

STATE OF MAINE DEPARTMENT OF TRANSPORTATION



GREENBUSH PENOBSCOT COUNTY BOOM BRIDGE OVER BOOMBRIDGE BROOK US ROUTE 2 FEDERAL PROJECT NO. 2309401 PROJECT LENGTH 0.152 mi. BRIDGE NO. 3587

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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 (2018) AADT	2110
Future (2038) AADT	2320
DHV - % of AADT	10
Design Hour Volume	232
Heavy Trucks (% of AADT)	11
Heavy Trucks (% of DHV)	11
Directional Distribution (% of DHV)	53
18 kip Equivalent P 2.0	316
18 kip Equivalent P 2.5	301
Design Speed (mph)	55

HYDROLOGIC DATA

Drainage Area	4.8 sq mi
Design Discharge (Q50)	296 cfs
Check Discharge (Q100)	346 cfs

Headwater Elevations and Discharge Velocities (Based on No Backwater from Penobscot River)

Headwater Elevation (Q1.1)	105.7 ft
Headwater Elevation (Q10)	106.6 ft
Headwater Elevation (Q25)	106.9 ft
Headwater Elevation (Q50)	107.1 ft
Headwater Elevation (Q100)	107.3 ft
Discharge Velocity (Q1.1)	2.7 fps
Discharge Velocity (Q50)	5.4 fps
Discharge Velocity (Q100)	5.7 fps

Headwater Elevations and Discharge Velocities (Based on Backwater from Penobscot River)

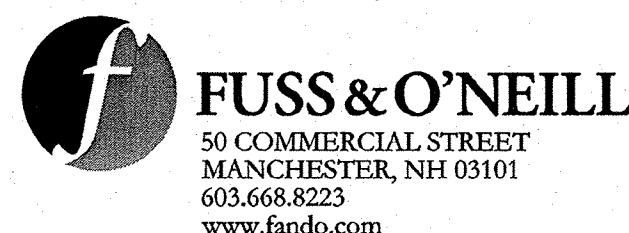
Headwater Elevation (Q1.1)	110.3 ft
Headwater Elevation (Q10)	120.0 ft
Headwater Elevation (Q25)	122.0 ft
Headwater Elevation (Q50)	123.6 ft
Headwater Elevation (Q100)	125.0 ft
Discharge Velocity (Q50)	4.5 fps
Discharge Velocity (Q100)	4.5 fps

MATERIALS

Concrete:	
Curbs	Class "LP"
All Other	Class "A"
Reinforcing Steel:	
Plain	ASTM A 615/A 615M, Grade 60
Low-Carbon Chromium	ASTM A 1035-CS, Grade 100
Structural Steel:	
All Material (Except as Noted)	ASTM A 709, Grade 50 (metallized)
High Strength Bolts	ASTM F3125, Grade A325, Type 1 (galvanized)
Anchor Rods	ASTM F1554

BASIC DESIGN STRESSES

Concrete:	
Class "LP"	f 'c = 5,000 psi
Class "A"	f 'c = 4,000 psi
Plain Reinforcing Steel	f y = 60,000 psi
Low-Carbon Chromium	f y = 100,000 psi
Structural Steel:	
ASTM A 709, Grade 50W	F y = 50,000 psi
ASTM F3125 Grade A325, Type 3	F u = 120,000 psi
ASTM F1554	F y = 105,000 psi
	F u = 120,000 psi



UTILITIES

Versant Power
Consolidated Communications

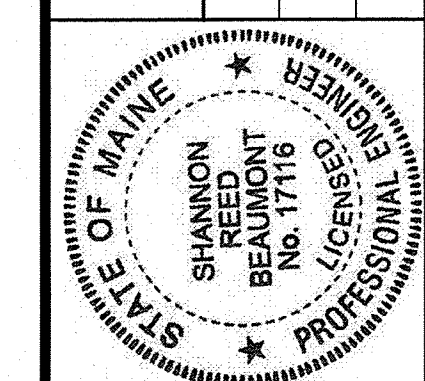
GoNetSpeed
Firstlight Communications

MAINTENANCE OF TRAFFIC

Maintain one lane of alternating traffic using on-site special detour with traffic signals.

PROJECT LOCATION	US Route 2 over the Boombridge Brook Located 2.20 miles north of the Milford/Greenbush town line. Lat./Long. 45°03'10.0" N 68°39'23.0" W
PROGRAM AREA	Bridge
OUTLINE OF WORK	Bridge Replacement

STATE OF MAINE	DEPARTMENT OF TRANSPORTATION	DATE
APPROVED		6-24-22
COMMISSIONER		
CHIEF ENGINEER		



SIGNATURE	17116	P.E. NUMBER	6/13/2022	DATE
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PROGRAM	BRIDGE
PROJECT MANAGER	Michael Wright
DESIGNER	Shannon Beaudoin
CONSULTANT	FUSS AND O'NEILL
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

21727.01
2309401
GREENBUSH BOOM BRIDGE
TITLE SHEET

SHEET NUMBER
1
OF 36

Date: 6/13/2022

Username:

Division: BRIDGE

Filename: \Bentley\ustn\001_Title.dgn

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.19	REMOVING EXISTING BRIDGE (CONCRETE = 349 CY)	1	LS
202.202	REMOVING PAVEMENT SURFACE	1,270	SY
203.20	COMMON EXCAVATION	1,000	CY
203.2318	DISPOSAL OF SPECIAL WASTE	710	T
203.24	COMMON BORROW	110	CY
203.25	GRANULAR BORROW	320	CY
206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES, PLAN QUANTITY	2,220	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	2,000	CY
403.2081	HOT MIX ASPHALT - 12.5 MM (POLYMER MODIFIED)	320	T
403.213	HOT MIX ASPHALT, 12.5 MM (BASE AND INTERMEDIATE BASE COURSE)	470	T
403.2131	HOT MIX ASPHALT, 12.5 MM (BASE AND INTERMEDIATE BASE COURSE, POLYMER MODIFIED)	310	T
409.15	BITUMINOUS TACK COAT, APPLIED	350	G
461.131	TEMPORARY PAVEMENT	350	T
501.231	DYNAMIC LOADING TEST	2	EA
501.54	STEEL H-BEAM PILES 117 LBS/FT, DELIVERED	360	LF
501.541	STEEL H-BEAM PILES 117 LBS/FT, IN PLACE	360	LF
501.90	PILE TIPS	10	EA
501.92	PILE DRIVING EQUIPMENT MOBILIZATION	1	LS
502.219	STRUCTURAL CONCRETE, ABUTMENT & RETAINING WALLS (130 CY)	1	LS
502.26	STRUCTURAL CONCRETE ROADWAY AND SIDEWALK SLAB ON STEEL BRIDGES (221 CY)	1	LS
502.31	STRUCTURAL CONCRETE APPROACH SLAB (28 CY)	1	LS
502.49	STRUCTURAL CONCRETE CURBS AND SIDEWALKS (17 CY)	1	LS
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	35,790	LB
503.13	REINFORCING STEEL, PLACING	35,790	LB
503.19	LOW-CARBON CHROMIUM REINFORCEMENT, FABRICATED AND DELIVERED	50,484	LB
503.20	LOW-CARBON CHROMIUM REINFORCEMENT, PLACING	50,484	LB
504.702	STRUCTURAL STEEL FABRICATED AND DELIVERED, WELDED (44,725 LB)	1	LS
504.71	STRUCTURAL STEEL ERECTION (44,725 LB)	1	LS
505.08	SHEAR CONNECTORS (1,110 EA)	1	LS
506.9104	THERMAL SPRAY COATING (SHOP APPLIED)	1	LS
507.0821	STEEL BRIDGE RAILING, 3 BAR (240 LF)	1	LS
507.0822	STEEL APPROACH RAILING, 3 BAR	4	EA
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE (536 SY)	1	LS
510.10	SPECIAL DETOUR, 16 FOOT ROADWAY WIDTH VEHICULAR AND PEDESTRIAN TRAFFIC NOT SEPARATED	1	LS
511.07	COFFERDAM, ALL COFFERDAMS	1	LS
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES (267 SY)	1	LS
519.60	EXPANSION DEVICE - ASPHALTIC PLUG JOINT	86	LF
526.301	TEMPORARY CONCRETE BARRIER, TYPE I (100 LF)	1	LS
527.34	WORK ZONE CRASH CUSHIONS	4	UN
606.1301	31" W-BEAM GUARDRAIL - MID-WAY SPLICE - SINGLE FACED	413	LF
606.1303	31" W-BEAM GUARDRAIL - MID-WAY SPLICE - 15' RADIUS OR LESS	25	LF
606.1305	31" W-BEAM GUARDRAIL - MID-WAY SPLICE FLARED TERMINAL	3	EA
606.1721	BRIDGE TRANSITION - TYPE I	4	EA
606.259	ANCHORAGE ASSEMBLY	1	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	8	EA
610.08	PLAIN RIPRAP	1,060	CY
610.213	VOID FILLED RIPRAP	284	CY
613.319	EROSION CONTROL BLANKET	50	SY
615.07	LOAM	89	CY
618.14	SEEDING METHOD NUMBER 2	15	UN
619.12	MULCH	15	UN
619.14	EROSION CONTROL MIX	177	CY
620.58	EROSION CONTROL GEOTEXTILE	440	SY
620.66	DRAINAGE GEOCOMPOSITE	140	SY
621.110	SMALL DECID. TREES 3'-4' GROUP A CONT.	15	EA
621.112	SMALL DECID. TREES 4'-5' GROUP A CONT.	15	EA
621.178	MEDIUM DECID. TREES 6'-8' GROUP A CONT.	15	EA
621.179	MEDIUM DECID. TREES 6'-8' GROUP B CONT.	15	EA
621.255	LARGE DECID. TREES 8'-10' GROUP A CONT.	15	EA
621.256	LARGE DECID. TREES 8'-10' GROUP B CONT.	15	EA
621.261	LARGE DECID. TREES 10'-12' GROUP A CONT.	15	EA
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	2,500	LF
627.78	TEMPORARY 4" PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW	1,600	LF
629.05	HAND LABOR, STRAIGHT TIME	20	HR
631.12	ALL PURPOSE EXCAVATOR (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	4	EA
652.33	DRUM	50	EA
652.34	CONE	50	EA
652.35	CONSTRUCTION SIGNS	400	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES (260 CD)	1	LS
652.38	FLAGGER	360	HR
652.41	PORTABLE CHANGEABLE MESSAGE SIGN	2	EA
656.75	TEMP. SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL CONSTRUCTION NOTES

- For easements, construction limits and right of way lines, refer to the Right of Way Map.
- The clearing limits as shown on the plans are approximate. The exact limits will be established in the field by the Resident. Payment for clearing will be considered incidental to Contract items.
- All utility facilities shall be adjusted by the respective utilities unless otherwise noted.
- 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.
- Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.
- In areas where the Resident directs the Contractor not to excavate to the subgrade line shown on the plans, payment for removing existing pavement, grubbing, shaping, ditching, and compacting the existing subbase and layers of new subbase 6 inches or less thick will be made under appropriate equipment rental items.
- All embankment material, except as otherwise shown, placed below roadway subbase shall be Granular Borrow meeting the requirements of Standard Specifications Subsection 703.19, Granular Borrow, for Material for Underwater Backfill.
- Place loam 2 inches deep on all new or reconstructed sideslopes or as directed by the Resident.
- Erosion Control Mix may be substituted in those areas normally receiving loam and seed as directed by the Resident. Placement shall be in accordance with Standard Specifications Section 619, Mulch. Payment will be made under Item No. 619.14, Erosion Control Mix.
- Place a 24-inch wide strip of Erosion Control Blanket on the sideslopes along the top of the riprap and behind the wingwalls.
- A MASH compliant guardrail end treatment shall be installed concurrently with the placement of each section of beam guardrail.
- Where it is apparent that runoff will cause continual erosion, Erosion Control Blanket, seeded gutters, riprap downspouts, and other gutters lined with Stone Ditch Protection shall be constructed after paving and shoulder work is completed. Payment will be made under the appropriate Contract items.
- Protective Coating for Concrete Surfaces shall be applied to the following areas:
 - All exposed surfaces of concrete curbs.
 - Fascias down to the drip notch.
 - Top of abutments and wingwalls, and
 - To one foot below the ground on vertical walls against earth.
- Project information referred to below may be accessed at the following MaineDOT web address: <http://www.maine.gov/mdot/contractors/>.
- The existing bridge plans may be accessed at the MaineDOT web address. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.
- Reports on hydrology and or hydraulics applicable to the bridge site may be accessed at the MaineDOT web address. The reports are based on Northstar's interpretation of the information obtained for the subject site. No assurance is given that the information or the conclusions of the report will be representative of actual conditions at the time of construction.

- The project geotechnical report titled: Geotechnical Design Report, Boom Bridge over Boombridge Brook, US Route 2, dated April 2022 may be accessed at the MaineDOT web address.
- Geotechnical information furnished or referred to in this plan set is for the use of the Bidders and the Contractor. No assurance is given that the information or interpretations will be representative of actual subsurface conditions at the construction site. MaineDOT will not be responsible for the Bidders' or Contractor's interpretations of, or conclusions drawn from, the geotechnical information. The boring logs contained in the plan set present factual and interpretive subsurface information collected at discrete locations. Data provided may not be representative of the subsurface conditions between the boring locations.
- Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid amount, with no addition or reduction in payment to the Contractor if the actual final quantities are different from the MaineDOT provided estimated quantities, except as follows:
 - If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.
 - If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.
 - 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.
- This site lends itself to different cofferdam configurations, depending on the contractors means and methods. Rather than speculate on how the bidders will want to configure the cofferdams, the Department has provided a single pay item to be used to cover all cofferdams on the project, regardless of how many are actually used.
- Grubbing in fill areas has been shown on the cross sections and quantities noted. These limits are approximate and have been used for estimating purposes only. Actual grubbing limits may vary based on field conditions as directed by the Resident.
- Final striping for the project shall be done by the Contractor per the striping layout in the Contract documents or as provided by the Department. Payment shall be made under the appropriate Contract items.

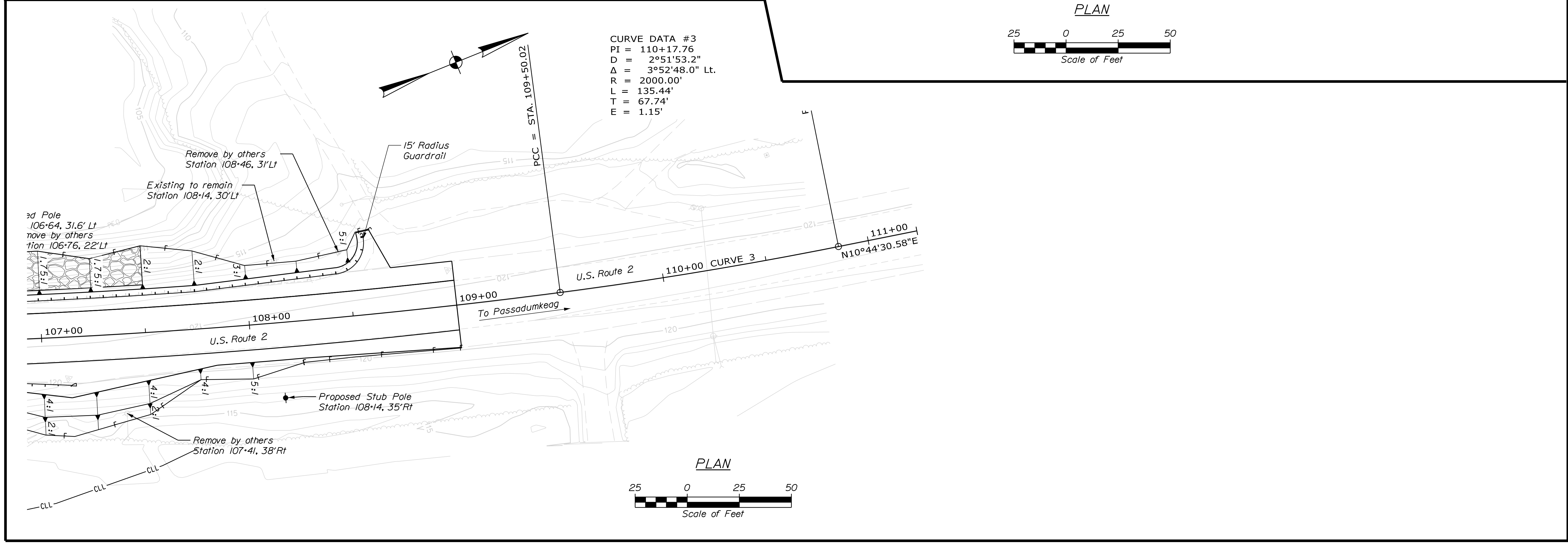
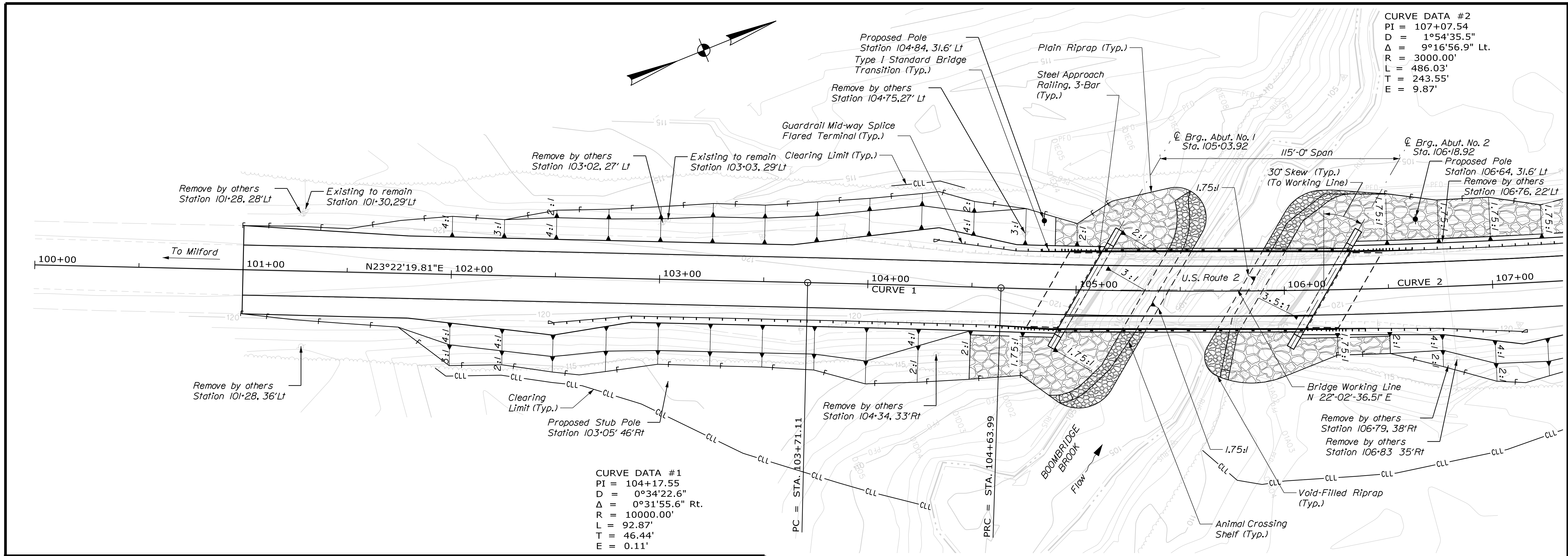
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2309401		BRIDGE NO. 3587		BRIDGE PLANS	
BOOM BRIDGE		BOOMBRIDGE BROOK		PENOBSCOT COUNTY		GREENBUSH		ESTIMATED QUANTITIES & GENERAL NOTES	
PROJ. MANAGER	M. WIGHT	BY	DATE	DESIGN-DETAILED	E. MALONEY	M. RAENZ	4/2022	SIGNATURE	
CHECKED-REVIEWED	K. FOX	J. FRENCH	4/2022	DESIGN-DETAILED	S. BEAUMONT	M. SMITH	4/2022	P.E. NUMBER	
DESIGN-DETAILED				REVISIONS 1				DATE	
				REVISIONS 2					
				REVISIONS 3					
				REVISIONS 4					
				FIELD CHANGES					
SHEET NUMBER									
2									
OF 36									

Date: 6/28/2022

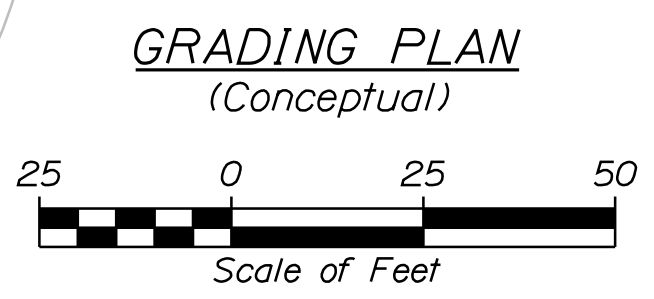
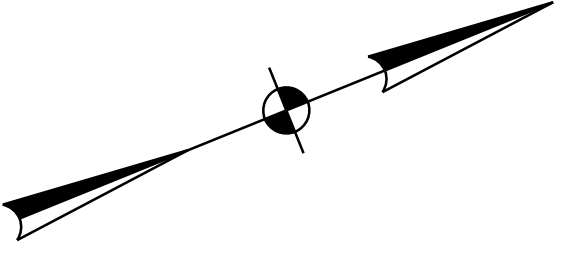
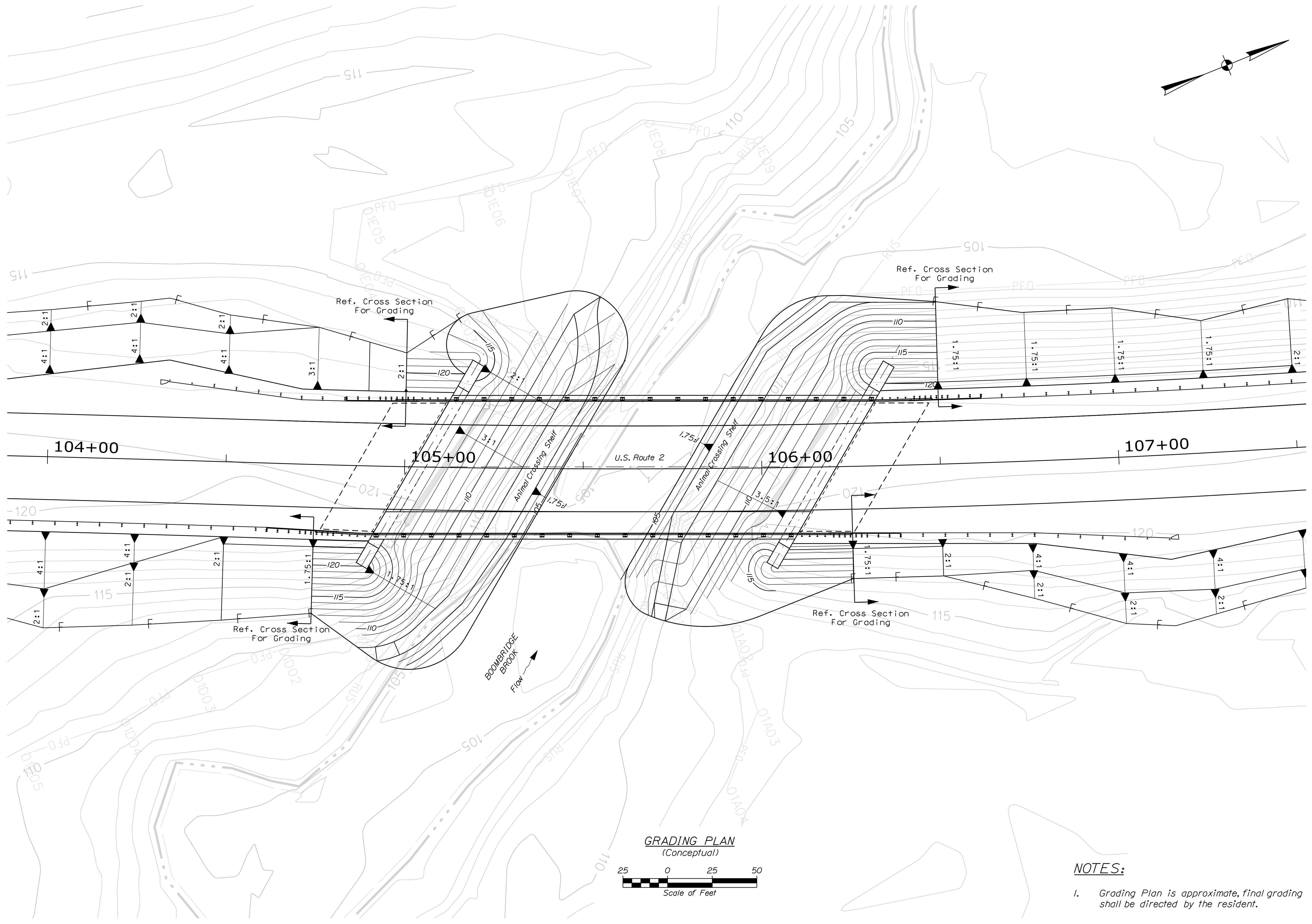
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Division: BRIDGE

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STATE OF MAINE DEPARTMENT OF TRANSPORTATION		2309401	
BRIDGE NO. 3587		WIN 21727.01	
 FUSS & O'NEILL 50 COMMERCIAL STREET MANCHESTER, NH 03101 www.fussandoneill.com			
PROJ. MANAGER	M. WIGHT	BY	DATE
DESIGN-DETAILED	E. MALONEY	M. RAENZ	4/2022
CHECKED-REVIEWED	N. FOX	J. FRENCH	4/2022
DESIGN-DETAILED	S. BEAUMONT	M. SMITH	4/2022
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
BOOM BRIDGE BOOMBRIDGE BROOK GREENBUSH PENOBSCOT COUNTY		GENERAL PLAN	
SHEET NUMBER		3	
		OF 36	



NOTES:

- Grading Plan is approximate, final grading shall be directed by the resident.

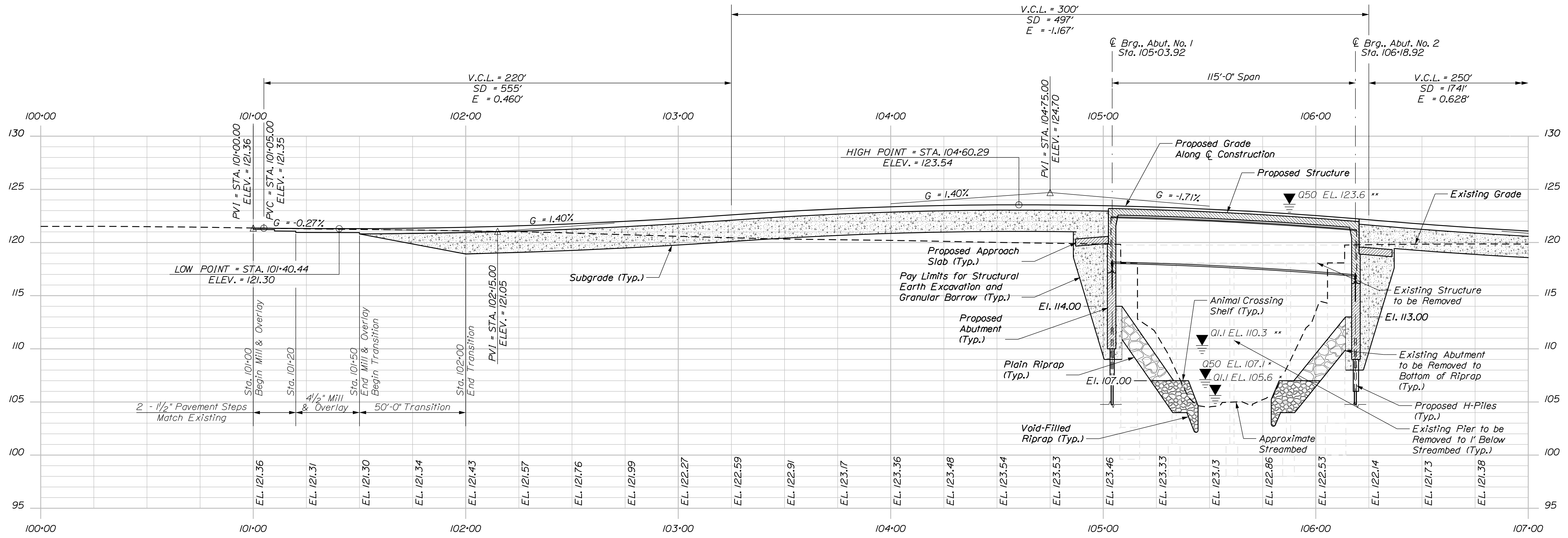
STATE OF MAINE DEPARTMENT OF TRANSPORTATION		2309401	
GREENBUSH PENOBSCOT COUNTY		WIN 21727.01	
BOOM BRIDGE BOOMBRIDGE BROOK		BRIDGE NO. 3587	
GRADING PLAN		BRIDGE PLANS	
PROJ. MANAGER	M. WIGHT	BY	DATE
DESIGN DETAILED	E. MALONEY	M. RAENZ	4/2022
CHECKED/REVIEWED	N. FOX	J. FRENCH	4/2022
DESIGN DETAILED	S. BEAUMONT	M. SMITH	4/2022
REVISIONS 1	-	-	-
REVISIONS 2	-	-	-
REVISIONS 3	-	-	-
REVISIONS 4	-	-	-
FIELD CHANGES		DATE	
SHEET NUMBER		P.E. NUMBER	
4		DATE	
OF 36			

Date: 6/28/2022

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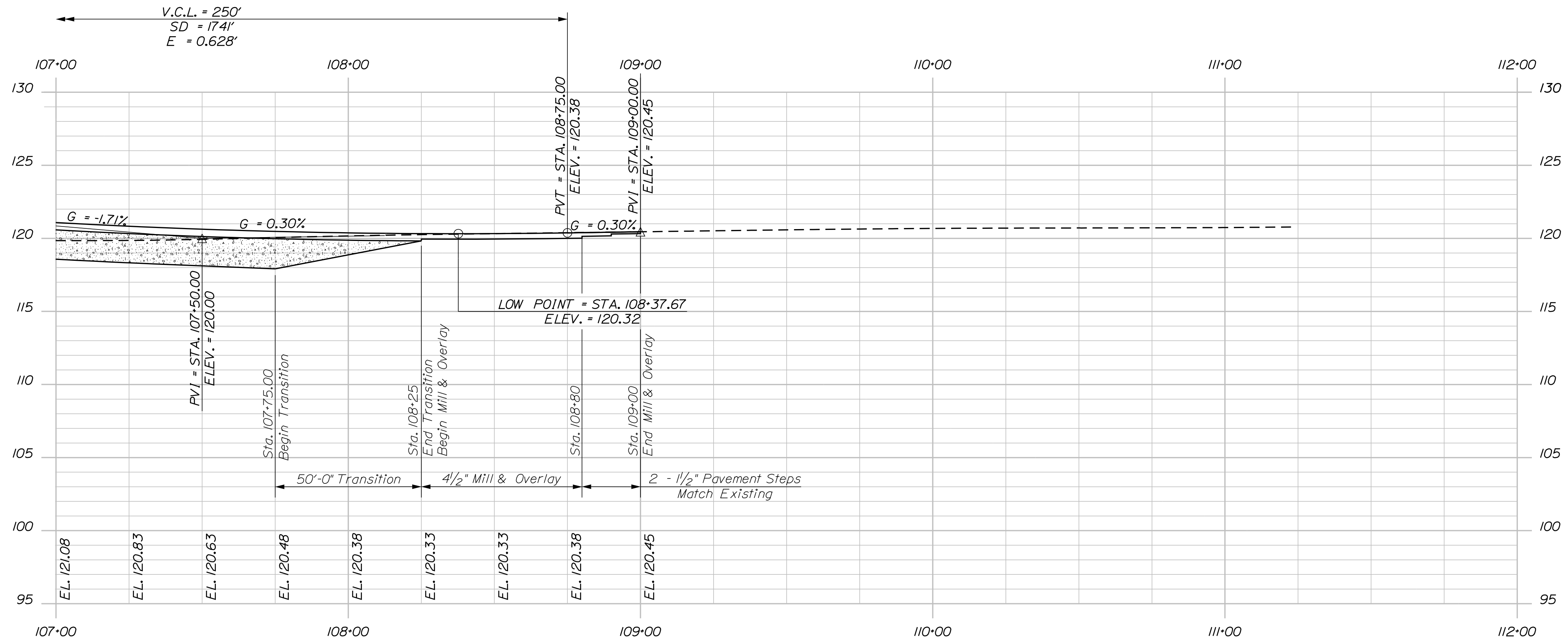
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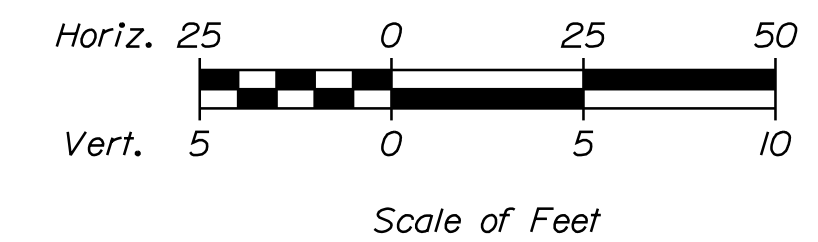


