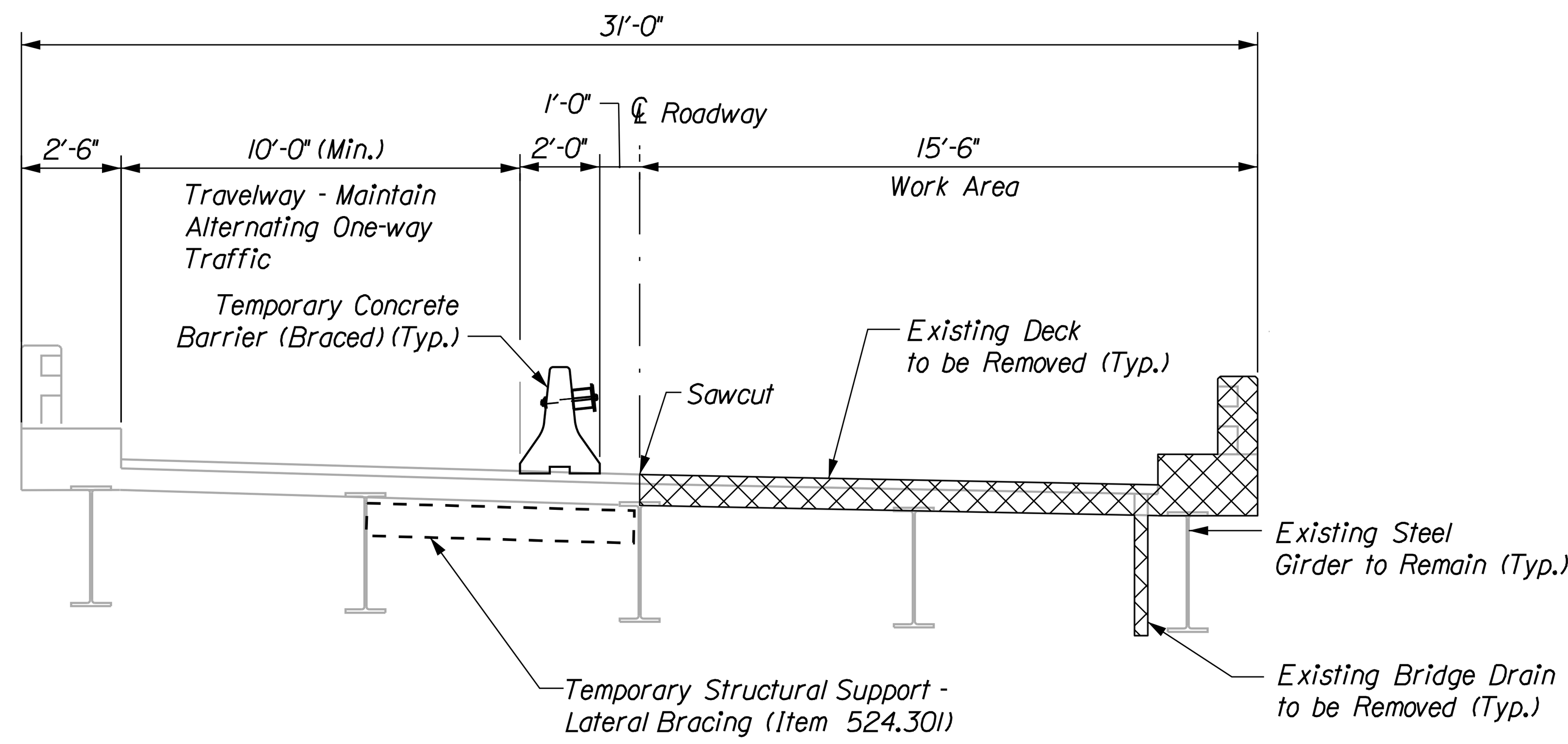
			DATE
PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	J. KHERA	W. GERHOLD	9/2023
CHECKED-REVIEWED	T. HIGGINSON	T. HIGGINSON	9/2023
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK — YORK COUNTY

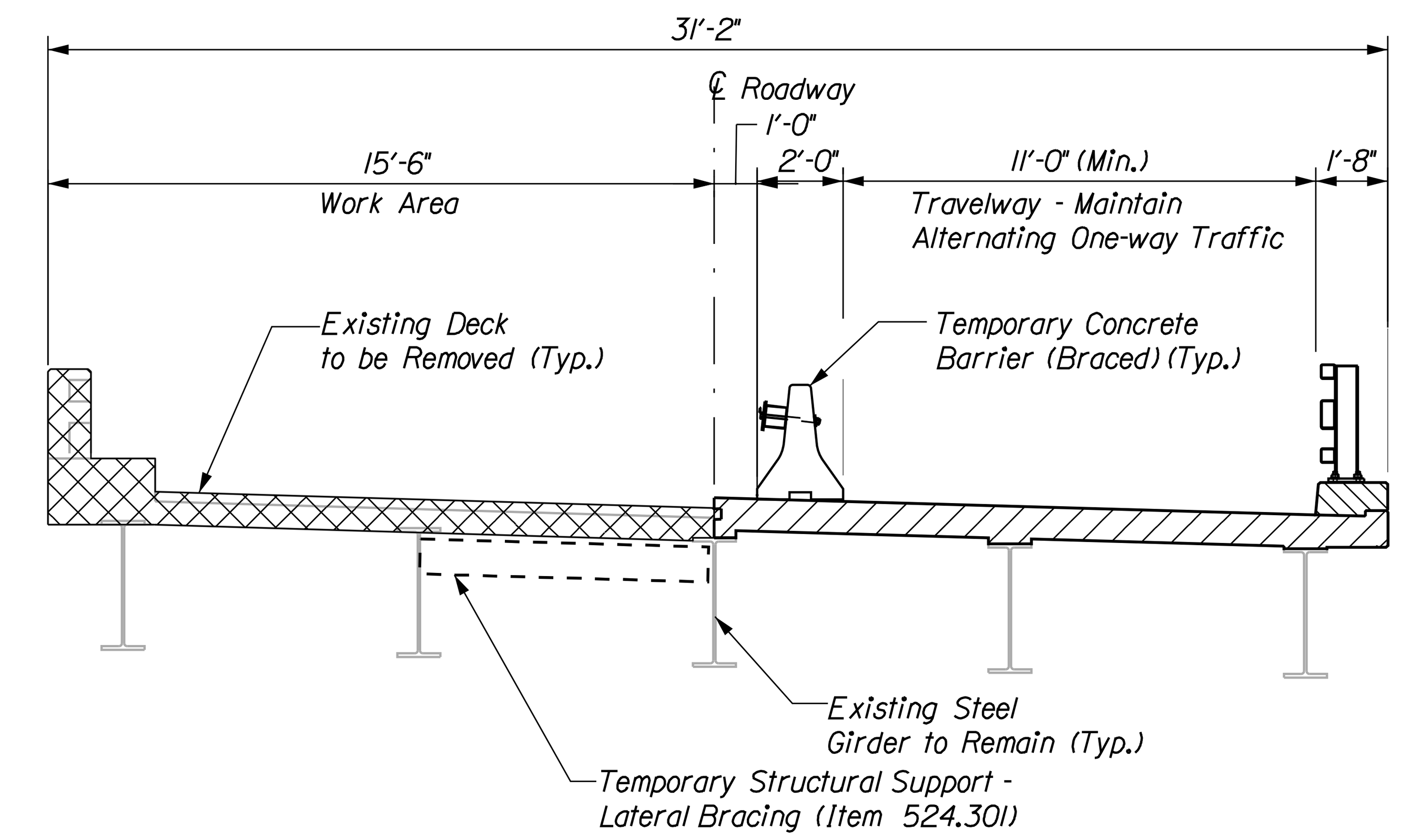
TYPICAL SECTIONS

SHEET NUMBER
6
OF 26

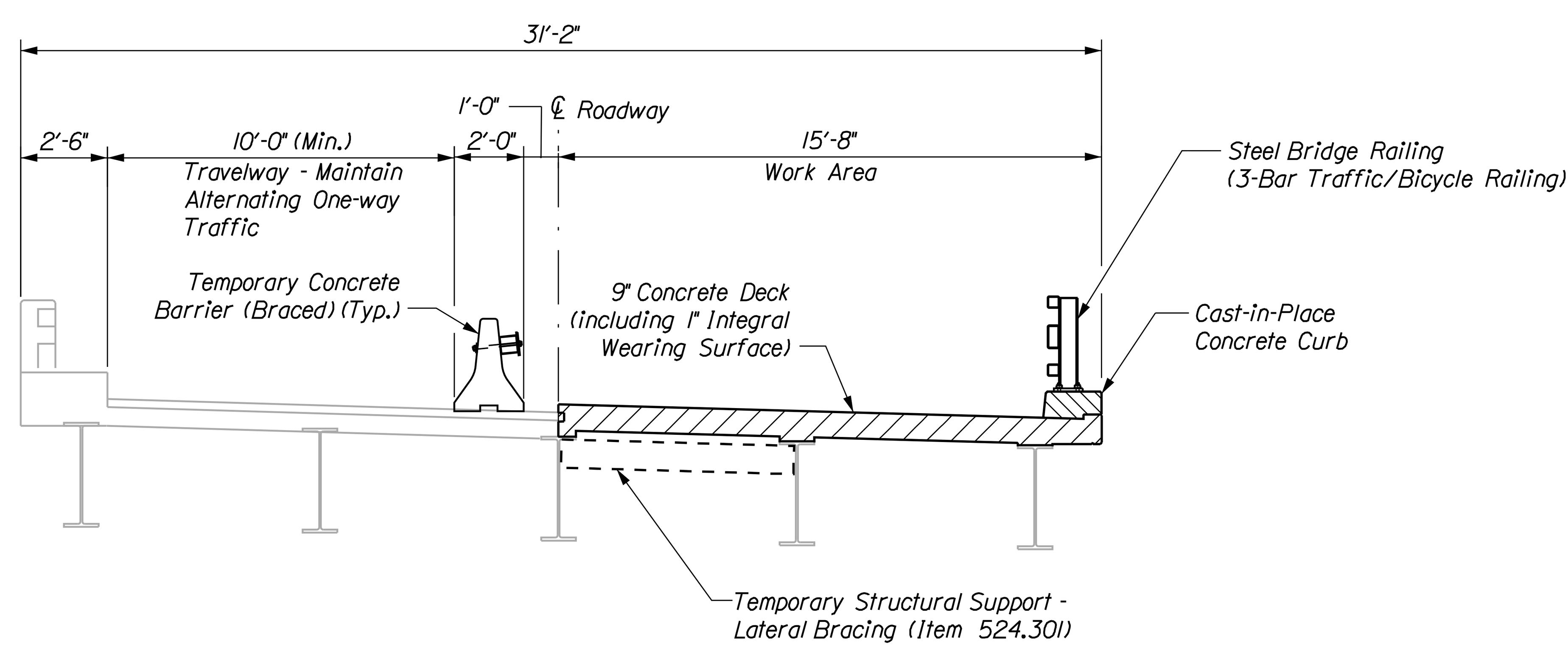
Date:10/25/2023 Username: Division: BRIDGE Filename: ...\BRIDGE\MSTA\006_Typical.dgn



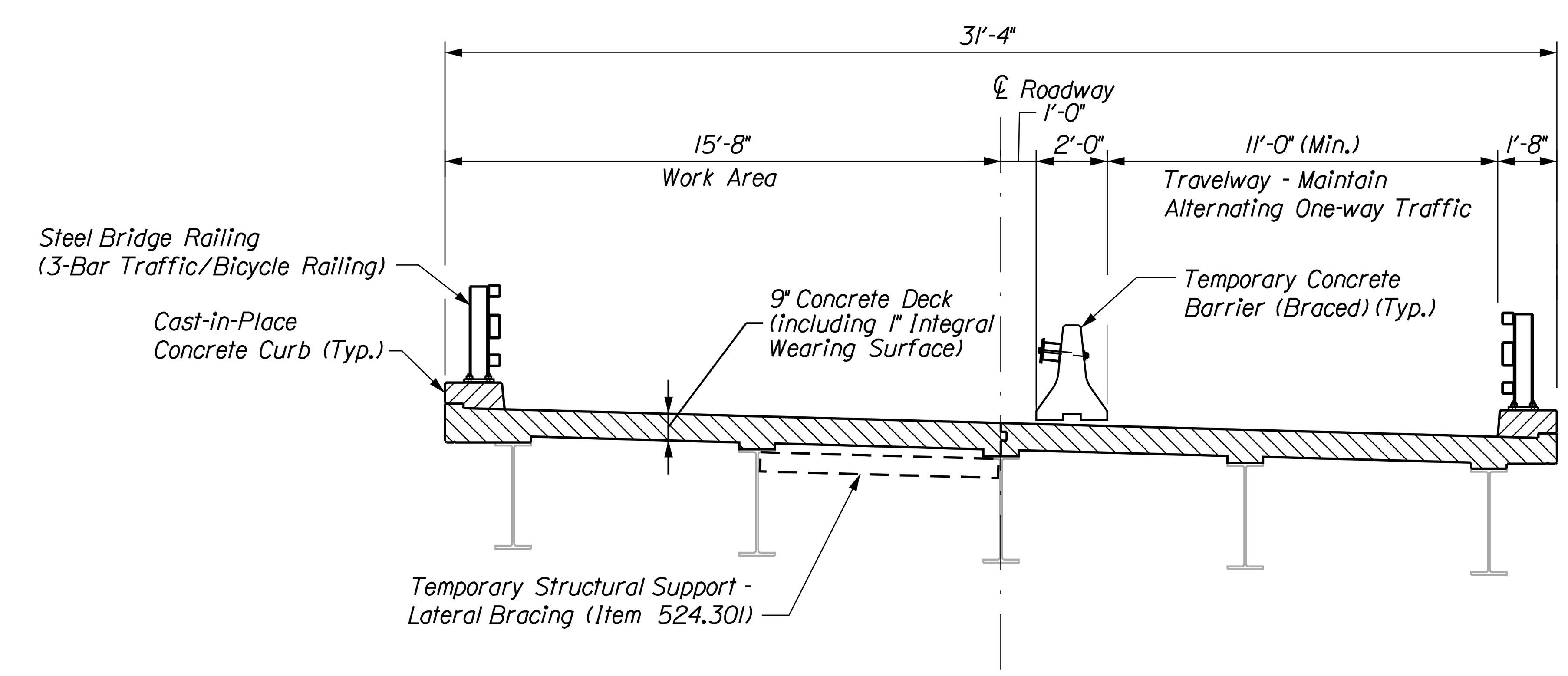
STAGE 1 DEMOLITION



STAGE 2 DEMOLITION



STAGE 1 CONSTRUCTION



STAGE 2 CONSTRUCTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE PLANS

BRIDGE NO. 5756

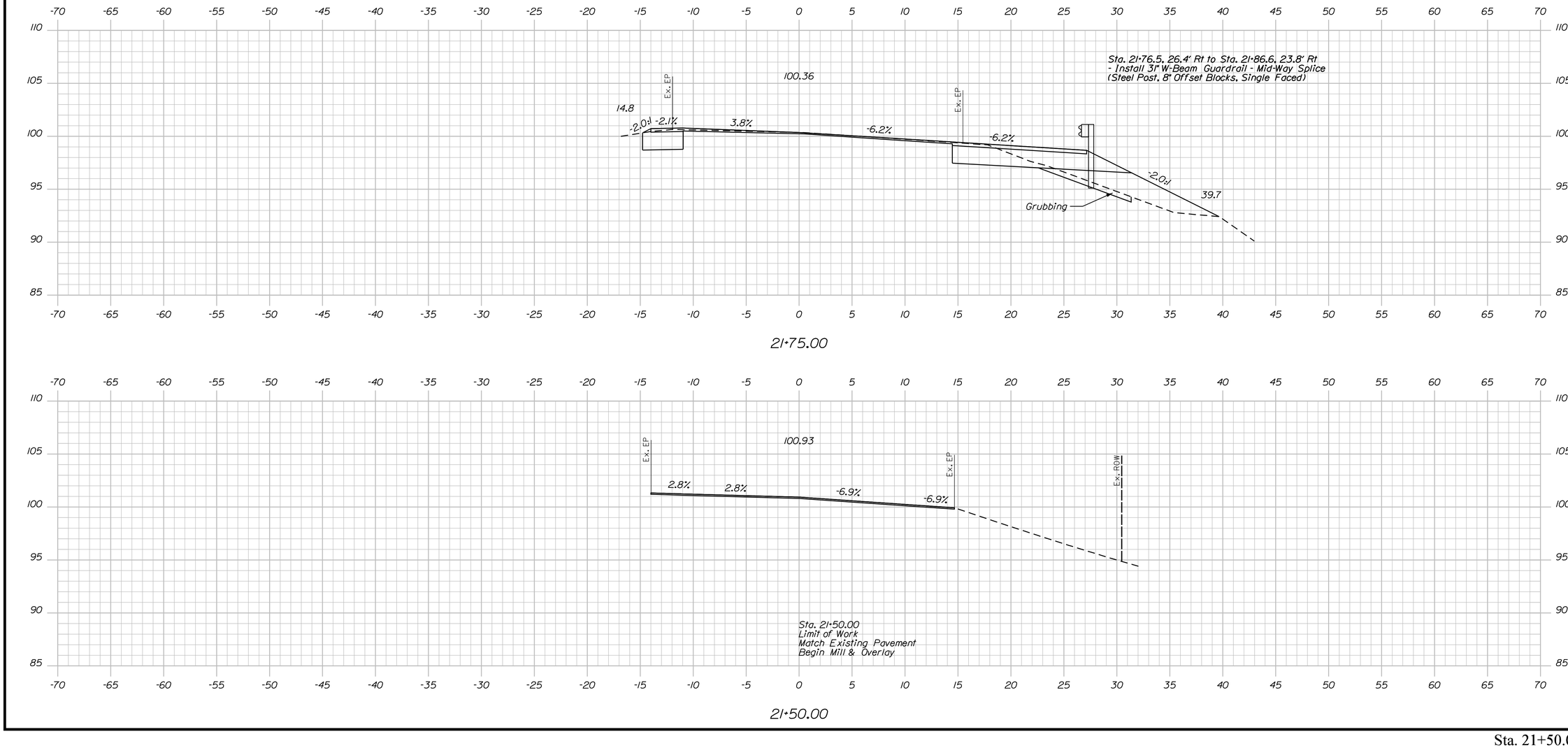
SIGNATURE
12202
P.E. NUMBER
10/23/2023
DATE

		BY	DATE
PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	N. GOMEZ	W. GERHOLD	9/2023
CHECKED-REVIEWED	K. JAMES	T. POLSON	9/2023
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

CONSTRUCTION STAGING

SHEET NUMBER
7
OF 26



Filename: ...\BRIDGE\MSTA\008_Xsect_01.dgn Username: Date:10/25/2023 Division: BRIDGE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE NO. 5756 BRIDGE PLANS

STATE OF MAINE TIMOTHY C. HIGGINSON No. 12558 REGISTERED PROFESSIONAL ENGINEER

PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	J. KHERA	9/2023	
CHECKED-REVIEWED	T. HIGGINSON	9/2023	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

