

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Tenth Edition 2024.

DESIGN LOADING

Live Load HL - 93 Modified for Strength I

HYDROLOGIC DATA

Drainage Area 2.5 sq mi
Design Discharge (Q50 Upland Flow + Highest Astronomical Tides) 1234.5 cfs
Check Discharge (Q1.1 Upland Flow + Category 1 Storm Tide) 1741.8 cfs
Headwater Elevation (Q50 Upland Flow + Highest Astronomical Tides) 7.5 ft
Headwater Elevation (Q1.1 Upland Flow + Category 1 Storm Tide) 11.4 ft
Discharge Velocity (Q50 Upland Flow + Highest Astronomical Tides) 2.2 ft
Discharge Velocity (Q1.1 Upland Flow + Category 1 Storm Tide) 2.6 ft
Mean Lower Low Water (MLLW) -5.95 ft
Mean Low Water (MLW) -5.57 ft
Mean High Water (MHW) 5.00 ft
Mean Higher High Water (MHHW) 5.43 ft

MATERIALS

Concrete: Precast Class "P"

Reinforcing: Reinforcing Steel ASTM A615/ A615 M, Grade 60
Steel Welded Wire Reinforcement AASHTO M 336

BASIC DESIGN STRESSES

Concrete: Class "P" f'c = 5,000 psi

Reinforcing Steel: ASTM A615, Grade 60 Fy = 60,000 psi
AASHTO M 336 Fy varies as described in specification

ADDISON
WASHINGTON COUNTY
LOT NORTON BRIDGE
OVER
KNOWLES RIVER

EAST SIDE ROAD
FEDERAL AID PROJECT NO. 2716000
BRIDGE NO. 3754
PROJECT LENGTH 0.206 MILES

LIST OF DRAWINGS

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UTILITIES

Versant Power, Charter Communications
Fidium Fiber

TRAFFIC DATA

Current (2023) AADT 840
Future (2043) AADT 920
DHV - % of AADT 10%
Design Hour Volume 92
Heavy Trucks (% of AADT) 12%
Heavy Trucks (% of DHV) 11%
Directional Distribution (% of DHV) 52%
18 kip Equivalent P 2.0 34
18 kip Equivalent P 2.5 33
Design Speed (mph) 35 mph

MAINTENANCE OF TRAFFIC

Bridge will be close to traffic during construction with traffic detoured off-site

PROJECT LOCATION	LOT NORTON BRIDGE (#3754) OVER KNOWLES RIVER. LOCATED EAST SIDE ROAD 2.3 MILES SOUTHWEST OF JUNCTION ROUTE 187
OUTLINE OF WORK	BRIDGE REPLACEMENT

WIN 27160.00

ADDISON
LOT NORTON BRIDGE
TITLE SHEET

SHEET NUMBER

1

OF 32

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
COMMISSIONER: <i>Daniel S. Myers</i>	<i>Daniel S. Myers</i>	9/2/26
CHIEF ENGINEER: <i>Charles G. Guy</i>	<i>Charles G. Guy</i>	9-2-2026

PROJECT INFORMATION	BRIDGE	PROGRAM
SIGNATURE	CHARLES GUY	PROJECT MANAGER
P.E. NUMBER	D. MYERS	DESIGNER
DATE	TYLIN	CONSULTANT
		PROJECT RESIDENT
		CONTRACTOR
		PROJECT COMPLETION DATE