PROFILE

* FLOOD ELEVATION ASSUMING NO BACKWATER FROM PENOBSCOT RIVER
 ** FLOOD ELEVATION BASED ON BACKWATER FROM PENOBSCOT RIVER



PROFILE



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2309401
WIN
21727.01
BRIDGE NO. 3587
BRIDGE PLANS



PROJ. MANAGER	M. WIGHT	BY	DATE
DESIGN-DETAILED	E. MALONEY	M. RAENZ	4/2022
CHECKED-REVIEWED	N. FOX	J. FRENCH	4/2022
DESIGN-DETAILED	S. BEAUMONT	M. SMITH	4/2022
DESIGN-DETAILED			
REVISIONS	1		
REVISIONS	2		
REVISIONS	3		
REVISIONS	4		
FIELD CHANGES			

BOOM BRIDGE
 BOOMBRIDGE BROOK
 GREENBUSH
 PENOBSCOT COUNTY
 PROFILE

SHEET NUMBER

5

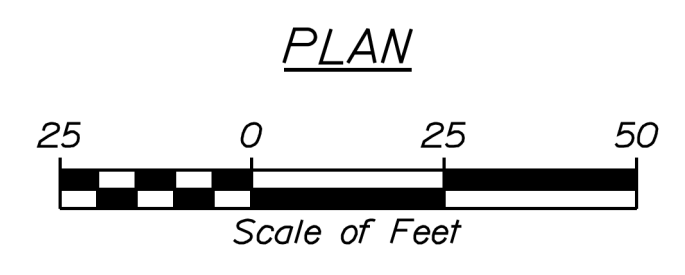
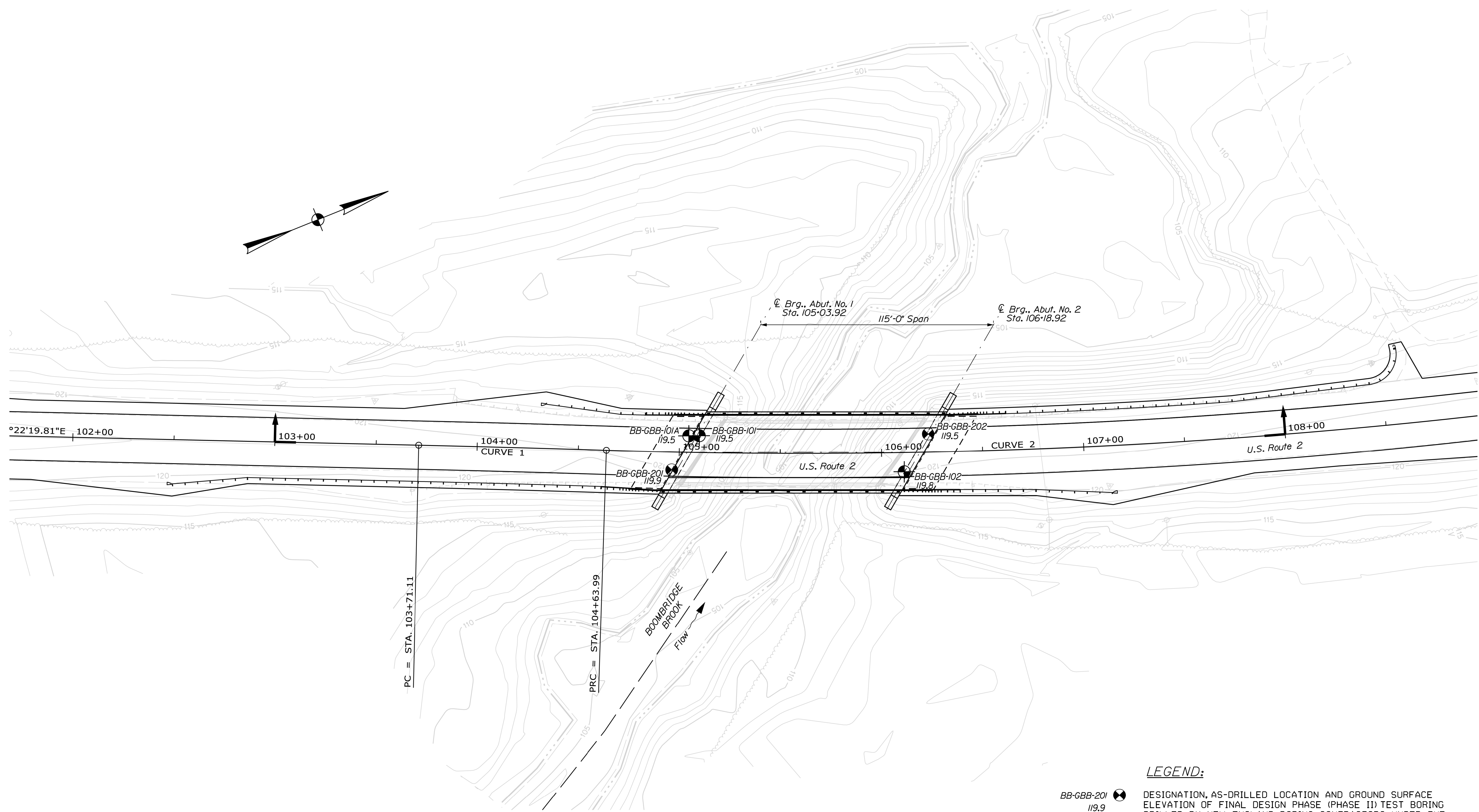
OF 36

Date: 3/31/2022

Username:

Division:

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NOTES:

1. EXISTING AND PROPOSED SITE CONDITIONS, THE LOCATION AND ORIENTATION OF EXISTING SITE FEATURES, AND THE LOCATION AND ORIENTATION OF THE PROPOSED BRIDGE STRUCTURE ARE TAKEN FROM ELECTRONIC MICROSTATION FILES PROVIDED BY FUSS & O'NEILL, INC.
2. THE PLAN LOCATIONS OF AND GROUND SURFACE ELEVATIONS AT TEST BORINGS SHOWN WERE DETERMINED UPON THE COMPLETION OF DRILLING BY THE MAINE DEPARTMENT OF TRANSPORTATION USING GPS SURVEY EQUIPMENT.
3. ELEVATIONS ARE IN FEET AND REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
4. TEST BORINGS WERE MONITORED IN THE FIELD BY A HALEY & ALDRICH, INC. GEOLOGIST OR GEOTECHNICAL ENGINEER.
5. REFER TO APPENDIX A FOR TEST BORING LOGS AND ROCK CORE PHOTOGRAPHS.

- LEGEND:**
- DESIGNATION, AS-DRILLED LOCATION AND GROUND SURFACE ELEVATION OF FINAL DESIGN PHASE (PHASE II) TEST BORING DRILLED BY NEW ENGLAND BORING CONTRACTORS UNDER THE DIRECTION OF HALEY & ALDRICH IN JUNE 2021 (PHASE II TEST BORINGS).
 - DESIGNATION, AS-DRILLED LOCATION AND GROUND SURFACE ELEVATION OF PRELIMINARY DESIGN PHASE (PHASE I) TEST BORING DRILLED BY NEW ENGLAND BORING CONTRACTORS UNDER THE DIRECTION OF HALEY & ALDRICH IN MARCH 2017 (PHASE I TEST BORINGS).
 - DESIGNATION, LOCATION, AND ORIENTATION OF INTERPRETIVE SUBSURFACE PROFILE; (SEE FIGURE 3)



STATE OF MAINE DEPARTMENT OF TRANSPORTATION		2309401	
BRIDGE NO. 3587		WIN 21727.01	
BRIDGE PLANS			
BOOM BRIDGE BOOMBRIDGE BROOK GREENBUSH PENOBSCOT COUNTY		BORING LOCATION PLAN	
SHEET NUMBER		6	
		OF 36	

Maine Department of Transportation				Project: US Route 2 over Beach Bridge Brook				Boring No.: BB-GBB-101							
Sub/rock Excavation Log				Location: Greenbush, Maine				WIN: 21727.00							
Driller: New England Boring Contractors		Elevation (ft): 119.5		Auger ID/OD: --		Sampler: Split Spoon 1.375 in. ID		Operator: B. Enos		Date: NAVD88		Rig Type: Hammer B53		Hammer Wt./Fall: SS-140#/30HW-140#/30	
Logged By: K. Raus		Date Start/Finish: 3-17-17/3-17-17		Rig Type: Hammer B53		Drilling Method: HW Drive, NW Span		Core Barrel: NQ-2.0 in. ID		Boring Location: 1761483E, 566341N		Casing ID/OD: HW-4.0 in. ID/NW-3.0 in. ID		Water Level: * Not Observed	
Hammer Efficiency Factor: 0.677				Hammer Type: Automatic				Rope & Cable: C							
Definitions: R = Rock Core Sample D = Split Spoon Sample M = Unsuccessful Split Spoon Sample Attempt L = Thin Wall Tube Sample U = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test MV = Unsuccessful Field Vane Shear Test Attempt S = Plasticity Index W = Weight of Rock or Casing WOP = Weight of One Person N = Hammer Efficiency Factor 95%/Noncorrected C = Consolidation Test				Abbreviations: SSA = Solid Stem Auger RC = Roller Cone WOP = Weight of Hammer WOPC = Weight of Rock or Casing WOPP = Weight of One Person N = Hammer Efficiency Factor 95%/Noncorrected C = Consolidation Test				Abbreviations: SSA = Solid Stem Auger RC = Roller Cone WOP = Weight of Hammer WOPC = Weight of Rock or Casing WOPP = Weight of One Person N = Hammer Efficiency Factor 95%/Noncorrected C = Consolidation Test							
Sample Information												Laboratory Testing Results/AASHTO and Unified Class			
Depth (ft)	Sample No.	Pen./Rec. (in)	Sample Depth (ft)	Blows (6 ft) (blows/ft or RQD (%)	Noncorrected	NGO	Grain Log	Visual Description and Remarks				Testing Results/AASHTO and Unified Class			
0								-BITUMINOUS CONCRETE-							
1	1D	24/3	2.0 - 4.0	24/16/12/7	28	32		Note: Frozen soils beneath pavement.							
2	2D	24/12	4.0 - 6.0	5/6/6/7	12	14		Brown, dry, dense, fine to coarse SAND, little fine gravel, trace coarse gravel							
3	3D	24/13	6.0 - 8.0	4/4/2/3	6	7		Light to reddish-brown, dry, medium dense, fine SAND, trace silt							
4	4D	24/4	8.0 - 10.0	4/2/2/3	4	5		Light to reddish-brown, dry, loose, fine SAND, trace silt							
5								Note: Silt increasing with depth.							
10	MD	24/0	10.0 - 12.0	3/2/1/2	3	3		Light to reddish-brown, moist, loose, Silty fine SAND, trace medium to coarse sand, trace gravel				G8410684 A-40) SM			
15								No Recovery, sample taken from tip of solid-stem auger							
15	5D	24/7	13.0 - 15.0	2/5/4/3	9	10		Light to reddish-brown, moist, very loose, fine sand, some silt (SM)				G8410685 A-40) SM/SC			
15	6D	24/7	15.0 - 17.0	1/2/2/3	4	5		Olive-grey, wet, loose, Silty or Clayey fine to medium SAND, some gravel, trace coarse sand							
15								Note: Drill wash return from 15.0 to 20.0 ft contains wood, clayey fine to coarse sand, trace gravel. Clay content increases with depth.							
20	7D	24/8	20.0 - 22.0	4/4/6/6	10	11		Olive-grey, wet, stiff, Silty CLAY, trace fine sand, contains wood							
20								Note: 3 tube sample attempts and 1 field vane attempt at 23.0 ft, refusal.							
20	8D	24/24	23.0 - 25.0	1/2/3/3	5	6		Olive-grey, wet, medium stiff, Silty CLAY, contains fragments of wood							
20								Note: Drill wash return from 23.0 to 25.0 ft contains clay and wood.							
25	9D	24/12	25.0 - 27.0	2/3/3/3	6	7		Olive-grey, wet, medium stiff, Silty CLAY, trace fine sand				#410688 CL LL=97, PL=20 PI=17 WC=50			
25								Note: Attempted field vane at 25.0 ft, refusal.							
25								Olive-grey, wet, medium stiff, Silty CLAY, trace fine sand							
25								Note: Drill wash return contains clay with wood from approximately 25.0 to 27.4 ft, sand and gravel from approximately 27.4 to 30.0 ft.							
30	10D	24/7	30.0 - 32.0	19/19/20/21	39	44		Olive-grey, wet, dense, fine to coarse SAND, trace silt, trace fine to coarse gravel							
30								Note: Drill wash return from 30.0 to 32.5 ft contains fine to coarse sand, trace gravel and silt.							
35	R1	60/60	34.2 - 39.2	RQD = 75%				Top of Bedrock at EL 87.0							
35								Note: Drove HW to 32.5 ft, span NW to 34.2 ft, clean out and begin rock core at 34.2 ft.							
35								Olive-grey to greenish-grey, aphanitic PHYLLITE. Hard to moderately hard, fresh to moderately weathered. Joints dipping at low to high angles, very close to close, tight to open, some -0.06 in. silt infilling. Two moderately weathered zones from 35.5 to 35.9 ft and 37.7 to 37.9 ft, frequent calcite veins.							
35								Rock Mass Quality=Fair							
35								Recovery=100%							
35								-VASSALBORO FORMATION-							
35								R1 Core Times (min:sec): 34.2-35.2' (1:44); 35.2-36.2' (1:13); 36.2-37.2' (1:18); 37.2-38.2' (1:29); 38.2-39.2' (1:55)							
35								Similar to R1, except fresh joints dipping at low to moderate angles with secondary high angle joints, occasional to frequent calcite veins.							
35								Rock Mass Quality=Good							
35								Recovery=100%							
35								-VASSALBORO FORMATION-							
35								R2 Core Times (min:sec): 39.2-40.2' (1:18); 40.2-41.2' (1:24); 41.2-42.2' (1:24); 42.2-43.2' (1:24); 43.2-44.2' (1:21)							
35								Similar to R2, except joints close to moderately spaced, frequent calcite veins.							
35								Rock Mass Quality=Excellent							
35								Recovery=100%							
35								-VASSALBORO FORMATION-							
35								R3 Core Times (min:sec): 44.2-45.2' (1:22); 45.2-46.2' (1:15); 46.2-47.2' (1:27); 47.2-48.2' (1:39); 48.2-49.2' (1:31)							
35								Similar to R2, except joints close to moderately spaced, frequent calcite veins.							
35								Rock Mass Quality=Good							
35								Recovery=100%							
35								-VASSALBORO FORMATION-							
35								R3 Core Times (min:sec): 44.2-45.2' (1:22); 45.2-46.2' (1:15); 46.2-47.2' (1:27); 47.2-48.2' (1:39); 48.2-49.2' (1:31)							
35								Bottom of Exploration at 49.2 feet below ground surface.							
Remarks: 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 1 Boring No.: BB-GBB-101			

Maine Department of Transportation				Project: US Route 2 over Beach Bridge Brook				Boring No.: BB-GBB-101A							
Sub/rock Excavation Log				Location: Greenbush, Maine				WIN: 21727.00							
Driller: New England Boring Contractors		Elevation (ft): 119.5		Auger ID/OD: --		Sampler: Split Spoon 1.375 in. ID		Operator: B. Enos		Date: NAVD88		Rig Type: Hammer B53		Hammer Wt./Fall: SS-140#/30HW-140#/30	
Logged By: K. Raus		Date Start/Finish: 3-17-17/3-17-17		Rig Type: Hammer B53		Drilling Method: SSA to 5'HW Push		Core Barrel: NQ-2.0 in. ID		Boring Location: 1761483E, 566336N		Casing ID/OD: HW-4.0 in. ID		Water Level: * Not Observed	
Hammer Efficiency Factor: 0.677				Hammer Type: Automatic				Rope & Cable: C							
Definitions: R = Rock Core Sample D = Split Spoon Sample M = Unsuccessful Split Spoon Sample Attempt L = Thin Wall Tube Sample U = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test MV = Unsuccessful Field Vane Shear Test Attempt S = Plasticity Index W = Weight of Rock or Casing WOP = Weight of One Person N = Hammer Efficiency Factor 95%/Noncorrected C = Consolidation Test				Abbreviations: SSA = Solid Stem Auger RC = Roller Cone WOP = Weight of Hammer WOPC = Weight of Rock or Casing WOPP = Weight of One Person N = Hammer Efficiency Factor 95%/Noncorrected C = Consolidation Test				Abbreviations: SSA = Solid Stem Auger RC = Roller Cone WOP = Weight of Hammer WOPC = Weight of Rock or Casing WOPP = Weight of One Person N = Hammer Efficiency Factor 95%/Noncorrected C = Consolidation Test							
Sample Information												Laboratory Testing Results/AASHTO and Unified Class			
Depth (ft)	Sample No.	Pen./Rec. (in)	Sample Depth (ft)	Blows (6 ft) (blows/ft or RQD (%)	Noncorrected	NGO	Grain Log	Visual Description and Remarks				Testing Results/AASHTO and Unified Class			
0								-BITUMINOUS CONCRETE-							
1	1D	24/10	1.0 - 3.0	123/153/75/103	228	257		Brown, dry, very dense, fine to coarse SAND, some gravel, trace silt, well graded							
2	2D	24/9	4.0 - 6.0	7/6/6/6	12	14		Brown, dry, medium dense, fine SAND, trace silt, trace medium to coarse sand, trace fine to coarse gravel, poorly graded							
3	3D	24/13	6.0 - 8.0	6/3/2/4	5	6		Brown, dry, loose, fine SAND, trace silt, trace medium sand, poorly graded							
4	4D	24/3	8.0 - 10.0	2/1/2/1	3	3		Brown, dry, very loose, fine SAND, trace silt, trace medium sand, poorly graded							
5	5D	24/12	10.0 - 12.0	3/9/6/2	15	17		Brown, wet, medium dense, fine SAND, some silt, trace medium to coarse sand, poorly graded				G8410686 A-2-40) SM			
5								Note: See Boring Log BB-GBB-101 for soil descriptions from 0 to 20.0 ft.							
10								Olive-grey, wet, medium dense, fine SAND, some silt, trace medium to coarse sand, poorly graded							
10								Note: Silt increasing with depth.							
10								Light to reddish-brown, moist, loose, Silty fine SAND, trace medium to coarse sand, trace gravel							
10								Note: No Recovery, sample taken from tip of solid-stem auger							
10								Light to reddish-brown, moist, very loose, fine sand, some silt (SM)							
10								-FILL-(SM)							
10								PID Reading=0.0ppm							
15	6D	24/19	15.0 - 17.0	3/2/3/3	5	6		Olive-grey, wet, medium dense, fine SAND, some clay, poorly graded							
15								Note: Drill wash return from 10.0 to 15.0 ft contains clayey fine sand with occasional gravel layers.							
15								Olive-brown, wet, medium stiff, SILT, trace fine sand, method -MARINE DEPOSIT-(ML)				G8410687 A-40) ML			
15								Note: Drill wash return from 15.0 to 20.0 ft contains silt to clay with depth, trace gravel and sand.							
20	7D	24/24	20.0 - 22.0	2/3/2/2	5	6		Olive-grey, wet, medium stiff, Silty CLAY, trace fine sand				#410689 CL LL=46, PL=22 PF=24 WC=35			
20								Note: 3 tube sample attempts and 1 field vane attempt at 23.0 ft, refusal.							
20								Olive-grey, wet, medium stiff, Silty CLAY, trace fine sand							
20								Note: Drill wash return from 20.0 to 25.0 ft contains olive-grey silty clay.							
25	11U	24/23	25.0 - 27.0					Olive-grey, wet, dense, Silty fine SAND, trace medium to coarse sand, trace fine to coarse gravel, loosely bonded							
25								Note: Attempted field vane shear test at 27.0 ft, refusal at 27.3 ft.							
25	8D	24/12	27.0 - 29.0	2/1/28/20	39	44		Olive-grey, wet, dense, Silty fine SAND, trace medium to coarse sand, trace fine to coarse gravel, loosely bonded							
25								Note: Drill wash return from 27.0 to 29.0 ft contains clay with wood from approximately 27.4 to 30.0 ft.							
30	9D	24/13	30.0 - 32.0	20/32/19/19	51	58		Olive-grey, moist, very dense, fine to coarse SAND, trace silt, trace fine to coarse gravel, moderately bonded							
30								Note: Drill wash return from 30.0 to 32.5 ft contains fine to coarse sand, trace gravel and silt.							
35	10D	11/6	35.0 - 35.9	11/50(5.0)				Olive-grey, wet, very dense, fine to coarse SAND, trace silt, trace fine to coarse gravel, moderately bonded							
35								Note: Split-spoon refusal at 35.9 ft. Advance roller bit to 38.0 ft.							
35								Note: Weathered bedrock in spoon tip.							
35								-WEATHERED BEDROCK-							
35								Top of Bedrock at EL 81.7							
35								Note: Spoon NW casing to 38.3 ft, begin rock core at 38.3 ft.							
35								Olive-grey, aphanitic PHYLLITE. Moderately hard, fresh. Joints vertical to high angle, spacing not discernible, tight, no infilling, smooth and planar joint surfaces.							
35								Rock Mass Quality=Very Poor							
35								Recovery=100%							
35								-VASSALBORO FORMATION-							
35								R1 Core Times (min:sec): 38.3-39.3' (1:03); 39.3-40.3' (1:29); 40.3-41.3' (1:24); 41.3-42.3' (1:24); 42.3-43.3' (1:24); 43.3-44.3' (1:24); 44.3-45.3' (1:24); 45.3-46.3' (1:24); 46.3-47.3' (1:24); 47.3-48.3' (1:24); 48.3-49.3' (1:24); 49.3-50.3' (1:24); 50.3-51.3' (1:24); 51.3-52.3' (1:24); 52.3-53.3' (1:24); 53.3-54.3' (1:24); 54.3-55.3' (1:24); 55.3-56.3' (1:24); 56.3-57.3' (1:24)							
35								Similar to R1, except joints dipping at low to moderate angles, extremely close to very close, -0.13 in. silt infilling on some joint surfaces.							
35								Rock Mass Quality=Good							
35								Recovery=100%							
35								-VASSALBORO FORMATION-							
35								R2 Core Times (min:sec): 40.5-41.5' (1:14); 41.5-42.5' (1:17); 42.5-43.5' (1:14); 43.5-44.5' (1:14); 44.5-45.5' (1:14); 45.5-46.5' (1:14); 46.5-47.5' (1:14); 47.5-48.5' (1:14); 48.5-49.5' (1:14); 49.5-50.5' (1:14); 50.5-51.5' (1:14); 51.5-52.5' (1:14); 52.5-53.5' (1:14); 53.5-54.5' (1:14); 54.5-55.5' (1:14); 55.5-56.5' (1:14); 56.5-57.5' (1:14)							
35								Similar to R1, except joints dipping at low to moderate angles, extremely close to moderate, tight to open, planar and smooth to rough, few calcite veins.							
35								Rock Mass Quality=Good							
35								Recovery=100%							
35								-VASSALBORO FORMATION-							
35								R3 Core Times (min:sec): 44.9-45.9' (2:15); 45.9-46.9' (2:36); 46.9-47.9' (2:15); 47.9-48.9' (2:15); 48.9-49.9' (2:15); 49.9-50.9' (2:15); 50.9-51.9' (2:15); 51.9-52.9' (2:15); 52.9-53.9' (2:15); 53.9-54.9' (2:15); 54.9-55.9' (2:15); 55.9-56.9' (2:15); 56.9-57.9' (2:15)							
35								Similar to R3, except joints dipping at low to moderate angles, extremely close to moderate, tight to open, planar and smooth to rough, few calcite veins.							
35								Rock Mass Quality=Good							
35								Recovery=100%							
35								-VASSALBORO FORMATION-							
35								R3 Core Times (min:sec): 52.1-53.1' (2:08); 53.1-54.1' (1:43); 54.1-55.1' (1:25); 55.1-56.1' (1:14); 56.1-57.1' (1:34)							
35															

Maine Department of Transportation				Project: US Route 2 Bridge over Boombridge Brook				Boring No.: BB-GBB-201																					
Soils/Rock Evaluation Log				Location: Greenbush, Maine				WIN: 21727.00																					
US CUSTOMARY UNITS																													
Driller:	New England Boring Contractors	Elevation (ft.):	120.0	Auger ID/OD:	--	Sampler:	Split-Spoon 1.375 in. ID	Operator:	T. Shaffer	Date:	NAVD 88	Logged By:	J. Fletcher	Rig Type:	Mobile B-53 Truck	Hammer WL/Fall:	SS-1408/30; HW-1408/30	Date Start/Finish:	6-15-2021/6-16-2021	Drilling Method:	HW Drive	Core Barrel:	NQ-2.0 in. ID	Boring Location:	1761495E; 566322N	Casing ID/OD:	HW-4.0 in. ID	Water Level*:	8.3 ft
Hammer Efficiency Factor:	0.867	Hammer Type:	Automatic	Hydraulic	Rope & Cable:																								
Definitions: R = Rock Core Sample S = Split Spoon Sample S _u = Field Vane Shear Strength (psf) D = Unsuccessful Split Spoon Sample Attempt SSA = Solid Stem Auger S _u (lab) = Lab Vane Undrained Shear Strength (psf) L = Thin Wall Tube Sample HSA = Hollow Stem Auger U = Unclassified Compressive Strength (psf) L _u = Thin Wall Tube Sample HSA = Hollow Stem Auger U = Unclassified Compressive Strength (psf) WU = Unsuccessful Thin Wall Tube Sample Attempt RC = Roller Cone N = Noncorrected R = Rock Core V = Field Vane Shear Test P = Pocket Penetrometer WOC = Weight of Rocks or Cores WOC = Weight of Rocks or Cores WOC = Weight of Rocks or Cores MV = Unsuccessful Field Vane Shear Test Attempt WOP = Weight of One Person N = Noncorrected R = Rock Core																													
Sample Information												Visual Description and Remarks				Laboratory Testing Results/AASHTO and Unified Class													
Depth (ft.)	Sample No.	Pen. (lb./ft.)	Sample Depth (ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)
0																													
1	1D	24/15	2.0 - 4.0	4/22/23/15	45	65																							
5	2D	24/12	4.0 - 6.0	7/6/7/6	13	19																							
5	3D	24/11	6.0 - 8.0	6/3/3/2	6	9																							
10	4D	24/11	8.0 - 10.0	3/2/1/WH	3	4																							
10	5D/B	24/6	10.0 - 12.0	1/WH/1/WH	1	1																							
10	6D	24/13	13.0 - 15.0	2/WH/1/3	1	1																							
15	7D	24/5	15.0 - 17.0	2/5/3/3	8	12																							
20	8D	24/22	20.0 - 22.0	2/2/2/2	4	6																							
25	9D	24/24	24.0 - 27.0	push thru vane																									
25	V1	25.6 - 26.0		push thru vane																									
25	V2	26.6 - 27.0		push thru vane																									
30	10D	24/8	30.0 - 32.0	12/12/13/8	25	36																							
35	R1	20/12	33.5 - 35.2	RQD = 0%																									
35	R2	39.6/40	35.2 - 38.5	RQD = 100%																									
35	R3	46/46	38.5 - 42.3	RQD = 61%																									
40																													
45																													
50																													

Maine Department of Transportation				Project: US Route 2 Bridge over Boombridge Brook				Boring No.: BB-GBB-202																					
Soils/Rock Evaluation Log				Location: Greenbush, Maine				WIN: 21727.00																					
US CUSTOMARY UNITS																													
Driller:	New England Boring Contractors	Elevation (ft.):	119.5	Auger ID/OD:	--	Sampler:	Split-Spoon 1.375 in. ID	Operator:	T. Shaffer	Date:	NAVD 88	Logged By:	J. Fletcher	Rig Type:	Mobile B-53 Truck	Hammer WL/Fall:	SS-1408/30; HW-1408/30	Date Start/Finish:	6-14-2021/6-15-2021	Drilling Method:	HW Drive	Core Barrel:	NQ-2.0 in. ID	Boring Location:	1761524E; 566446N	Casing ID/OD:	HW-4.0 in. ID	Water Level*:	13.4 ft
Hammer Efficiency Factor:	0.867	Hammer Type:	Automatic	Hydraulic	Rope & Cable:																								
Definitions: R = Rock Core Sample S = Split Spoon Sample S _u = Field Vane Shear Strength (psf) D = Unsuccessful Split Spoon Sample Attempt SSA = Solid Stem Auger S _u (lab) = Lab Vane Undrained Shear Strength (psf) L = Thin Wall Tube Sample HSA = Hollow Stem Auger U = Unclassified Compressive Strength (psf) L _u = Thin Wall Tube Sample HSA = Hollow Stem Auger U = Unclassified Compressive Strength (psf) WU = Unsuccessful Thin Wall Tube Sample Attempt RC = Roller Cone N = Noncorrected R = Rock Core V = Field Vane Shear Test P = Pocket Penetrometer WOC = Weight of Rocks or Cores WOC = Weight of Rocks or Cores WOC = Weight of Rocks or Cores MV = Unsuccessful Field Vane Shear Test Attempt WOP = Weight of One Person N = Noncorrected R = Rock Core																													
Sample Information												Visual Description and Remarks				Laboratory Testing Results/AASHTO and Unified Class													
Depth (ft.)	Sample No.	Pen. (lb./ft.)	Sample Depth (ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	Blows (ft./ft.)	
0																													
1	1D	24/15	2.0 - 4.0	9/8/9/7	17	25																							
5	2D	24/13	4.0 - 6.0	7/4/3/2	7	10																							
5	3D	24/19	6.0 - 8.0	2/2/3/2	5	7																							
10	4D	24/7	8.0 - 10.0	4/2/1/4	3	4																							
10	5D	24/5	10.0 - 12.0	6/2/2/2	4	6																							
10	6D	24/14	12.0 - 14.0	WOH/1/3/5	4	6																							
15	7D	24/4*	15.0 - 17.0	3/1/WH/1/WH	1	1																							
15	8D	24/5*	17.0 - 19.0	4/1/2/1	3	4																							
15	MV	24/24	19.5 - 21.5																										
20																													
25	9D	24/24	25.0 - 27.0	push thru vane																									
25	V1	25.6 - 26.0		push thru vane																									
25	V2	26.6 - 27.0		push thru vane																									
30	10D	24/7	30.0 - 32.0	30/24/26/23	50	72																							
35	R1	24/20	35.0 - 37.0	RQD = 38%																									
35	R2	36/24	37.0 - 40.0	RQD = 50%																									
40	R3	44/43	40.0 - 43.7	RQD = 63%																									
45	R4	15.6/15.6	43.7 - 45.0	RQD = 100%																									
50																													
55																													
60																													
65																													
70																													
75																													