12558
P.E. NUMBER

10/23/2023
DATE

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

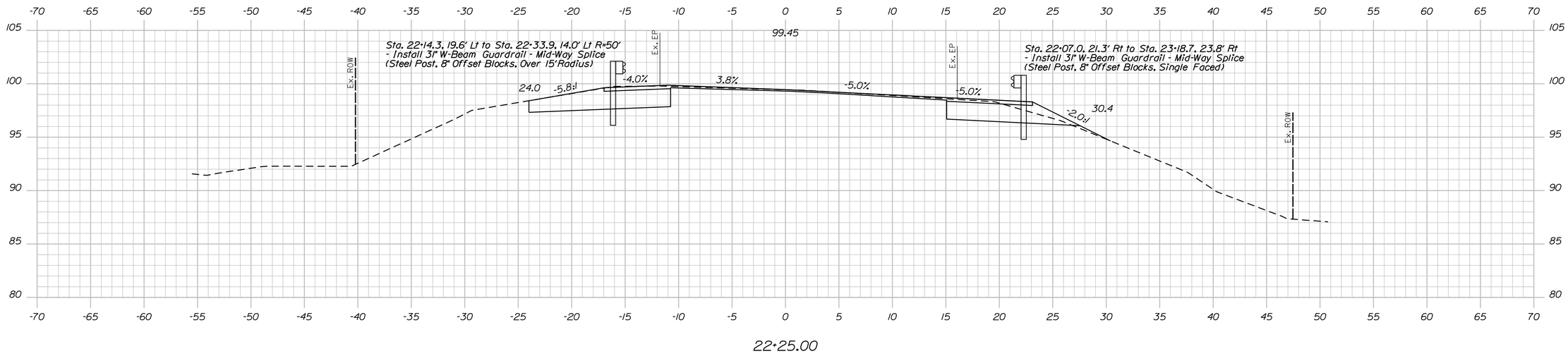
CROSS SECTIONS

SHEET NUMBER

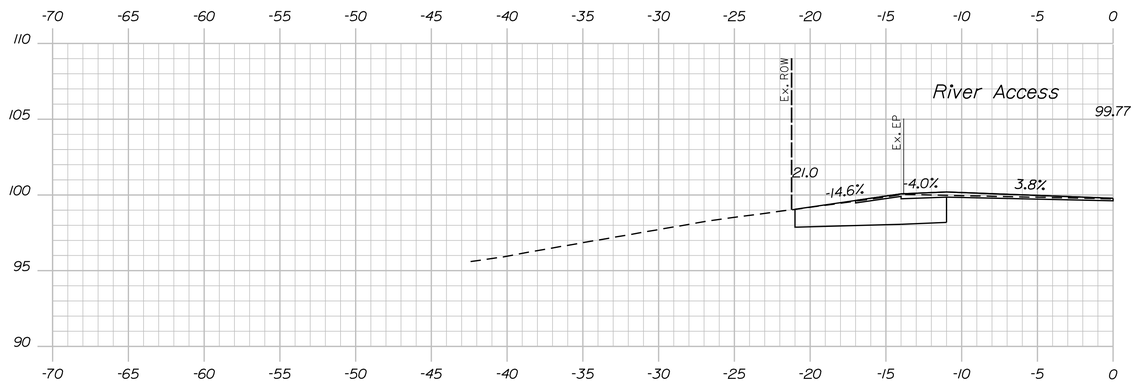
8

OF 26

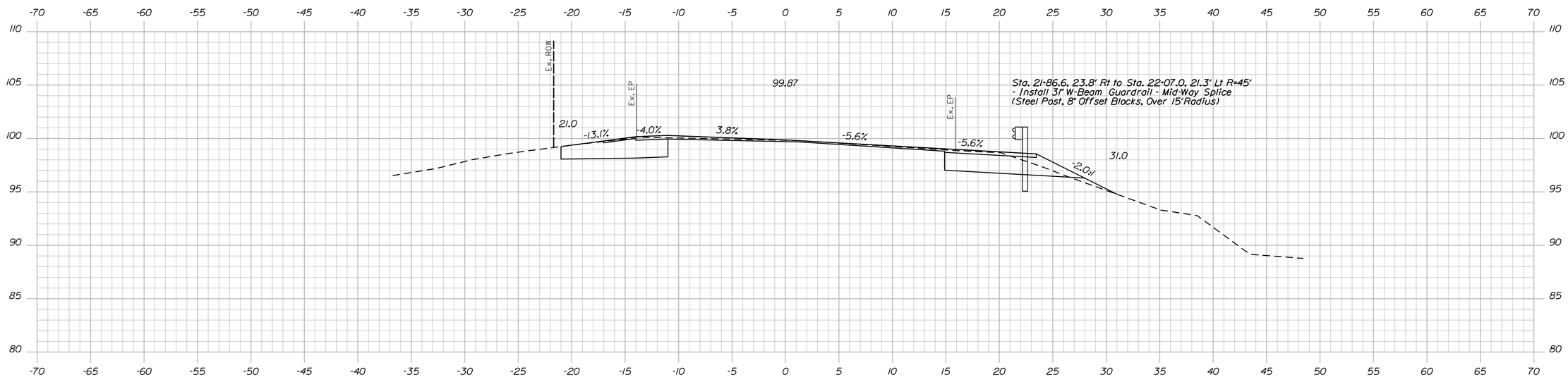
Sta. 21+50.00 to Sta. 21+75.00



22+25.00



22+05.00



22+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE PLANS

BRIDGE NO. 5756

STATE OF MAINE TIMOTHY C. HIGGINSON No. 12558 REGISTERED PROFESSIONAL ENGINEER

Scott Cliff

SIGNATURE

12558

P.E. NUMBER

10/23/2023

DATE

PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	J. KHERA	BY	DATE
CHECKED-REVIEWED	T. HIGGINSON	J. KHERA	9/2023
DESIGN2-DETAILED2		T. HIGGINSON	9/2023
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

CROSS SECTIONS

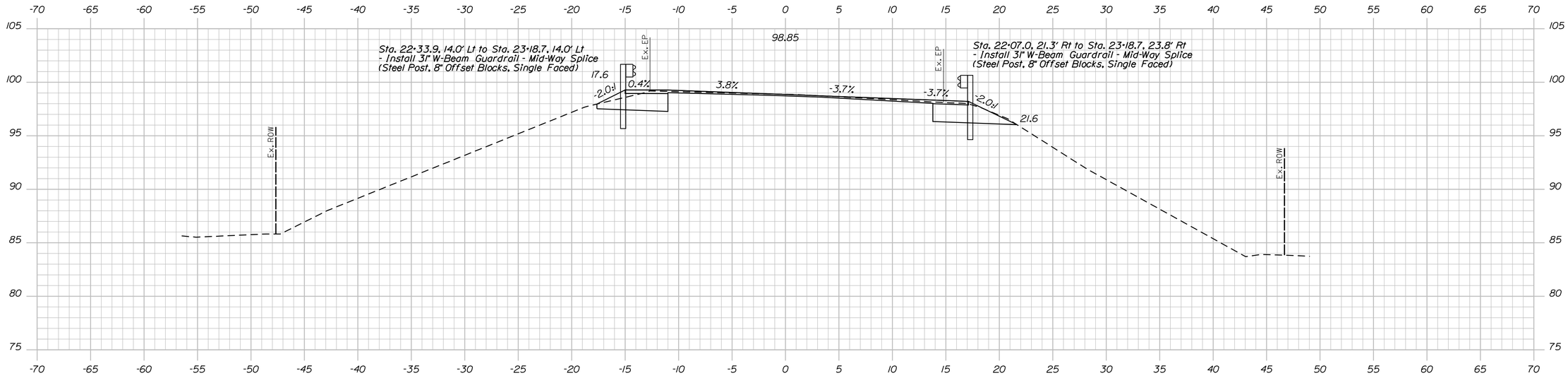
SHEET NUMBER

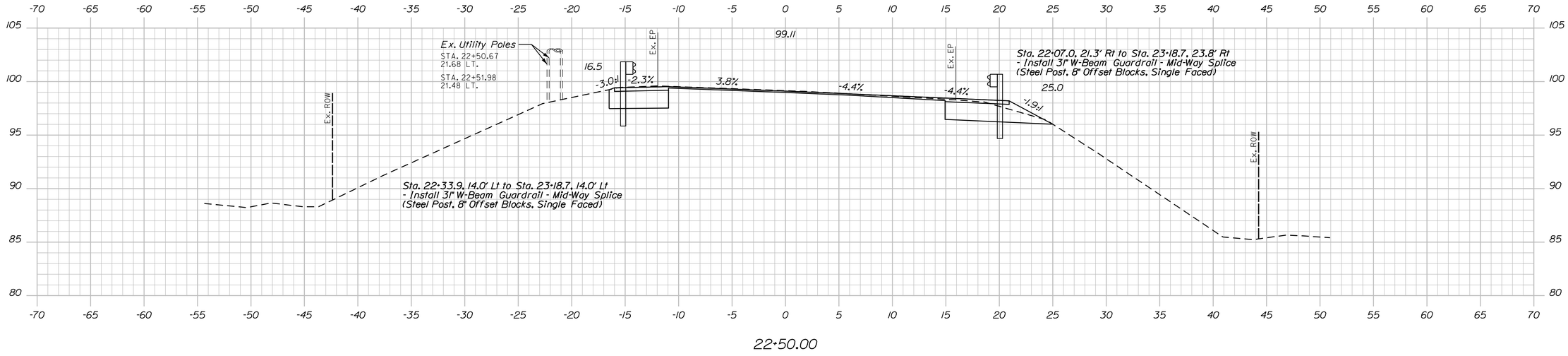
9

OF 26

Sta. 22+00.00 to Sta. 22+25.00

Filename: ...\BRIDGE\MSTA\009_Xsect_02.dgn Division: BRIDGE Username: Date:10/25/2023





Sta. 22+50.00 to Sta. 22+75.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE NO. 5756

BRIDGE PLANS

STATE OF MAINE TIMOTHY C. HIGGINSON No. 12558 REGISTERED PROFESSIONAL ENGINEER

Scott Wolfe

12558
P.E. NUMBER

10/23/2023
DATE

SIGNATURE

	BY	DATE
PROJ. MANAGER	D. EATON	
DESIGN-DETAILED	J. KHERA	9/2023
CHECKED-REVIEWED	T. HIGGINSON	9/2023
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

CROSS SECTIONS

SHEET NUMBER

10

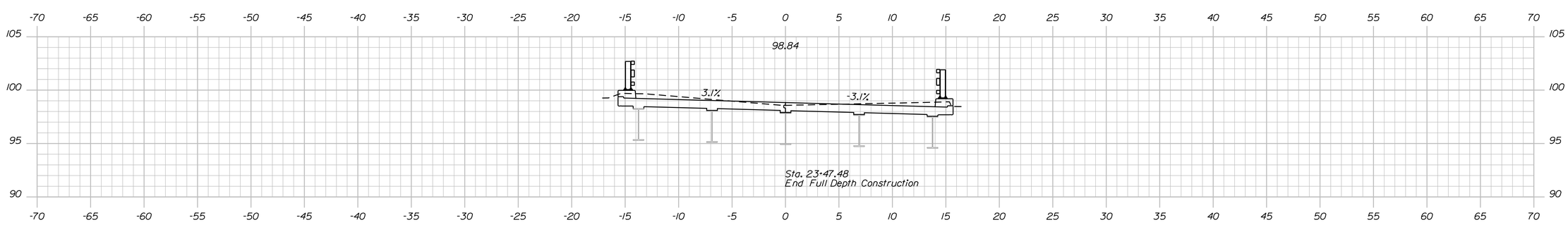
OF 26

Username:

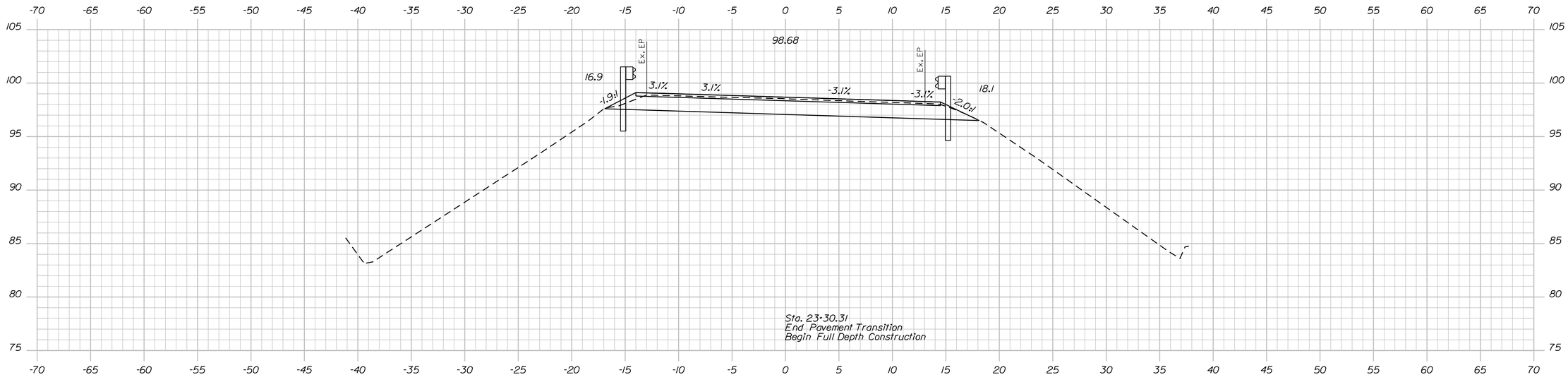
Date:10/25/2023

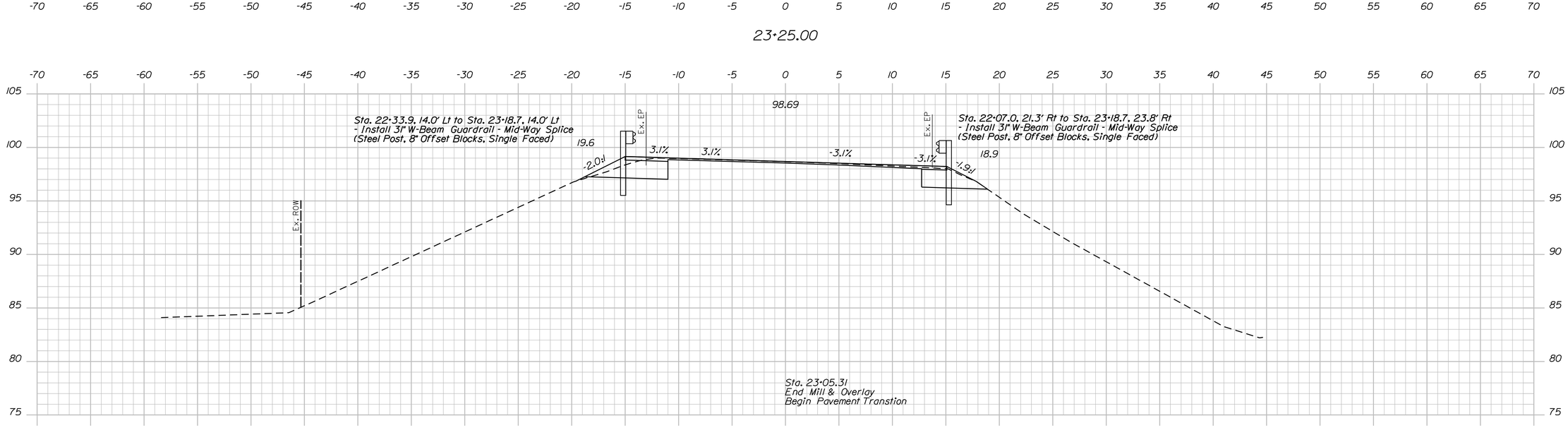
Division: BRIDGE

Filename: ...\BRIDGE\MSTA\010_Xsect_03.dgn



23+50.00





23+25.00

23+00.00

Sta. 23+00.00 to Sta. 23+50.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE NO. 5756

BRIDGE PLANS

STATE OF MAINE TIMOTHY C. HIGGINSON No. 12558 REGISTERED PROFESSIONAL ENGINEER

	BY	DATE
PROJ. MANAGER	D. EATON	
DESIGN-DETAILED	J. KHERA	9/2023
CHECKED-REVIEWED	T. HIGGINSON	9/2023
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

12558
P.E. NUMBER

10/23/2023
DATE

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

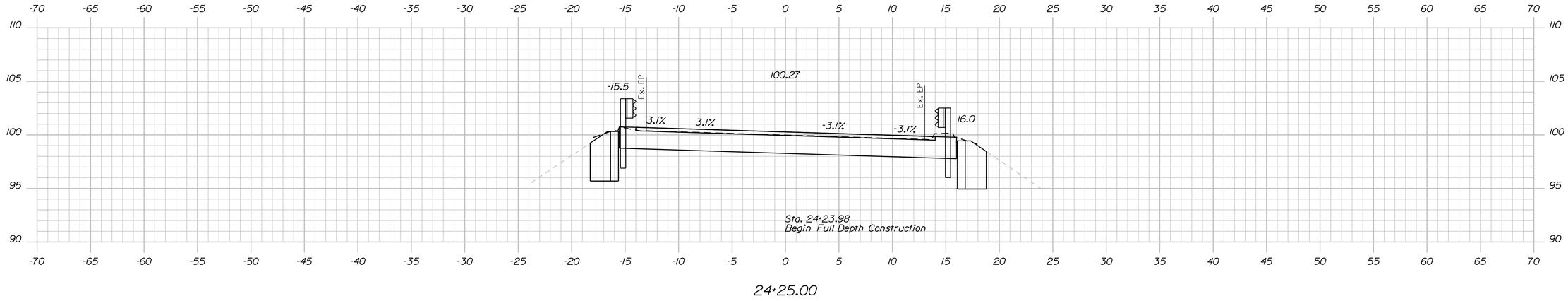
CROSS SECTIONS

SHEET NUMBER

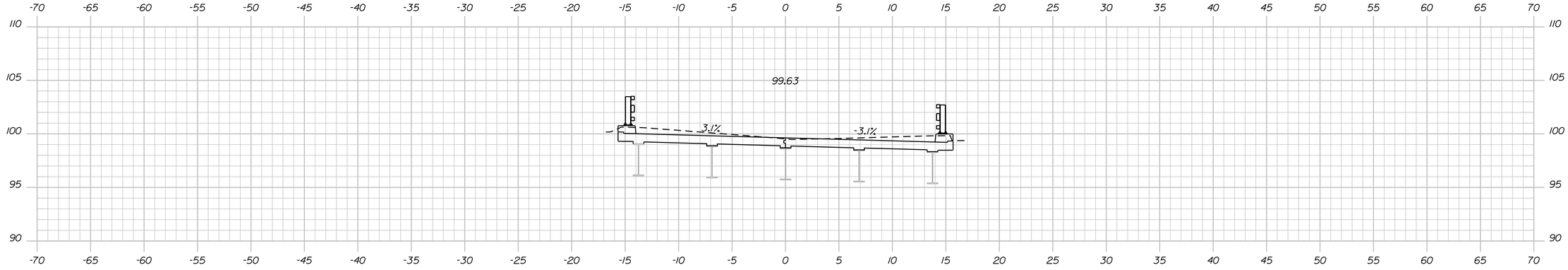
11

OF 26

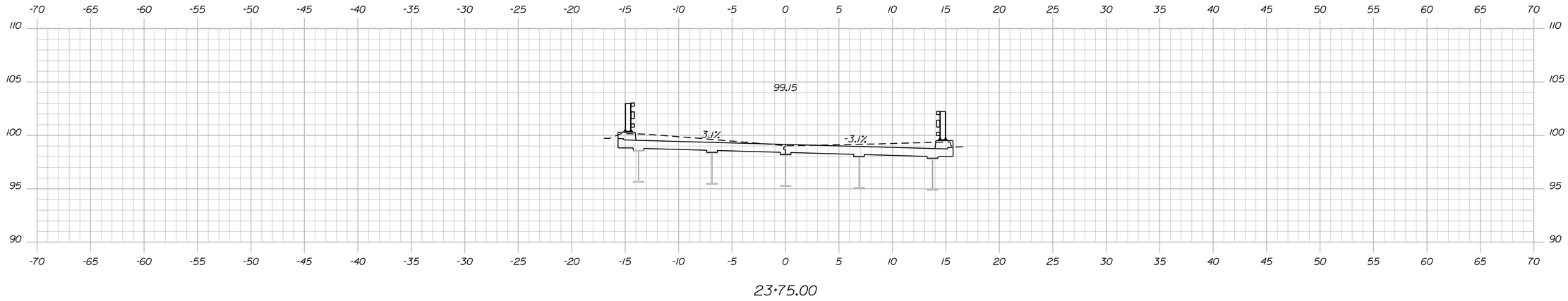
Filename: ...\BRIDGE\MSTA\011_Xsect_04.dgn Division: BRIDGE Username: Date:10/25/2023