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
201.23	Removing Single Tree Top Only	3	EA
201.24	Removing Stump	3	EA
203.20	Common Excavation	1750	CY
203.2318	Disposal of Special Waste	830	T
203.25	Granular Borrow	1040	CY
203.33	Special Fill	170	CY
203.4338	Lightweight Fill Foamed Glass Aggregate	1700	CY
203.55	Culvert Bedding Stone	190	CY
304.10	Aggregate Subbase Course - Gravel	2500	CY
403.208	Hot Mix Asphalt - 12.5mm Nominal Max Size	335	T
403.213	Hot Mix Asphalt, 12.5mm Nominal Maximum Size (Base and Intermediate Base Course)	550	T
409.15	Bituminous Tack Coat, Applied	125	G
508.13	Sheet Waterproofing Membrane (120 SY)	1	LS
511.07	Cofferdam (Box Culvert)	1	LS
511.07	Cofferdam (Approach Embankment)	1	LS
515.21	Protective Coating for Concrete Surfaces (170 SY)	1	LS
526.301	Portable Concrete Barrier, Type I (60 LF)	1	LS
534.71	Precast Concrete Box Culvert	1	LS
606.1301	31" W-Beam Guardrail, Mid-Way Splice - Single Faced	1808	LF
606.1306	31" W-Beam Guardrail, Mid-Way Splice -Tangent Terminal	4	EA
606.353	Reflectorized Flexible Guardrail Marker	8	EA
610.16	Heavy Riprap	4150	CY
610.18	Stone Ditch Protection	65	CY
610.213	Void Filled Riprap	110	CY
613.319	Erosion Control Blanket	700	SY
615.07	Loam	91	CY
618.14	Seeding Method Number 2	15	UN
619.12	Mulch	15	UN
619.14	Erosion Control Mix	182	CY
620.54	Stabilization / Reinforcement Geotextile	320	SY
620.58	Erosion Control Geotextile	3600	SY
620.65	Reinforcement Geogrid	280	SY
627.733	4" White or Yellow Painted Pavement Marking Line	3300	LF
629.05	Hand Labor, Straight Time	50	HR
631.12	All Purpose Excavator (Including Operator)	50	HR
631.172	Truck - Large (Including Operator)	50	HR
639.19	Field Office, Type B	1	EA
652.312	Type III Barricades	4	EA
652.33	Drum	20	EA
652.34	Cone	20	EA
652.35	Construction Signs	350	SF
652.361	Maintenance of Traffic Control Devices	1	LS
652.38	Flaggers	200	HR
656.75	Temporary Soil Erosion and Water Pollution Control	1	LS
659.10	Mobilization	1	LS

GENERAL CONSTRUCTION NOTES:

1. For easements, construction limits, and right of way lines, refer to Right of Way Map.
2. The clearing limits as shown on the plans are approximate. The exact limits will be established in the field by the Resident. Payment for clearing will be considered incidental to Contract items.
3. All utility facilities shall be adjusted by the respective utilities unless otherwise noted.
4. Existing signs within the Project limits shall be removed and reset as directed by the Resident. Payment for removal and reinstallation of existing signs will be considered incidental to the Contract. No separate payment will be made.
5. Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.
6. Stones which cannot be rolled or compacted into the surface of the shoulder shall be removed by hand raking. Payment for hand raking will be considered incidental to Pay Item 304.10, Aggregate Subbase Course Gravel.
7. 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.
8. All embankment material, except as otherwise shown, shall be Granular Borrow meeting the requirements of Standard Specifications Subsection 703.19, Granular Borrow, for Material for Underwater Backfill.
9. Place loam 2 inches deep on all new or reconstructed sideslopes or as directed by the Resident.
10. Erosion Control Mix may be substituted in those areas normally receiving loam and seed as directed by the Resident. Placement shall be in accordance with Standard Specifications Section 619, Mulch. Payment will be made under Pay Item 619.14, Erosion Control Mix.
11. Place a 24-inch-wide strip of Erosion Control Blanket on the sideslopes along the top of the riprap and behind the wingwalls.
12. A MASH-compliant guardrail end treatment shall be installed concurrently with the placement of each section of beam guardrail.
13. 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.
14. Protective Coating for Concrete Surfaces shall be applied to the following areas:

Concrete headwalls, including to one foot inside the box;
Exposed tops of vertical walls and to one foot below the ground on the back side;
Exposed faces of vertical walls and to one foot inside the box.
15. Project information referred to below may be accessed at the following MaineDOT web address:
<http://www.maine.gov/mdot/doing-business/bid-opportunities>
16. 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.
17. Reports on hydrology and/or hydraulics applicable to the bridge site may be accessed at the MaineDOT web address. The reports are based on MaineDOT's interpretation of the information obtained for the subject site. No assurance is given that the information or the conclusions of the report will be representative of actual conditions at the time of construction.
18. The project geotechnical report titled: Geotechnical Design Report, Noyes Bridge #5932 Replacement, dated October 2025, may be accessed at the MaineDOT web address.
19. Geotechnical information furnished or referred to in this plan set is for the use of the Bidders and the Contractor. No assurance is given that the information or interpretations will be representative of actual subsurface conditions at the construction site. MaineDOT will not be responsible for the Bidders' or Contractor's interpretations of, or conclusions drawn from, the geotechnical information. The boring logs contained in the plan set present factual and interpretive subsurface information collected at discrete locations. Data provided may not be representative of the subsurface conditions between the boring locations.
20. Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid amount, with no addition or reduction in payment to the Contractor if the actual final quantities are different from the MaineDOT-provided estimated quantities, except as follows:

a. If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.

b. If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.

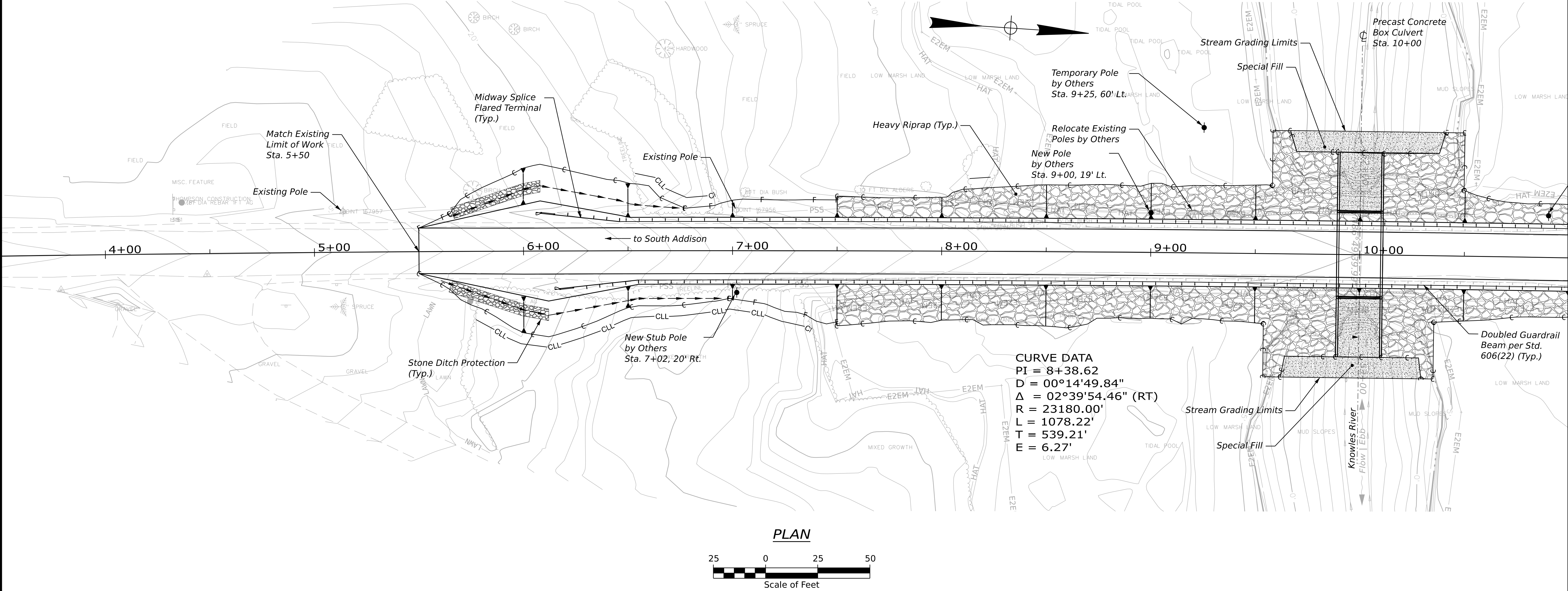
c. If a design change results in changes to estimated quantities for Lump Sum pay items, price adjustments will be made in accordance with Standard Specifications Section 109.7, Equitable Adjustments to Compensation and Time.
21. This site lends itself to different cofferdam configurations, depending on the Contractor's means and methods and considering that a temporary earth support system will be needed. Rather than speculate on how the bidders will configure the cofferdams, the Department has provided two pay items to be used to cover the cofferdams on the project, one for the culvert, and another for the embankment, regardless of how many are actually used.
22. Water flow from Knowles River into the ocean shall be maintained with bypass pipe(s). The pipe(s) shall be placed at the elevation of the E2EM wetland line (Approximately elevation 5.0') or as approved by the Resident, and shall at a minimum be able to convey 20 cfs at a headwater elevation of 6.5'.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 2716000
WIN 27160.00