Date: 3/31/2022

Username:

Division:

Filename: ... \CAD\006_Boring_Logs.dgn

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2309401

WIN 21727.01

BRIDGE NO. 3587

BRIDGE PLANS

PROJ. MANAGER BY DATE

DESIGN-DETAILED K. POST 12/2021

CHECKED-REVIEWED E. FORCE 12/2021

DESIGN-DETAILED - - -

REVISIONS 1 - - -

REVISIONS 2 - - -

REVISIONS 3 - - -

REVISIONS 4 - - -

FIELD CHANGES - - -

SIGNATURE

P.E. NUMBER

DATE

BOOM BRIDGE
BOOMBRIDGE BROOK
GREENBUSH PENOBSCOT COUNTY

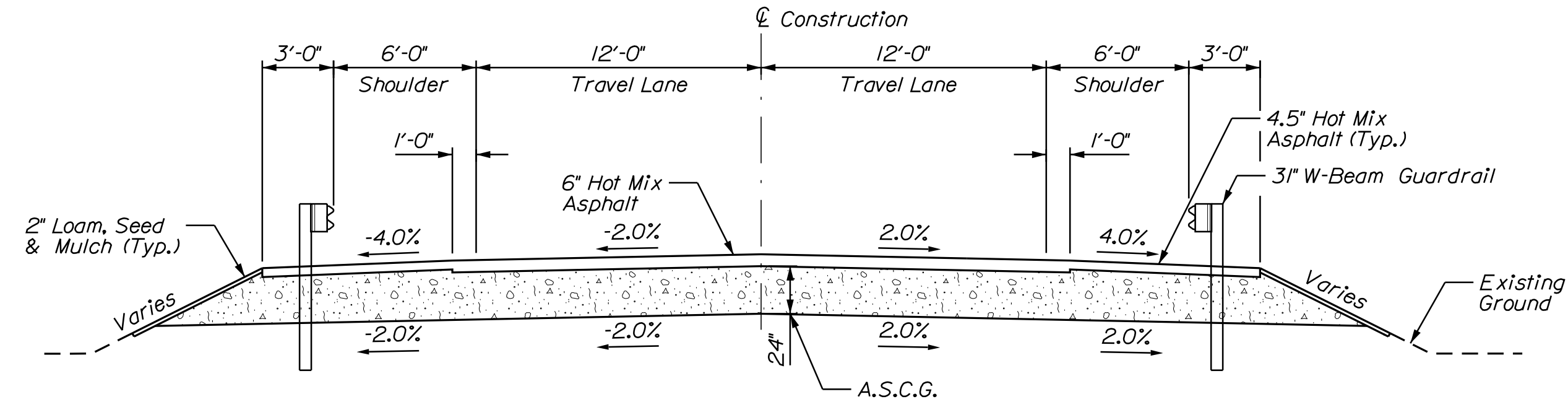
BORING LOGS

SHEET NUMBER

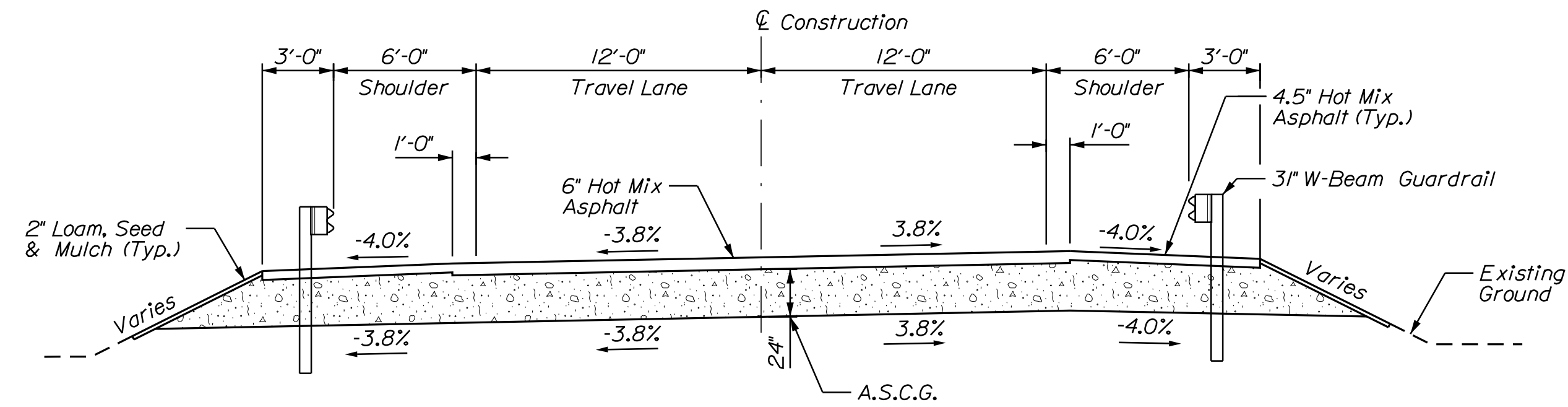
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OF 36

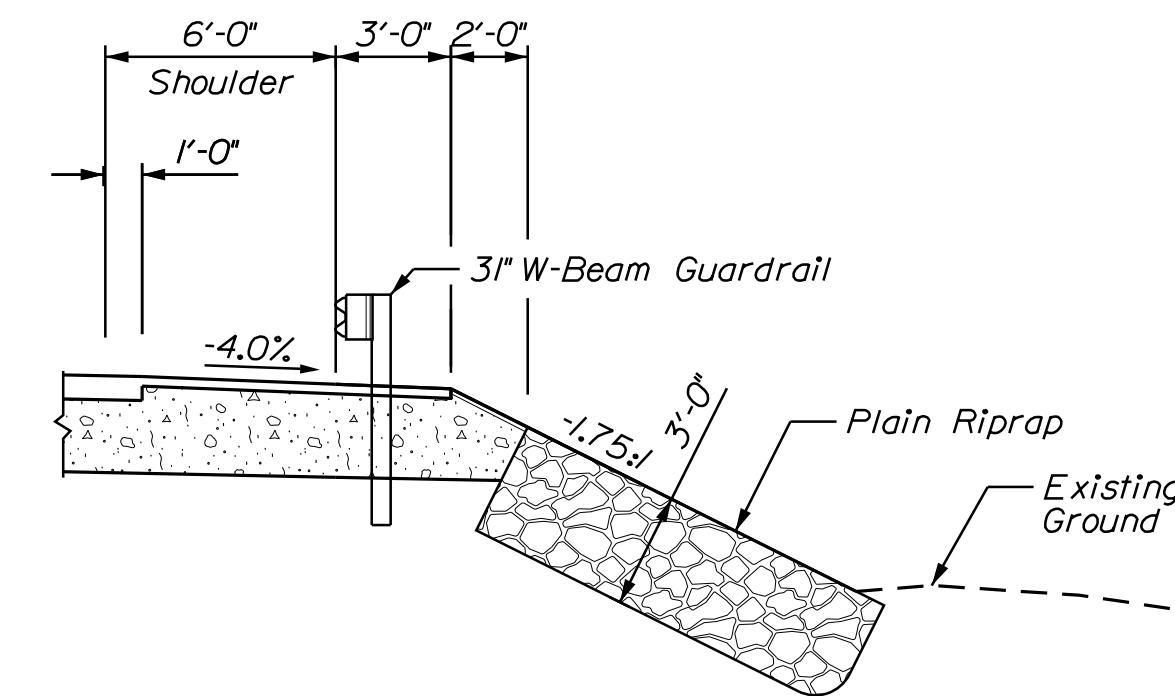




NORMAL CROWN APPROACH DESIGN SECTION



SUPERELEVATED APPROACH DESIGN SECTION



RIPRAP SLOPE DETAIL



PROJ. MANAGER	M. WIGHT	BY	DATE
DESIGN DETAILED	E. MALONEY	M. RAENZ	4/2022
CHECKED/REVIEWED	N. FOX	J. FRENCH	4/2022
DESIGN DETAILED	S. BEAUMONT	M. SMITH	4/2022
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BOOM BRIDGE
BOOMBRIDGE BROOK
GREENBUSH
PENOBSCOT COUNTY
TYPICAL SECTIONS

SHEET NUMBER

10

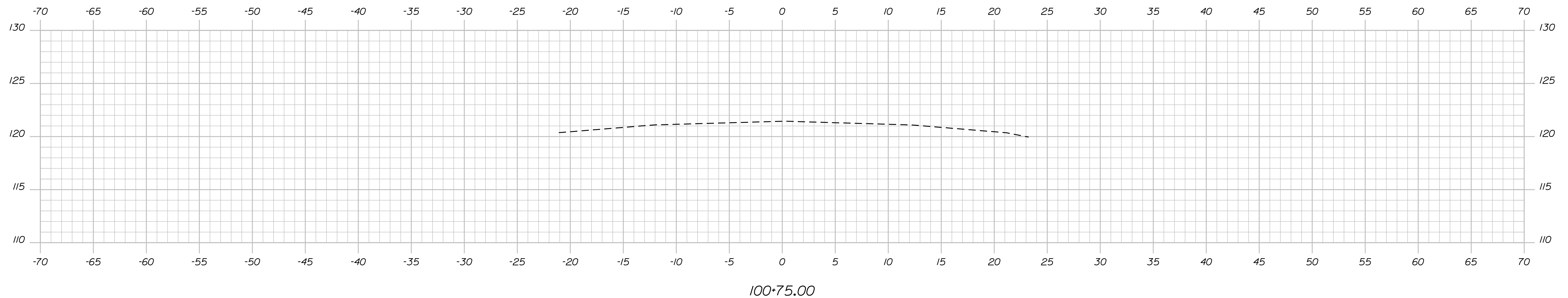
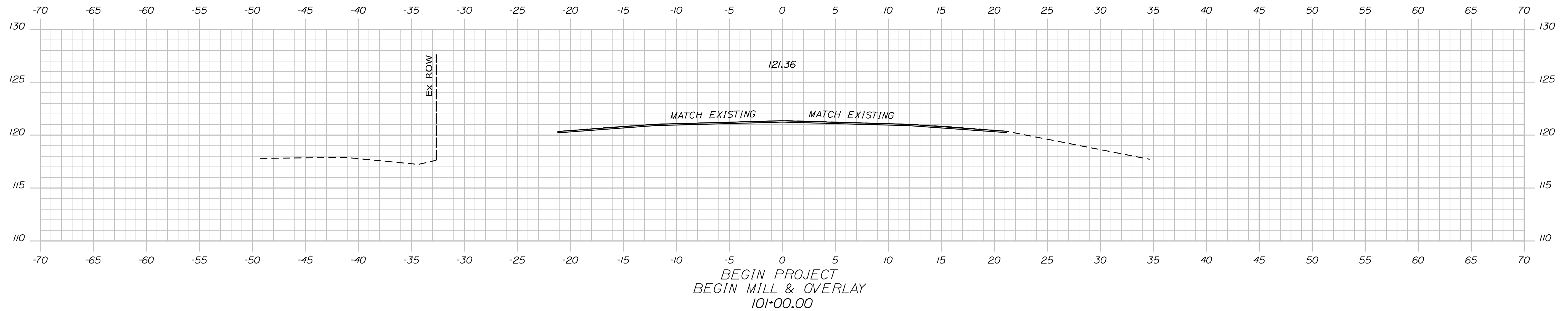
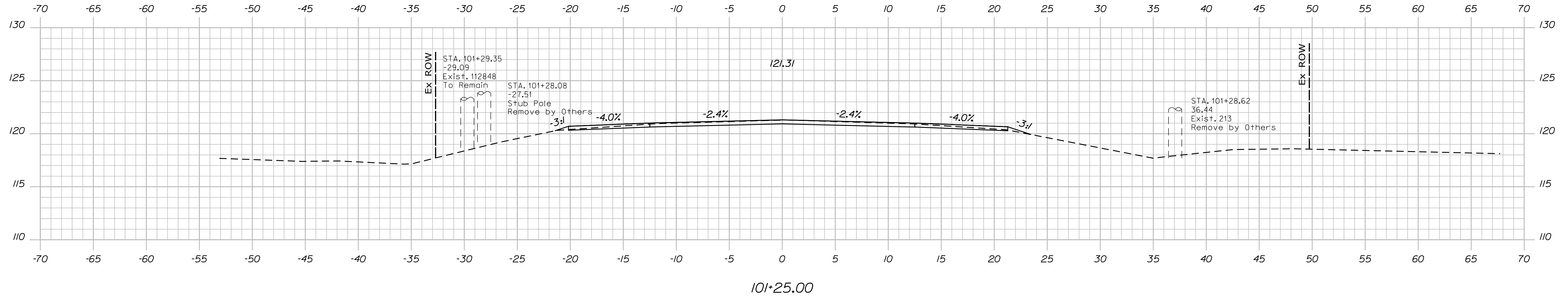
OF 36

Date: 6/28/2022

Username:

Division: BRIDGE

Filename: ... \ustn\011_XSECT_100+75_015.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2309401
WIN
21727.01
BRIDGE NO. 3587
BRIDGE PLANS

DESIGNER: M. MALONEY
CHECKED: E. MALONEY
DESIGNED: J. FRENCH
DATE: 4/2022
SIGNATURE: J. FRENCH
P.E. NUMBER: M. SMITH
DATE: 4/2022

PROJ. MANAGER	BY	DATE
M. WIGHT	M. MALONEY	4/2022
DESIGN DETAILED	M. RAENZ	4/2022
CHECKED/REVIEWED	N. FOX	4/2022
DESIGNED/TAILED	S. BEAUMONT	4/2022
DESIGNED/TAILED	M. SMITH	4/2022
REVISIONS 1	-	-
REVISIONS 2	-	-
REVISIONS 3	-	-
REVISIONS 4	-	-
FIELD CHANGES	-	-

BOOM BRIDGE
BOOMBRIDGE BROOK
GREENBUSH
PENOBSCOT COUNTY
CROSS SECTIONS

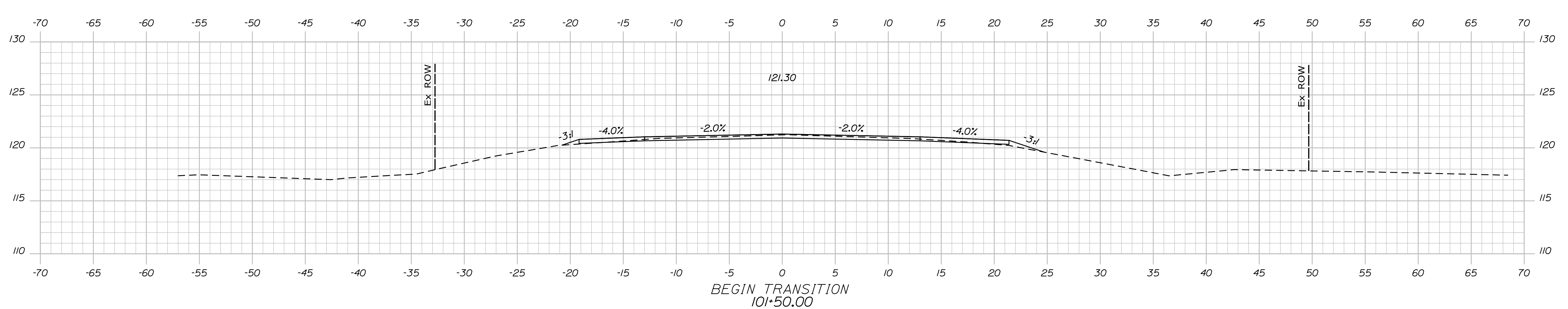
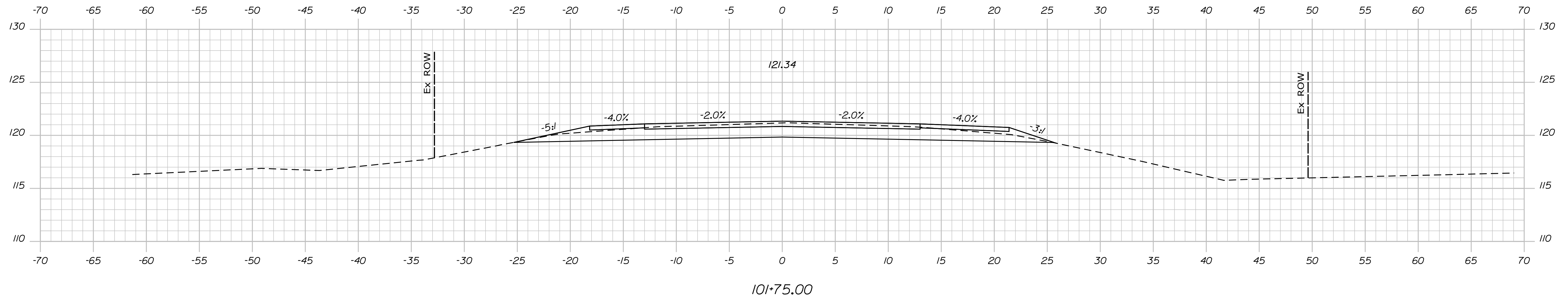
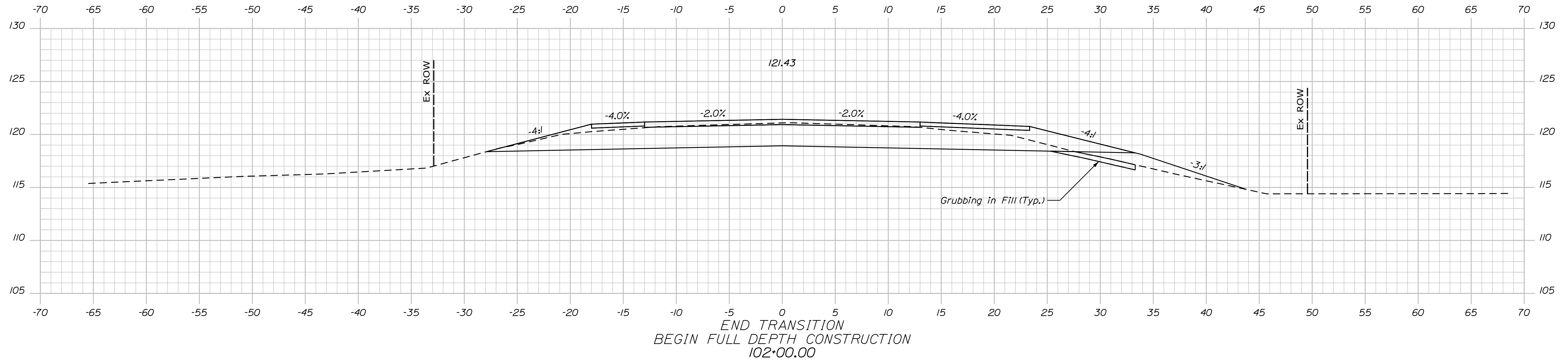
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11
OF 36

Date: 6/28/2022

Username:

Division: BRIDGE

Filename: ... \ustn\012_XSECT_101+50_001.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2309401
WIN
21727.01
BRIDGE NO. 3587
BRIDGE PLANS

DESIGN DETAILED: E. MALONEY
CHECKED/REVIEWED: N. FOX
DESIGN DETAILED: S. BEAUMONT
DESIGN DETAILED: M. SMITH
BY: M. RAENZ
J. FRENCH
M. SMITH
DATE: 4/2022
SIGNATURE
P.E. NUMBER
DATE

PROJ. MANAGER	M. WIGHT	BY	DATE
DESIGN DETAILED	E. MALONEY	M. RAENZ	4/2022
CHECKED/REVIEWED	N. FOX	J. FRENCH	4/2022
DESIGN DETAILED	S. BEAUMONT	M. SMITH	4/2022
DESIGN DETAILED	M. SMITH		
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BOOM BRIDGE
BOOMBRIDGE BROOK
GREENBUSH
PENOBSCOT COUNTY
CROSS SECTIONS

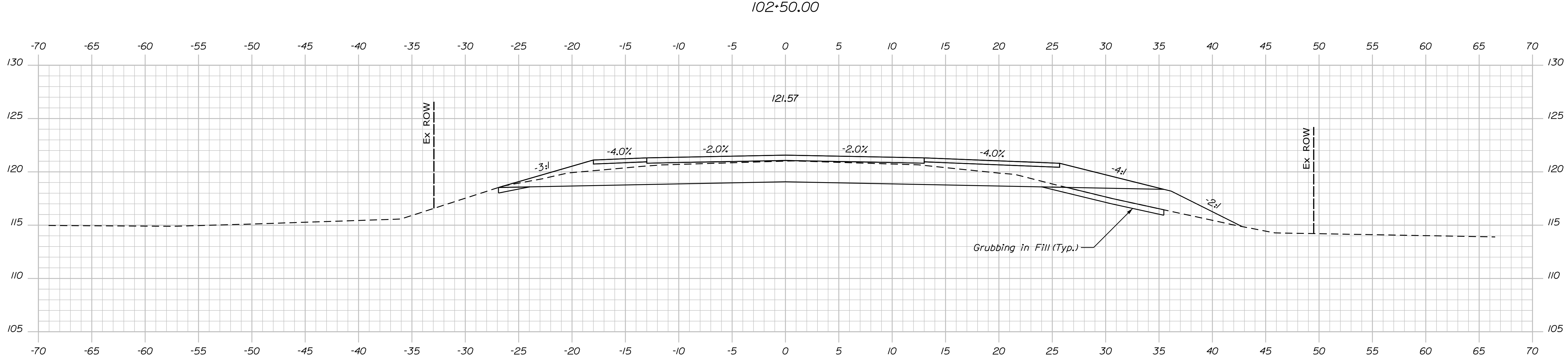
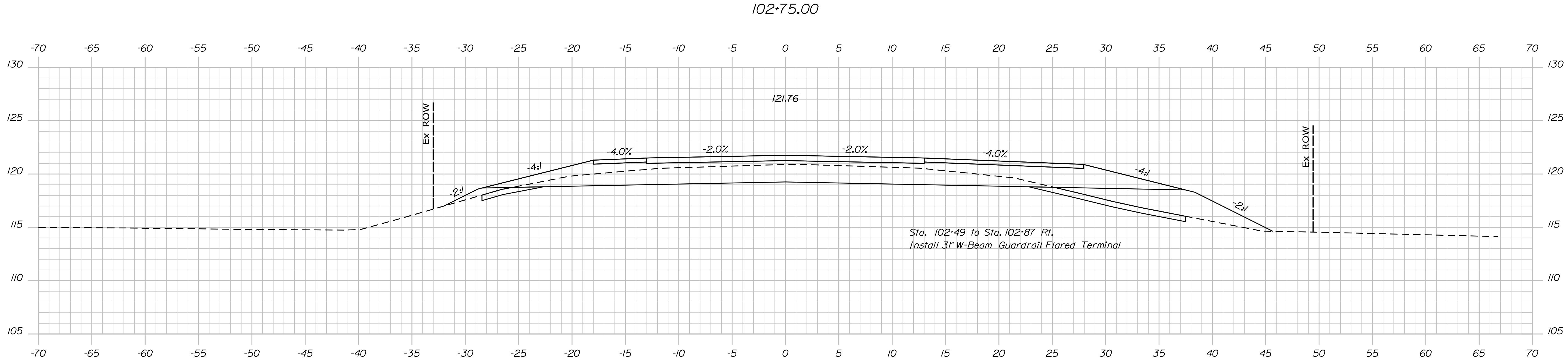
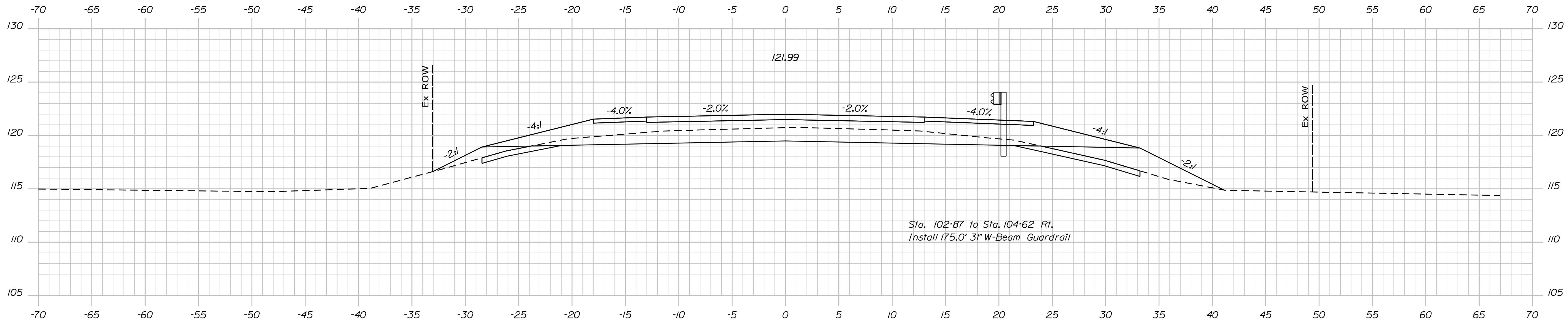
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12
OF 36

Date: 6/28/2022

Username:

Division: BRIDGE

Filename: ... \ustn\013_XSECT_102+25_002.dgn



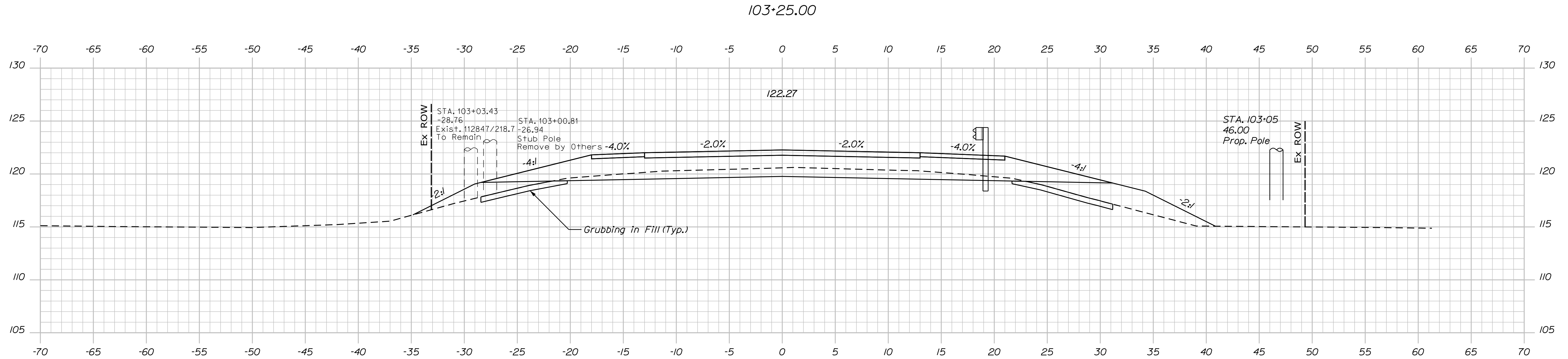
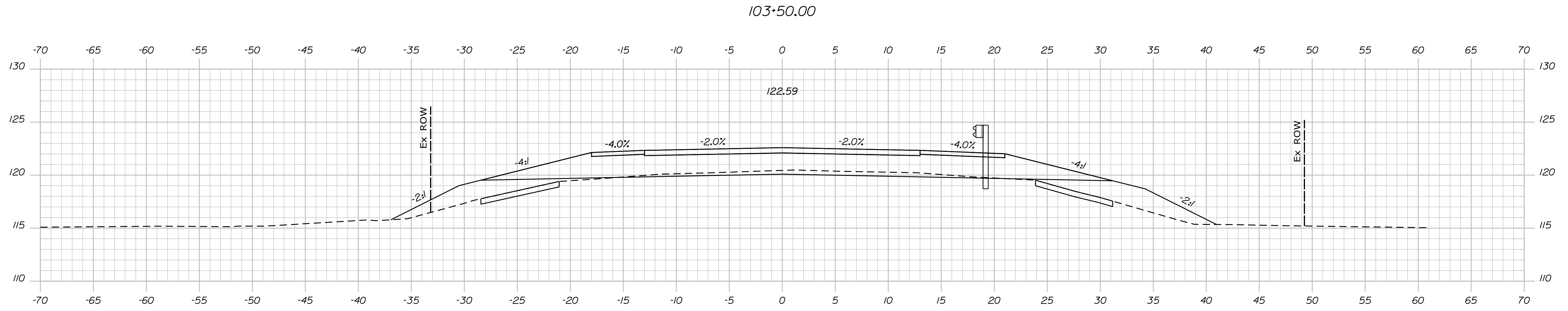
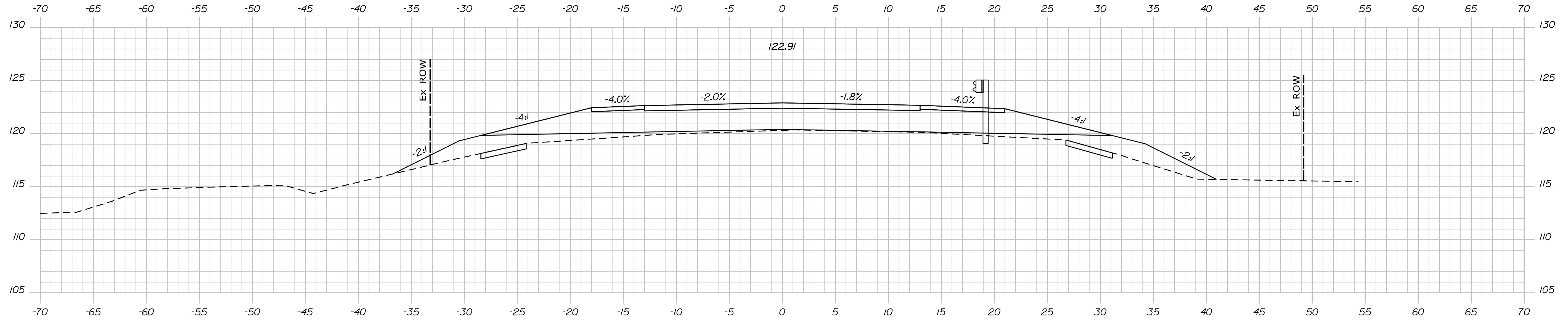
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2309401		WIN		BRIDGE NO. 3587		BRIDGE PLANS	
BOOM BRIDGE		BOOMBRIDGE BROOK		PENOBSCOT COUNTY		CROSS SECTIONS		SHEET NUMBER		13	
OF 36		Sta. 102+25.00 to Sta. 102+75.00		PROJ. MANAGER		M. WIGHT		BY		DATE	
DESIGN/DETAILED		E. MALONEY		M. RAENZ		4/2022		CHECKED/REVIEWED		N. FOX	
DESIGN/DETAILED		S. BEAUMONT		M. SMITH		4/2022		DESIGN/DETAILED		SIGNATURE	
REVISIONS 1								P.E. NUMBER		DATE	
REVISIONS 2											
REVISIONS 3											
REVISIONS 4											
FIELD CHANGES											