24+25.00



24+00.00



23+75.00

Sta. 23+75.00 to Sta. 24+25.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE NO. 5756

BRIDGE PLANS

STATE OF MAINE TIMOTHY C. HIGGINSON No. 12558 LICENSED PROFESSIONAL ENGINEER

SIGNATURE

12558
P.E. NUMBER

10/23/2023
DATE

	BY	DATE
DESIGN-DETAILED	J. KHERA	9/2023
CHECKED-REVIEWED	T. HIGGINSON	9/2023
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

PROJ. MANAGER: D. EATON

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

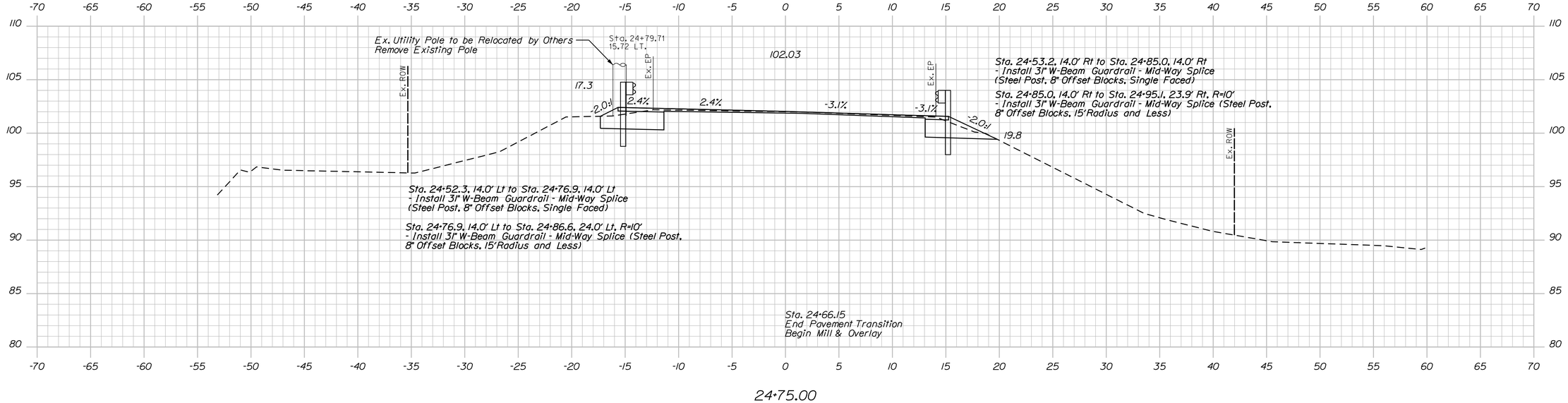
CROSS SECTIONS

SHEET NUMBER

12

OF 26

Filename: ...\BRIDGE\MSTA\012_Xsect_05.dgn Division: BRIDGE Username: Date:10/25/2023



Sta. 24+50.00 to Sta. 24+75.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE NO. 5756

BRIDGE PLANS

STATE OF MAINE · TIMOTHY C. HIGGINSON · No. 12558 · REGISTERED PROFESSIONAL ENGINEER

SIGNATURE

12558
P.E. NUMBER

10/23/2023
DATE

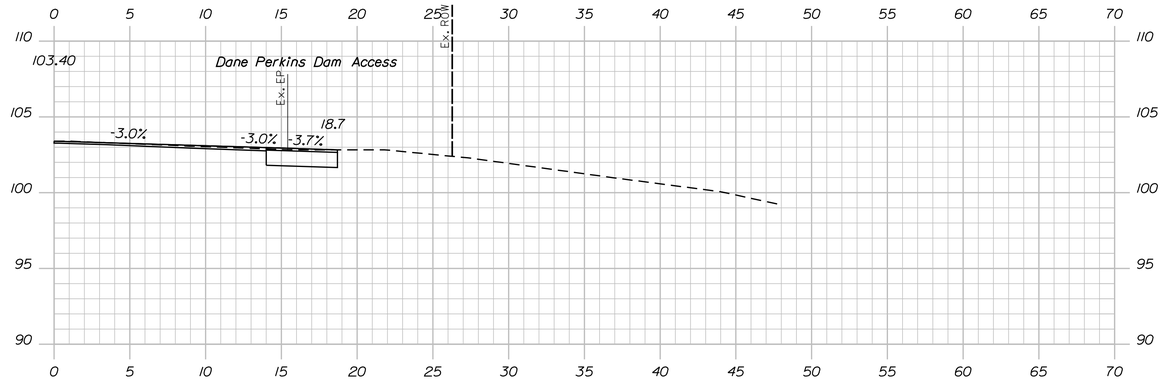
PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	J. KHERA	BY	DATE
CHECKED-REVIEWED	T. HIGGINSON	J. KHERA	9/2023
DESIGN2-DETAILED2		T. HIGGINSON	9/2023
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

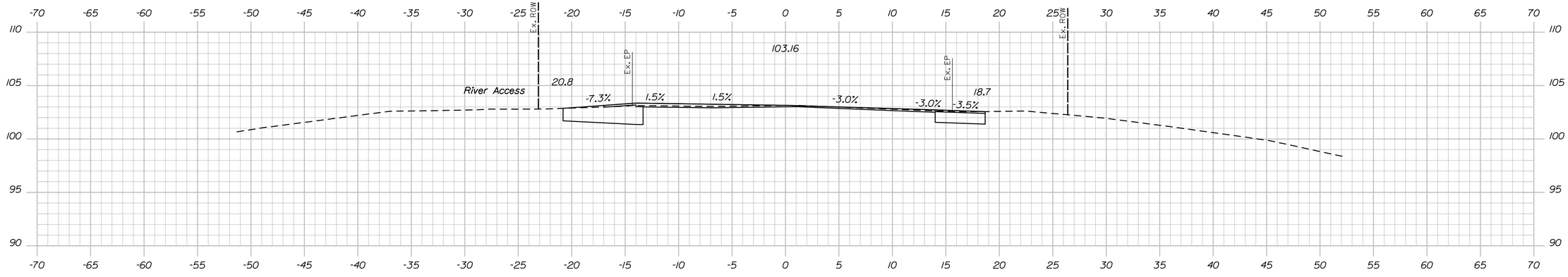
CROSS SECTIONS

SHEET NUMBER
13
OF 26

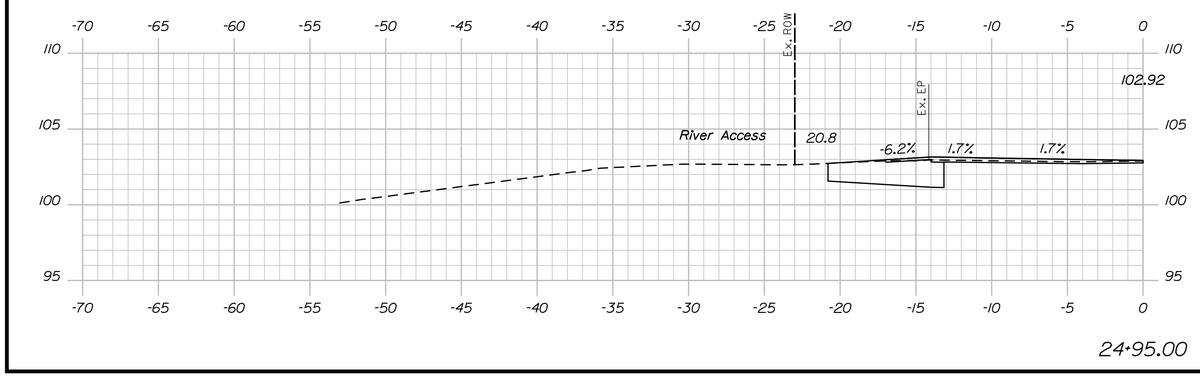
Date:10/25/2023
Username:
Division: BRIDGE
Filename: ...\BRIDGE\MSTA\013_Xsect_06.dgn



25+05.00



25+00.00



24+95.00

Sta. 24+95.00 to Sta. 25+05.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE NO. 5756

BRIDGE PLANS

STATE OF MAINE TIMOTHY C. HIGGINSON No. 12558 REGISTERED PROFESSIONAL ENGINEER

PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	J. KHERA	J. KHERA	9/2023
CHECKED-REVIEWED	T. HIGGINSON	T. HIGGINSON	9/2023
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

12558
P.E. NUMBER

10/23/2023
DATE

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

CROSS SECTIONS

SHEET NUMBER

14

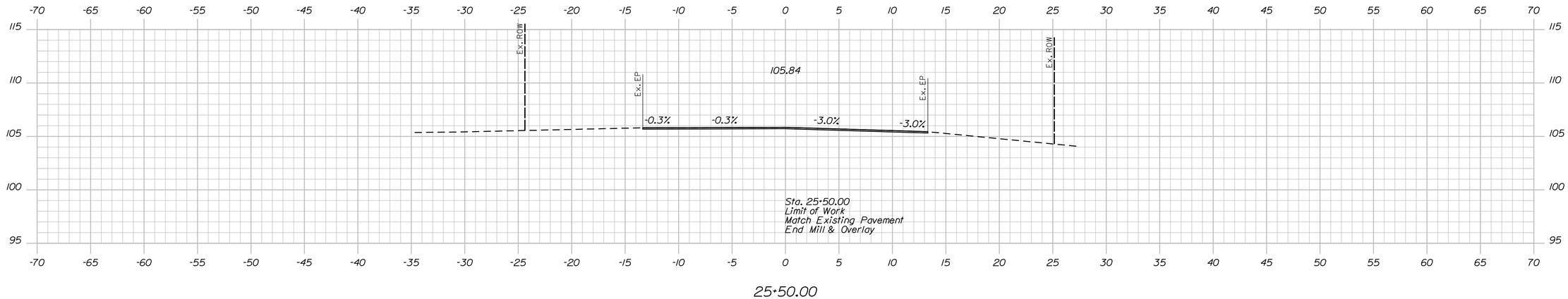
OF 26

Username:

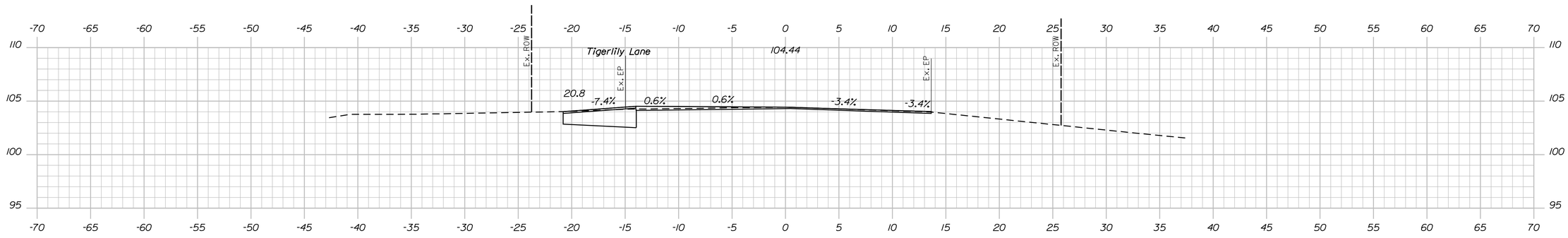
Date:10/25/2023

Division: BRIDGE

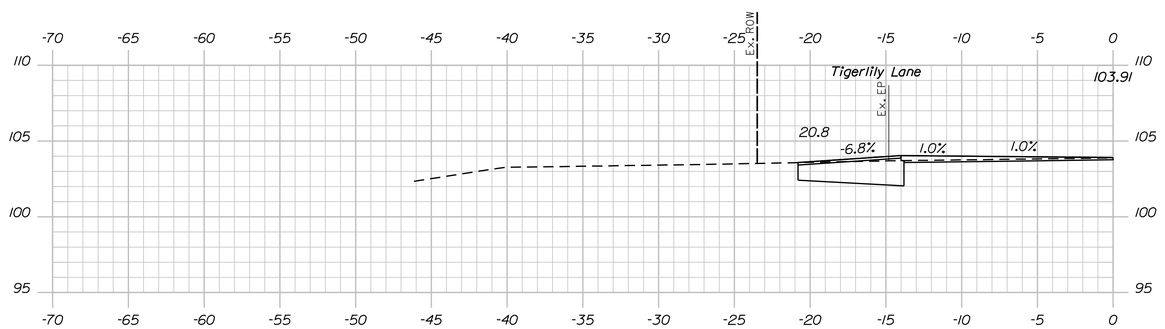
Filename: ...\BRIDGE\MSTA\014_Xsect_07.dgn



25+50.00



25+25.00



25+15.00

Sta. 25+15.00 to Sta. 25+50.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE NO. 5756

BRIDGE PLANS

STATE OF MAINE TIMOTHY C. HIGGINSON NO. 12558 REGISTERED PROFESSIONAL ENGINEER

Scott Cliff

SIGNATURE

12558

P.E. NUMBER

10/23/2023

DATE

PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	J. KHERA	J. KHERA	9/2023
CHECKED-REVIEWED	T. HIGGINSON	T. HIGGINSON	9/2023
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

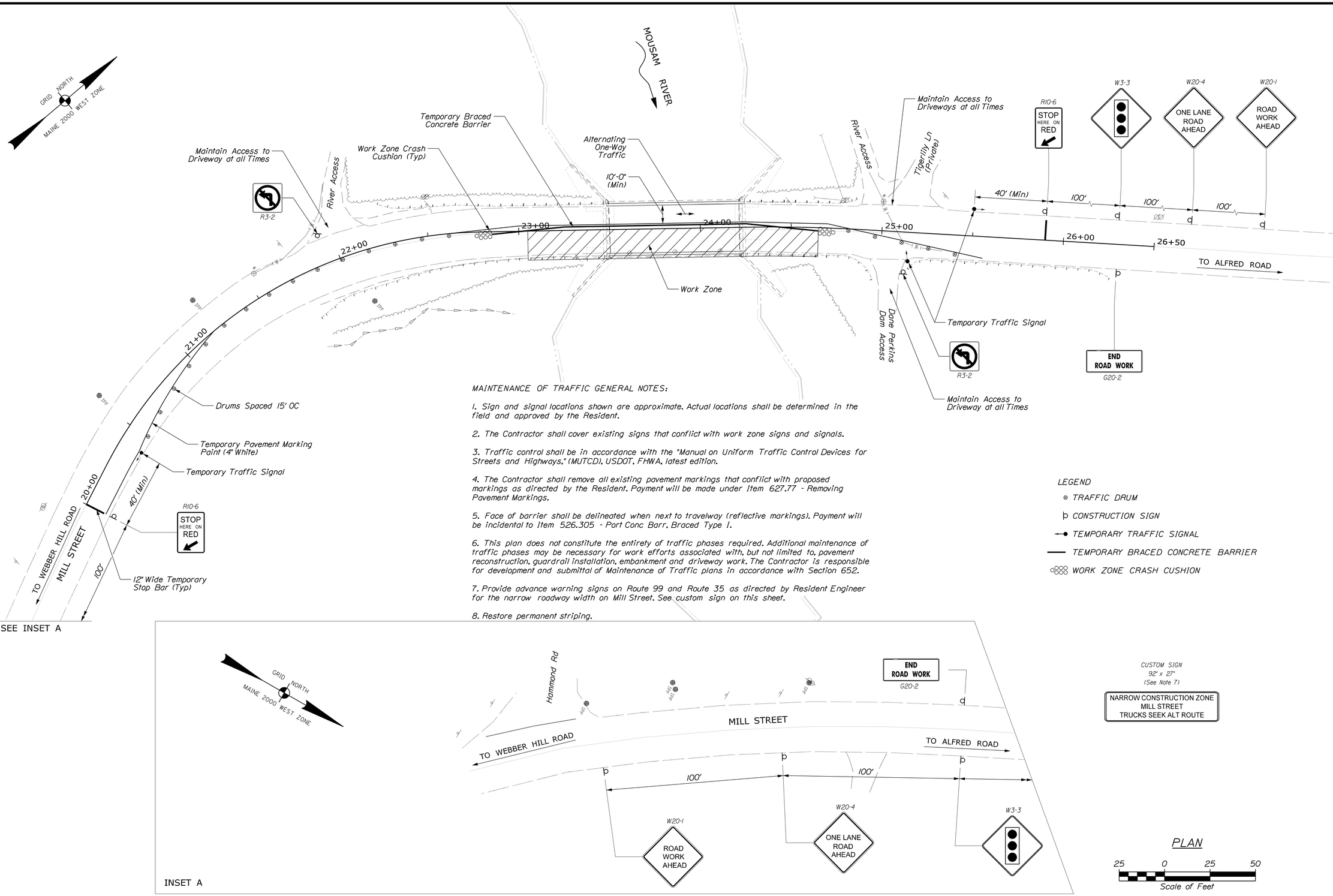
CROSS SECTIONS

SHEET NUMBER

15

OF 26

Filename: ...\BRIDGE\MSTA\015_Xsect_08.dgn Division: BRIDGE Username: Date:10/25/2023



MAINTENANCE OF TRAFFIC GENERAL NOTES:

1. Sign and signal locations shown are approximate. Actual locations shall be determined in the field and approved by the Resident.

2. The Contractor shall cover existing signs that conflict with work zone signs and signals.

3. Traffic control shall be in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," (MUTCD), USDOT, FHWA, latest edition.

4. The Contractor shall remove all existing pavement markings that conflict with proposed markings as directed by the Resident. Payment will be made under Item 627.77 - Removing Pavement Markings.

5. Face of barrier shall be delineated when next to travelway (reflective markings). Payment will be incidental to Item 526.305 - Port Conc Barr, Braced Type 1.

6. This plan does not constitute the entirety of traffic phases required. Additional maintenance of traffic phases may be necessary for work efforts associated with, but not limited to, pavement reconstruction, guardrail installation, embankment and driveway work. The Contractor is responsible for development and submittal of Maintenance of Traffic plans in accordance with Section 652.

7. Provide advance warning signs on Route 99 and Route 35 as directed by Resident Engineer for the narrow roadway width on Mill Street. See custom sign on this sheet.