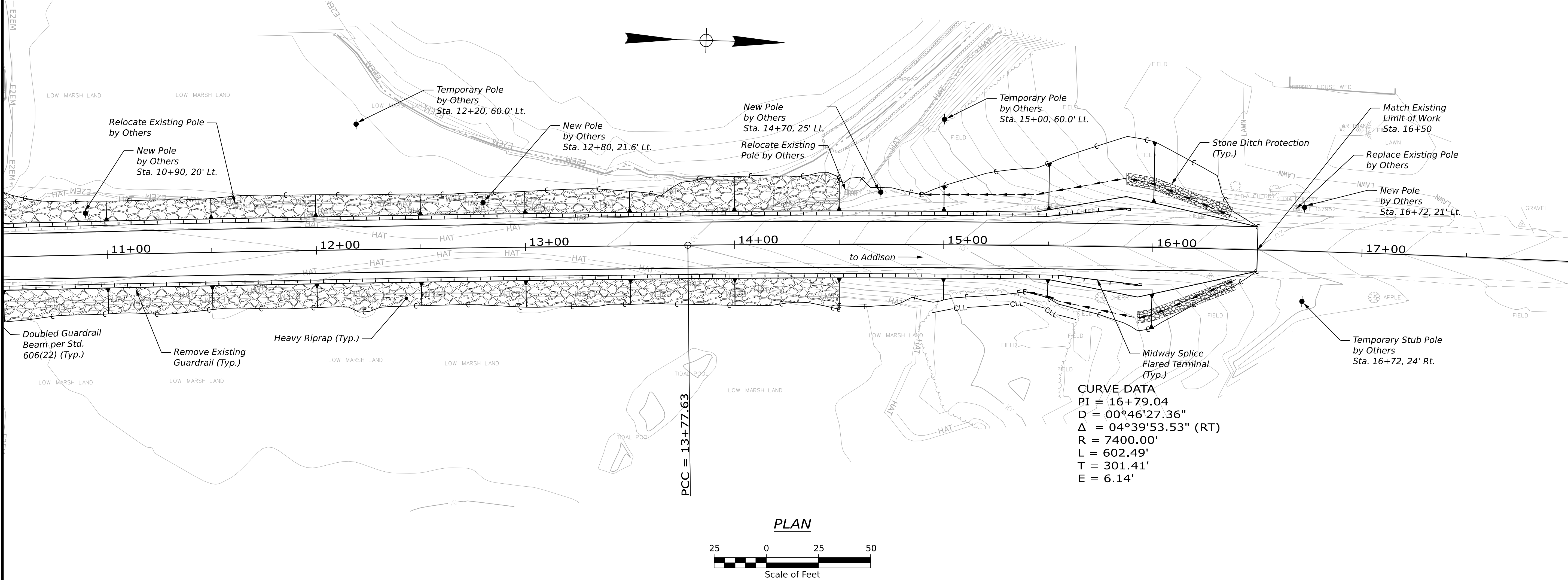
LOT NORTON BRIDGE NO. 3754
CROSSING KNOWLES RIVER
ADDISON

ESTIMATED QUANTITIES
AND GENERAL NOTES

SHEET NUMBER
2
OF 32



PROJ. MANAGER	BY	DATE	SIGNATURE
DESIGN-DETAILED	CHARLES GUY	06/2025	
CHECKED-REVIEWED	T. KELLY	06/2025	
DESIGN-DETAILED2	D. MYERS		
DESIGN-DETAILED3	S. DAVIS		
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			