Date: 6/28/2022

Username:

Division: BRIDGE

Filename: ... \ustn\014_XSECT_103+00_003.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2309401
WIN
21727.01
BRIDGE NO. 3587
BRIDGE PLANS

DESIGN-DETAILED	E. MALONEY	4/2022	SIGNATURE
CHECKED-REVIEWED	N. FOX	4/2022	
DESIGN-DETAILED	S. BEAUMONT	4/2022	P.E. NUMBER
REVISIONS 1			DATE
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BOOM BRIDGE
BOOMBRIDGE BROOK
PENOBSCOT COUNTY
CROSS SECTIONS

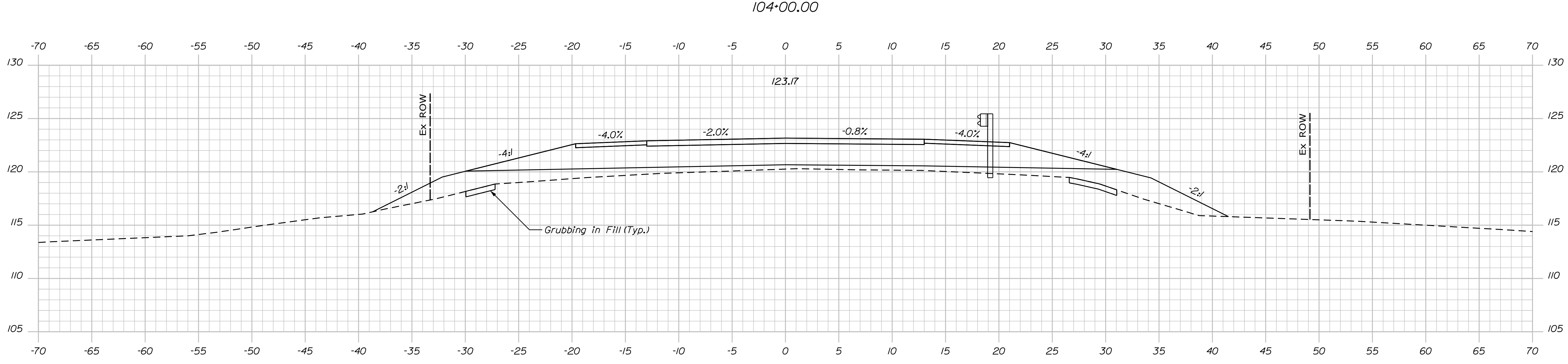
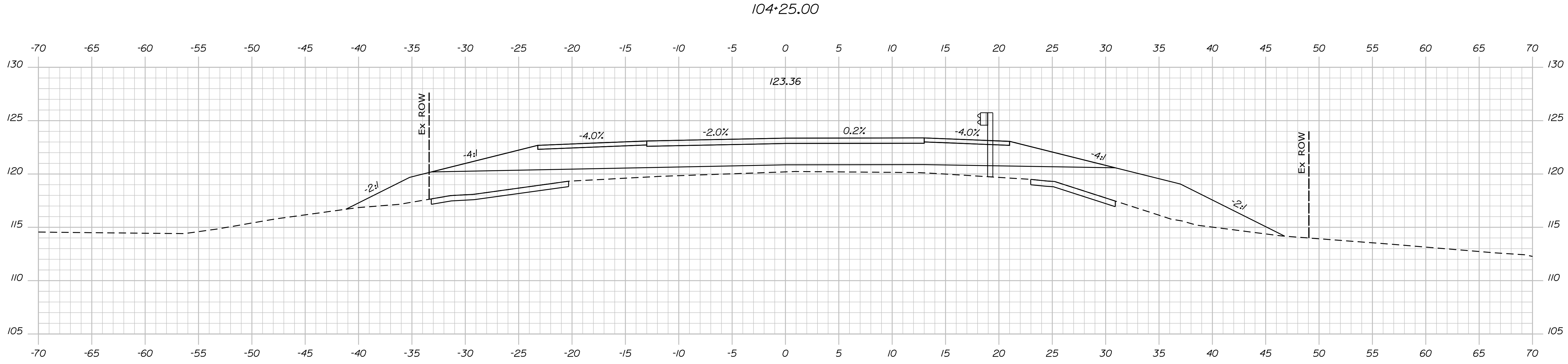
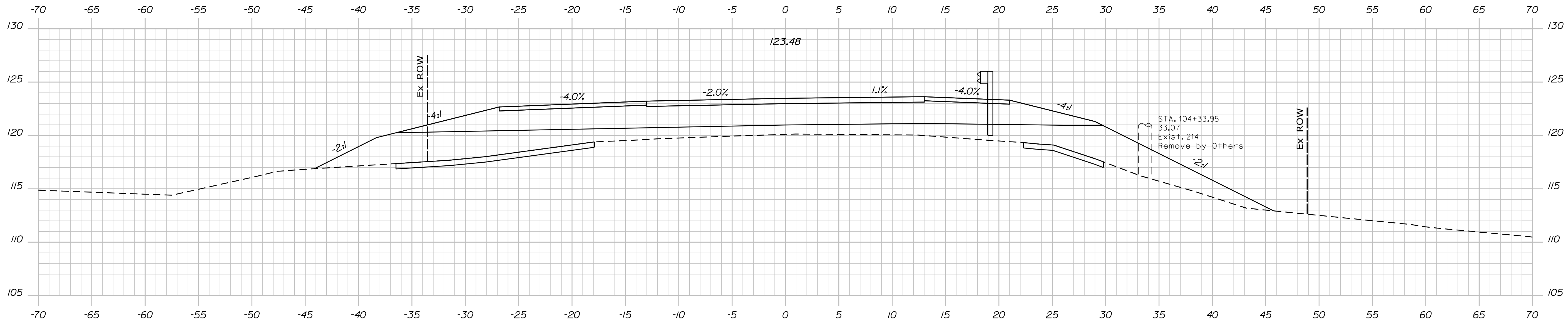
SHEET NUMBER
14
OF 36

Date: 6/28/2022

Username:

Division: BRIDGE

Filename: ... \ustn\015_XSECT_103+75_004.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2309401
WIN
21727.01
BRIDGE NO. 3587
BRIDGE PLANS

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

DATE	BY	M. WIGHT	DATE
4/2022	M. RAENZ	E. MALONEY	4/2022
4/2022	J. FRENCH	N. FOX	4/2022
4/2022	M. SMITH	S. BEAUMONT	4/2022

BOOM BRIDGE
BOOMBRIDGE BROOK
GREENBUSH
PENOBSCOT COUNTY
CROSS SECTIONS

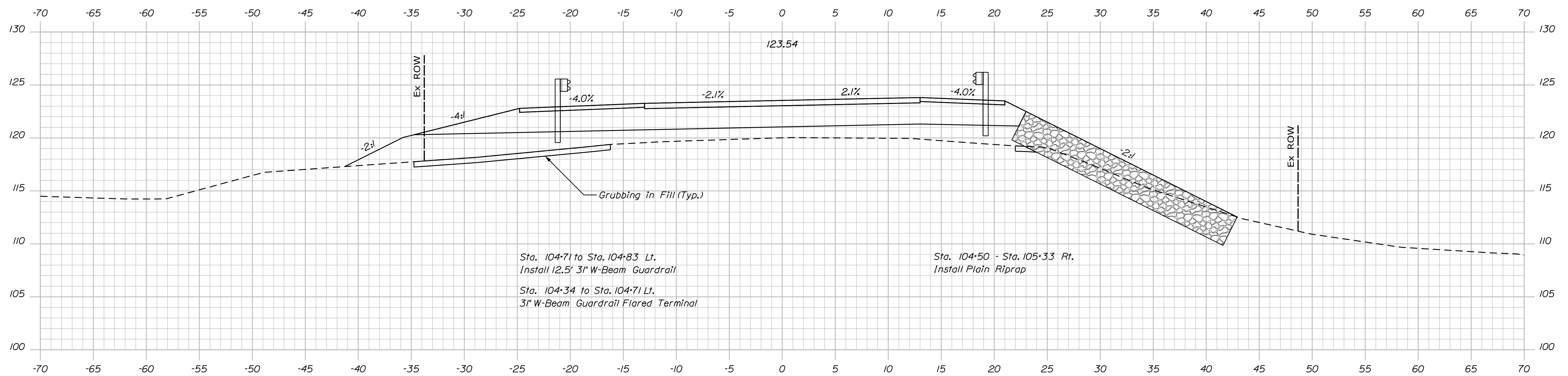
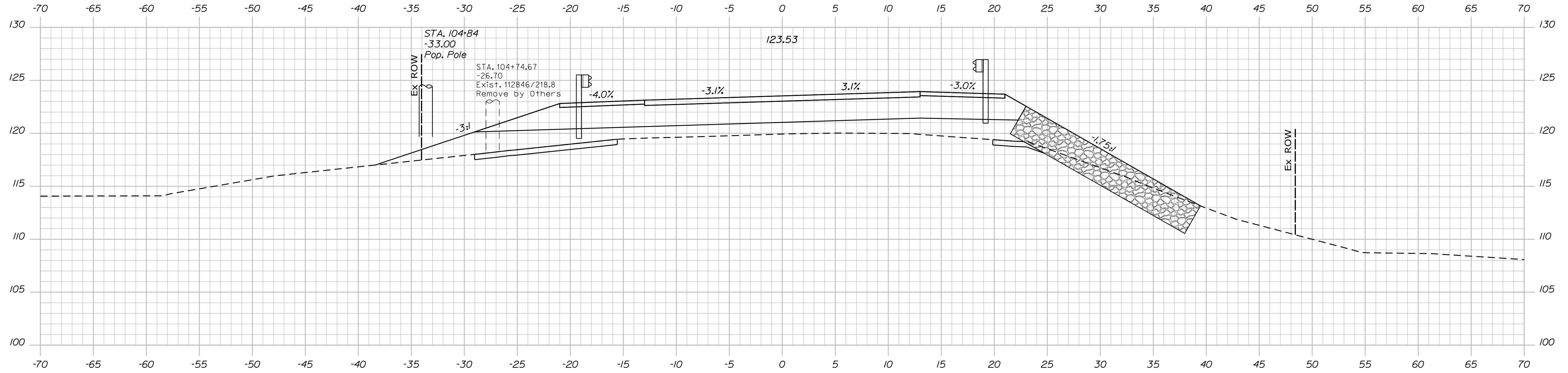
SHEET NUMBER
15
OF 36

Date: 6/28/2022

Username:

Division: BRIDGE

Filename: ... \ustn\016_XSECT_104+50_005.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2309401
WIN 21727.01
BRIDGE NO. 3587 BRIDGE PLANS

DESIGN: M. WIGHT
CHECKED: E. MALONEY
DESIGNED: J. FRENCH
DATE: 4/2022
SIGNATURE: M. SMITH
P.E. NUMBER: -
DATE: -

PROJ. MANAGER	BY	DATE
M. WIGHT	M. RAENZ	4/2022
E. MALONEY	J. FRENCH	4/2022
N. FOX	M. SMITH	4/2022
S. BEAUMONT	-	-
REVISIONS 1	-	-
REVISIONS 2	-	-
REVISIONS 3	-	-
REVISIONS 4	-	-
FIELD CHANGES	-	-

BOOM BRIDGE
BOOMBRIDGE BROOK
GREENBUSH PENOBSCOT COUNTY
CROSS SECTIONS

SHEET NUMBER
16
OF 36

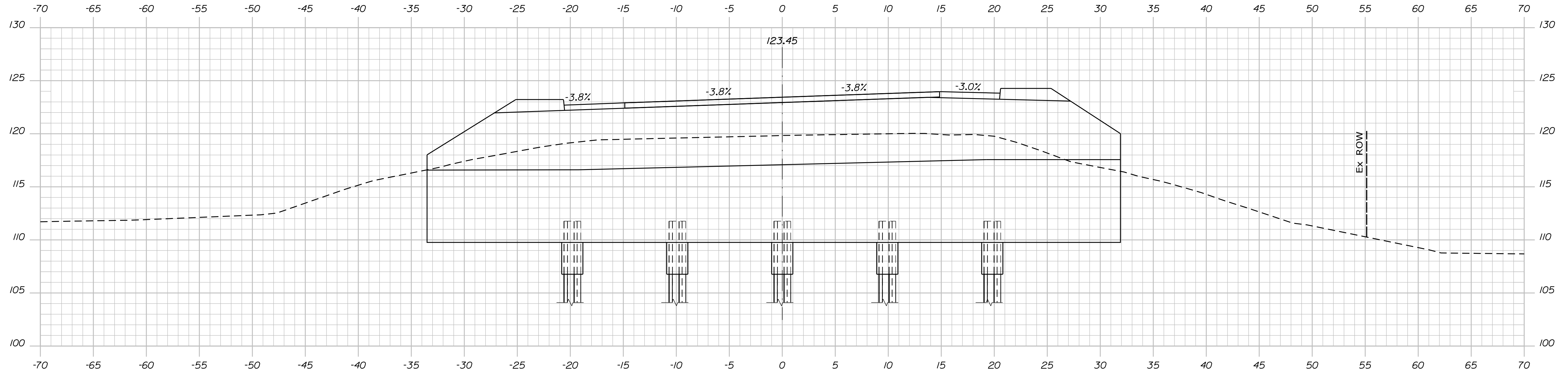
Sta. 104+50.00 to Sta. 104+75.00

Date: 6/28/2022

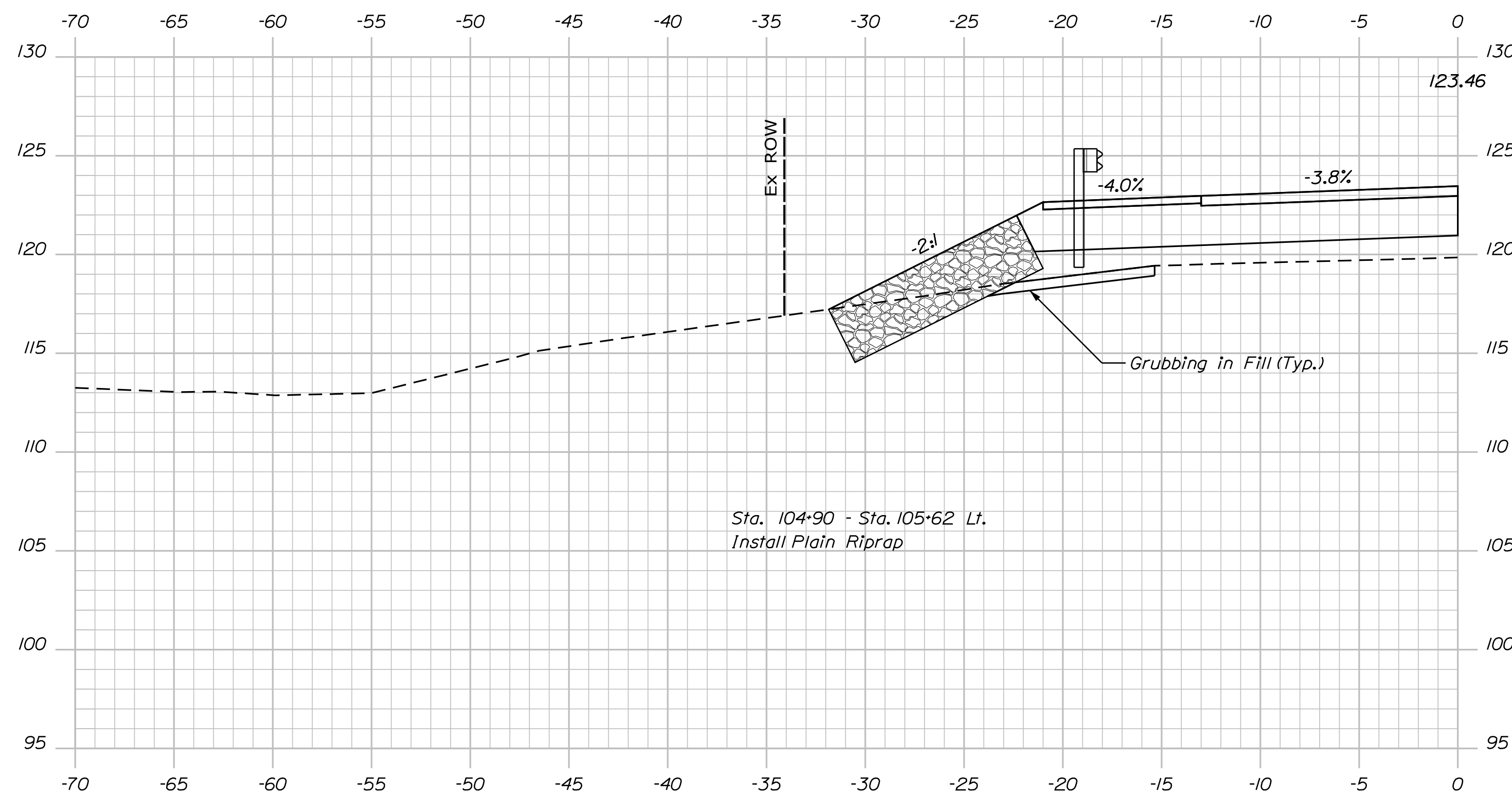
Username:

Division: BRIDGE

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BEGIN BRIDGE
105+03.92 SKEWED



105+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2309401

BRIDGE NO. 3587 WIN 21727.01 BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

PROJ. MANAGER	M. WIGHT	BY	DATE
DESIGN-DETAILED	E. MALONEY	M. RAENZ	4/2022
CHECKED-REVIEWED	N. FOX	J. FRENCH	4/2022
DESIGN-DETAILED	S. BEAUMONT	M. SMITH	4/2022
DESIGN-DETAILED	-	-	-
REVISIONS 1	-	-	-
REVISIONS 2	-	-	-
REVISIONS 3	-	-	-
REVISIONS 4	-	-	-
FIELD CHANGES	-	-	-

BOOM BRIDGE
BOOMBRIDGE BROOK
GREENBUSH PENOBSCOT COUNTY

CROSS SECTIONS

SHEET NUMBER

17

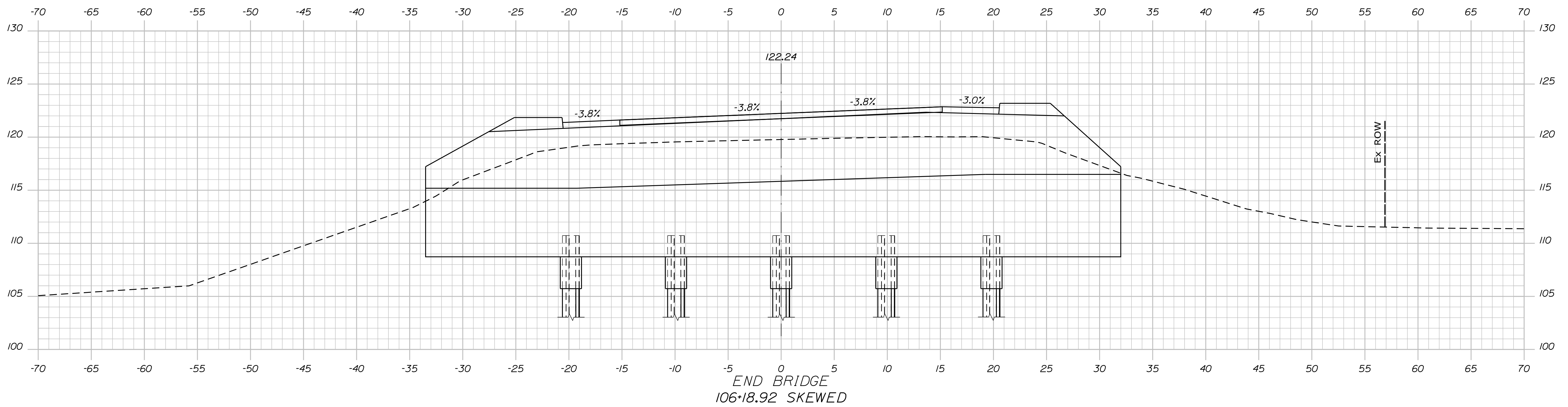
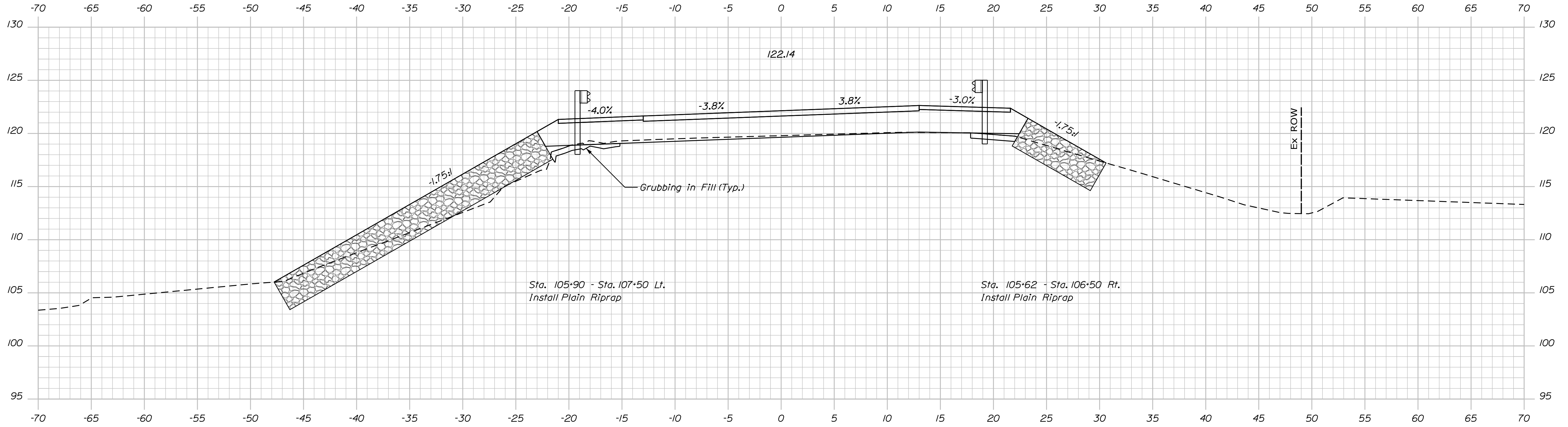
OF 36

Date: 6/28/2022

Username:

Division: BRIDGE

Filename: ... \ustn\018_XSECT_106+18_009.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2309401
WIN 21727.01
BRIDGE NO. 3587
BRIDGE PLANS

PROJ. MANAGER	BY	DATE
M. WIGHT	M. MALONEY	4/2022
E. MALONEY	M. RAENZ	4/2022
CHECKED-REVIEWED	N. FOX	4/2022
DESIGN-REVIEWED	J. FRENCH	4/2022
DESIGNS DETAILED	S. BEAUMONT	4/2022
DESIGNS DETAILED	M. SMITH	4/2022
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BOOM BRIDGE
BOOMBRIDGE BROOK
GREENBUSH
PENOBSCOT COUNTY
CROSS SECTIONS

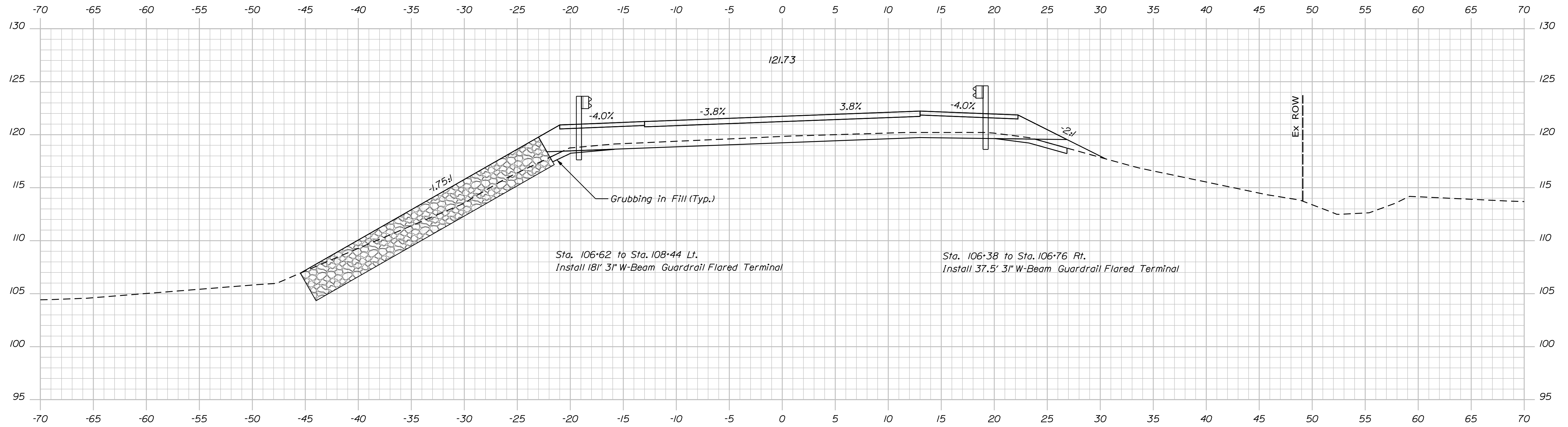
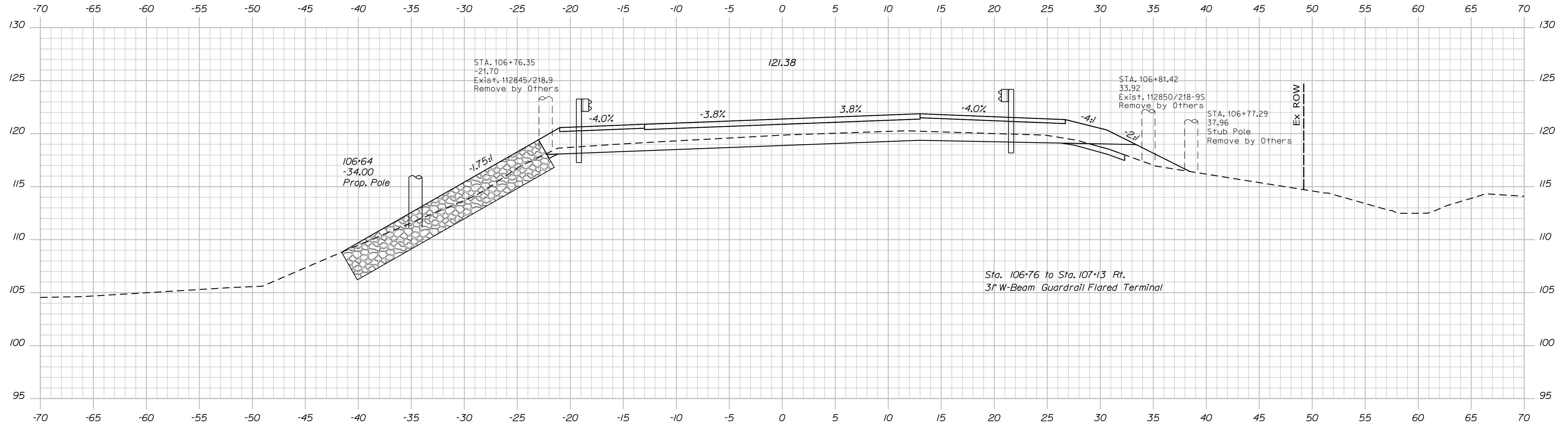
SHEET NUMBER
18
OF 36

Date: 6/28/2022

Username:

Division: BRIDGE

Filename: ... \ustn\019_XSECT_106-50_010.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2309401

WIN

21727.01

BRIDGE NO. 3587

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

PROJ. MANAGER	M. WIGHT	BY	DATE
DESIGN DETAILED	E. MALONEY	M. RAENZ	4/2022
CHECKED/REVIEWED	N. FOX	J. FRENCH	4/2022
DESIGN DETAILED	S. BEAUMONT	M. SMITH	4/2022
DESIGN DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BOOM BRIDGE
BOOMBRIDGE BROOK
GREENBUSH
PENOBSCOT COUNTY

CROSS SECTIONS

SHEET NUMBER

19

OF 36

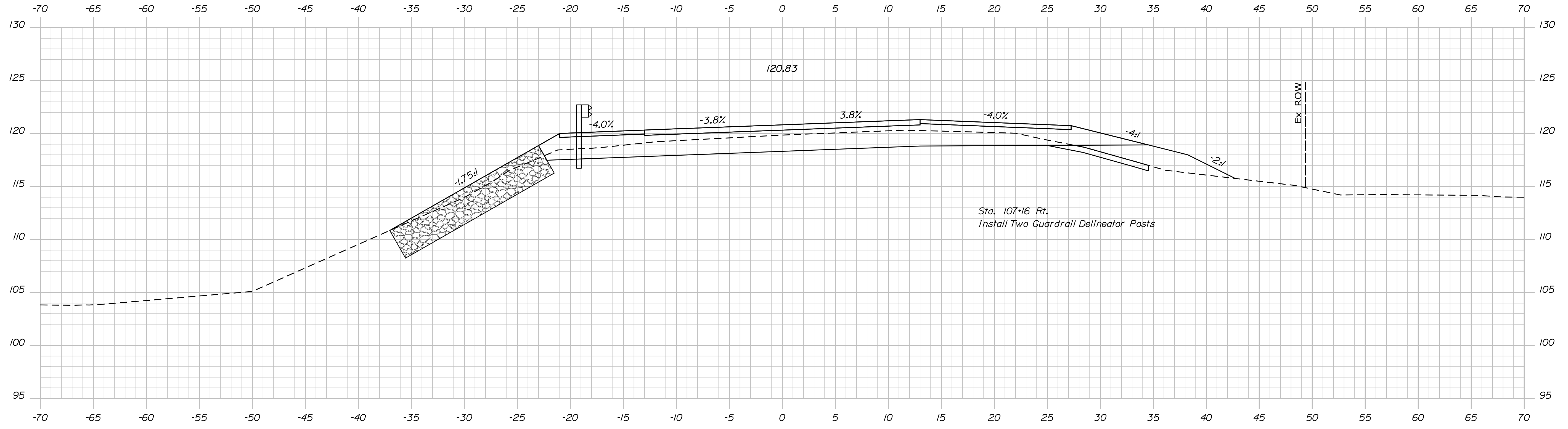
Sta. 106+50.00 to Sta. 106+75.00

Date: 6/28/2022

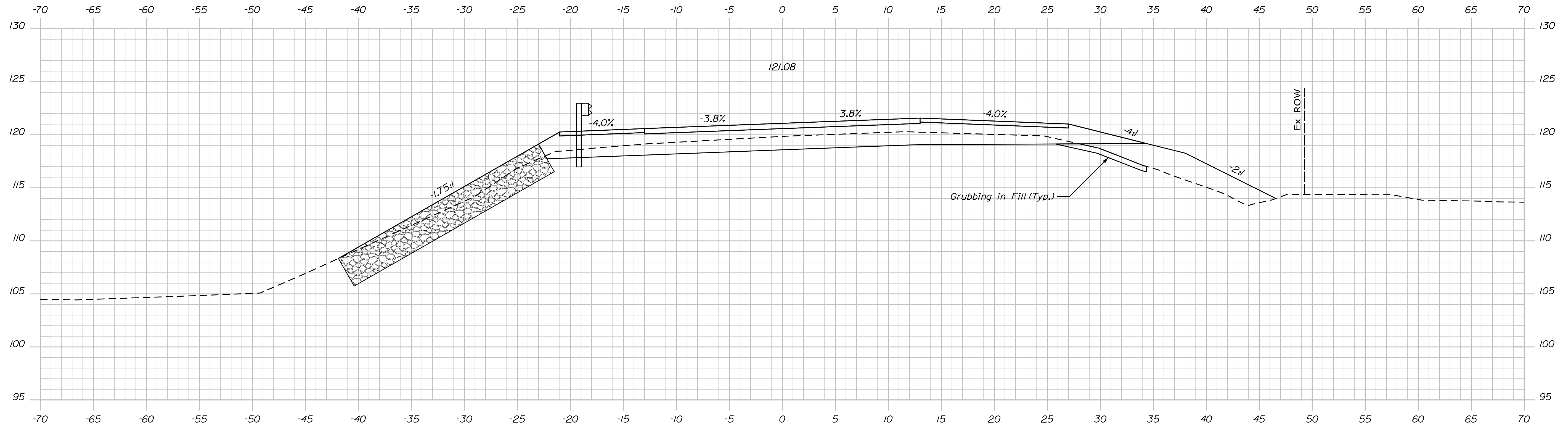
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Division: BRIDGE