8. Restore permanent striping.

LEGEND

- TRAFFIC DRUM
- CONSTRUCTION SIGN
- TEMPORARY TRAFFIC SIGNAL
- TEMPORARY BRACED CONCRETE BARRIER
- WORK ZONE CRASH CUSHION

MAINTENANCE OF TRAFFIC STAGE I

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE PLANS

BRIDGE NO. 5756

STATE OF MAINE TIMOTHY C HIGGINSON No. 12558 REGISTERED PROFESSIONAL ENGINEER

SIGNATURE		
12558	P.E. NUMBER	
10/23/2023	DATE	

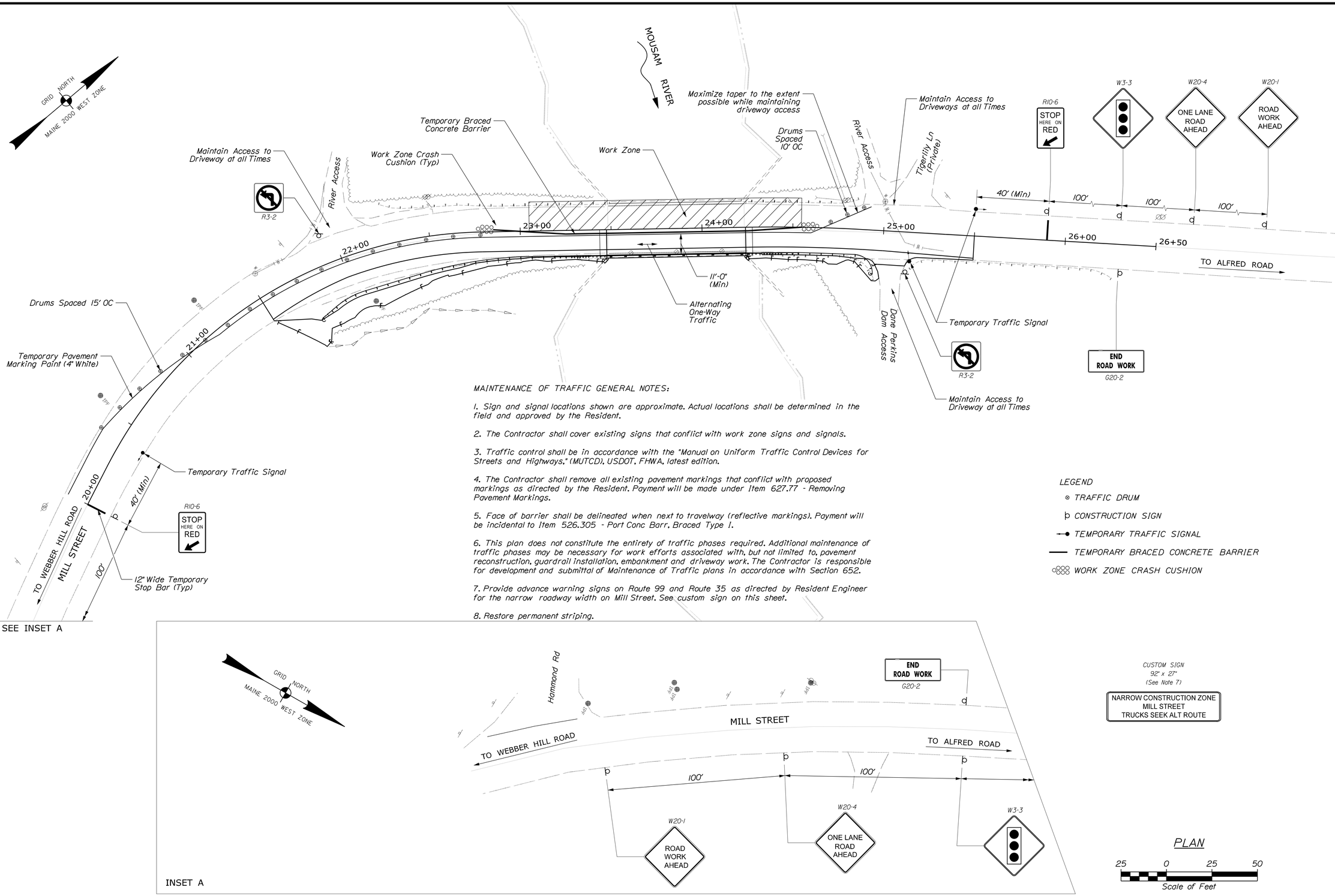
PROJ. MANAGER	D. EATON	
DESIGN-DETAILED	C. CARNEY	9/2023
CHECKED-REVIEWED	T. HIGGINSON	9/2023
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

MAINTENANCE OF TRAFFIC

SHEET NUMBER
16
OF 26

Filename: ...\MSTA\016_TrafficControl_1.dgn Division: BRIDGE Username: Date:10/25/2023



MAINTENANCE OF TRAFFIC GENERAL NOTES:

1. Sign and signal locations shown are approximate. Actual locations shall be determined in the field and approved by the Resident.

2. The Contractor shall cover existing signs that conflict with work zone signs and signals.

3. Traffic control shall be in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," (MUTCD), USDOT, FHWA, latest edition.

4. The Contractor shall remove all existing pavement markings that conflict with proposed markings as directed by the Resident. Payment will be made under Item 627.77 - Removing Pavement Markings.

5. Face of barrier shall be delineated when next to travelway (reflective markings). Payment will be incidental to Item 526.305 - Port Conc Barr, Braced Type 1.

6. This plan does not constitute the entirety of traffic phases required. Additional maintenance of traffic phases may be necessary for work efforts associated with, but not limited to, pavement reconstruction, guardrail installation, embankment and driveway work. The Contractor is responsible for development and submittal of Maintenance of Traffic plans in accordance with Section 652.

7. Provide advance warning signs on Route 99 and Route 35 as directed by Resident Engineer for the narrow roadway width on Mill Street. See custom sign on this sheet.

8. Restore permanent striping.

LEGEND

- TRAFFIC DRUM
- CONSTRUCTION SIGN
- TEMPORARY TRAFFIC SIGNAL
- TEMPORARY BRACED CONCRETE BARRIER
- WORK ZONE CRASH CUSHION

CUSTOM SIGN
92" x 27"
(See Note 7)

NARROW CONSTRUCTION ZONE
MILL STREET
TRUCKS SEEK ALT ROUTE

PLAN

25 0 25 50
Scale of Feet

MAINTENANCE OF TRAFFIC STAGE 2

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900 | WIN 023629.00 | BRIDGE PLANS

BRIDGE NO. 5756

STATE OF MAINE TIMOTHY C. HIGGINSON No. 12558 REGISTERED PROFESSIONAL ENGINEER

SIGNATURE		
12558	P.E. NUMBER	
10/23/2023	DATE	

	BY	DATE
D. EATON	C. CARNEY	9/2023
C. CARNEY	T. HIGGINSON	9/2023
T. HIGGINSON		

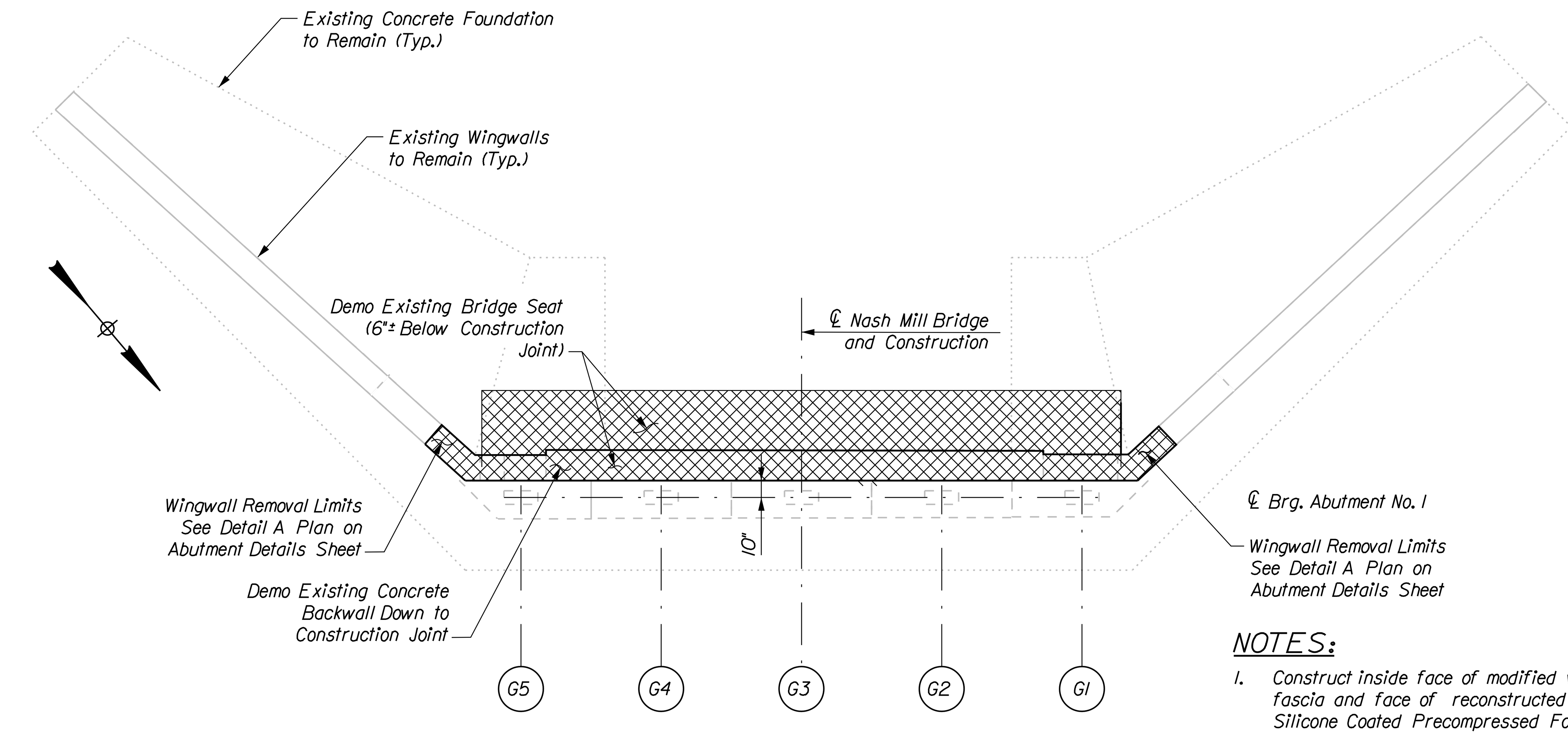
PROJ. MANAGER	
DESIGN-DETAILED	
CHECKED-REVIEWED	
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

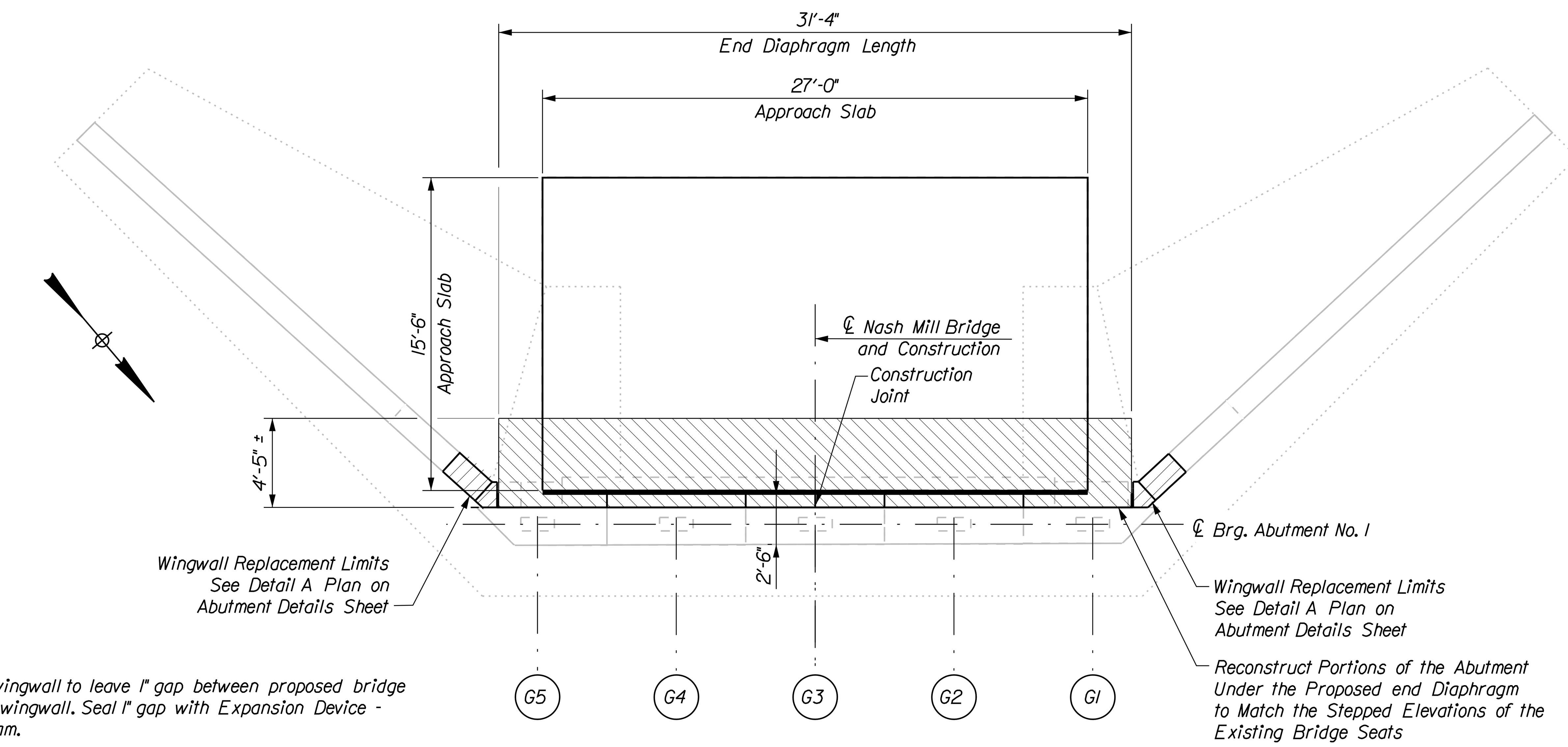
MAINTENANCE OF TRAFFIC

SHEET NUMBER
17
OF 26

Filename: ...\MSTA\017_TrafficControl_2.dgn Division: BRIDGE Username: Date:10/25/2023



ABUTMENT No. 1 DEMOLITION PLAN



ABUTMENT No. 1 CONSTRUCTION PLAN

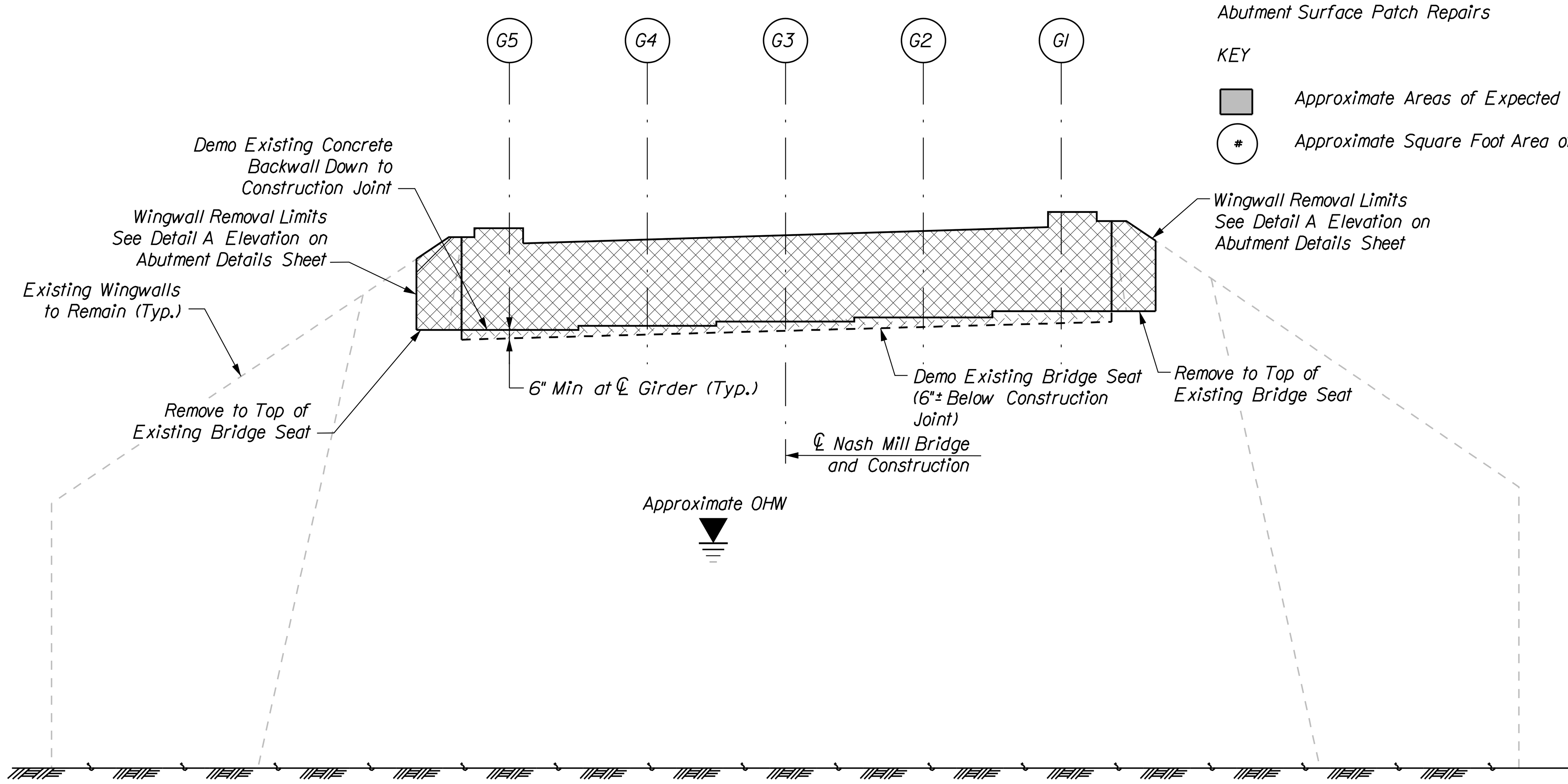
NOTES:

1. Construct inside face of modified wingwall to leave 1" gap between proposed bridge fascia and face of reconstructed wingwall. Seal 1" gap with Expansion Device - Silicone Coated Precompressed Foam.
2. The estimated abutment repair quantities are based on the existing Highway Bridge Inspection Report. If differences are experienced, the Resident shall be notified and quantities shall be adjusted accordingly.
3. Areas identified by visual inspection requiring concrete repair are shown. Abutments shall be inspected jointly by the Contractor and Resident. Deteriorated concrete shall be removed to sound concrete and repaired utilizing Item(s) 518.60 and/or 518.80 as directed by the Resident. Actual repair areas will be determined and agreed on by the Contractor and the Resident during construction.