Filename: ... \ustn\020_XSECT_107+00_01.dgn



107+25.00



107+00.00

STATE OF MAINE

DEPARTMENT OF TRANSPORTATION

2309401

WIN

21727.01

BRIDGE NO. 3587

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

4/2022

4/2022

4/2022

BY

M. RAENZ

J. FRENCH

PROJ. MANAGER

E. MALONEY

N. FOX

CHECKED

S. BEAUMONT

M. SMITH

DESIGN

REVISIONS 1

REVISIONS 2

REVISIONS 3

REVISIONS 4

FIELD CHANGES

BOOM BRIDGE

BOOMBRIDGE BROOK

PENOBSCOT COUNTY

CROSS SECTIONS

SHEET NUMBER

20

OF 36

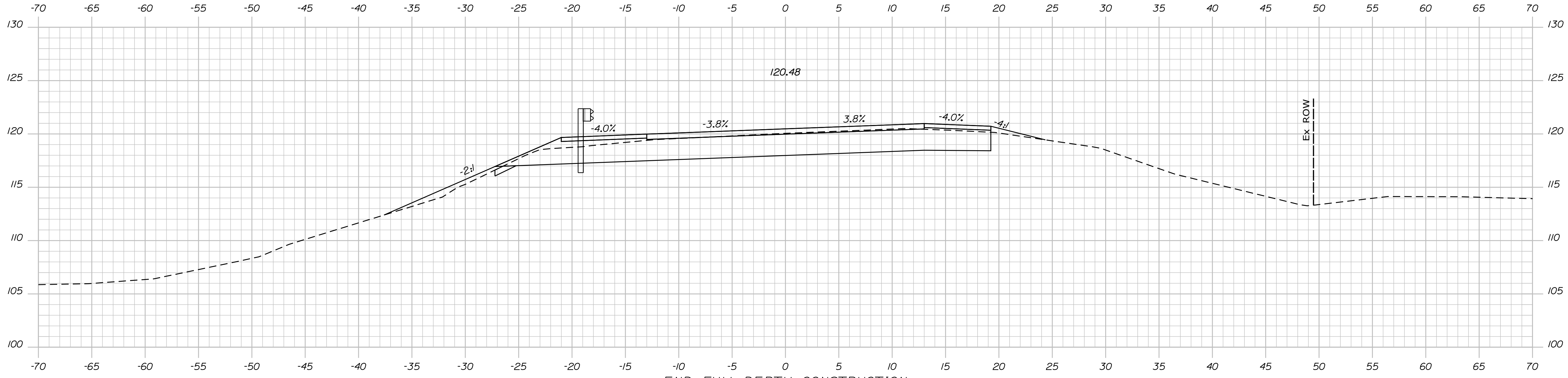
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Date: 6/28/2022

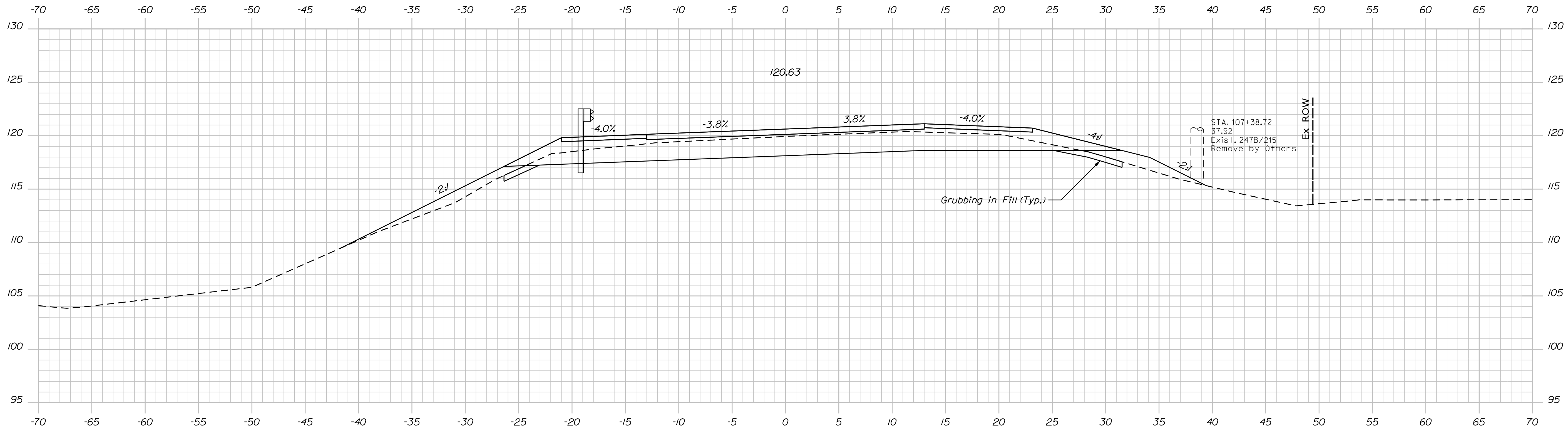
Username:

Division: BRIDGE

Filename: ... \ustn\021_XSECT_107+50_012.dgn



END FULL DEPTH CONSTRUCTION
 BEGIN TRANSITION
 107+75.00



107+50.00

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 2309401
 WIN 21727.01
 BRIDGE NO. 3587
 BRIDGE PLANS

DESIGNER: M. WIGHT
 CHECKED: E. MALONEY
 DESIGNED: J. FRENCH
 DATE: 4/2022
 SIGNATURE: _____
 P.E. NUMBER: _____
 DATE: _____

PROJ. MANAGER	M. WIGHT	BY	DATE
DESIGN DETAILED	E. MALONEY	M. RAENZ	4/2022
CHECKED	E. MALONEY	J. FRENCH	4/2022
DESIGN DETAILED	S. BEAUMONT	M. SMITH	4/2022
REVISIONS	1	-	-
REVISIONS	2	-	-
REVISIONS	3	-	-
REVISIONS	4	-	-
FIELD CHANGES	-	-	-

BOOM BRIDGE
 BOOMBRIDGE BROOK
 GREENBUSH
 PENOBSCOT COUNTY
 CROSS SECTIONS

SHEET NUMBER
 21
 OF 36

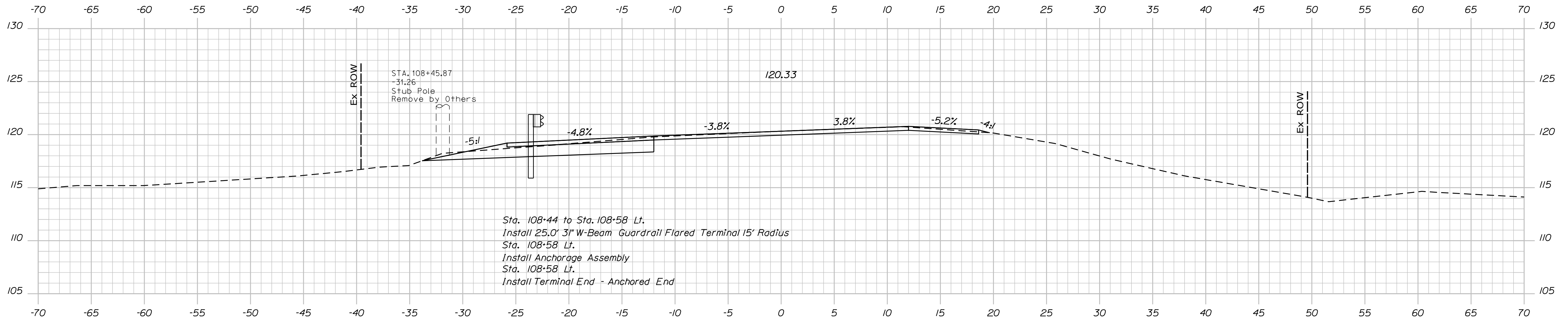
Sta. 107+50.00 to Sta. 107+75.00

Date: 6/28/2022

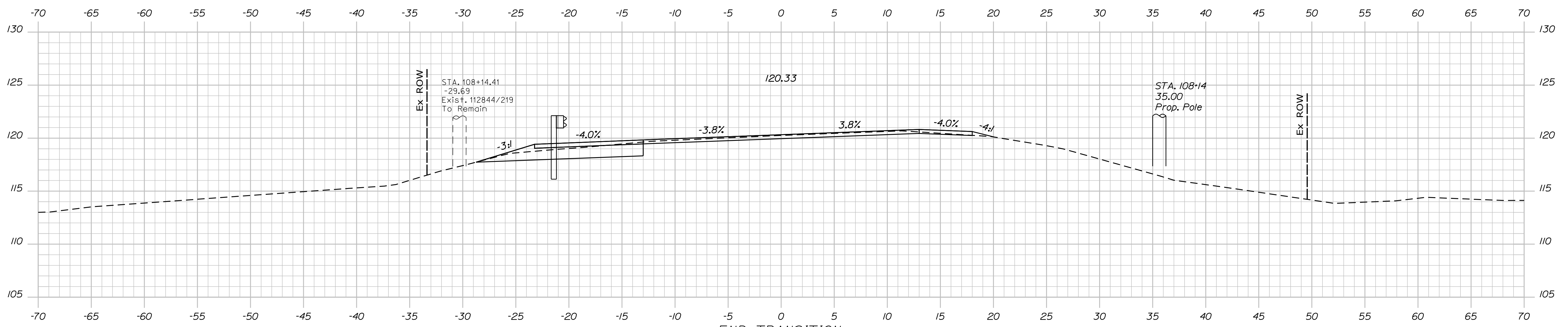
Username:

Division: BRIDGE

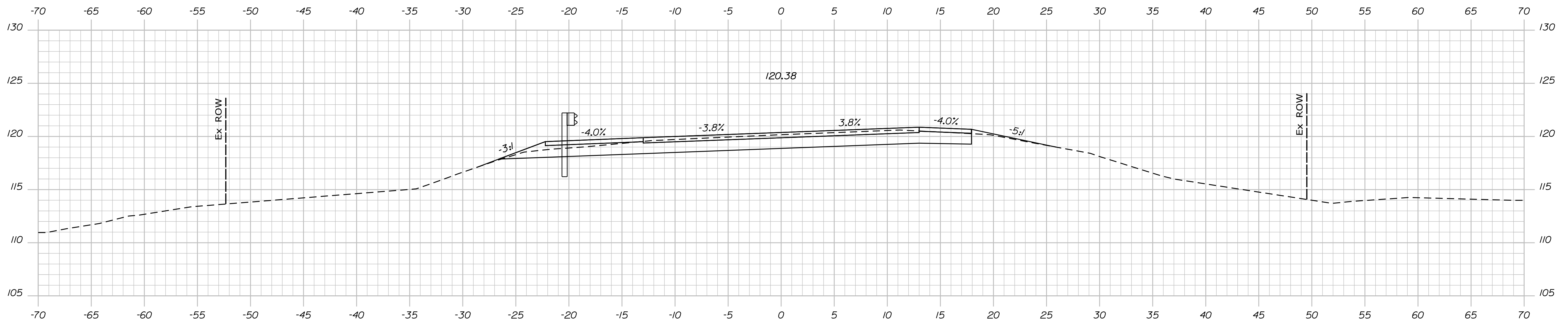
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108+50.00



END TRANSITION
BEGIN MILL & OVERLAY
108+25.00



108+00.00

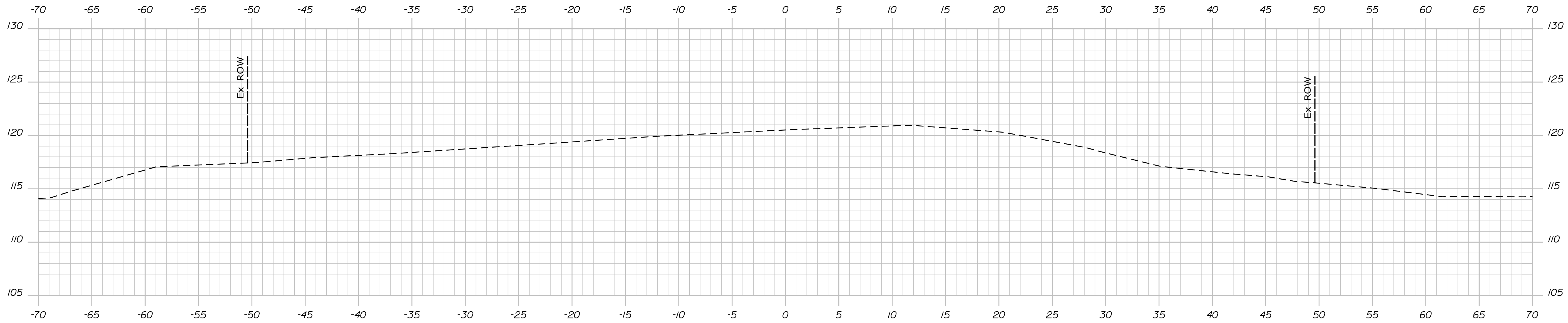
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2309401	
BOOM BRIDGE		BOOMBRIDGE BROOK		GREENBUSH	
PENOBSCOT COUNTY		CROSS SECTIONS		SHEET NUMBER	
22		OF 36		BRIDGE NO. 3587	
WIN		21727.01		BRIDGE PLANS	
PROJ. MANAGER	M. WIGHT	BY	M. MALONEY	DATE	4/2022
DESIGN-DETAILED	E. MALONEY	CHECKED-REVIEWED	M. RAENZ	DATE	4/2022
DESIGNED-DRAWN	N. FOX	DESIGNED-REVIEWED	J. FRENCH	DATE	4/2022
DESIGNED-DETAILED	S. BEAUMONT	DESIGNED-REVIEWED	M. SMITH	DATE	4/2022
REVISIONS 1				P.E. NUMBER	
REVISIONS 2				DATE	
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

Date: 6/28/2022

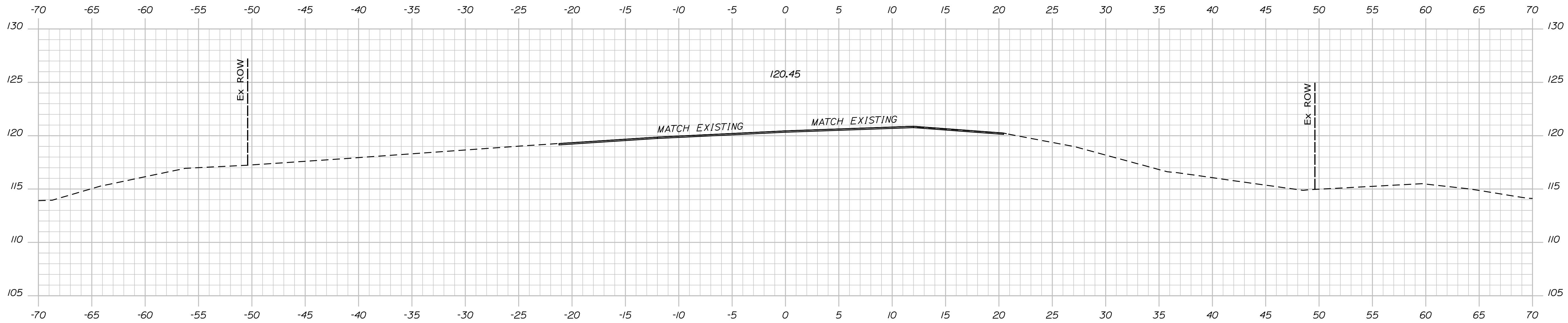
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Division: BRIDGE

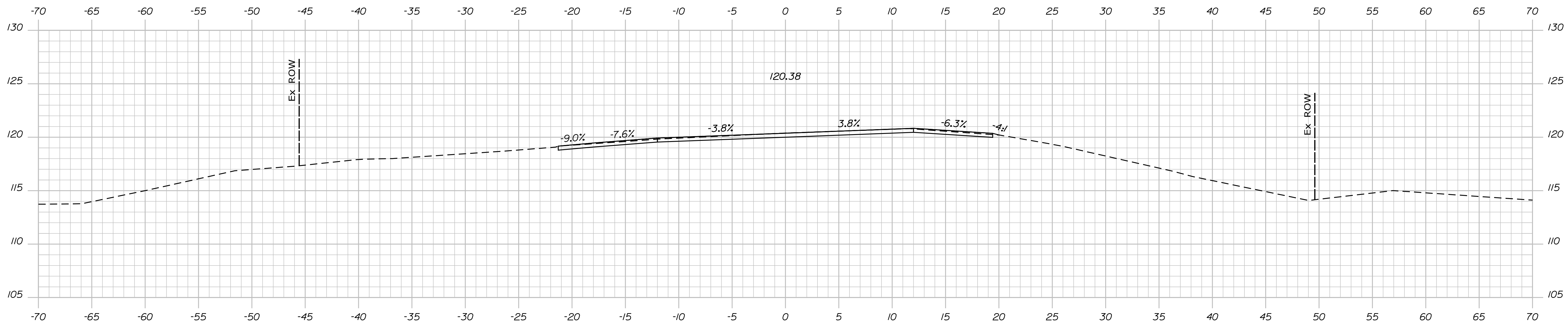
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109+25.00



END MILL & OVERLAY
END PROJECT
109+00.00



108+75.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2309401

BRIDGE NO. 3587 WIN WIN12727101 BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

PROJ. MANAGER	PROGRAM	DATE
WARREN	WARREN	4/20/22
J. FRENCH	J. FRENCH	4/20/22
SCHRAMM	SCHRAMM	4/20/22
DESIGNER	DESIGNER	
REVISIONS 1	REVISIONS 1	
REVISIONS 2	REVISIONS 2	
REVISIONS 3	REVISIONS 3	
REVISIONS 4	REVISIONS 4	
FIELD CHANGES	FIELD CHANGES	

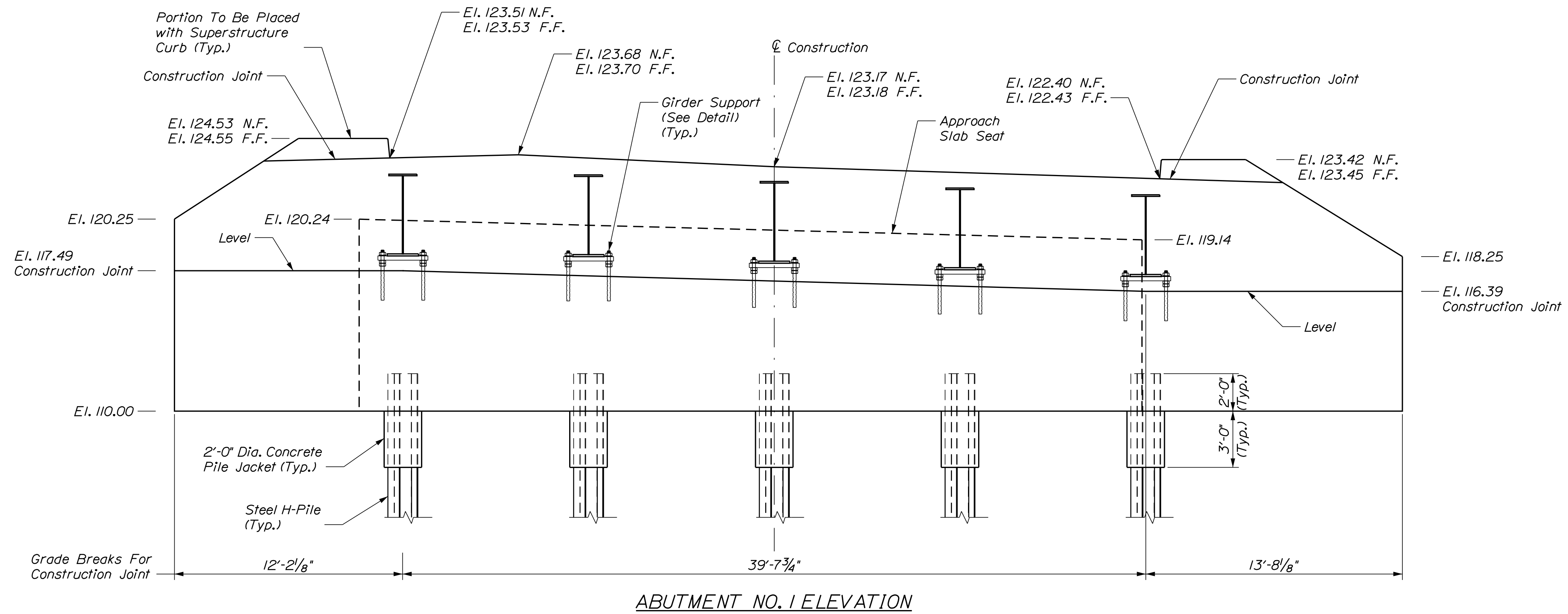
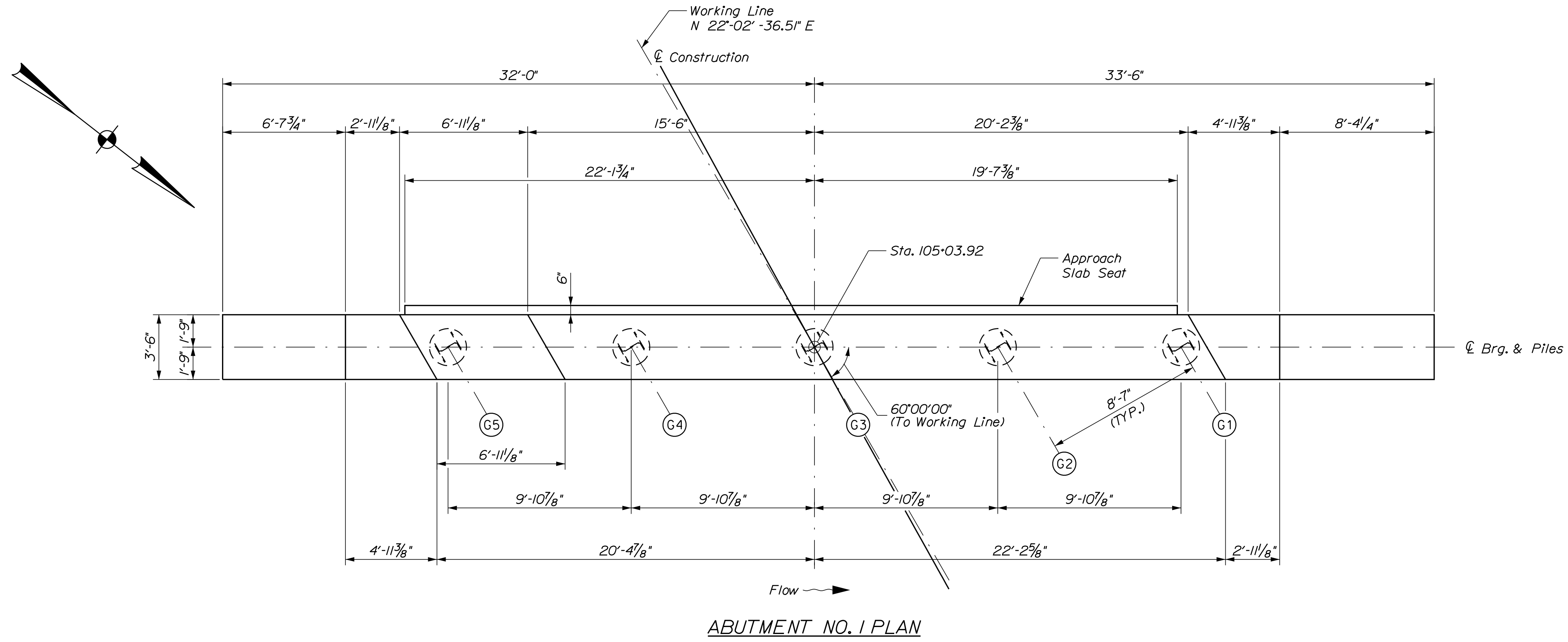
BOOM BRIDGE
BOOMBRIDGE BROOK
GREENBUSH PENOBSCOT COUNTY

CROSS SECTIONS

SHEET NUMBER

23

OF 36



Legend
 N.F. = Near Face
 F.F. = Far Face

PROJ. MANAGER	M. WIGHT	BY	DATE
DESIGNED/DETAILED	E. MALONEY	M. RAENZ	4/2022
CHECKED/REVIEWED	N. FOX	J. FRENCH	4/2022
DESIGNED/DETAILED	S. BEAUMONT	M. SMITH	4/2022
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

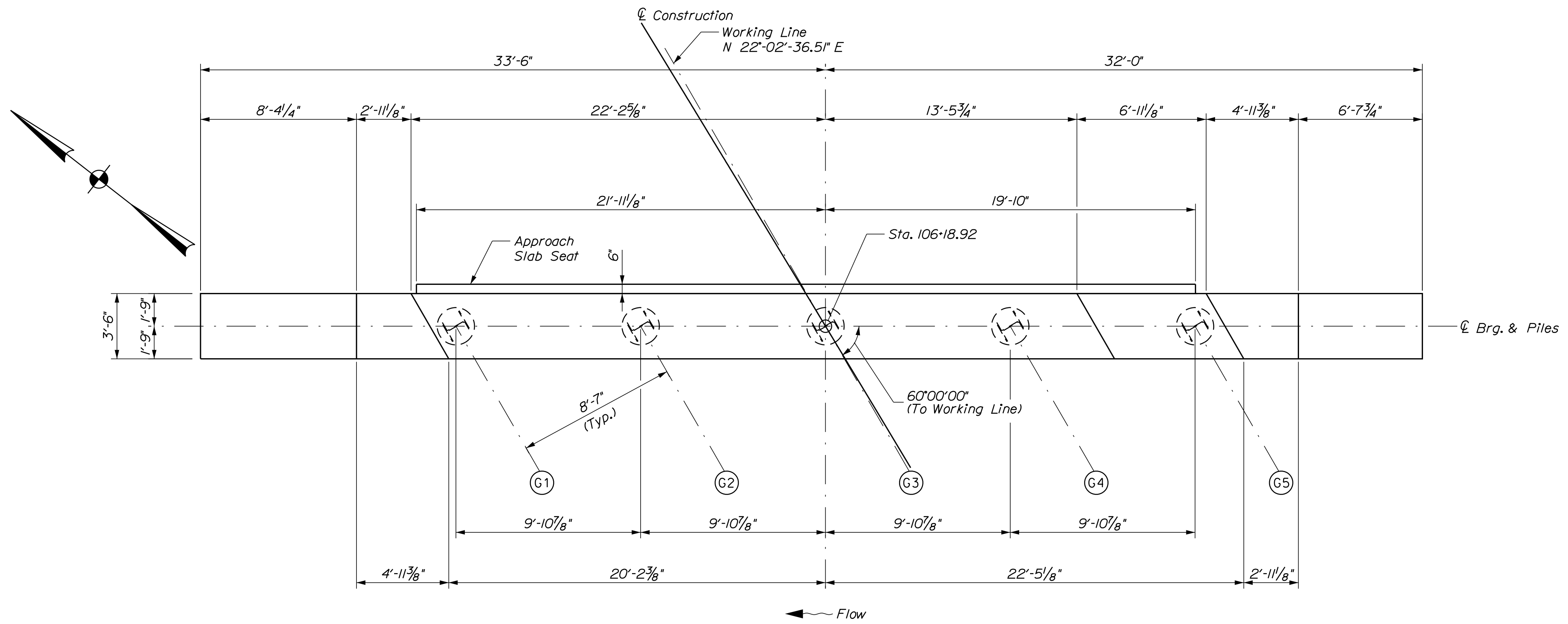
SIGNATURE	P.E. NUMBER	DATE

BOOM BRIDGE
 BOOMBRIDGE BROOK
 GREENBUSH
 PENOBSCOT COUNTY
 ABUTMENT NO. 1 DETAILS

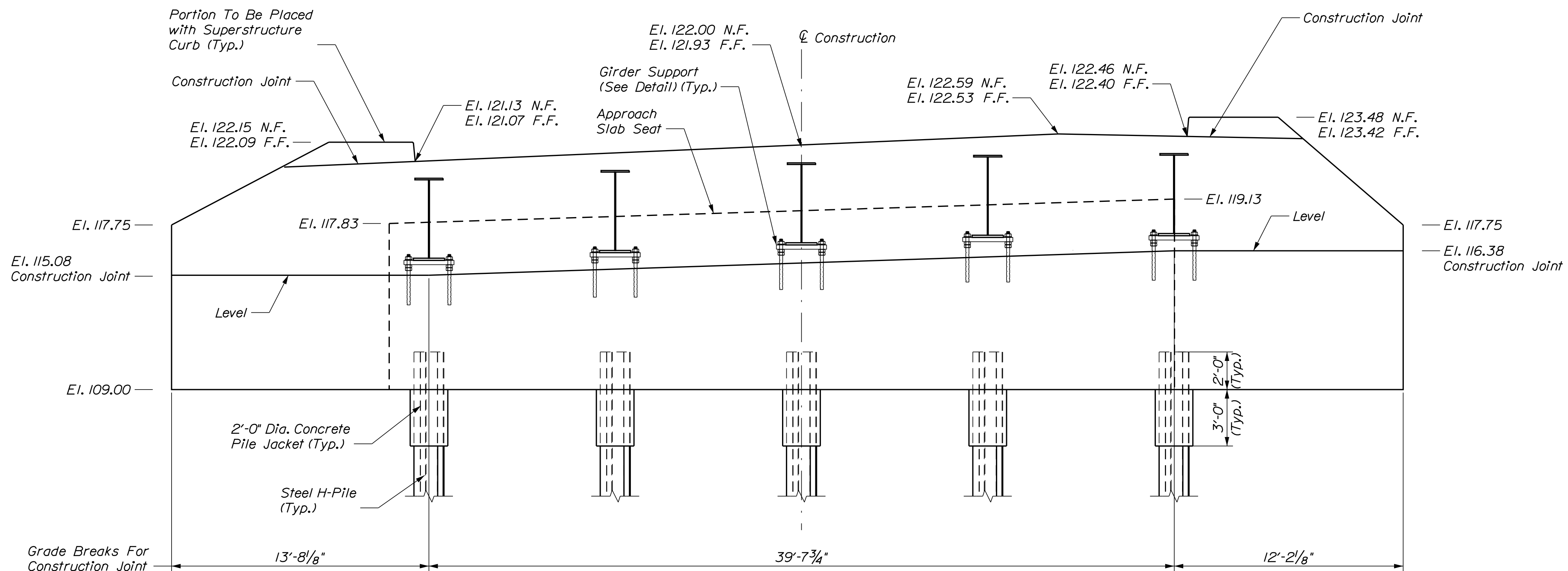
SHEET NUMBER

24

OF 36



ABUTMENT NO. 2 PLAN



ABUTMENT NO. 2 ELEVATION

Legend
N.F. = Near Face
F.F. = Far Face

DESIGN DETAILED	E. MALONEY	4/2022	SIGNATURE
CHECKED/REVIEWED	N. FOX	4/2022	P.E. NUMBER
DESIGN DETAILED	S. BEAUMONT	4/2022	DATE
DESIGN DETAILED	M. SMITH		
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

PROJ. MANAGER	M. WIGHT	DATE	
DESIGN DETAILED	E. MALONEY	4/2022	
CHECKED/REVIEWED	N. FOX	4/2022	
DESIGN DETAILED	S. BEAUMONT	4/2022	
DESIGN DETAILED	M. SMITH		
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BOOM BRIDGE
BOOMBRIDGE BROOK
GREENBUSH
PENOBSCOT COUNTY
ABUTMENT NO. 2 DETAILS

SHEET NUMBER

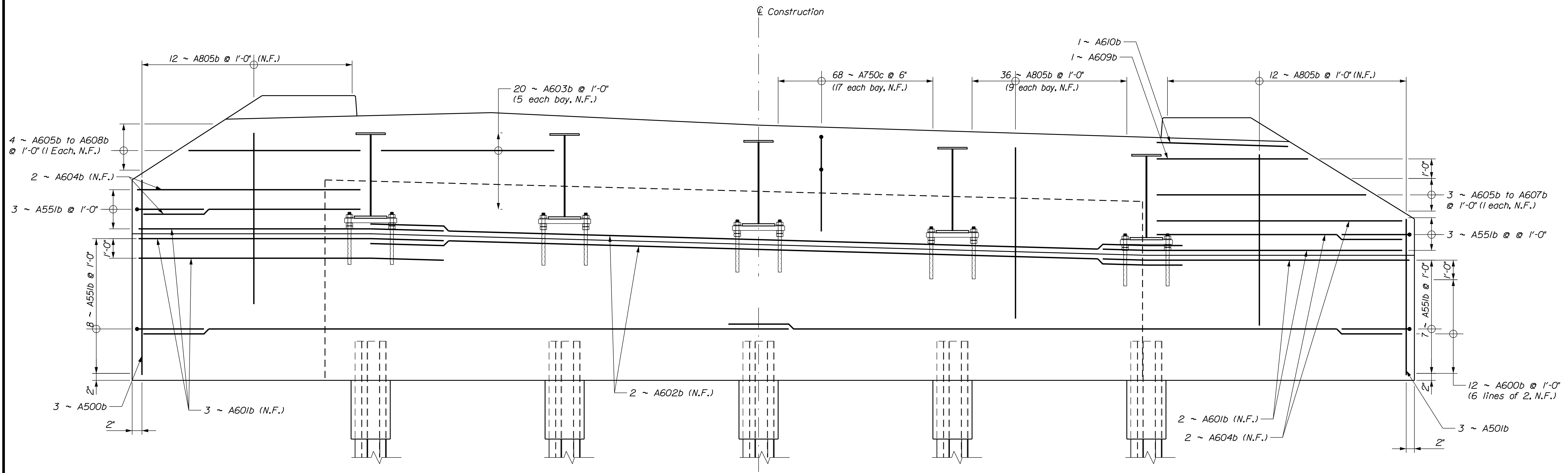
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Date: 6/28/2022

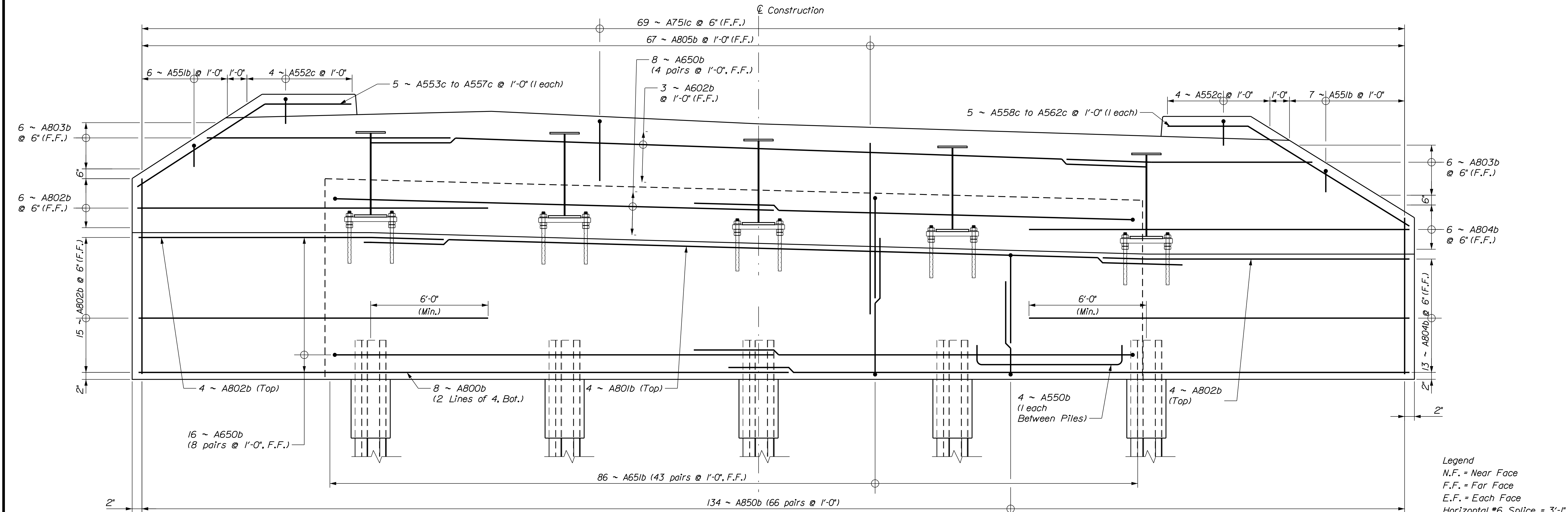
Username:

Division: BRIDGE

Filename: ... \ustn\027_Abument_1_Rebar.dgn



ABUTMENT NO. 1 REINFORCING (NEAR FACE)



ABUTMENT NO. 1 REINFORCING (FAR FACE)

Legend
 N.F. = Near Face
 F.F. = Far Face
 E.F. = Each Face
 Horizontal #6 Splice = 3'-1"
 Horizontal #8 Splice = 4'-1"
 Vertical #6 Splice = 2'-5"
 Vertical #8 Splice = 3'-2"

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 2309401
 WIN
 21727.01
 BRIDGE NO. 3587
 BRIDGE PLANS

PROJ. MANAGER	M. WIGHT	BY	DATE
DESIGN-DETAILED	E. MALONEY	M. RAENZ	4/2022
CHECKED-REVIEWED	N. FOX	J. FRENCH	4/2022
DESIGNS-DETAILED	S. BEAUMONT	M. SMITH	4/2022
DESIGNS-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE	P.E. NUMBER	DATE

BOOM BRIDGE
 BOOMBRIDGE BROOK
 GREENBUSH PENOBSCOT COUNTY
 ABUTMENT NO. 1 REINFORCING ELEVATIONS

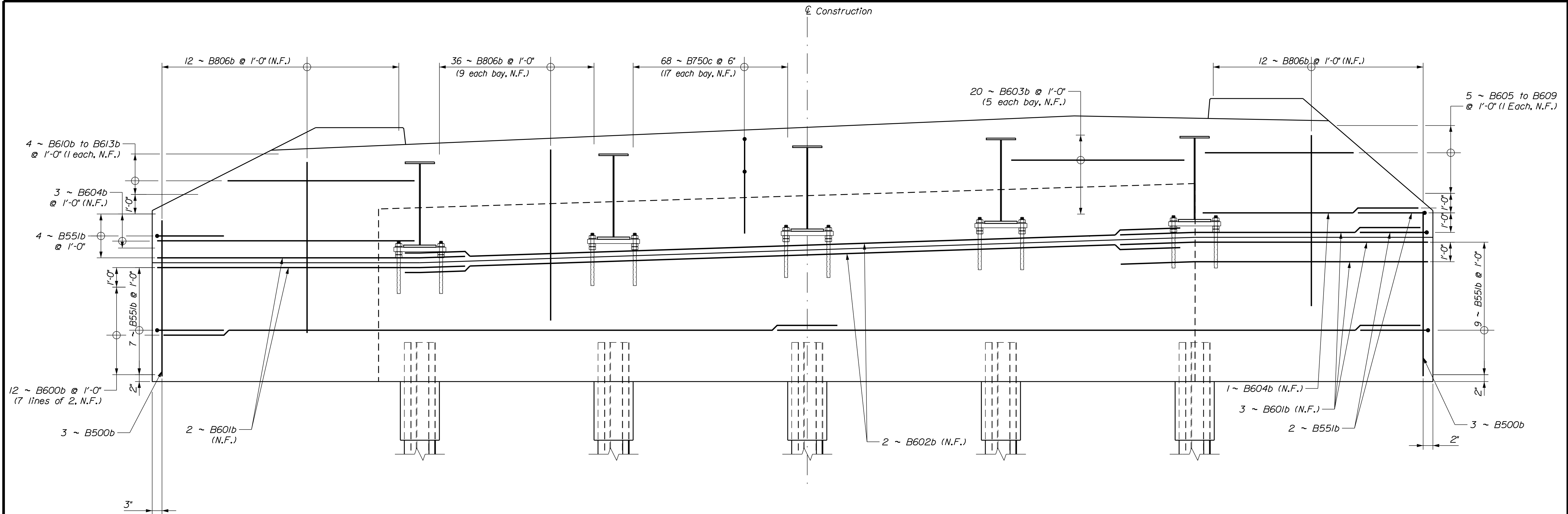
SHEET NUMBER
 27
 OF 36

Date: 6/28/2022

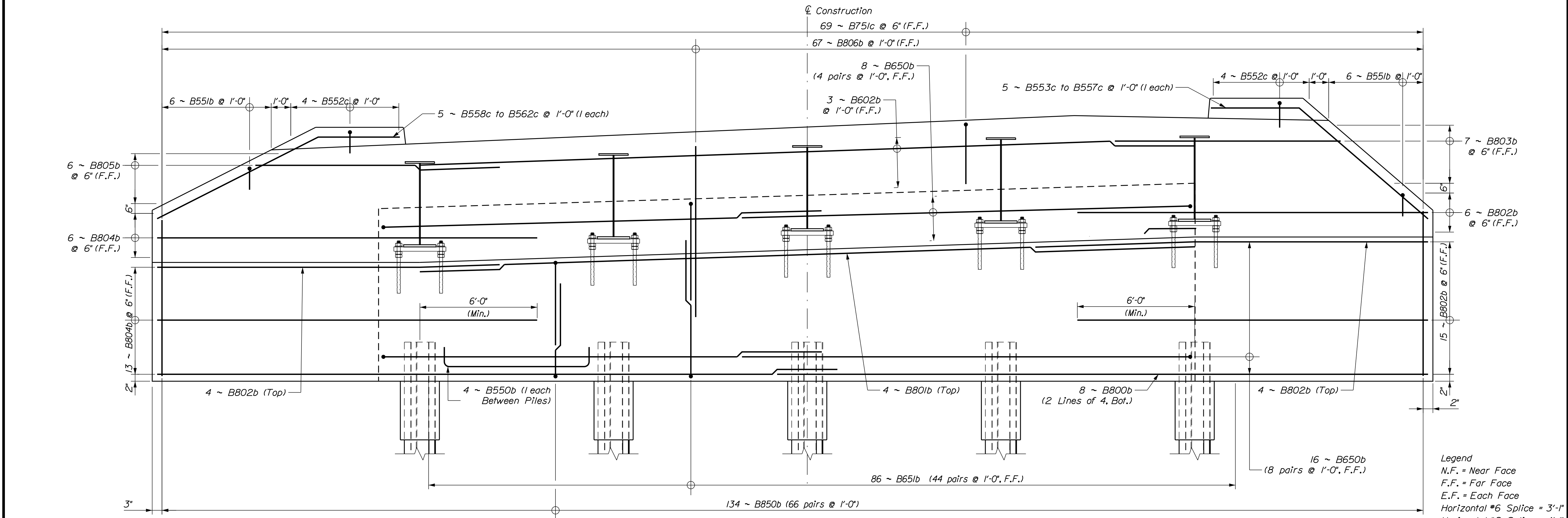
Username:

Division: BRIDGE

Filename: ... \ustin\028_Abument_2_Rebar.dgn



ABUTMENT NO. 2 REINFORCING (NEAR FACE)



ABUTMENT NO. 2 REINFORCING (FAR FACE)

Legend
 N.F. = Near Face
 F.F. = Far Face
 E.F. = Each Face
 Horizontal #6 Splice = 3'-1"
 Horizontal #8 Splice = 4'-1"
 Vertical #6 Splice = 2'-5"
 Vertical #8 Splice = 3'-2"

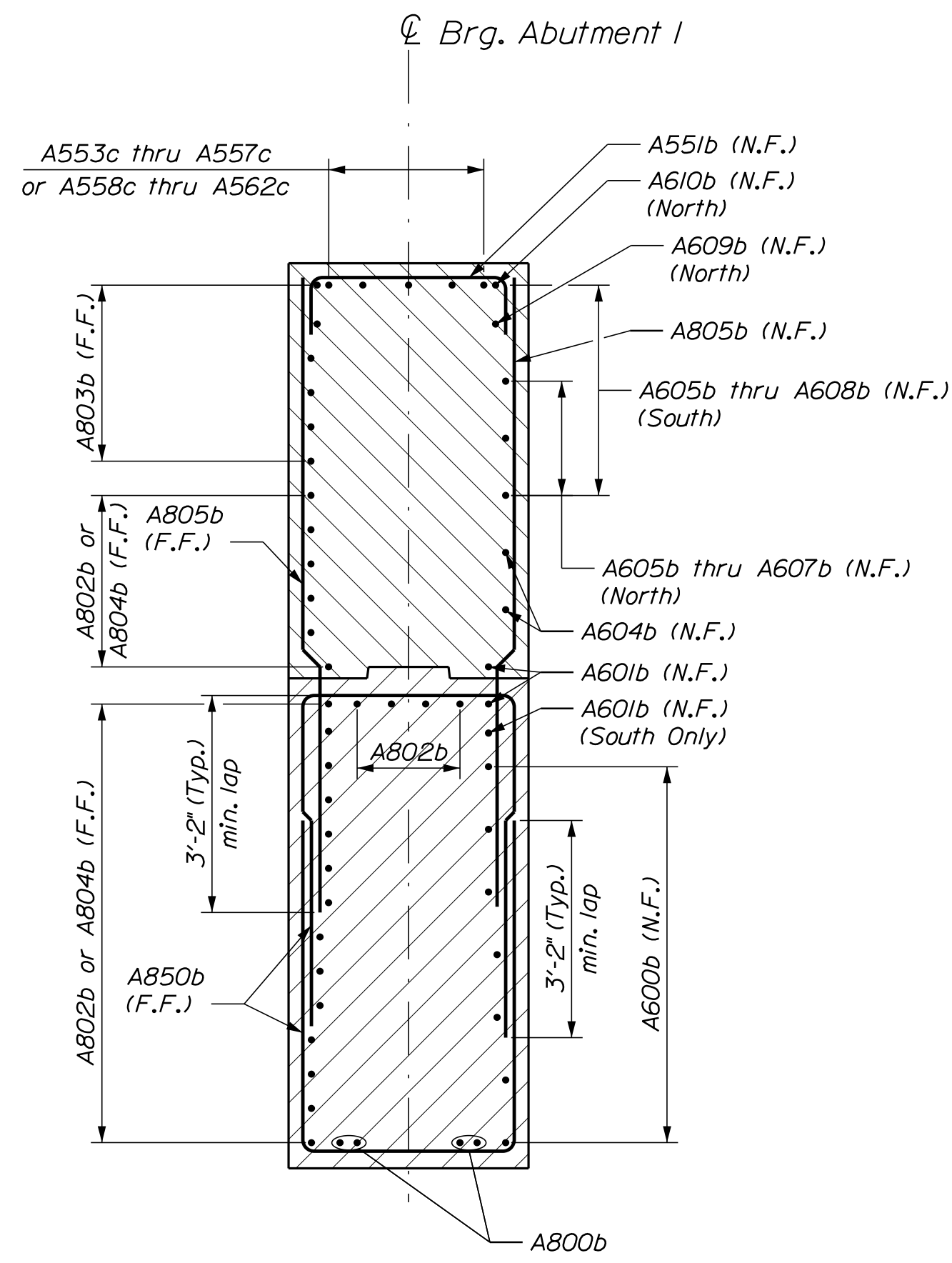
STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 2309401
 WIN
 21727.01
 BRIDGE NO. 3587
 BRIDGE PLANS

DESIGN	CHECKED	REVIEWED	DATE	BY	DATE
M. WIGHT	E. MALONEY	M. RAENZ	4/2022	J. FRENCH	4/2022
SIGNATURE					
P.E. NUMBER					
DATE					

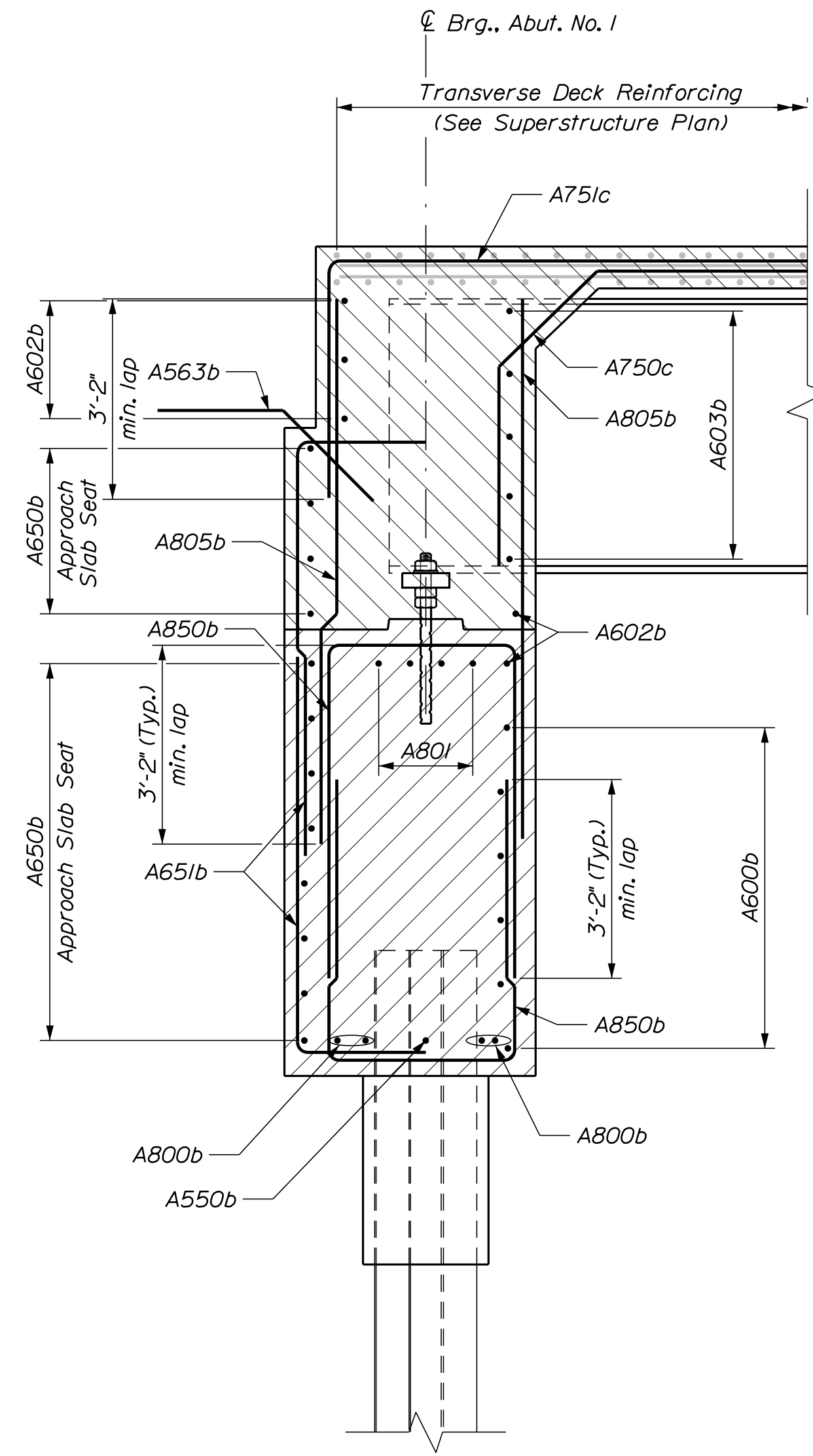
DESIGN	CHECKED	REVIEWED	DATE	BY	DATE
M. WIGHT	E. MALONEY	M. RAENZ	4/2022	J. FRENCH	4/2022
SIGNATURE					
P.E. NUMBER					
DATE					

BOOM BRIDGE
 BOOMBRIDGE BROOK
 GREENBUSH
 PENOBSCOT COUNTY
 ABUTMENT NO. 2 REINFORCING
 ELEVATIONS

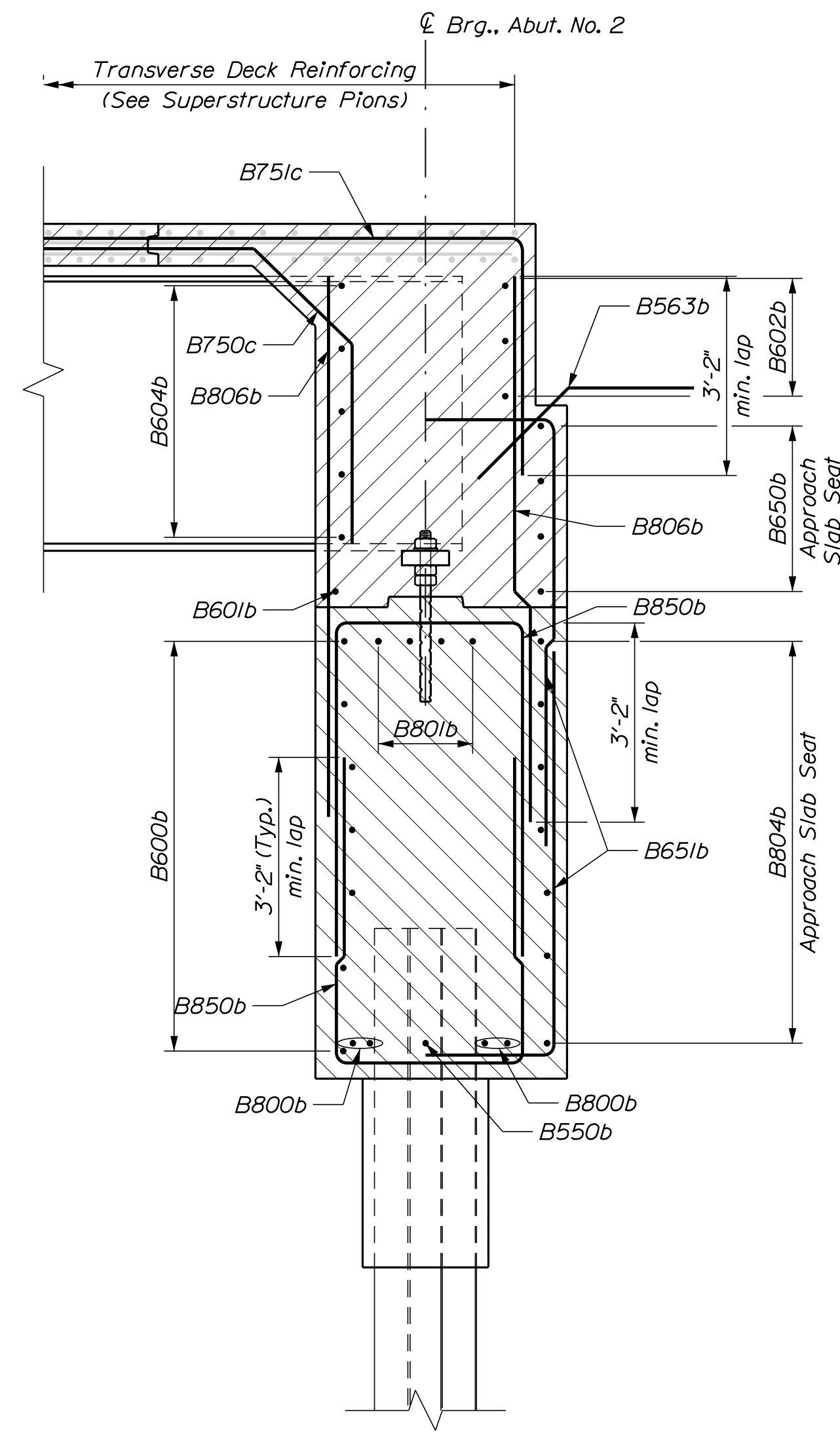
SHEET NUMBER
 28
 OF 36



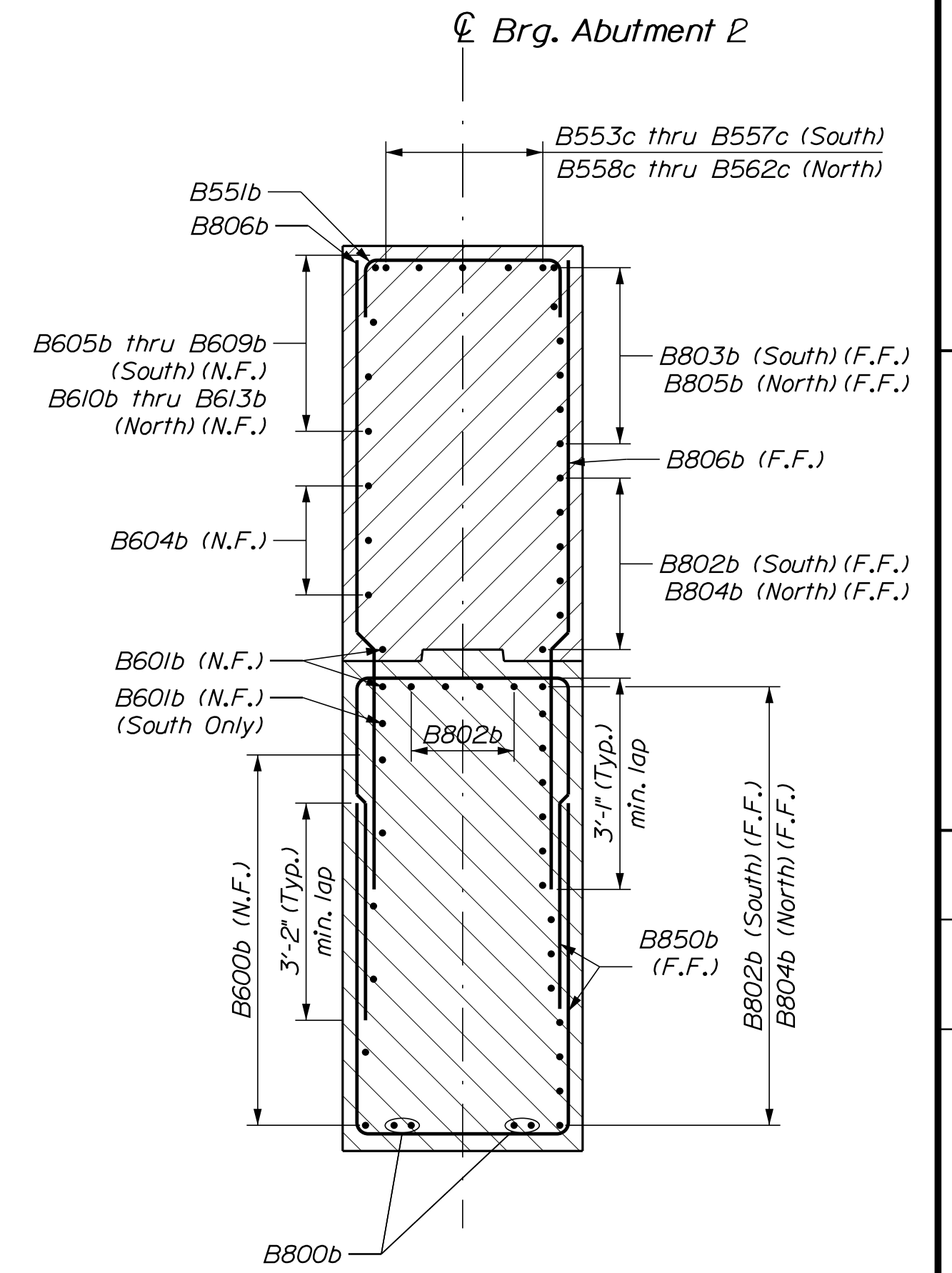
ABUTMENT NO. 1 WINGWALL SECTION



ABUTMENT NO. 1 SECTION



ABUTMENT NO. 2 SECTION



ABUTMENT NO. 2 WINGWALL SECTION

PROJ. MANAGER	M. WIGHT	BY	DATE
DESIGN DETAILED	E. MALONEY	M. RAENZ	4/2022
CHECKED/REVIEWED	N. FOX	J. FRENCH	4/2022
DESIGN DETAILED	S. BEAUMONT	M. SMITH	4/2022
DESIGN DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BOOM BRIDGE
BOOMBRIDGE BROOK
GREENBUSH PENOBSCOT COUNTY
ABUTMENT REINFORCING SECTIONS