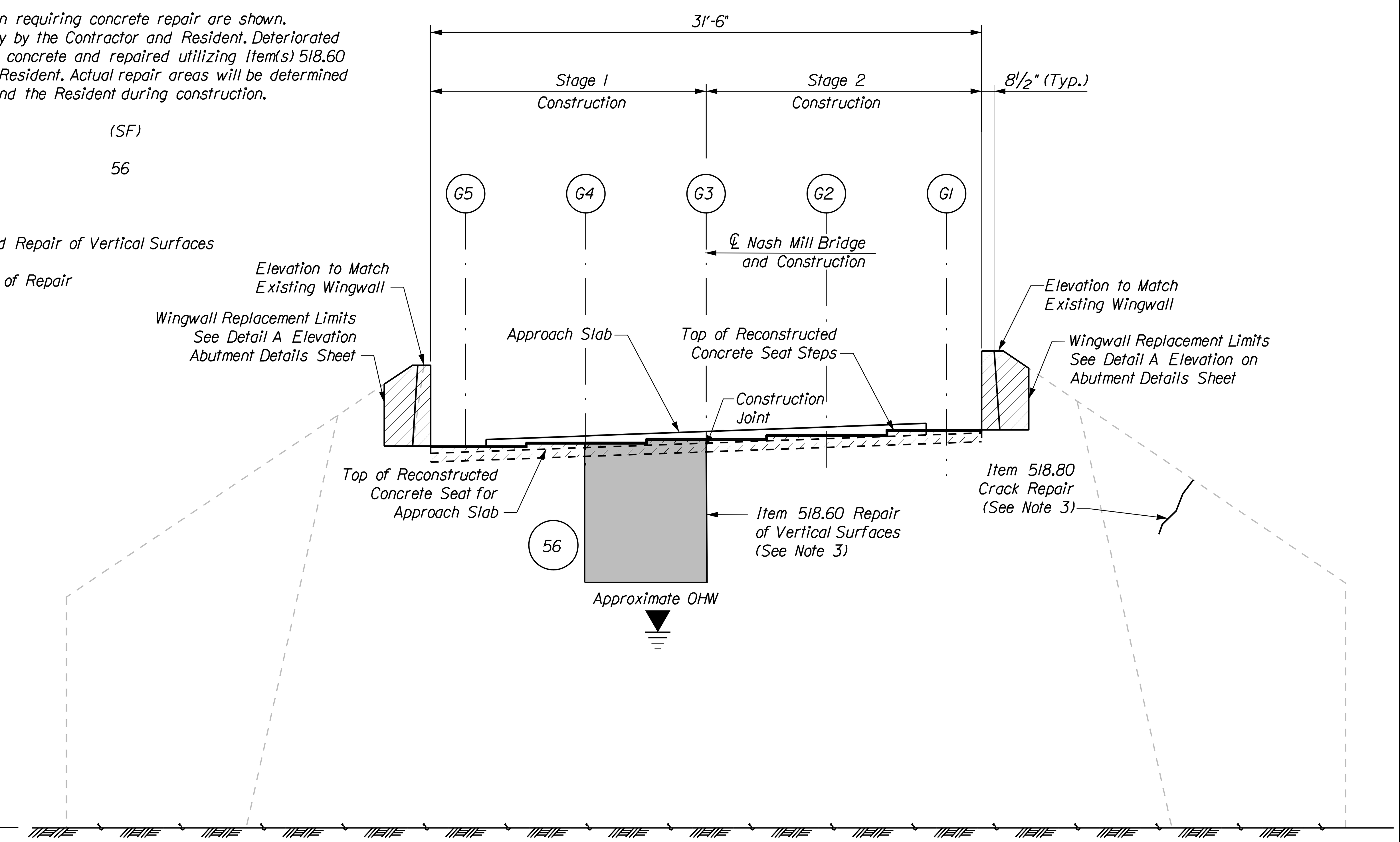
ESTIMATED REPAIR QUANTITIES	(SF)
Abutment Surface Patch Repairs	56

KEY

- (shaded box) Approximate Areas of Expected Repair of Vertical Surfaces
- (circle) Approximate Square Foot Area of Repair



ABUTMENT No. 1 DEMOLITION ELEVATION



ABUTMENT No. 1 CONSTRUCTION ELEVATION

STATE OF MAINE DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE PLANS

BRIDGE NO. 5756

SIGNATURE
P.E. NUMBER 12202
DATE 10/23/2023

	BY	DATE
PROJ. MANAGER	D. EATON	
DESIGN-DETAILED	N. GOMEZ	W. GERHOLD 9/2023
CHECKED-REVIEWED	T. POLSON	T. POLSON 9/2023
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

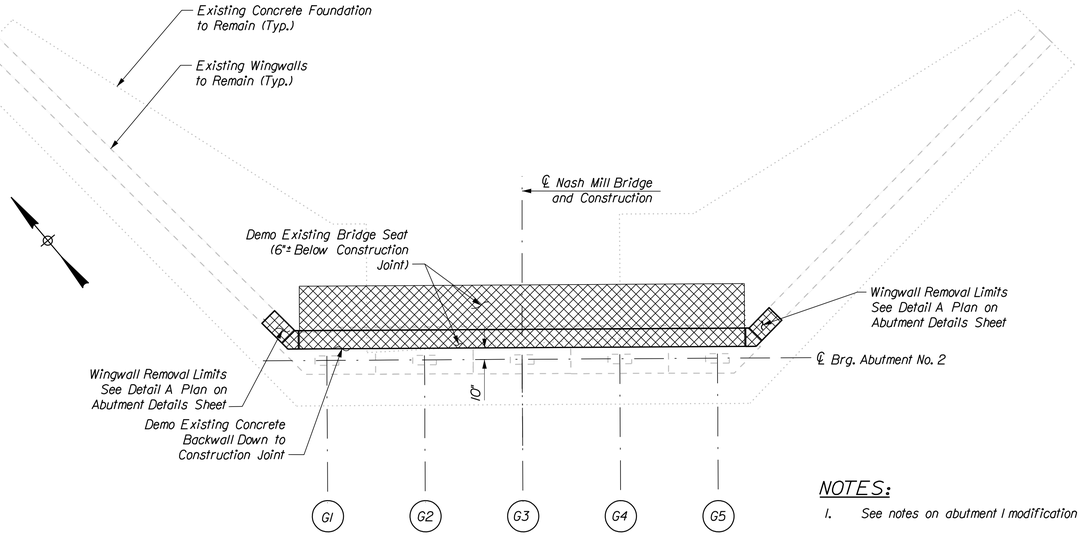
NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

ABUTMENT 1 MODIFICATIONS

SHEET NUMBER 18 OF 26

wsp

Date:10/25/2023 Username: Division: BRIDGE Filename: ...\MSTA\018_Abutment_Mod.dgn



ABUTMENT No. 2 DEMOLITION PLAN

NOTES:

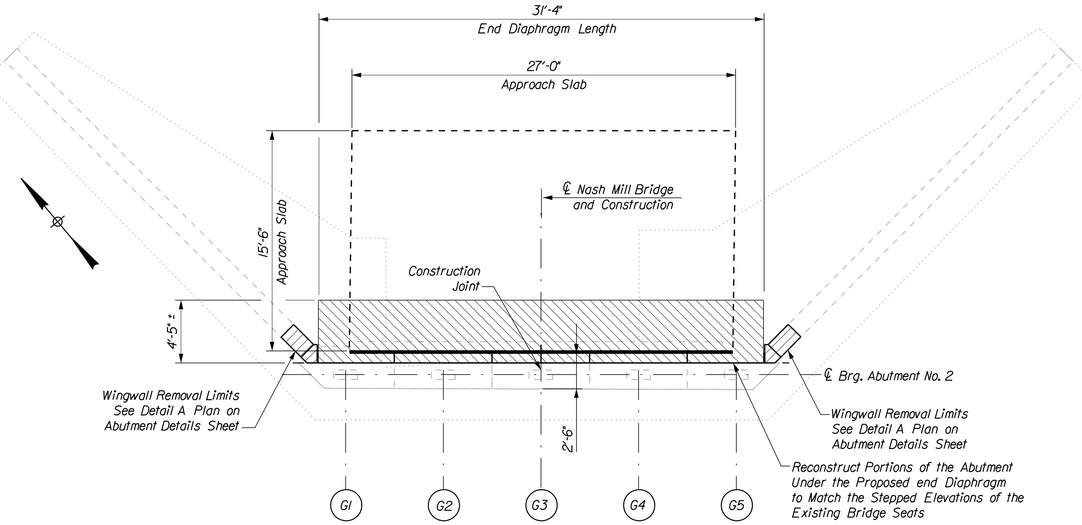
1. See notes on abutment I modification sheet.

Estimated Repair Quantities	(SF)
Abutment Surface Patch Repairs	96

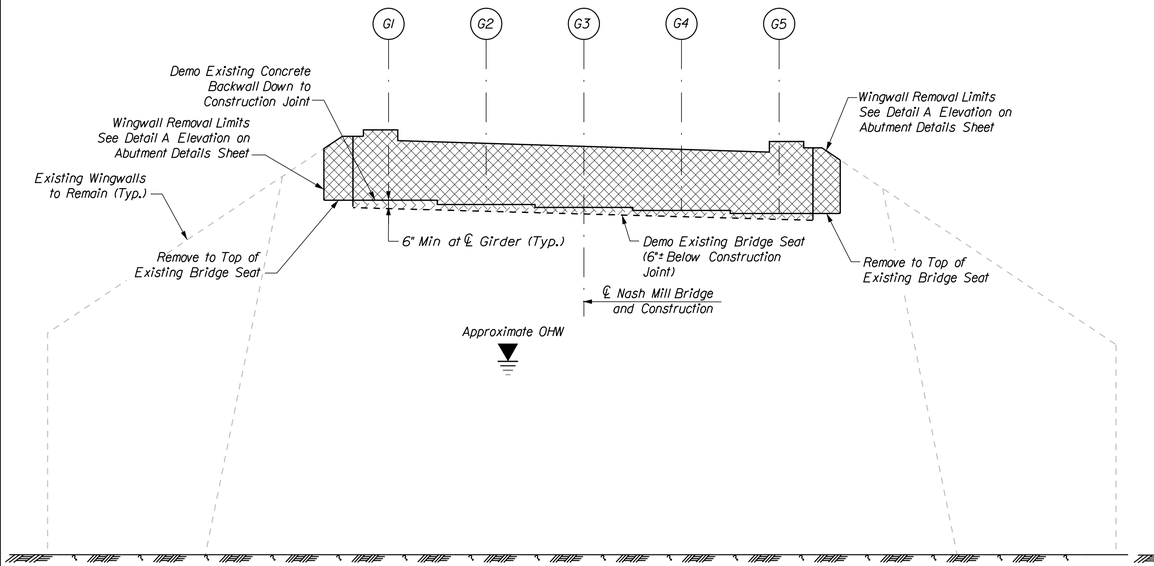
KEY

Approximate Areas of Expected Repair of Vertical Surfaces

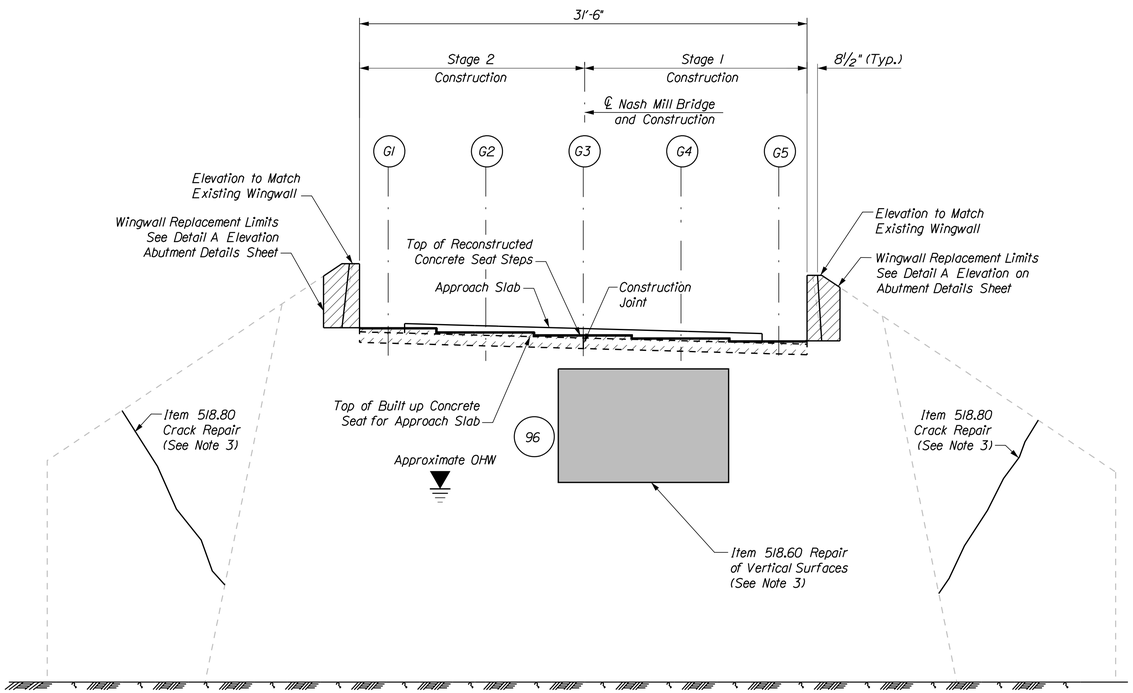
(#) Approximate Square Foot Area of Repair



ABUTMENT No. 2 CONSTRUCTION PLAN



ABUTMENT No. 2 DEMOLITION ELEVATION



ABUTMENT No. 2 CONSTRUCTION ELEVATION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE PLANS

BRIDGE NO. 5766

STATE OF MAINE — Adam Stanish — 12202 — REGISTERED PROFESSIONAL ENGINEER — 10/23/23

PROJ. MANAGER	D. EATON
DESIGN-DETAILED	N. GOMEZ
CHECKED-REVIEWED	T. POLSON
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	

	BY	DATE
REVISIONS 1	W. GERHOLD	9/2023
REVISIONS 2	T. POLSON	9/2023
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

12202 P.E. NUMBER

10/23/2023 DATE

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

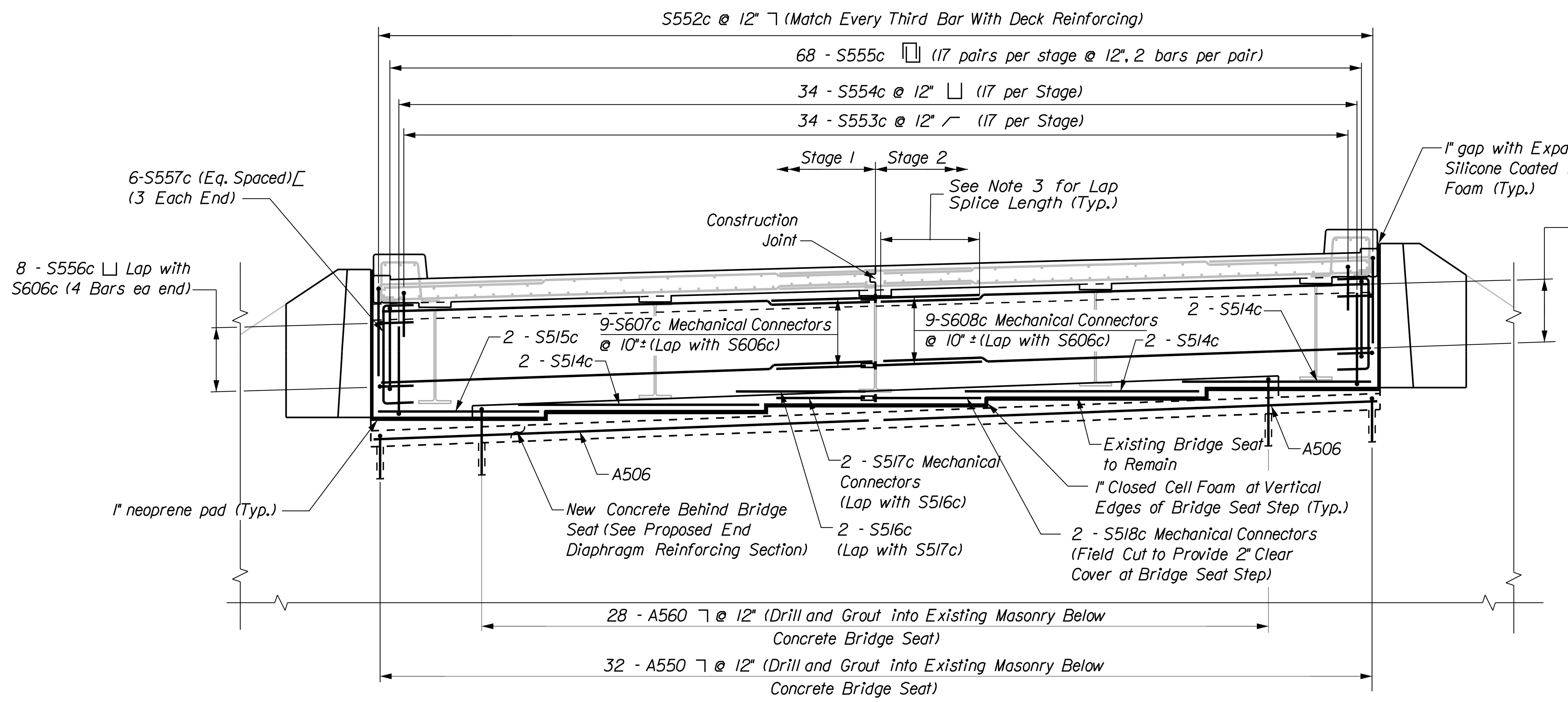
ABUTMENT 2 MODIFICATIONS

SHEET NUMBER

19

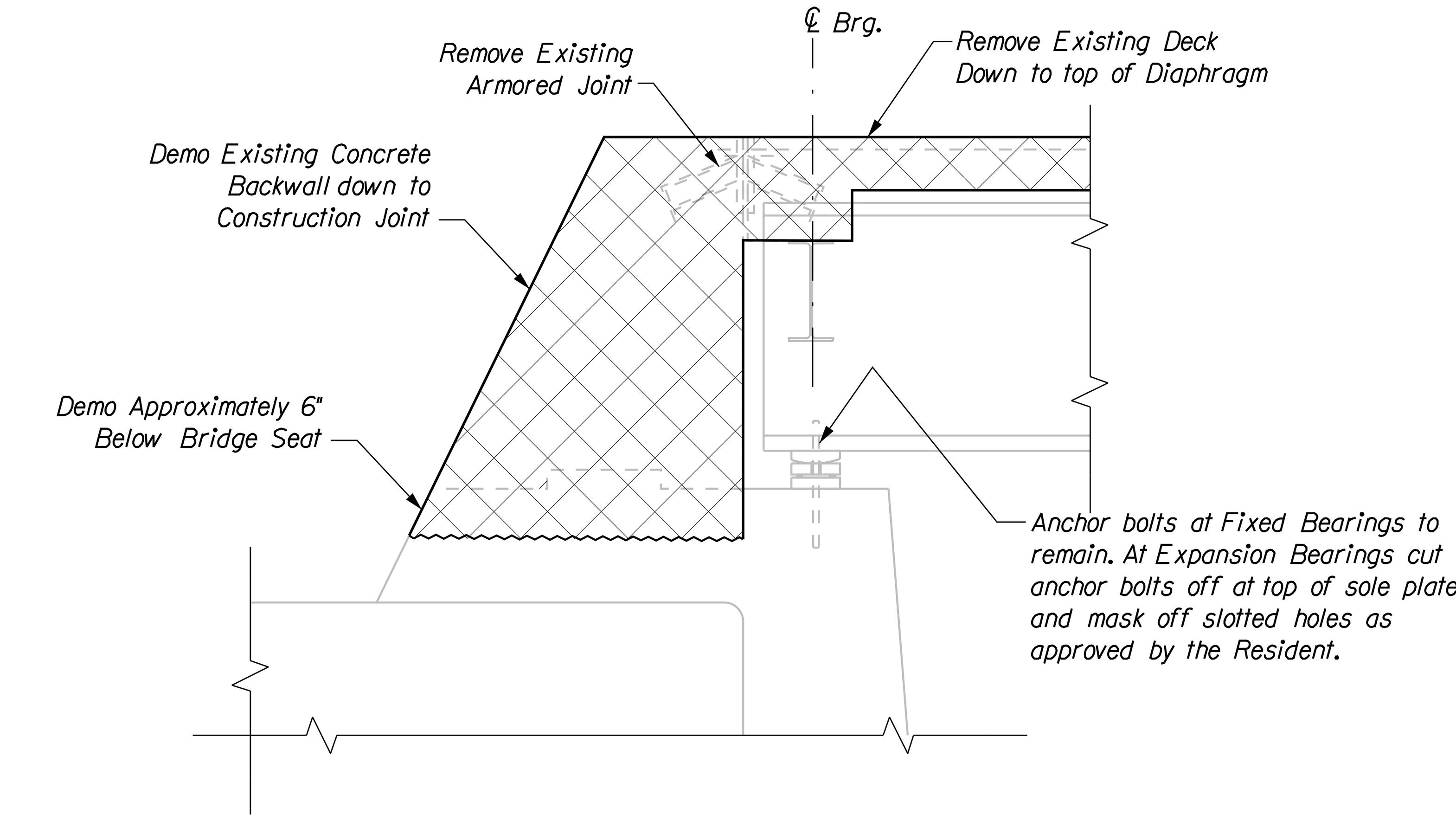
OF 26

Filename: ...\MSTA\019_Abutment_2Mod.dgn Username: Division: BRIDGE Date:10/25/2023



ABUTMENT AND END DIAPHRAGM REINFORCING ELEVATION

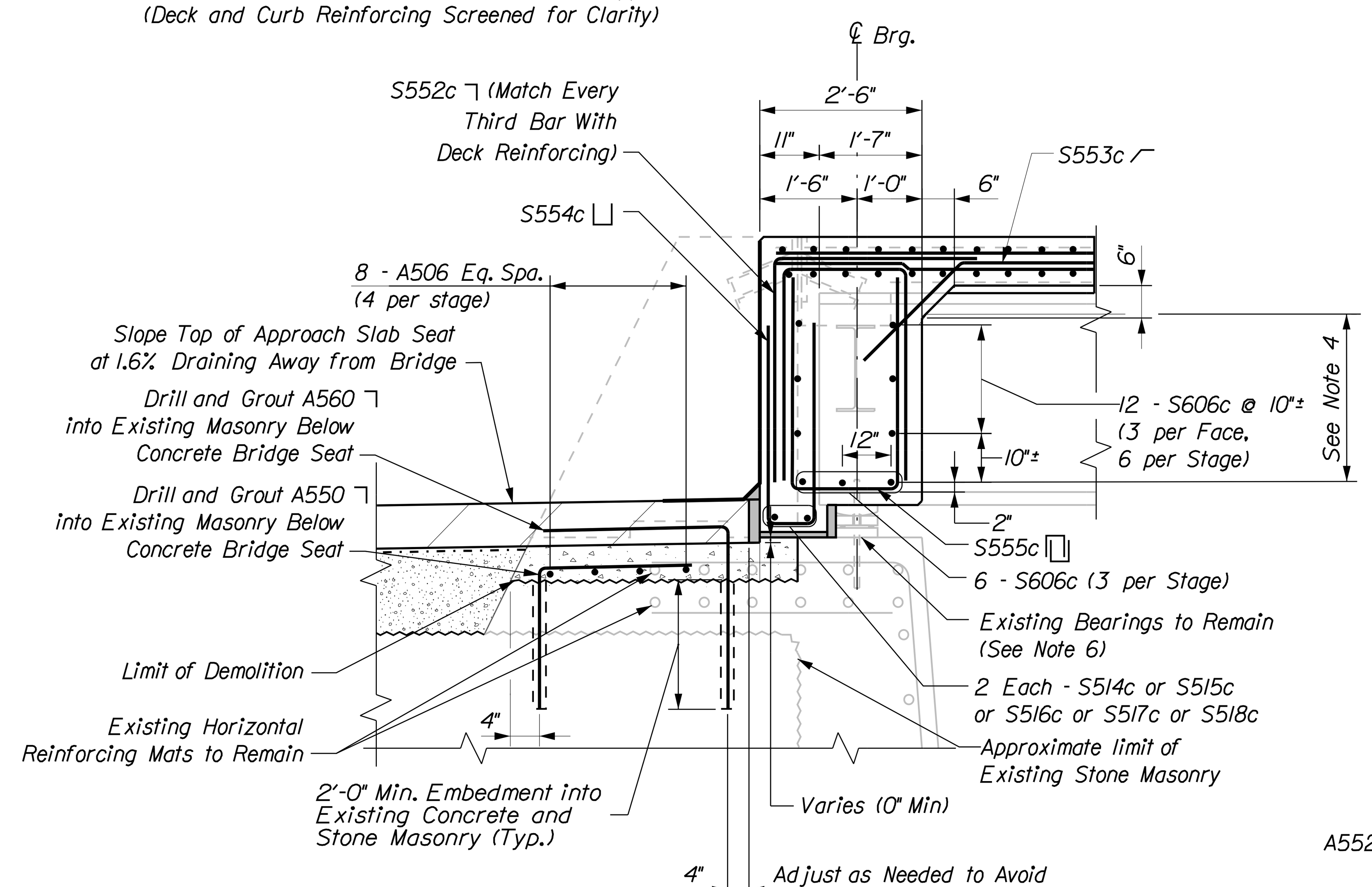
(Abutment No. 1 shown, Abutment No. 2 similar but opposite)
(Deck and Curb Reinforcing Screened for Clarity)



ABUTMENT REMOVAL SECTION

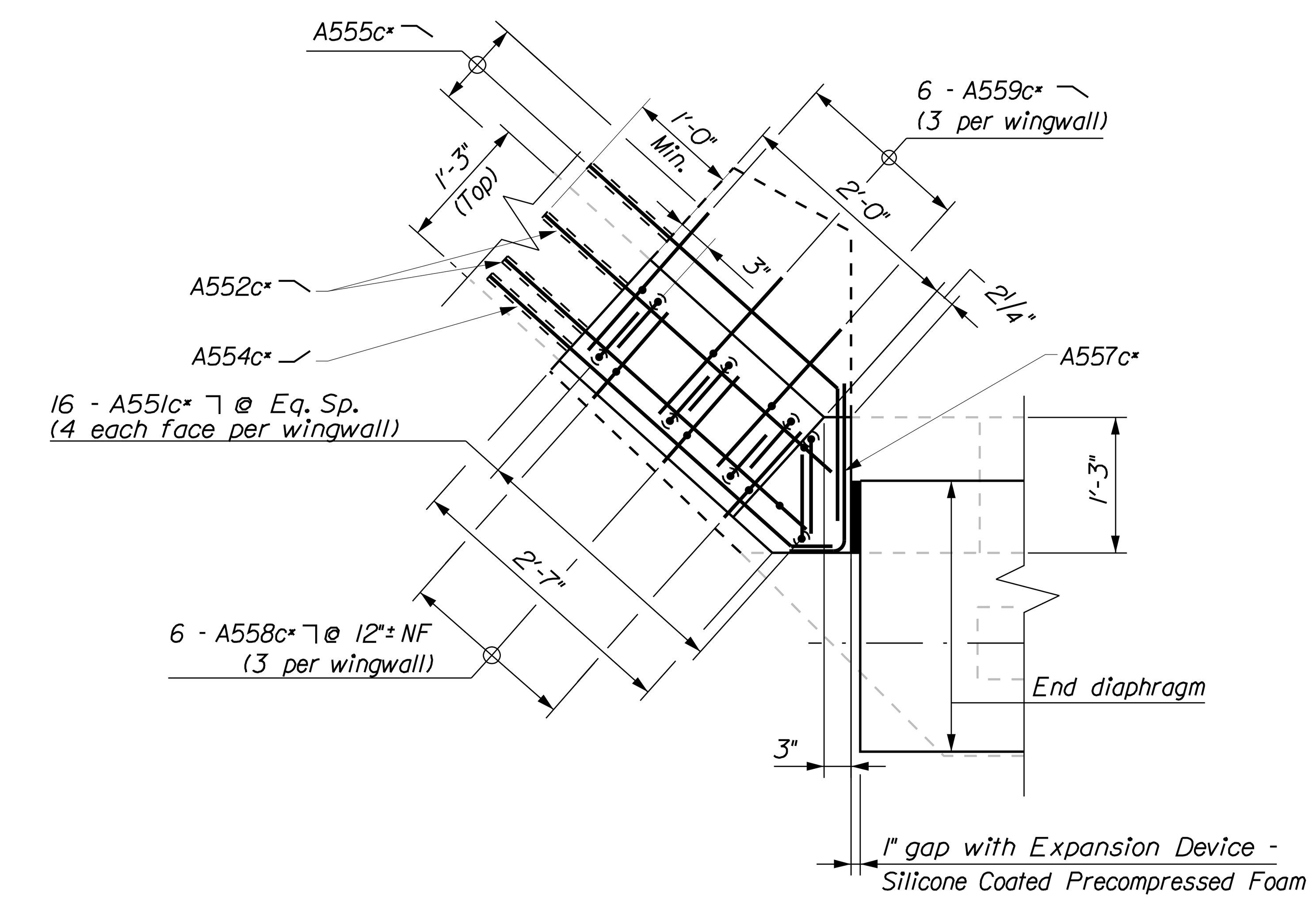
NOTES:

1. Neoprene pads shall be either polychloroprene or natural polyisprene of 50±5 Shore A durometer hardness, and shall conform to the requirements of Section 18.2 of the LRFD Bridge Construction Specifications, Third Edition.
2. Neoprene pads, closed cell foam, mortared chamfer and preformed expansion joint filler will not be paid for directly but will be incidental to related contract items.
3. Minimum lap splice length shall be:
   2'-7" for #5 bars
   3'-1" for #6 bars
4. Drill (5) 1 3/4" diameter holes in the Girder 3 web and (5) 1" diameter holes in each of the remaining girder webs to Accommodate S607c & S608c Mechanical Connectors and S606c bars.
5. Existing bearings shown schematically. Existing bearings to remain.
6. NF = Near Face
   FF = Far Face
7. Abutment No. 1 reinforcement detailed with bar mark "A". Abutment No. 2 reinforcement similar but with bar mark "B".
8. The Contractor shall use care not to damage the existing reinforcing steel which is to remain. Any damaged reinforcing steel shall be replaced as directed by the Resident at no expense to the Department.
9. The Contractor shall locate, by non-destructive methods, reinforcing steel in the existing concrete before drilling and grouting new reinforcing steel and anchor rods. All costs associated with this work shall be incidental to related contract items.
10. Reinforcing steel shall have 2 inches cover unless otherwise noted.
11. Existing concrete abutments and wingwalls to be removed as shown on the plans shall be sawcut one inch deep prior to removing existing concrete. All costs associated with this work shall be incidental to related contract items.
12. Where drilling and anchoring of reinforcement is specified, the Contractor shall use a material listed on the Maine Department of Transportation Qualified Product List of Concrete Adhesive Anchor Systems. Proposed anchoring material and embedment depth shall be submitted for approval. No separate payment will be made for drilling and anchoring of reinforcing steel, but shall be incidental to the related Contract pay item.
13. All dimensions based on or related to the existing bridge shall be verified in the field by the Contractor.
14. All exposed edges of concrete shall have a 3/4 inch chamfer unless otherwise noted. Chamfers for wingwall modifications shall match existing chamfers.



PROPOSED END DIAPHRAGM REINFORCING SECTION

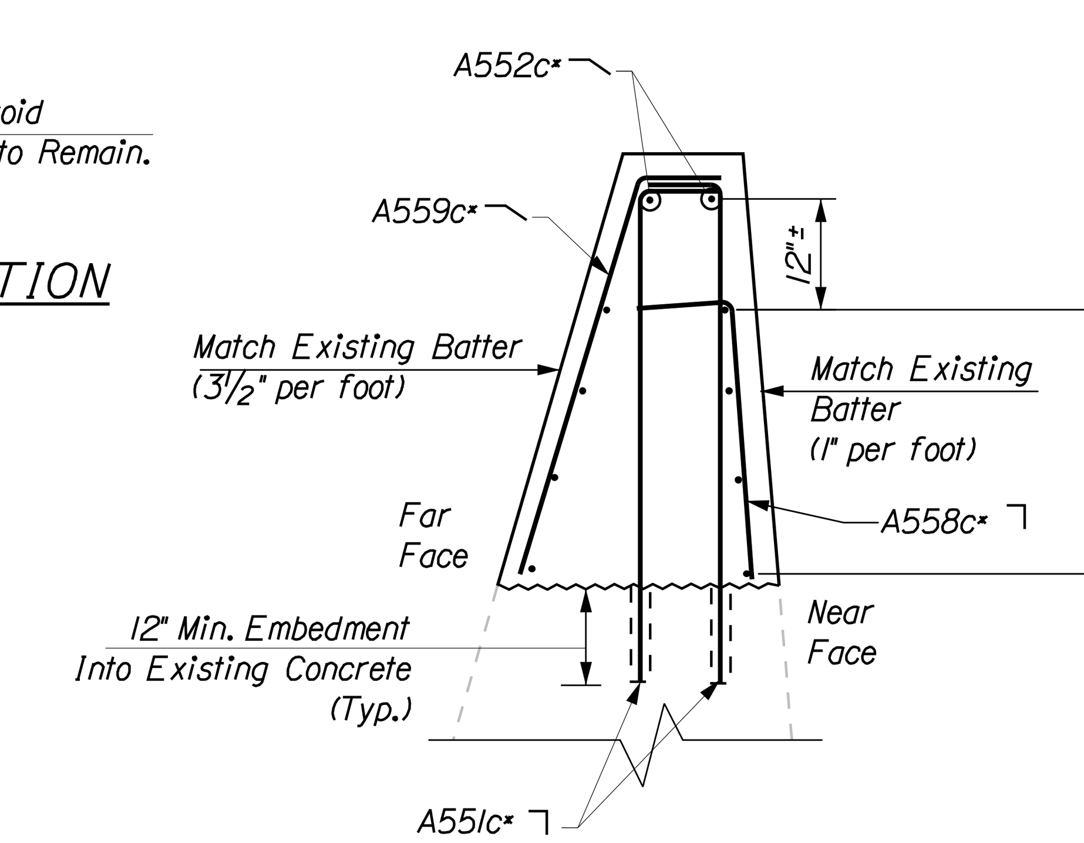
Abutment No. 1 shown (Abutment No. 2 similar but opposite)



* Indicates bars to be cut to length in the field

DETAIL A - REINFORCING PLAN

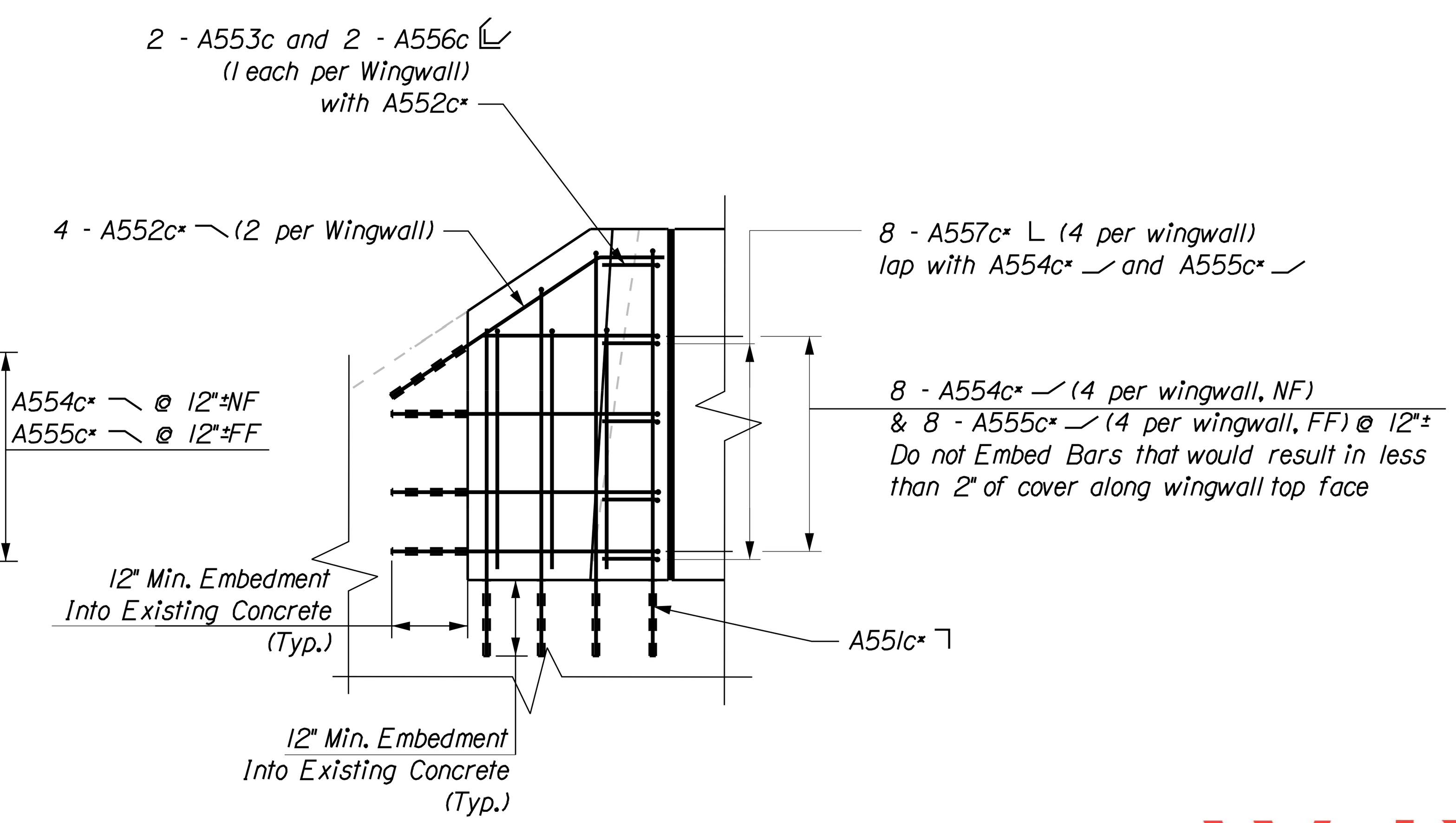
Adjacent wingwall similar but opposite hand. Opposite abutment similar.



* Indicates bars to be cut to length in the field

WINGWALL REINFORCING SECTION

Adjacent wingwall similar but opposite hand. Opposite abutment similar.



* Indicates bars to be cut to length in the field

DETAIL A - REINFORCING ELEVATION

Adjacent wingwall similar but opposite hand. Opposite abutment similar.
(A559c* omitted for clarity)

wsp

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE PLANS

BRIDGE NO. 5756

PROJ. MANAGER	D. EATON	
DESIGN-DETAILED	E. CARON	9/2023
CHECKED-REVIEWED	K. JAMES	9/2023
DESIGN2-DETAILED2	W. GERHOLD	
DESIGN3-DETAILED3	T. POLSON	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

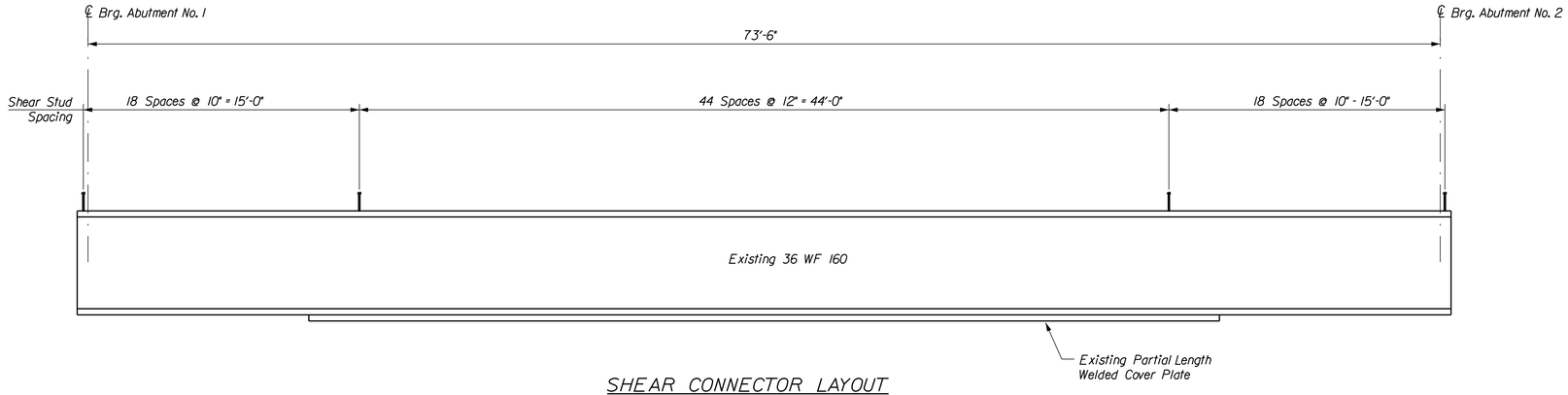
SIGNATURE
12202
P.E. NUMBER
10/23/2023
DATE

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

ABUTMENT DETAILS

SHEET NUMBER
20
OF 26

Date: 10/25/2023 Username: Division: BRIDGE Filename: ...\BRIDGE\MSTA\020_Abutment_Det

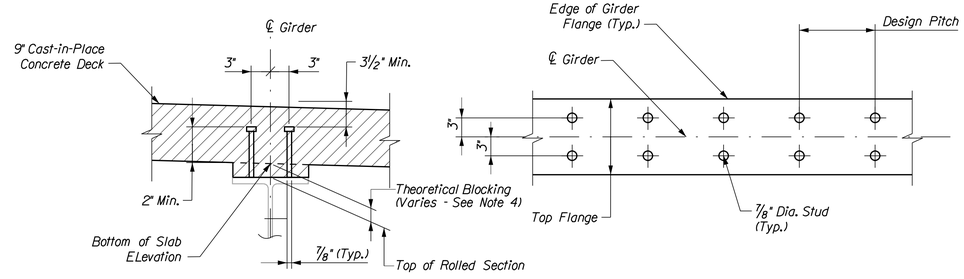


SHEAR CONNECTOR LAYOUT

Double Studs ~ 162 Studs Per Girder (5) = 810 Studs

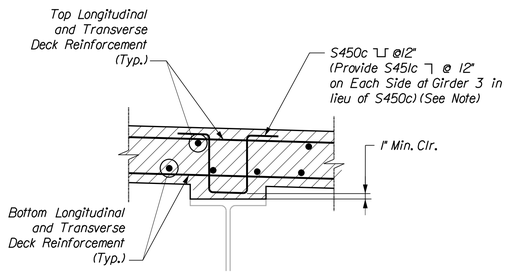
NOTES

1. Girder haunches are anticipated to have variable depths and may require stud lengths ranging from 6" to 8". Payment for additional shear connectors will be considered incidental to Item 505.08 "Shear Connectors".
2. Temporary top flange bracing placed at midspan of the existing girders is required for construction of the new deck and paid for under Item 524.301, Temporary Structural Support - Lateral Bracing. The temporary bracing shall be removed after concrete deck has cured.
3. Prior to installing the proposed shear studs, the Contractor shall clean the top flange so that it is free of debris. Rust, scale , oil and other contaminants that would adversely the welding operation. Payment for cleaning the top flange for installation of proposed shear studs will be considered incidental to shear stud item.
4. The theoretical blocking used for design of the structure is 5⅜" and 5⅝" at the centerline of bearing of Abutment 1 and Abutment 2, respectively. Refer to Standard Detail 502(03) for blocking details. See Haunch Reinforcement detail on Structural Steel Details sheet when blocking depth exceeds 4 inches.