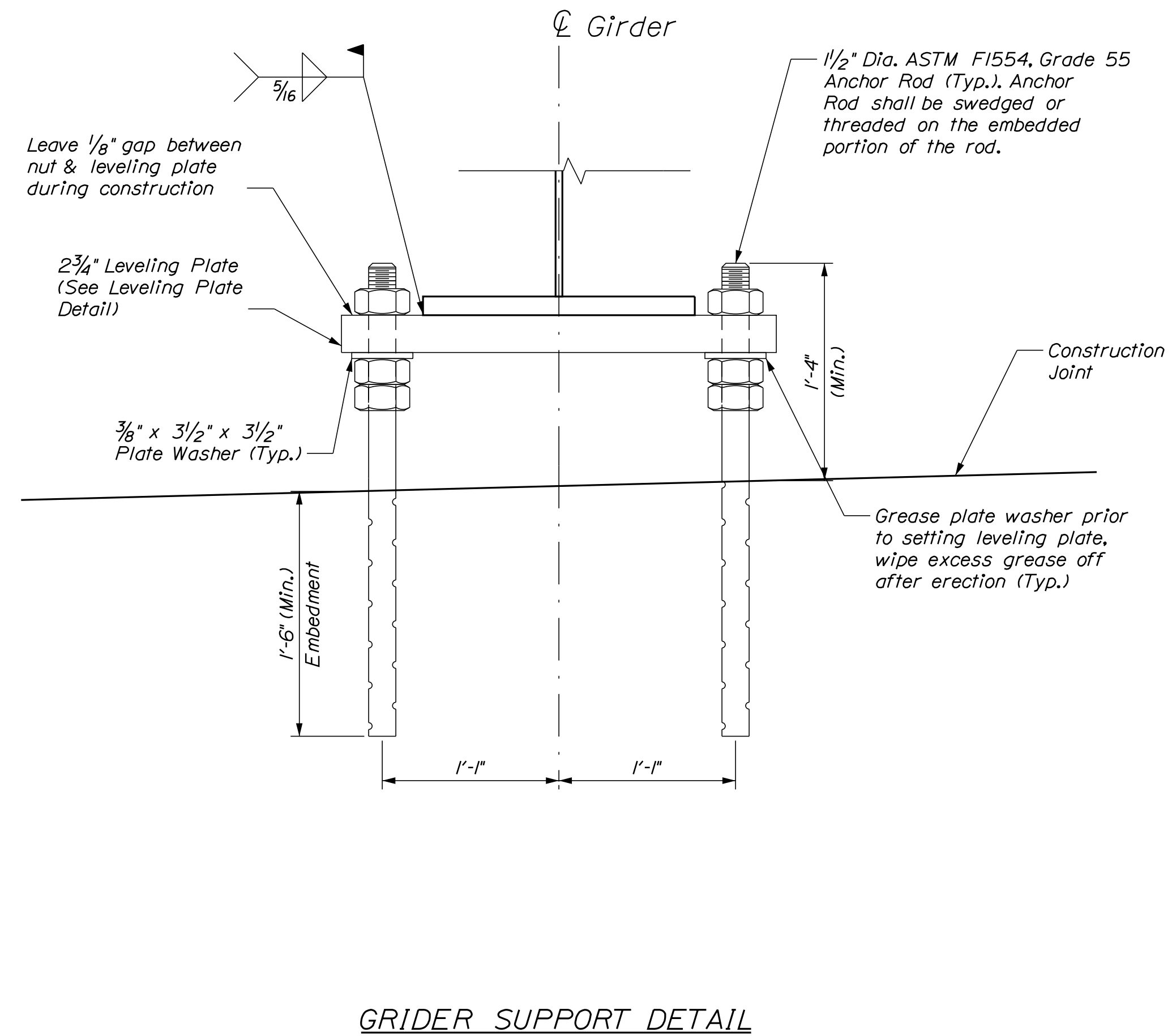
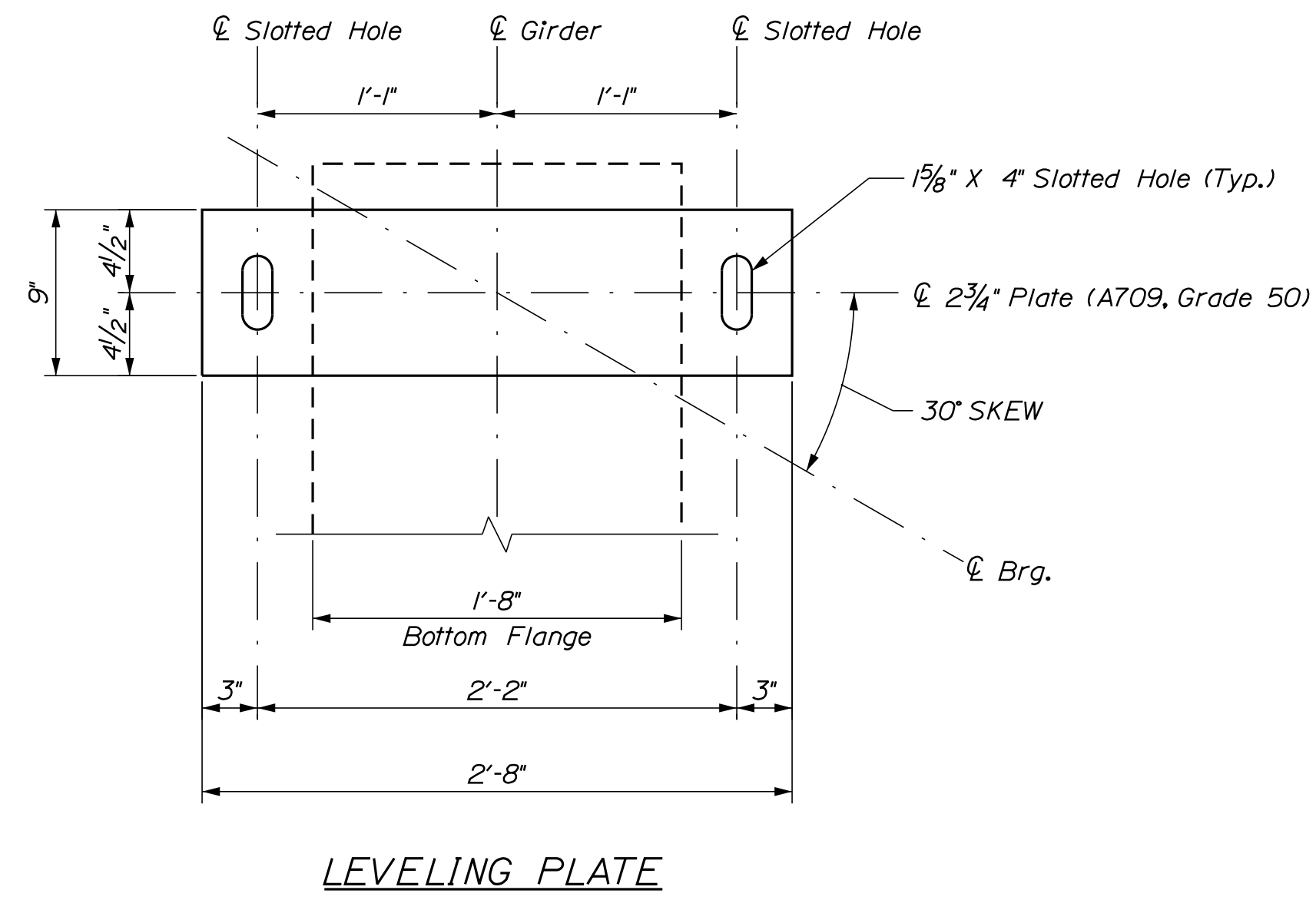
SHEET NUMBER

29

OF 36

GIRDER SUPPORT NOTES

1. Payment for fabrication and installation of the girder support assemblies at the abutments will be considered incidental to related Contract items.



ABUTMENT NO. 1
BOTTOM OF GIRDER
ELEVATIONS
(at ϕ Brg.)

Girder	Elevation
G1	117.18
G2	117.54
G3	117.89
G4	118.24
G5	118.28

ABUTMENT NO. 2
BOTTOM OF GIRDER
ELEVATIONS
(at ϕ Brg.)

Girder	Elevation
G1	115.87
G2	116.28
G3	116.69
G4	117.09
G5	117.18

STATE OF MAINE
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BRIDGE PLANS

PROJ. MANAGER	M. WIGHT	BY	DATE
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CHECKED/REVIEWED	N. FOX	J. FRENCH	4/2022
DESIGN DETAILED	S. BEAUMONT	M. SMITH	4/2022
DESIGN DETAILED	-	-	-
REVISIONS 1	-	-	-
REVISIONS 2	-	-	-
REVISIONS 3	-	-	-
REVISIONS 4	-	-	-
FIELD CHANGES	-	-	-

BOOM BRIDGE
BOOMBRIDGE BROOK
GREENBUSH PENOBSCOT COUNTY
GIRDER SUPPORT DETAILS

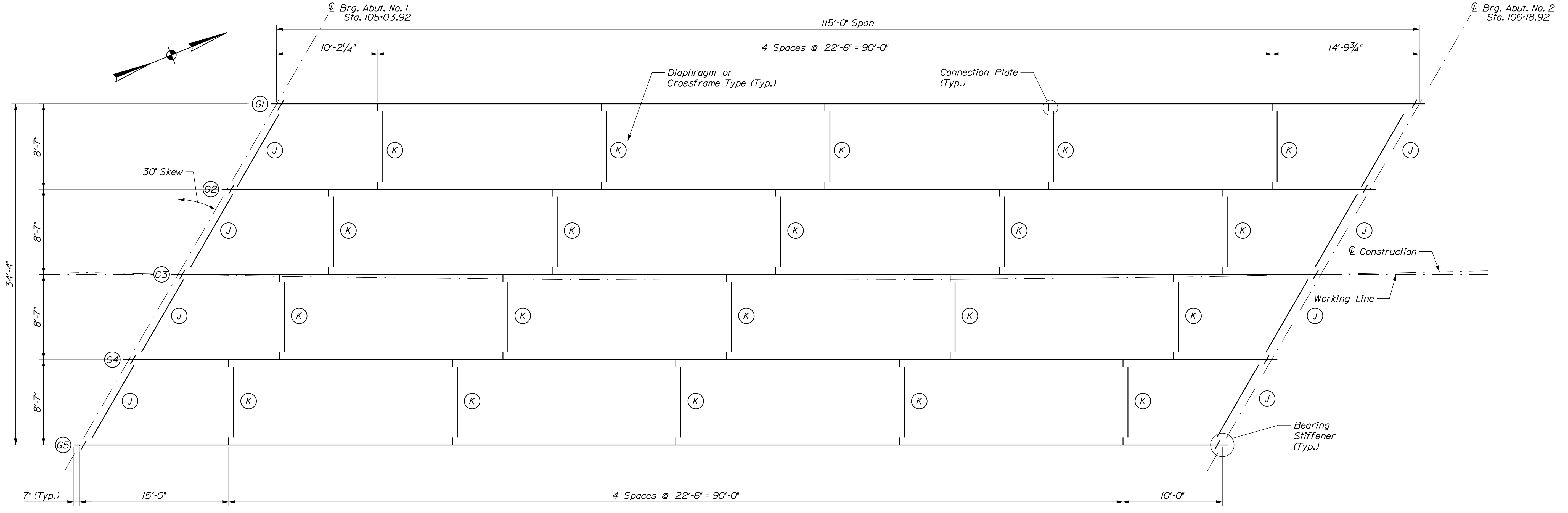
SHEET NUMBER
30
OF 36

Date: 6/28/2022

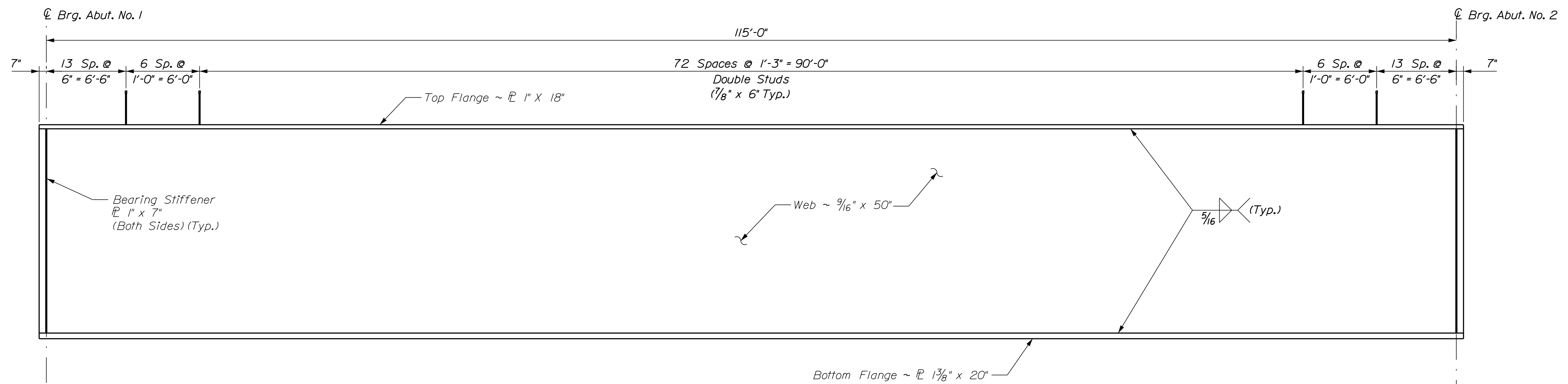
Username:

Division: BRIDGE

Filename: ... \ustn\031_Framing_Plan.dgn



FRAMING PLAN



GIRDER ELEVATION

222 (111x2 Rows) Studs per Girder (1110 Studs Total)

NOTES

1. J type end diaphragms are optional and may be omitted if contractor deems they are unnecessary for erection of steel.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2309401
WIN 21727.01
BRIDGE NO. 3587
BRIDGE PLANS

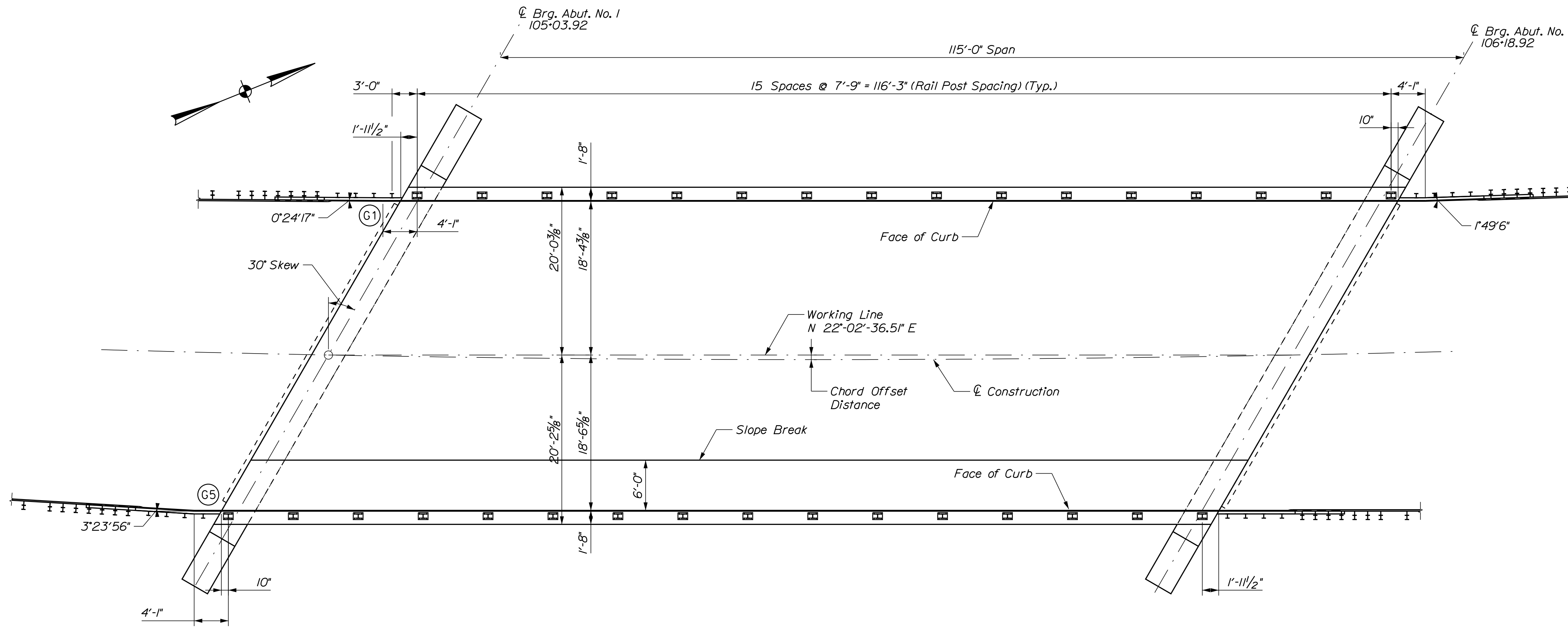
PROJ. MANAGER	M. WIGHT	BY	DATE
DESIGN-DETAILED	E. MALONEY	M. RAENZ	4/2022
CHECKED-REVIEWED	N. FOX	J. FRENCH	4/2022
DESIGNS-DETAILED	S. BEAUMONT	M. SMITH	4/2022
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BOOM BRIDGE
BOOMBRIDGE BROOK
GREENBUSH PENOBSCOT COUNTY
FRAMING PLAN &
GIRDER ELEVATION

SHEET NUMBER

31

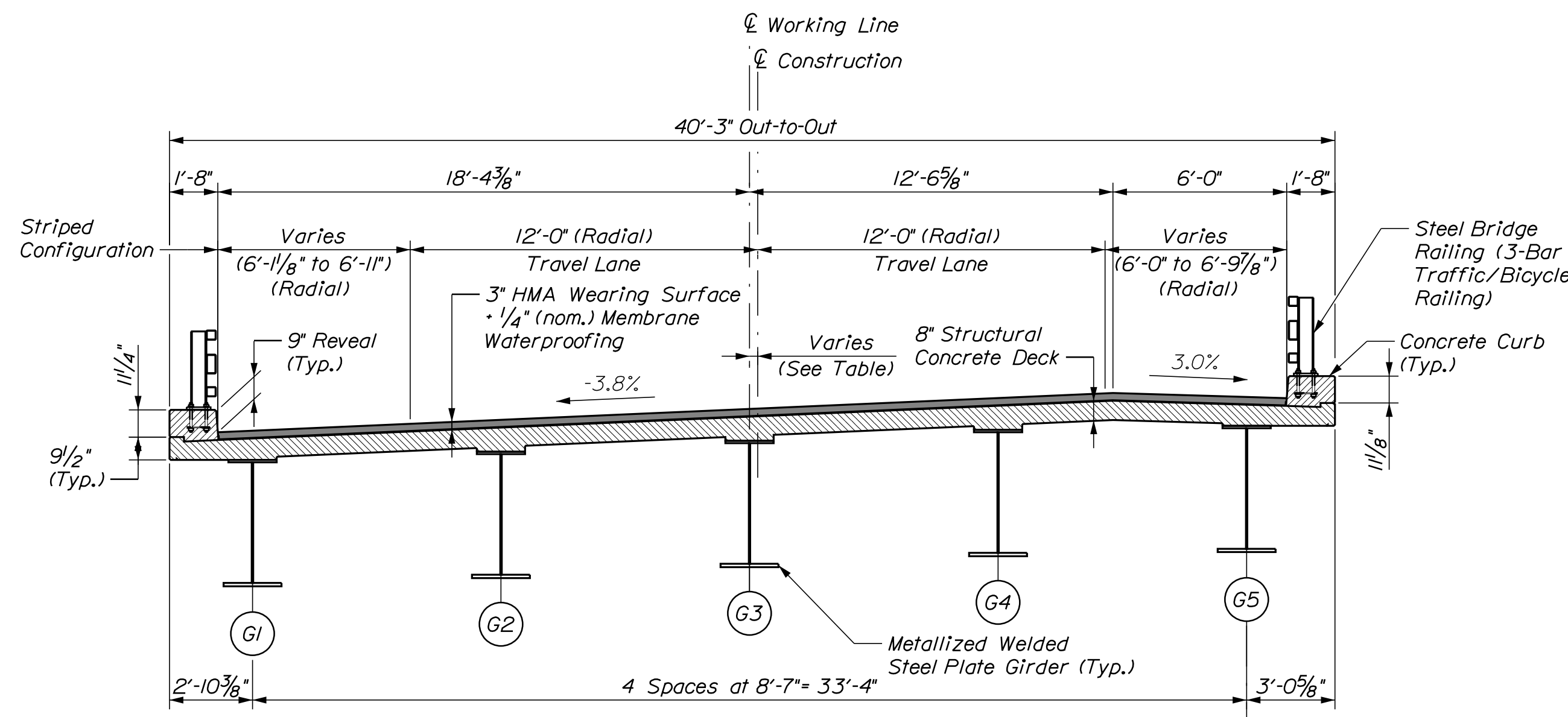
OF 36



SUPERSTRUCTURE PLAN

SUPERSTRUCTURE NOTES

1. The theoretical blocking used for design of the structure is 3" inch at the centerline of bearing of the abutments. Refer to Standard Detail 502(03) for blocking details.
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. Precast Concrete Deck Panels are not allowed on this project.



PROPOSED BRIDGE SECTION

Abut. 1	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.90	Abut. 2
0.00	0.10	0.20	0.28	0.35	0.41	0.46	0.50	0.53	0.55	0.55	0.55	0.53	0.50	0.46	0.41	0.35	0.28	0.20	0.10	0.00

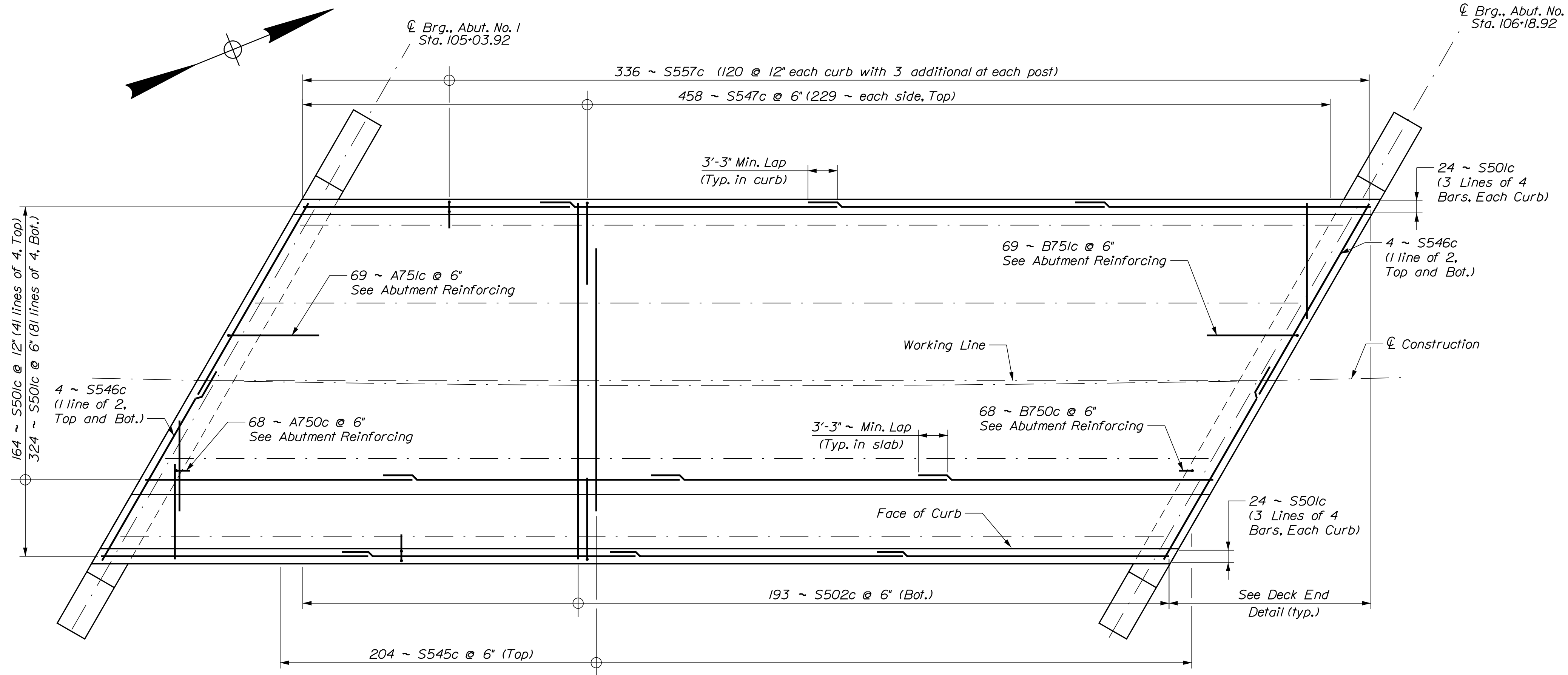
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2309401		BRIDGE NO. 3587		WIN		21727.01		BRIDGE PLANS	
BOOM BRIDGE		BOOMBRIDGE BROOK		PENOBSCOT COUNTY		GREENBUSH		SUPERSTRUCTURE PLAN		SHEET NUMBER		33	
PROJ. MANAGER		M. WIGHT		BY		DATE		DESIGN-DETAILED		CHECKED-REVIEWED		SIGNATURE	
E. MALONEY		M. RAENZ		M. RAENZ		4/2022		J. FRENCH		J. FRENCH		4/2022	
S. BEAUMONT		M. SMITH		M. SMITH		4/2022		P.E. NUMBER		DATE		P.E. NUMBER	
REVISIONS 1		REVISIONS 2		REVISIONS 3		REVISIONS 4		FIELD CHANGES		DATE		DATE	

Date: 6/28/2022

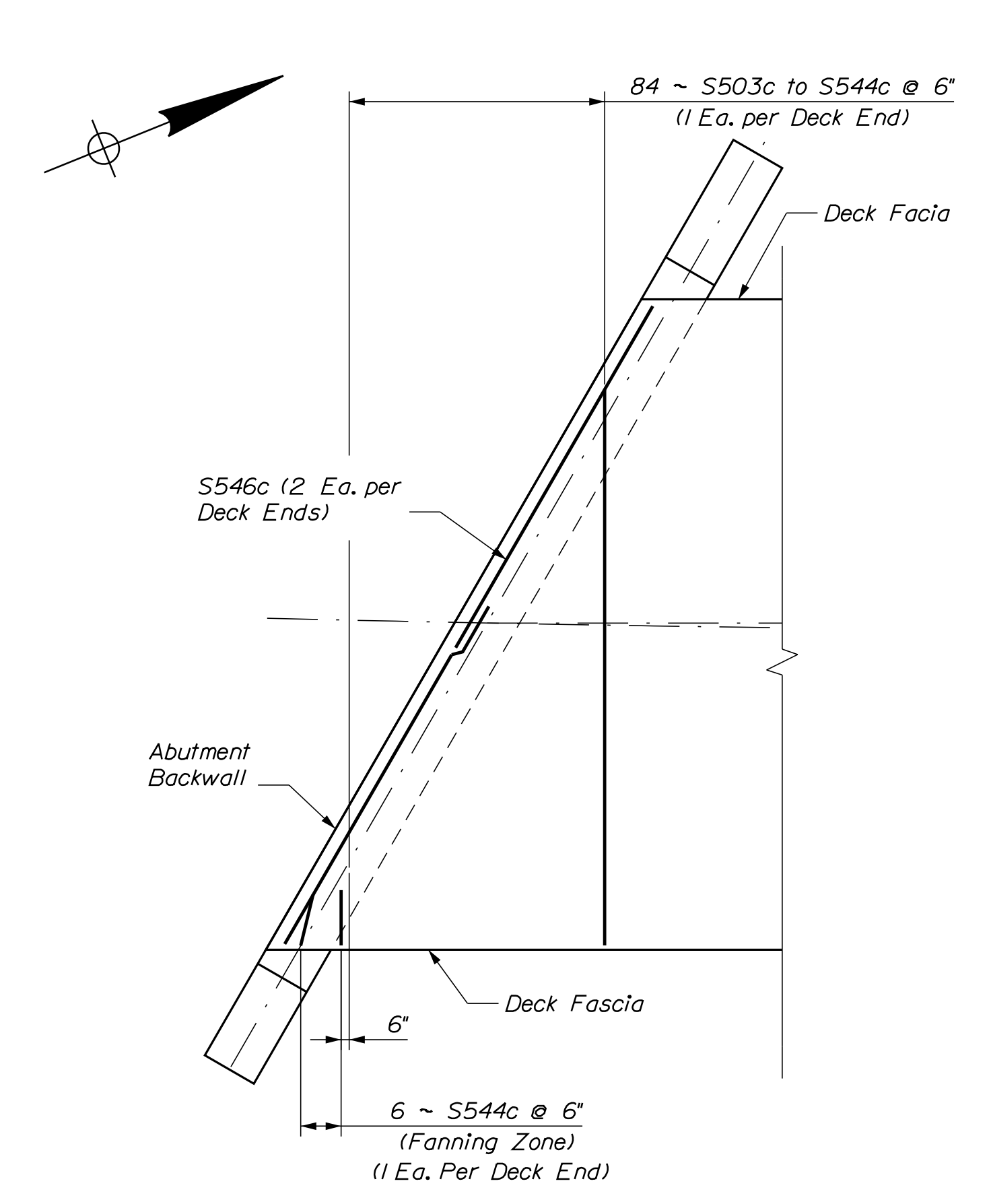
Username:

Division: BRIDGE

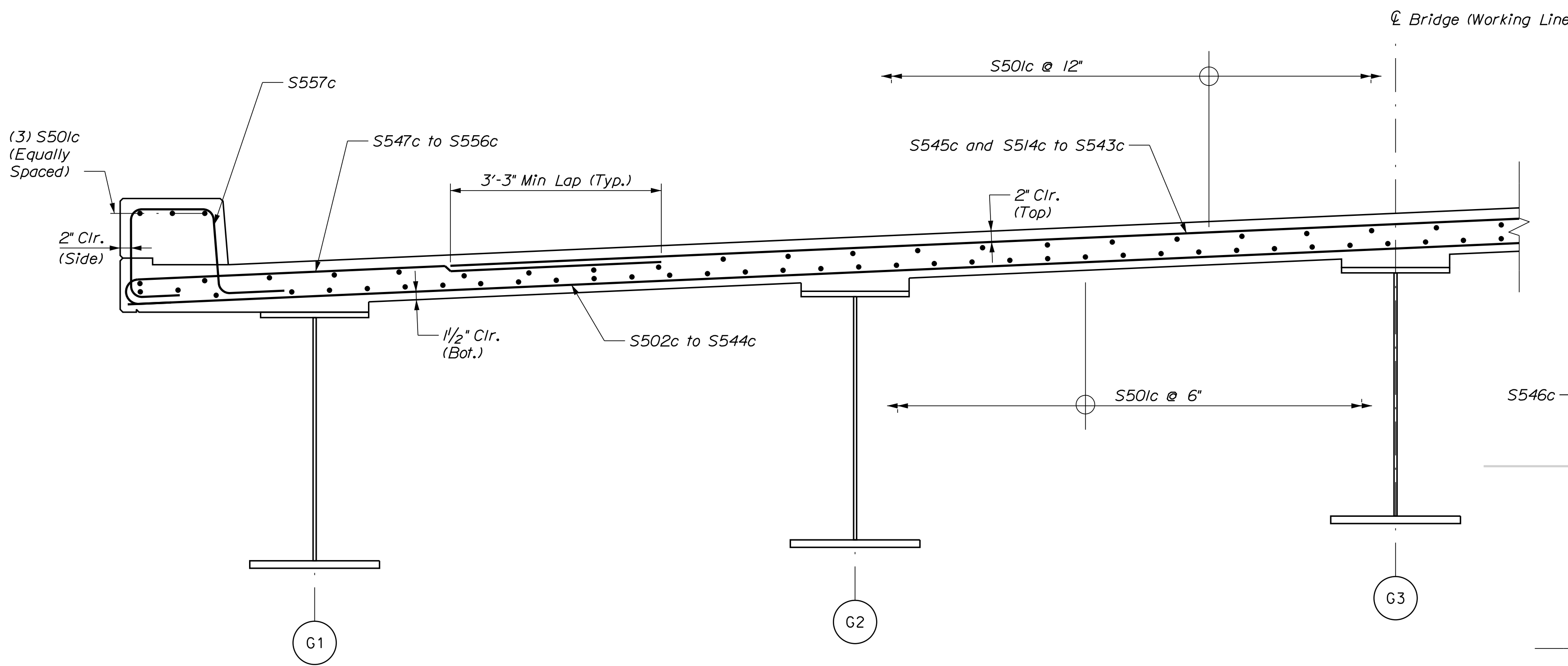
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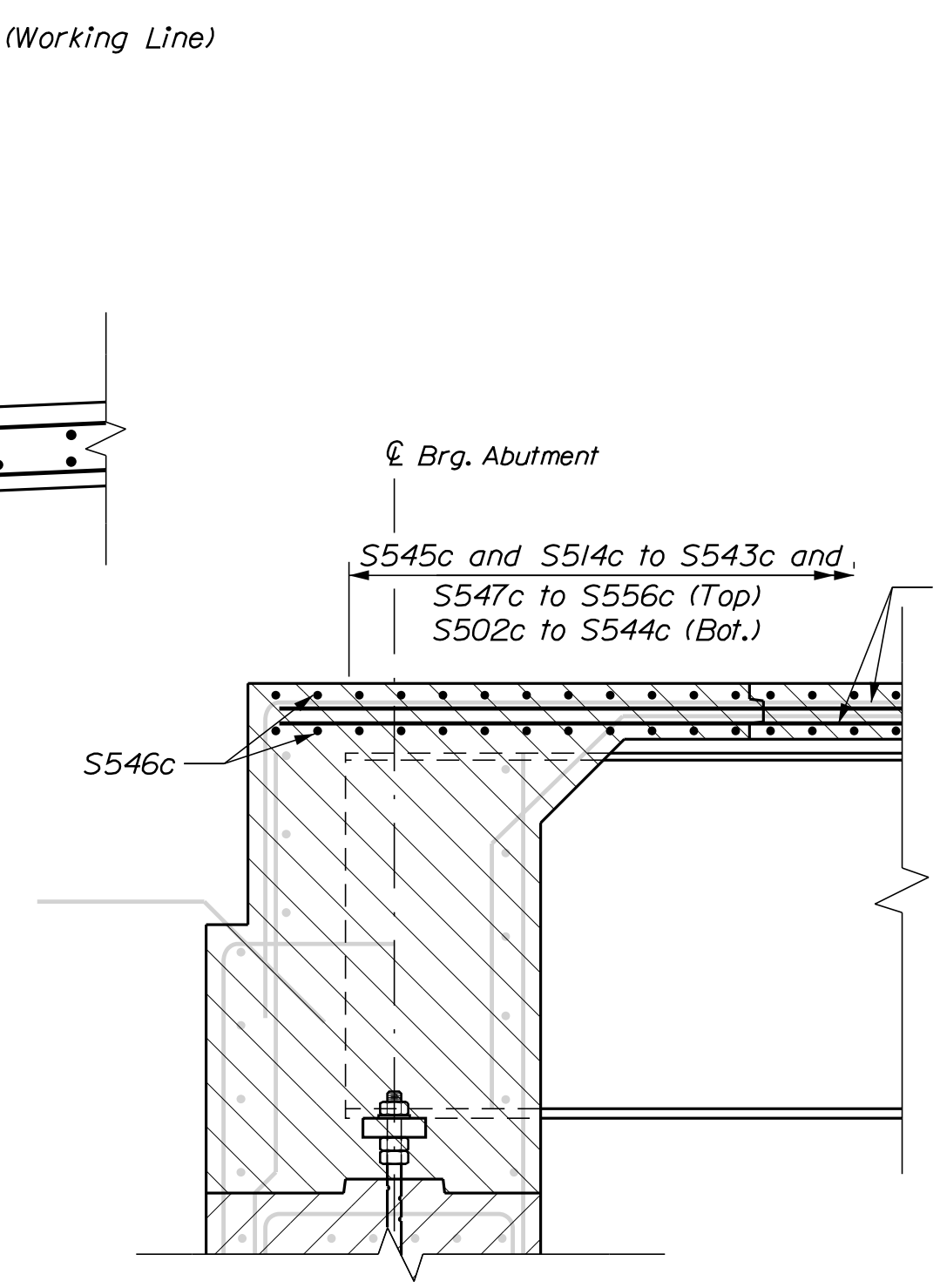
DECK REINFORCING PLAN