SECTION PLAN

SHEAR CONNECTOR DETAILS



HAUNCH REINFORCEMENT DETAIL

Note: Where girder haunch depths exceed 4" haunch reinforcement shall be provided. locations of girder haunch reinforcement shall be verified by the Resident. A nominal quantity of haunch reinforcement bars is specified, but actual number of bars required is to be determined by the Resident.

BOTTOM OF SLAB ELEVATIONS

	℄ Brg. Abut. 1	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	℄ Brg. Abut. 2
Girder 1	98.51	98.58	98.67	98.77	98.89	99.02	99.16	99.32	99.49	99.68	98.88
Girder 2	98.29	98.37	98.45	98.56	98.67	98.80	98.95	99.10	99.28	99.46	99.66
Girder 3	98.08	98.15	98.24	98.34	98.46	98.59	98.73	98.89	99.06	99.25	99.45
Girder 4	97.86	97.94	98.02	98.13	98.24	98.37	98.52	98.67	98.85	99.03	99.23
Girder 5	97.65	97.72	97.81	97.91	98.03	98.16	98.30	98.46	98.63	98.82	99.02

UNFACTORED GIRDER DEFLECTIONS

Girder 1 & Girder 5 Deflections (in)											
	℄ Brg. Abut. 1	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	℄ Brg. Abut. 2
Cast-In-Place Slab Deflection	0	½	15/16	1 5/16	1 ½	1 9/16	1 ½	1 5/16	15/16	½	0
Superimposed Deflection	0	1/16	1/16	⅛	⅛	⅛	⅛	⅛	1/16	1/16	0
Total Deflection	0	9/16	1	1 3/8	1 5/8	1 11/16	1 5/8	1 3/8	1	9/16	0
Girder 2 & Girder 4 Deflections (in)											
	℄ Brg. Abut. 1	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	℄ Brg. Abut. 2
Cast-In-Place Slab Deflection	0	½	15/16	1 5/16	1 ½	1 5/8	1 ½	1 5/16	15/16	½	0
Superimposed Deflection	0	1/16	1/16	1/16	⅛	⅛	⅛	1/16	1/16	1/16	0
Total Deflection	0	9/16	1	1 3/8	1 5/8	1 11/16	1 5/8	1 3/8	1	9/16	0
Girder 3 - Stage 1 Deflections (in)											
	℄ Brg. Abut. 1	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	℄ Brg. Abut. 2
Cast-In-Place Slab Deflection	0	3/16	5/16	7/16	½	9/16	½	7/16	5/16	3/16	0
Superimposed Deflection	0	0	1/16	1/16	1/16	1/16	1/16	1/16	1/16	0	0
Total Deflection	0	3/16	3/8	½	9/16	5/8	9/16	½	3/8	3/16	0
Girder 3 - Stage 2 Deflections (in)											
	℄ Brg. Abut. 1	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	℄ Brg. Abut. 2
Cast-In-Place Slab Deflection	0	3/16	5/16	7/16	½	½	½	7/16	5/16	3/16	0
Superimposed Deflection	0	0	1/16	1/16	1/16	1/16	1/16	1/16	1/16	0	0
Total Deflection	0	3/16	5/16	7/16	½	9/16	½	7/16	5/16	3/16	0

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE PLANS

BRIDGE NO. 5756

STATE OF MAINE Adam Stolch 12202 PROFESSIONAL ENGINEER 10/23/23

PROJ. MANAGER	D. EATON
DESIGN-DETAILED	W. GERHOLD 9/2023
CHECKED-REVIEWED	N. GOMEZ 9/2023
DESIGN2-DETAILED2	E. CARON
DESIGN3-DETAILED3	T. POLSON
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

12202 P.E. NUMBER
SIGNATURE
10/23/2023 DATE

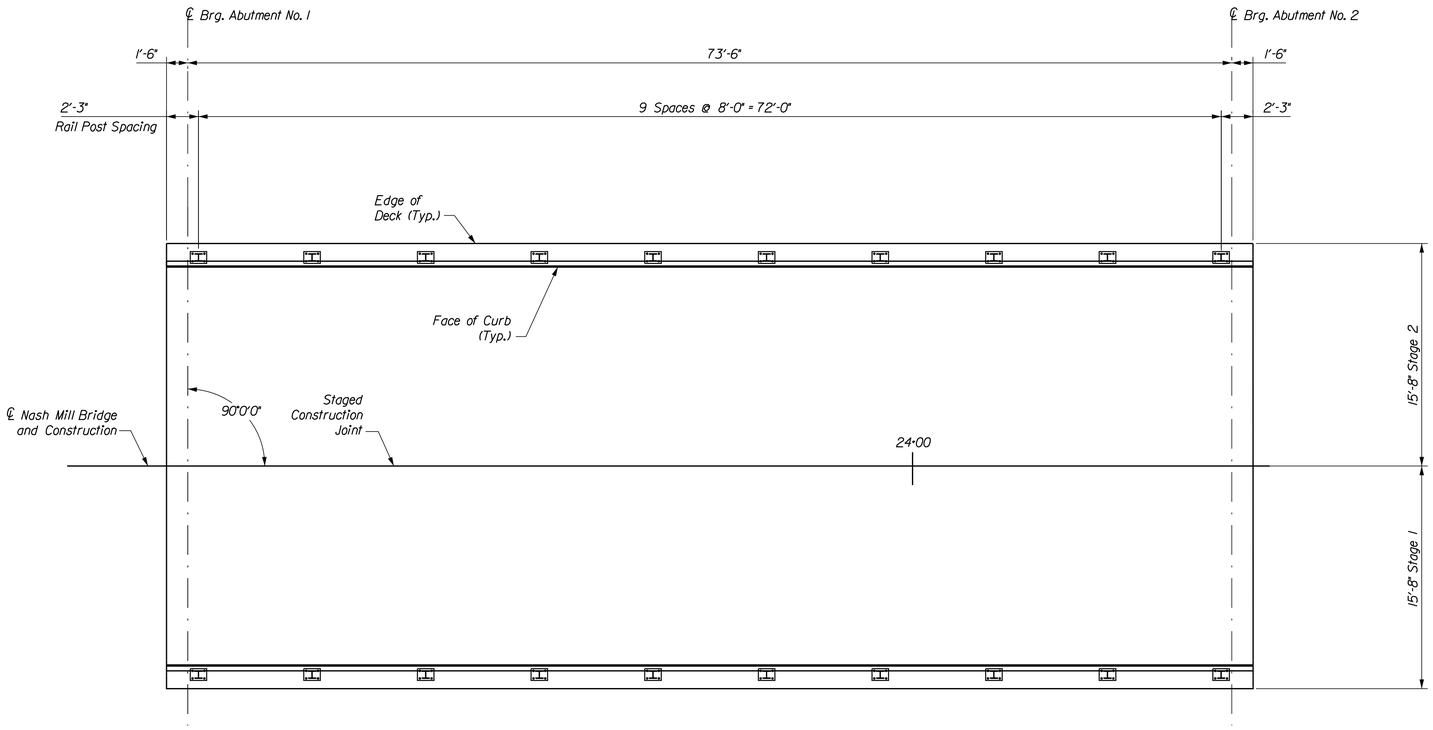
NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

STRUCTURAL STEEL DETAILS

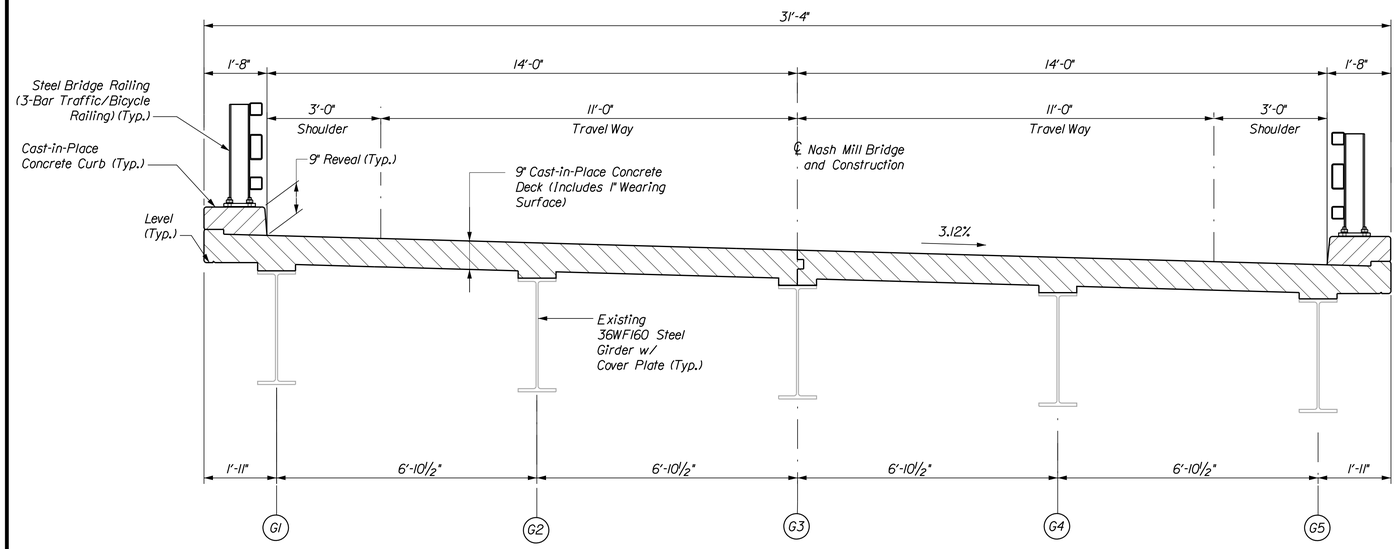
SHEET NUMBER
21
OF 26

wsp

Filename: ...\Cadd\BRIDGE\MSTA\021_Steel_Det Division: BRIDGE Username: Date:10/25/2023



DECK PLAN



PROPOSED BRIDGE SECTION

SUPERSTRUCTURE NOTES:

1. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.
2. Form a one inch V-groove on the fascias at the horizontal joint between the curb and slab.
3. The superstructure slab concrete, including end diaphragm, shall be placed continuously and shall be kept plastic until the entire placement has been made.
4. Precast Concrete Deck Panels are not allowed on this project.
5. Anchor rods for the steel bridge rail posts shall be shortened by 1 inch to provide additional clearance between the top of the deck and bottom of the anchor rod.
6. The saw cut grooving shall be in the longitudinal direction.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE NO. 5756

BRIDGE PLANS

STATE OF MAINE Adam Stolch 12202 REGISTERED PROFESSIONAL ENGINEER 10/23/23

PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	E. CARON	W. GERHOLD	9/2023
CHECKED-REVIEWED	N. GOMEZ	T. POLSON	9/2023
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

12202
P.E. NUMBER

10/23/2023
DATE

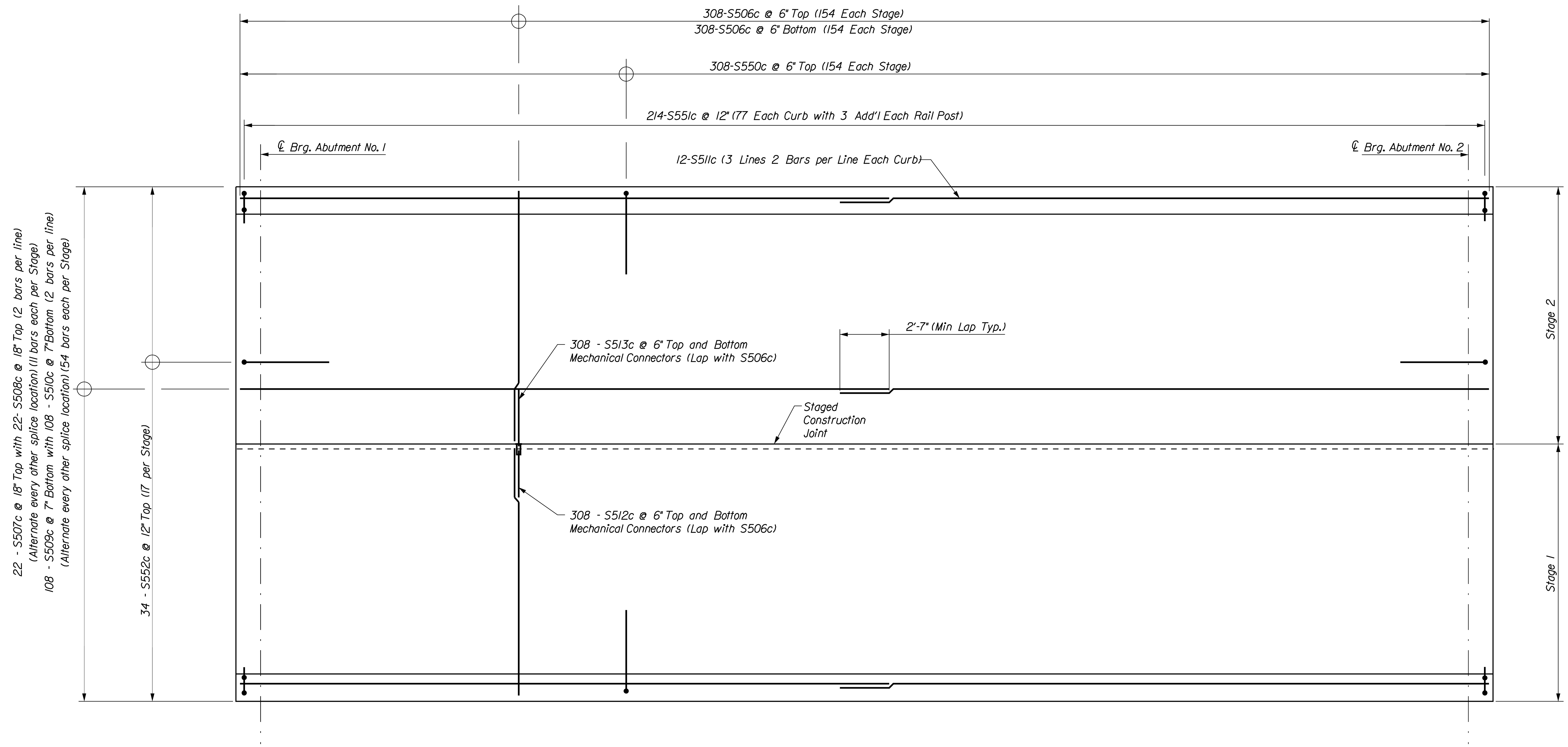
NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

SUPERSTRUCTURE PLAN

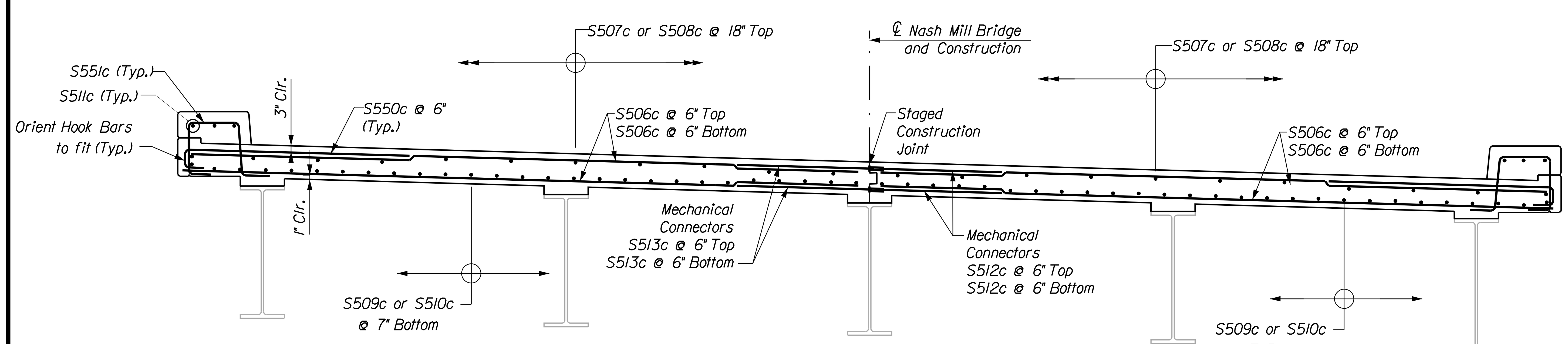
SHEET NUMBER
22
OF 26

wsp

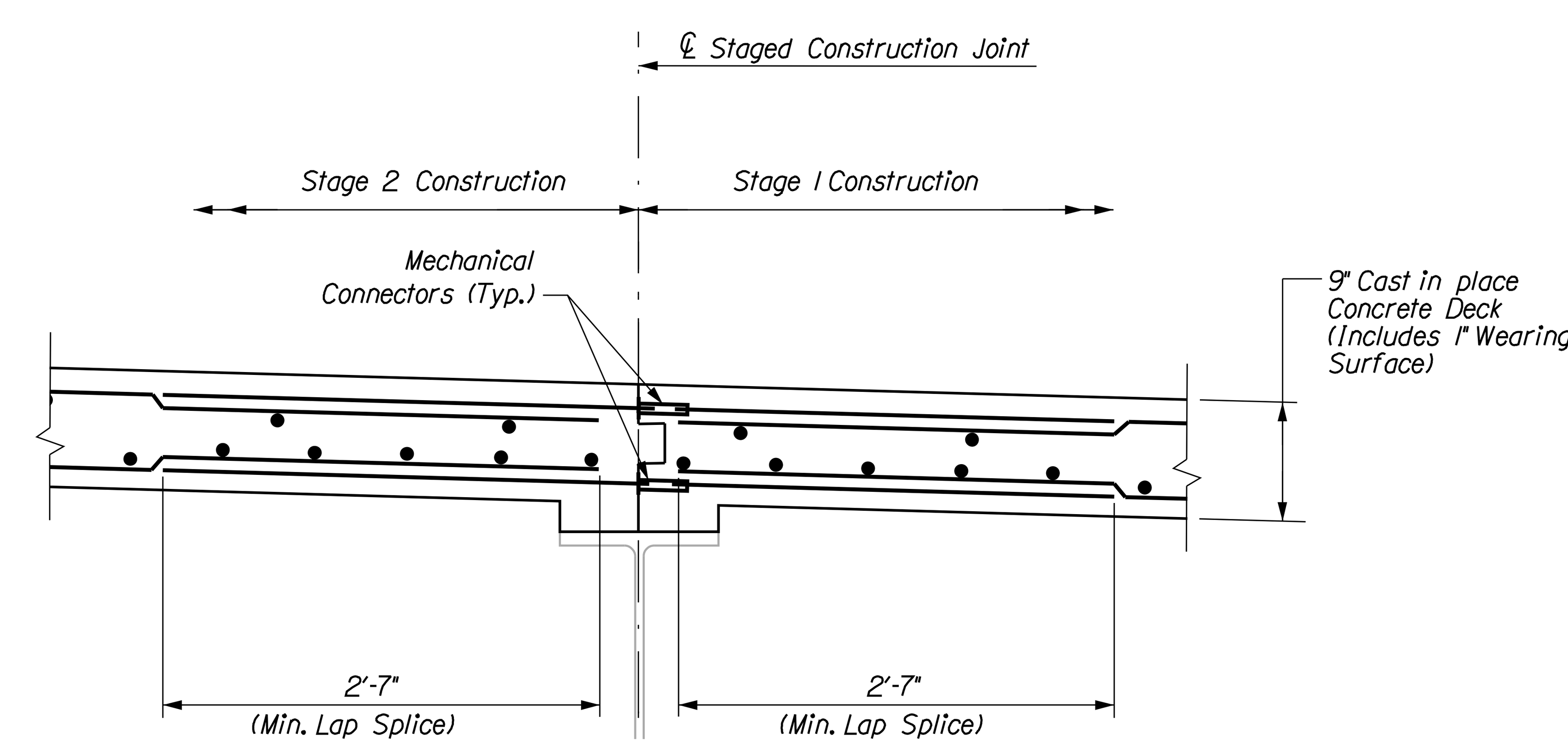
Filename: ...\MSTA\022_Superstructure.dgn Division: BRIDGE Username: Date:10/25/2023



SUPERSTRUCTURE REINFORCING PLAN



SUPERSTRUCTURE REINFORCING SECTION



LONGITUDINAL CONSTRUCTION JOINT DETAIL

wsp

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE PLANS

BRIDGE NO. 5756

		BY	DATE
PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	E. CARON	W. GERHOLD	9/2023
CHECKED-REVIEWED	K. JAMES	T. POLSON	9/2023
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

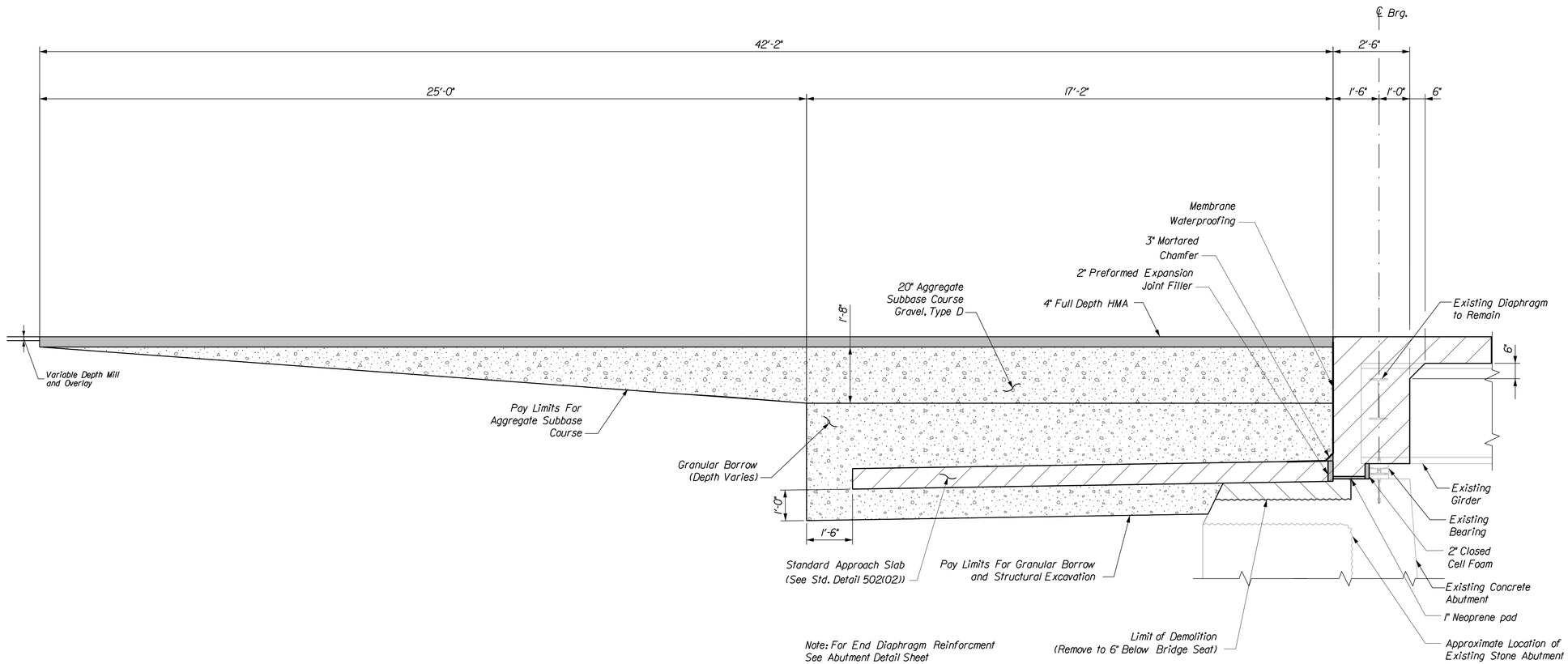
SIGNATURE
12202
P.E. NUMBER
10/23/2023
DATE

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

REINFORCING PLAN

SHEET NUMBER
23
OF 26

Filename: ...\BRIDGE\MSTA\023_reinfplan.dgn
Division: BRIDGE
Username:
Date:10/25/2023



DECK END DETAIL

Abutment 1 shown (Abutment 2 similar but opposite)

Filename: ...\BRIDGE\MSTA\024_Deck_Det.dgn Division: BRIDGE Username: Date:10/25/2023

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900

WIN 023629.00

BRIDGE NO. 5766

BRIDGE PLANS

STATE OF MAINE Adam Stolch 12202 PROFESSIONAL ENGINEER 10/23/23

PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	E. CARON	W. GERHOLD	9/2023
CHECKED-REVIEWED	N. GOMEZ	T. POLSON	9/2023
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES	---		

SIGNATURE

12202
P.E. NUMBER

10/23/2023
DATE

NASH MILL BRIDGE
MOUSAM RIVER
YORK COUNTY
KENNEBUNK

SUPERSTRUCTURE
DECK END DETAILS

SHEET NUMBER

24

OF 26

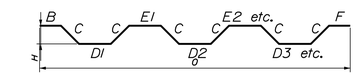
STRAIGHT BARS

MARK	QTY.	LENGTH	LOCATION
			Superstructure
S506c	616	15'-3"	*Top and bottom transverse*
S507c	22	45'-0"	*Top longitudinal*
S508c	22	33'-10"	*Top longitudinal*
S509c	108	45'-0"	*Bottom longitudinal*
S510c	108	33'-10"	*Bottom longitudinal*
S511c	12	39'-5"	*Longitudinal curb reinforcement*
S512c	308	3'-0"	*Stage I deck mechanical coupler*
S513c	308	3'-6"	*Stage 2 deck mechanical coupler*
S514c	12	8'-8"	*Bottom of end diaphragm stub*
S515c	4	5'-0"	*Bottom of end diaphragm stub*
S516c	4	5'-5"	*Bottom of end diaphragm stub*
S517c	4	3'-0"	*Stage I end dia. mech. coupler*
S518c	4	3'-6"	*Stage 2 end dia. mech. coupler*
S606c	36	15'-3"	*End diaphragm primary*
S607c	18	3'-6"	*Stage I end dia. mech. coupler*
S608c	18	4'-0"	*Stage 2 end dia. mech. coupler*
			Approach Slab
AS501	64	12'-8"	*Bottom transverse*
AS502	32	3'-0"	*Stage I mechanical coupler*
AS503	32	3'-6"	*Stage 2 mechanical coupler*
AS601	108	15'-2"	*Bottom longitudinal*
			Abutment No. 1
A506	8	15'-5"	*Approach slab seat long.*
			Abutment No. 2
B506	8	15'-5"	*Approach slab seat long.*

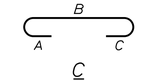
BENT BARS

MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
														Superstructure
S450c	140	3'-4"	SL	0'-8"	0'-8"	0'-8"	0'-8"			0'-8"				*Haunch reinforcement*
S451c	70	1'-4"	L	0'-8"	0'-8"									*Haunch rein. at girder 3*
S550c	308	5'-8"	C	0'-7"	5'-1"	0'-0"								*Deck overhang transverse*
S551c	214	5'-3"	SC	0'-10"	1'-2"	1'-3"	1'-2"			0'-10"		1'-4"		*Curb stirrup*
S552c	68	6'-0"	L	3'-0"	3'-0"									*End diaphragm hanger*
S553c	68	6'-0"	V				3'-0"	3'-0"			2'-1"			*End diaphragm top of front face*
S554c	68	5'-7"	S	0'-0"	2'-6"	0'-7"	2'-6"			0'-0"				*End diaphragm rear stirrup*
S555c	136	8'-6"	S	0'-0"	3'-2"	2'-2"	3'-2"			0'-0"				*End diaphragm stirrup*
S556c	16	4'-6"	S	0'-0"	1'-3"	2'-0"	1'-3"			0'-0"				*End diaphragm end stirrups*
S557c	12	5'9"	S	0'-0"	1'-3"	3'-3"	1'-3"			0'-0"				*End dia. vertical end stirrups*
														Abutment No. 1
A550	32	4'-8"	L	2'-4"	2'-4"									*Back of abutment dowels*
A551c*	16	6'-11"	L	6'-0"	0'-11"									*Vertical wingwall bars*
A552c*	4	4'-8"	V				1'-2"	3'-6"			1'-6"			*Wingwall top bars*
A553c	2	1'-10"	T3	0'-6"	0'-9"	0'-7"					0'-5"			*Top wingwall stirrup*
A554c*	8	4'-5"	V				3'-9"	0'-8"			0'-6"			*Horizontal wingwall bars. NF*
A555c*	8	4'-0"	V				3'-1"	0'-11"			0'-8"			*Horizontal wingwall bars. FF*
A556c	2	2'-2"	T3	0'-10"	0'-6"	0'-10"					0'-7"			*Top wingwall stirrup*
A557c*	8	4'-1"	L	3'-0"	1'-1"									*Wingwall horizontal L's*
A558c*	6	4'-6"	L	1'-1"	3'-5"									*Wingwall NF battered bars*
A559c*	6	5'-6"	V				0'-11"	4'-7"			4'-5"			*Wingwall FF battered bars*
A560	28	3'-10"	L	1'-0"	2'-10"									*Approach slab dowels*
														Abutment No. 2
B550	32	4'-8"	L	2'-4"	2'-4"									*Back of abutments dowels*
B551c*	16	6'-11"	L	6'-0"	0'-11"									*Vertical wingwall bars*
B552c*	4	4'-8"	V				1'-2"	3'-6"			1'-6"			*Wingwall top bars*
B553c	2	1'-10"	T3	0'-6"	0'-9"	0'-7"					0'-5"			*Top wingwall stirrup*
B554c*	8	4'-5"	V				3'-9"	0'-8"			0'-6"			*Horizontal wingwall bars. NF*
B555c*	8	4'-0"	V				3'-1"	0'-11"			0'-8"			*Horizontal wingwall bars. FF*
B556c	2	2'-2"	T3	0'-10"	0'-6"	0'-10"					0'-7"			*Top wingwall stirrup*
B557c*	8	4'-1"	L	3'-0"	1'-1"									*Wingwall horizontal L's*
B558c*	6	4'-6"	L	1'-1"	3'-5"									*Wingwall NF battered bars*
B559c*	6	5'-6"	V				0'-11"	4'-7"			4'-5"			*Wingwall FF battered bars*
B560	28	3'-10"	L	1'-0"	2'-10"									*Approach slab dowels*

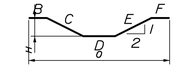
TYPE - BENDING DIAGRAMS



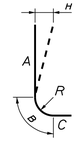
B



C

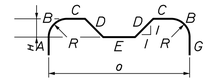


M

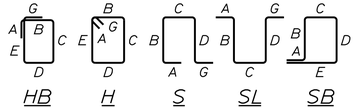


J

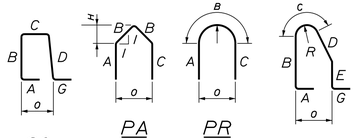
L



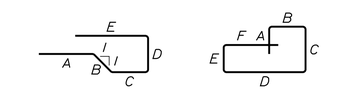
W



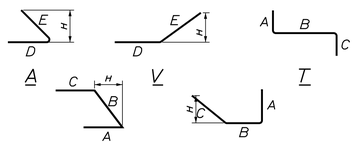
HB H S SL SB



SC PA PR CB



SJ EP



A V T T2 T3

* *Indicates bars to be cut to fit in the field*

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 A615, Grade 60
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 "S650" = bar size #6
   Mark "P805" = bar size #8

2. The lower case letter following the bar number indicates the material of the bar.
   "AS501", no letter = (Black) Plain Steel
   "A555c", c = Low-carbon Chromium Steel

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2362900 BRIDGE PLANS

WIN 023629.00

BRIDGE NO. 5756

STATE OF MAINE — Adam Stolch — 12202 — PROFESSIONAL ENGINEER — 10/23/23

PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	E. CARON	9/2023	DESIGN 1
CHECKED-REVIEWED	K. JAMES	9/2023	DESIGN 2
DESIGN2-DETAILED2			DESIGN 3
DESIGN3-DETAILED3			DESIGN 4
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE — P.E. NUMBER 12202 — 10/23/2023 DATE

NASH MILL BRIDGE
MOUSAM RIVER
KENNEBUNK YORK COUNTY

REINFORCING SCHEDULE

SHEET NUMBER 25 OF 26

PLAN LEGEND

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

Existing / Proposed

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	

STATE OF MAINE
REGISTRY OF DEEDS
COUNTY _____
RECEIVED _____, _____
at _____h_____m_____M and recorded in
Plan Book _____, Page _____
Attest: _____
REGISTER

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

GRID NORTH
MAINE 2000 WEST ZONE

CONTROL INFORMATION

HORIZONTAL DATUM - US STATE PLANE NAD83 (2011)
ZONE - MAINE 2000 WEST ZONE
VERTICAL DATUM - NAVD 88
COMBINED FACTOR - 0.9999805

NOTE: PRESCRIPTIVE EASEMENT FOR HIGHWAY PURPOSES WITHIN LIMITS OF WROUGHT PORTION (L.O.W.P.)

MOUSAM RIVER SHORE LINE BASED ON SKETCH FROM 2005 AERIAL PHOTO AND IS APPROXIMATE ONLY!

KENNEBUNK LIGHT AND POWER
TAX MAP/LOT - 15/3
BOOK/PAGE - 8293/166 & 1228/286
POR NO. - 3

KENNEBUNK, KENNEBUNKPORT & WELLS WATER DISTRICT 30-FOOT WIDE UTILITY EASEMENT

LEA ELIZABETH MAIORANA
TAX MAP/LOT - 15/2
BOOK/PAGE - 14836/693
POR NO. - 5

JANE TODD ROSS
TAX MAP/LOT - 15/4
BOOK/PAGE - 17366/387
POR NO. - 1

PETER J. FULLER
TAX MAP/LOT - 15/7
BOOK/PAGE - 8886/62
POR NO. - 2

KENNEBUNK LIGHT AND POWER
TAX MAP/LOT - 15/6
BOOK/PAGE - 8293/166 & 1228/286
POR NO. - 4

MOUSAM RIVER
MILL STREET
MOUSAM STREET ROAD/ TO WEBBER HILL ROAD
TIGERLILY LN (PRIVATE)
TO ALFRED ROAD
Done Perkins Dam Access
River Access
STA 23+48.98 ℄ Brg. Abutment No. 1
STA 24+22.48 ℄ Brg. Abutment No. 2
73'-6" Span
90°0'0" Skew
R=250'
R=225'
R=50'
R=10'
11.0'
P.L.
L.O.W.P.
SWLL
DSYL
Driveway Apron
Low Volume Guardrail End
Remove and Reset Existing WI-8 Sign Post
Remove and Reset Existing OM3-R Sign Post
Guardrail Terminal End - RWE03A
STA 25+50 Limit of Work Match Existing Pavement End Mill & Overlay
STA 21+50 Limit of Work Match Existing Pavement Begin Mill & Overlay
Transition W-Beam Guardrail to Bridge Rail (Typ.)
Proposed Edge of Pavement (Typ.)
Proposed 3/4" W-Beam Guardrail Mid-Way Splice (Typ.)
Field Verify Grading and Adjust as Needed to Maintain Ditchline
PTRA 151 BM-151 AN UP20
PTRA 150 BM-150 AN UP18
PTRA 504 SPK
PTRA 502 SPK
PCTL 23629-10 GPS SPK

RIGHT OF WAY INFORMATION

TOWN OF KENNEBUNK RECORDS:
1) MILL STREET FROM ALFRED ROAD TO THE INTERSECTION WITH DISCONTINUED PORTION OF HOLLAND ROAD: PAGE 62, 3 RODS (49.5-FEET), MARCH 14, 1857.
2) MILL STREET FROM THE INTERSECTION WITH DISCONTINUED PORTION OF HOLLAND ROAD AND SOUTHERLY TO AND ACROSS NASH BRIDGE (PRESCRIPTIVE EASEMENT): 3 RODS (49.5 FEET) BASED ON FOUND MONUMENTATION, AND WIDER IN SUPPORTING SLOPE AND BRIDGE STRUCTURE AREAS.

TOWN OF WELLS RECORDS:
1) CAT MOUSAM ROAD / MILL STREET, SOUTHWESTERLY OF NASH BRIDGE (PRESCRIPTIVE EASEMENT): A REVIEW OF THE STATE FILES, COUNTY RECORDS, AND TOWN RECORDS HAS PRODUCED THE FOLLOWING: CAT MOUSAM ROADWAY ACCEPTED BY THE TOWN OF WELLS IN 1778 AS A THREE ROD ROAD. KENNEBUNK WAS A PART OF THE TOWN OF WELLS UNTIL IT WAS INCORPORATED AS A TOWN IN 1820. NO STATE OR COUNTY INFORMATION HAS BEEN FOUND TO DATE WHICH DESCRIBED CAT MOUSAM ROAD. THE RIGHT OF WAY AS SHOWN IS BASED ON MONUMENTATION FOUND AND APPARENT ROADWAY CENTERLINE.

MOUSAM RIVER SHORE LINE BASED ON SKETCH FROM 2005 AERIAL PHOTO AND IS APPROXIMATE ONLY!

THE PROJECT SITE IS SUBJECT TO FLOWAGE RIGHTS OF KENNEBUNK LIGHT AND POWER DISTRICT, TO AN ELEVATION OF 83'± (NAVD-88) AS SHOWN ON FIGURE E-3, PREPARED BY WRIGHT AND PIERCE ENGINEERING, PROJECT NO. 12397A, DATED JANUARY 2017.

NASH MILL BRIDGE
OVER
MOUSAM RIVER

BRIDGE NO. 5756 WIN 023629.00

ITEM	CHECKED
EXISTING CONDITION PLAN	C.W.K.
FINAL RIGHT OF WAY	R.M.C.
AREAS	TECH

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

REVISIONS

NO.	DATE	DESCRIPTION	BY

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

DAVID BERNHARDT
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

OFFICE USE ONLY
PLAN NOT TO BE RECOREDED

MILL STREET
MILL STREET
KENNEBUNK YORK COUNTY
FEDERAL AID PROJECT NO. 2362900

OCTOBER 2023 | RIGHT-OF-WAY MAP | SCALE 1" = 25' | SHEET 1 OF 1

SHEET NUMBER
26
OF 26