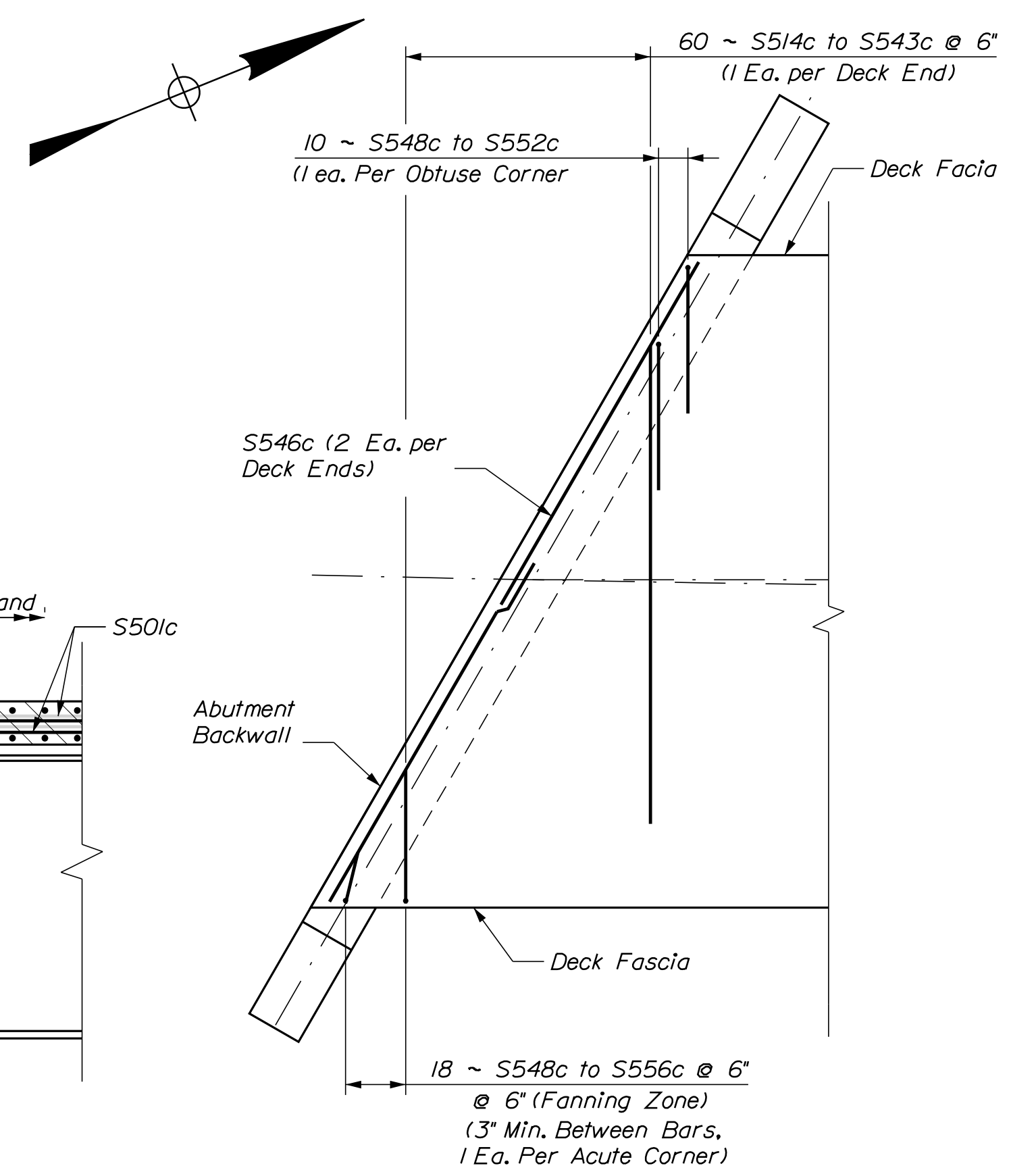
DECK END DETAIL (Bottom Mat Reinforcing)



PARTIAL TRANSVERSE SECTION



PARTIAL LONGITUDINAL SECTION



DECK END DETAIL (Top Mat Reinforcing)

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2309401		BRIDGE NO. 3587		BRIDGE PLANS	
BOOM BRIDGE		BOOMBRIDGE BROOK		PENOBSCOT COUNTY		SUPERSTRUCTURE REINFORCING		WIN 21727.01	
PROJ. MANAGER	M. WIGHT	DESIGN-DETAILED	E. MALONEY	CHECKED-REVIEWED	N. FOX	DESIGN-DETAILED	S. BEAUMONT	REVISIONS 1	
DATE	4/2022	BY	M. RAENZ	DATE	4/2022	BY	J. FRENCH	REVISIONS 2	
DATE	4/2022	BY	M. SMITH	DATE	4/2022	BY	M. SMITH	REVISIONS 3	
DATE		BY		DATE		BY		REVISIONS 4	
SHEET NUMBER		34		OF 36		FIELD CHANGES			

Date: 6/28/2022

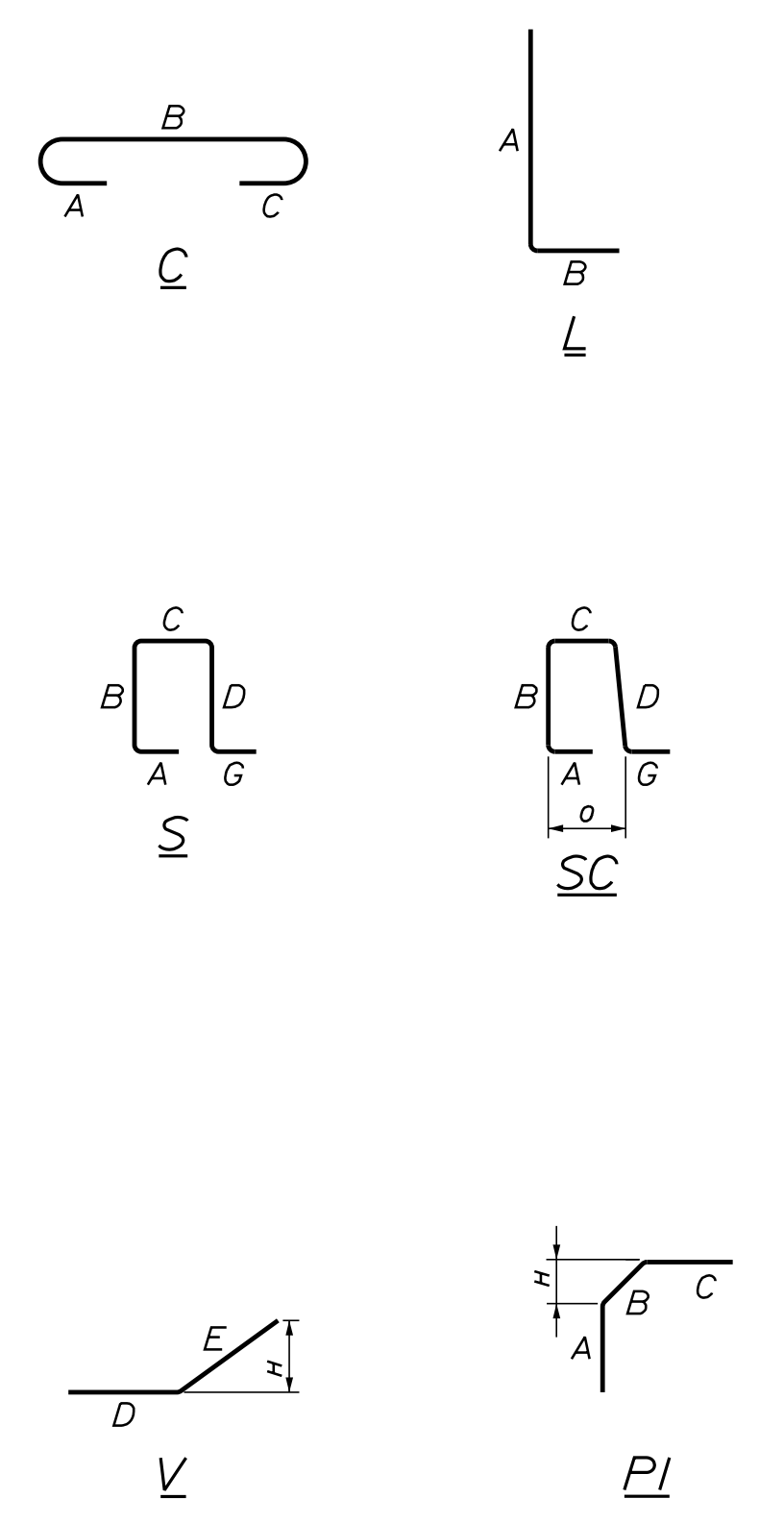
Username:

Division: BRIDGE

Filename: ... \ustin\035_Rebar_Schedule.dgn

STRAIGHT BARS								BENT BARS																
MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION		
Abutment 1 (Plain Bars)				Superstructure (Low Carbon Chromium)				Abutment 1 (Plain Bars)																
A500b	3	9'-11"	End of South Wingwall, Vertical	S501c	5/2	32'-2"	Deck Longitudinal	A550b	4	9'-10"	S	0'-0"	0'-10"	8'-2"	0'-10"								Abutment Bottom Vertical Stirrup	
A501b	3	7'-11"	End of North Wingwall, Vertical	S502c	193	39'-11"	Deck Transverse, Bottom	A551b	35	4'-10"	S	0'-0"	0'-10"	3'-2"	0'-10"								Wingwall Stirrups	
A600b	12	34'-2"	Near Face Abutment, Horizontal	S503c	2	39'-0"	Deck Transverse (Corner), Bottom	A563b	37	4'-11"	V				2'-0"	2'-11"					2'-1"	Approach Slab Dowels		
A601b	5	15'-9"	Near Face Abutment, Horizontal	S504c	2	38'-2"	Deck Transverse (Corner), Bottom	A650b	24	23'-3"	L	22'-3"	1'-0"									Approach Slab Seat, Horizontal		
A602b	5	39'-8"	NF and FF Abutment, Horizontal	S505c	2	37'-3"	Deck Transverse (Corner), Bottom	A651b	86	7'-2"	L	6'-2"	1'-0"									Far Face Abutment, Vertical		
A603b	20	9'-6"	Near Face Abutment, Horizontal	S506c	2	36'-5"	Deck Transverse (Corner), Bottom	A850b	134	13'-6"	S	0'-0"	5'-2"	3'-2"	5'-2"							Abutment, Vertical		
A604b	4	12'-4"	Near Face Wingwall, Horizontal	S507c	2	35'-6"	Deck Transverse (Corner), Bottom																	
A605b	2	11'-9"	Near Face Wingwall, Horizontal	S508c	2	34'-8"	Deck Transverse (Corner), Bottom																	
A606b	2	10'-1"	Near Face Wingwall, Horizontal	S509c	2	33'-10"	Deck Transverse (Corner), Bottom																	
A607b	2	8'-6"	Near Face Wingwall, Horizontal	S510c	2	32'-11"	Deck Transverse (Corner), Bottom																	
A608b	1	8'-1"	Near Face South WW, Horizontal	S511c	2	32'-1"	Deck Transverse (Corner), Bottom	A552c	8	12'-10"	S	0'-0"	4'-10"	3'-2"	4'-10"							Top of Wingwall Stirrup		
A609b	1	6'-11"	Near Face North WW, Horizontal	S512c	2	31'-2"	Deck Transverse (Corner), Bottom	A553c	1	9'-11"	V				2'-10"	7'-1"					2'-11"	Top of South Wingwall		
A610b	1	6'-1"	Near Face North WW, Horizontal	S513c	2	30'-4"	Deck Transverse (Corner), Bottom	A554c	1	10'-4"	V				3'-3"	7'-1"					2'-11"	Top of South Wingwall		
				S514c	4	29'-6"	Deck Tran. (Corner), Bot. & Top	A555c	1	10'-10"	V				3'-9"	7'-1"					2'-11"	Top of South Wingwall		
				S515c	4	28'-7"	Deck Tran. (Corner), Bot. & Top	A556c	1	11'-3"	V				4'-2"	7'-1"					2'-11"	Top of South Wingwall		
A800b	8	34'-8"	Bottom of Pile Cap, Horizontal	S516c	4	27'-9"	Deck Tran. (Corner), Bot. & Top	A557c	1	11'-9"	V				4'-8"	7'-1"					2'-11"	Top of South Wingwall		
A801b	4	37'-10"	Top of Pile Cap, Horizontal	S517c	4	26'-10"	Deck Tran. (Corner), Bot. & Top	A558c	1	12'-3"	V				2'-10"	9'-5"					4'-8"	Top of North Wingwall		
A802b	29	18'-0"	FF South WW & Pile Cap, Horiz	S518c	4	26'-0"	Deck Tran. (Corner), Bot. & Top	A559c	1	12'-8"	V				3'-3"	9'-5"					4'-8"	Top of North Wingwall		
A803b	12	15'-0"	Far Face Wingwall, Horizontal	S519c	4	25'-1"	Deck Tran. (Corner), Bot. & Top	A560c	1	13'-2"	V				3'-9"	9'-5"					4'-8"	Top of North Wingwall		
A804b	19	19'-6"	Far Face North WW, Horizontal	S520c	4	24'-3"	Deck Tran. (Corner), Bot. & Top	A561c	1	13'-7"	V				4'-2"	9'-5"					4'-8"	Top of North Wingwall		
A805b	127	8'-9"	NF and FF Abutment, Vertical	S521c	4	23'-5"	Deck Tran. (Corner), Bot. & Top	A562c	1	14'-1"	V				4'-8"	9'-5"					4'-8"	Top of North Wingwall		
				S522c	4	22'-6"	Deck Tran. (Corner), Bot. & Top																	
Abutment 2 (Plain Bars)				Superstructure (Low Carbon Chromium)				Abutment 2 (Plain Bars)																
B500b	6	8'-5"	End of Wingwall, Vertical	S523c	4	21'-8"	Deck Tran. (Corner), Bot. & Top	A750c	68	10'-2"	PI	2'-9"	2'-2"	5'-3"								1'-8"	Near Face Dowel into Deck	
				S524c	4	20'-9"	Deck Tran. (Corner), Bot. & Top	A751c	69	21'-5"	L	3'-5"	18'-0"										Far Face Dowel into Deck	
				S525c	4	19'-11"	Deck Tran. (Corner), Bot. & Top																	
B600b	12	34'-2"	Near Face Abutment, Horizontal	S526c	4	19'-1"	Deck Tran. (Corner), Bot. & Top	Abutment 2 (Plain Bars)																
B601b	5	15'-9"	Near Face Abutment, Horizontal	S527c	4	18'-2"	Deck Tran. (Corner), Bot. & Top	B550b	4	9'-10"	S	0'-0"	0'-10"	8'-2"	0'-10"							0'-0"	Abutment Bottom Vertical Stirrup	
B602b	5	39'-8"	NF and FF Abutment, Horizontal	S528c	4	17'-4"	Deck Tran. (Corner), Bot. & Top	B551b	34	4'-10"	S	0'-0"	0'-10"	3'-2"	0'-10"							0'-0"	Wingwall Stirrups	
B603b	20	9'-6"	Near Face Abutment, Horizontal	S529c	4	16'-5"	Deck Tran. (Corner), Bot. & Top	B563b	37	4'-11"	V				2'-0"	2'-11"							Approach Slab Dowels	
B604b	4	12'-8"	Near Face Wingwall, Horizontal	S530c	4	15'-7"	Deck Tran. (Corner), Bot. & Top																	
B605b	1	10'-0"	Near Face South WW, Horizontal	S531c	4	14'-9"	Deck Tran. (Corner), Bot. & Top	B650b	24	23'-3"	L	22'-3"	1'-0"										Approach Slab Seat, Horizontal	
B606b	1	8'-10"	Near Face South WW, Horizontal	S532c	4	13'-10"	Deck Tran. (Corner), Bot. & Top	B651b	86	7'-2"	L	6'-2"	1'-0"										Far Face Abutment, Vertical	
B607b	1	7'-8"	Near Face South WW, Horizontal	S533c	4	13'-0"	Deck Tran. (Corner), Bot. & Top																	
B608b	1	6'-6"	Near Face South WW, Horizontal	S534c	4	12'-1"	Deck Tran. (Corner), Bot. & Top	B850b	134	13'-4"	S	0'-0"	5'-1"	3'-2"	5'-1"							0'-0"	Abutment, Vertical	
B609b	1	5'-8"	Near Face South WW, Horizontal	S535c	4	11'-3"	Deck Tran. (Corner), Bot. & Top																	
B610b	1	13'-1"	Near Face North WW, Horizontal	S536c	4	10'-4"	Deck Tran. (Corner), Bot. & Top	Abutment 2 (Low-Carbon Chromium Bars)																
B611b	1	11'-2"	Near Face North WW, Horizontal	S537c	4	9'-6"	Deck Tran. (Corner), Bot. & Top	B552c	8	13'-0"	S	0'-0"	4'-11"	3'-2"	4'-11"							0'-0"	Top of Wingwall Stirrup	
B612b	1	9'-3"	Near Face North WW, Horizontal	S538c	4	8'-8"	Deck Tran. (Corner), Bot. & Top	B553c	1	11'-3"	V				2'-10"	8'-6"						5'-6"	Top of South Wingwall	
B613b	1	8'-6"	Near Face North WW, Horizontal	S539c	4	7'-9"	Deck Tran. (Corner), Bot. & Top	B554c	1	11'-9"	V				3'-3"	8'-6"						5'-6"	Top of South Wingwall	
				S540c	4	6'-11"	Deck Tran. (Corner), Bot. & Top	B555c	1	12'-3"	V				3'-9"	8'-6"						5'-6"	Top of South Wingwall	
B800b	8	34'-8"	Bottom of Pile Cap, Horizontal	S541c	4	6'-0"	Deck Tran. (Corner), Bot. & Top	B556c	1	12'-8"	V				4'-2"	8'-6"						5'-6"	Top of South Wingwall	
B801b	4	37'-10"	Top of Pile Cap, Horizontal	S542c	4	5'-2"	Deck Tran. (Corner), Bot. & Top	B557c	1	13'-2"	V				4'-8"	8'-6"						5'-6"	Top of South Wingwall	
B802b	29	18'-0"	FF South WW & Pile Cap, Horiz	S543c	4	4'-4"	Deck Tran. (Corner), Bot. & Top	B558c	1	12'-0"	V				2'-10"	9'-2"						4'-2"	Top of North Wingwall	
B803b	7	14'-10"	Far Face South WW, Horizontal	S544c	8	3'-5"	Deck Transverse (Corner), Bottom	B559c	1	12'-5"	V				3'-3"	9'-2"						4'-2"	Top of North Wingwall	
B804b	19	19'-6"	Far Face North WW, Horizontal	S545c	204	29'-11"	Deck Transverse, Top	B560c	1	12'-11"	V				3'-9"	9'-2"						4'-2"	Top of North Wingwall	
B805b	6	16'-1"	Far Face North WW, Horizontal	S546c	8	24'-9"	Deck Transverse (Ends), T & B	B561c	1	13'-4"	V				4'-2"	9'-2"						4'-2"	Top of North Wingwall	
B806b	127	8'-9"	NF and FF Abutment, Vertical					B562c	1	13'-10"	V				4'-8"	9'-2"						4'-2"	Top of North Wingwall	
Approach Slabs (Plain Bars)				Superstructure (Low Carbon Chromium)				Abutment 2 (Low-Carbon Chromium Bars)																
AS501b	32	30'-0"	Approach Slab, Transverse					B750c	68	10'-2"	PI	2'-9"	2'-2"	5'-3"								1'-8"	Near Face Dowel into Deck	
AS502b	32	12'-10"	Approach Slab, Transverse					B751c	69	21'-5"	L	3'-5"	18'-0"										Far Face Dowel into Deck	
AS601b	144	15'-2"	Approach Slab, Longitudinal					Superstructure (Low Carbon Chromium)																
								S547c	458	8'-10"	C	0'-0"	8'-3"	7"									Deck Transverse, Overhang	
								S548c	4	8'-3"	C	0'-0"	7'-8"	7"									Deck Overhang (Corner)	
								S549c	4	7'-9"	C	0'-0"	7'-2"	7"									Deck Overhang (Corner)	
								S550c	4	7'-2"	C	0'-0"	6'-7"	7"									Deck Overhang (Corner)	
								S551c	4	6'-7"	C	0'-0"	6'-0"	7"									Deck Overhang (Corner)	
								S552c	4	6'-1"	C	0'-0"	5'-6"	7"									Deck Overhang (Corner)	
								S553c	2	5'-6"	C	0'-0"	4'-11"	7"									Deck Overhang (Corner)	
								S554c	2	4'-11"	C	0'-0"	4'-4"	7"									Deck Overhang (Corner)	
								S555c	2	4'-5"	C	0'-0"	3'-10"	7"									Deck Overhang (Corner)	
								S556c	2	3'-10"	C	0'-0"	3'-3"	7"									Deck Overhang (Corner)	
								S557c	336	5'-9"	SC	0'-10"	1'-5"	1'-3"	1'-5"							0'-10"	1'-4"	Curb Stirrups

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 A615, Grade 60
 Stainless Steel Reinforcing: ASTM A955, Grade 75
 Glass Fiber Reinforced Polymer: ASTM D7957
 Low Carbon Chromium Steel: ASTM A1035, Type CS, Grade 100

GENERAL NOTES

- The first two digit(s) following the letter(s)

Town, County, State _____
 Approx. Property Lines _____
 Existing Right of Way _____
 Limits of Wrought Portion _____
 Control Of Access _____
 New Right of Way _____
 New Easement _____
 New Temporary Rights _____
 New R/W Within Existing R/W _____

New R/W Along Existing R/W _____
 Building _____
 Trees Conifer _____
 Tree Line _____
 Water Edge _____
 Ledge _____
 Fence CHAIN LINK _____
 Sign _____
 Clearing Limit Line _____
 Bush Line _____
 Rock/Boulder _____
 Barb Wire _____
 Well _____
 Deciduous _____
 Flag Pole _____
 STOCKADE _____
 MAILBOX _____

PLAN LEGEND

Sanitary Sewer	Existing	Proposed	Traveled Way	Existing	Proposed
Telephone Line	Existing	Proposed	Ditch	Existing	Proposed
Electric Line	Existing	Proposed	Catch Basin	Existing	Proposed
Water Line	Existing	Proposed	Manhole	Existing	Proposed
Underdrain Line	Existing	Proposed	Sewer Manhole	Existing	Proposed
Gas Line	Existing	Proposed	Utility Pole	Existing	Proposed
Guardrail	Existing	Proposed	Fire Hydrant	Existing	Proposed
Culvert	Existing	Proposed	Curbing	Existing	Proposed

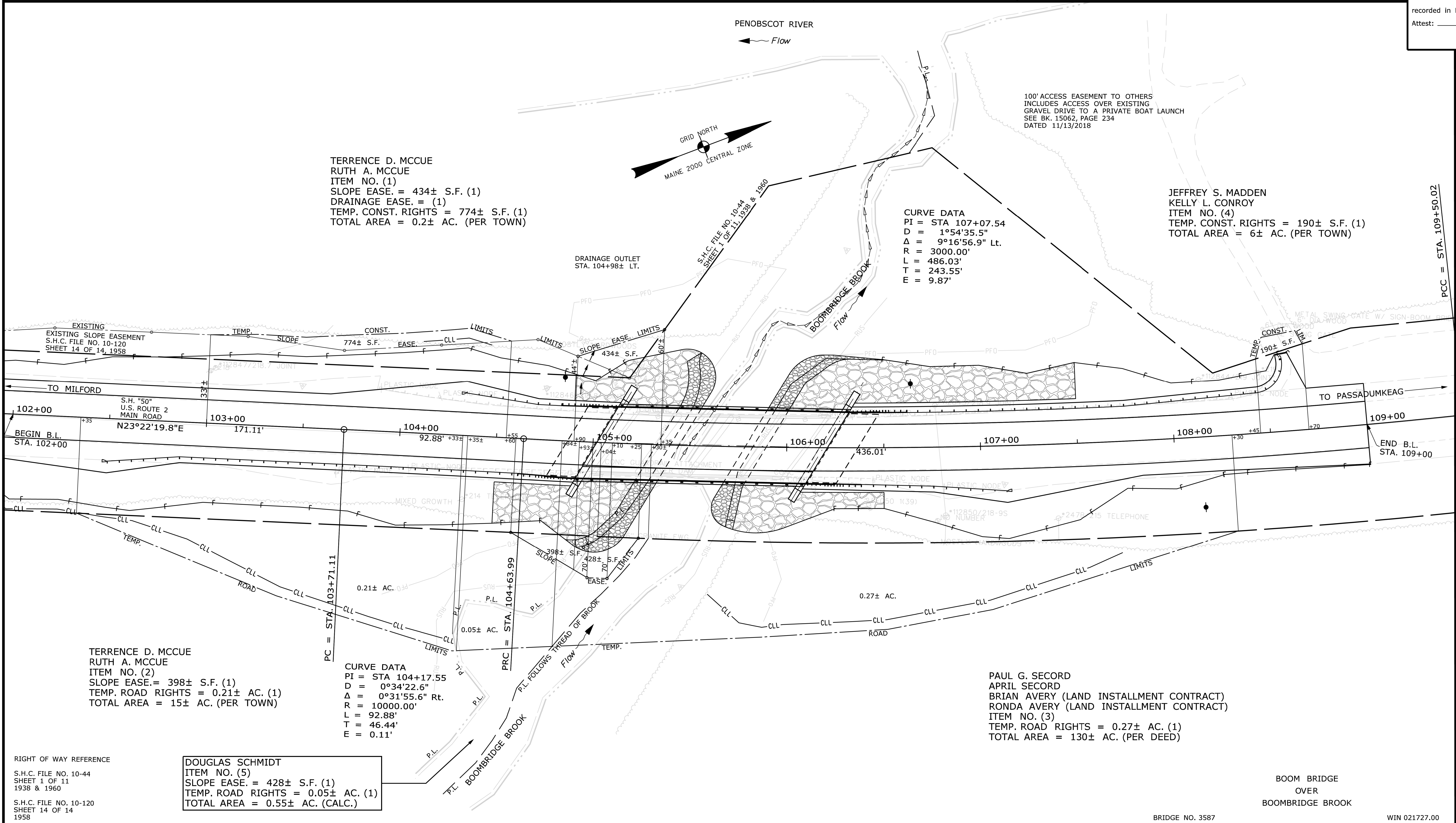
Cut Line _____
 Stonewall _____
 Baseline _____
 Monument _____
 Iron Rod Found _____
 Replacement Pin Set _____
 Fill Line _____
 Retaining Wall _____
 Traverse Point _____
 Pipe Found _____

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.

Scale of Feet: 0, 25, 50, 75, 100

STATE OF MAINE
 REGISTRY OF DEEDS

COUNTY _____
 RECEIVED _____
 at _____ h _____ m _____ M and
 recorded in Plan Bk _____, Pg. _____
 Attest: _____
 REGISTER



TECH	CHECKED
BDM	BDM
BDM	BDM
BDM	BDM

ITEM	EXISTING	CONDITION	PLAN
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
 GREENBUSH
 RIGHT OF WAY MAP

REVISIONS			PLAN FILED IN PLAN BOOK				PAGE COUNTY RECORD						
NO.	DATE	DESCRIPTION	BY	NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE	COND.	05-16-22	16480	180

BRUCE A. VAN NOTE
 COMMISSIONER
 JOYCE NOEL TAYLOR
 CHIEF ENGINEER

DATE _____

STATE HIGHWAY "50"
 U.S. ROUTE 2 MAIN ROAD
 GREENBUSH PENOBSCOT COUNTY
 FEDERAL AID PROJECT NO. STP-2172(700)

JANUARY 2022
 SCALE 1" = 25'

RIGHT-OF-WAY MAP
 SHEET 1 OF 1

D.O.T. FILE NO. 10-527

SHEET NUMBER
36
 OF 36

Date: 6/5/2022

Username: Betina.Martin

Division: ROW

Filename: ... \00\ROW\MSTA001_RWPLAN1.dgn

BRIDGE NO. 3587 WIN 021727.00