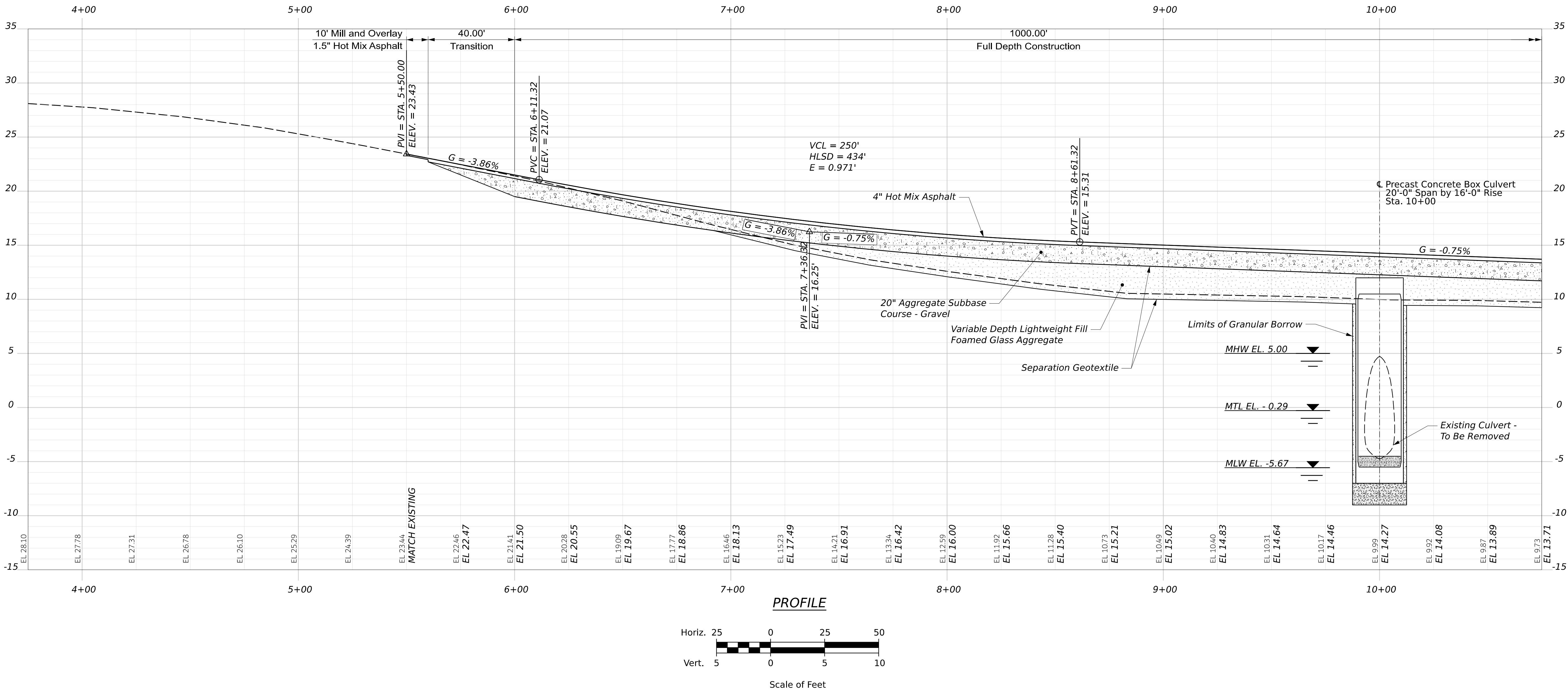
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 2716000
WIN 27160.00

PROJ. MANAGER	CHARLES GUY	BY	DATE	SIGNATURE
DESIGN-DETAILED	T. KELLY	T. KELLY	06/2025	
CHECKED-REVIEWED	S. DAVIS	D. MYERS	06/2025	
DESIGN-DETAILED2				
DESIGN-DETAILED3				
REVISIONS 1				
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				

LOT NORTON BRIDGE NO. 3754 CROSSING KNOWLES RIVER ADDISON
GENERAL PLAN 2 OF 2

SHEET NUMBER
4
OF 32



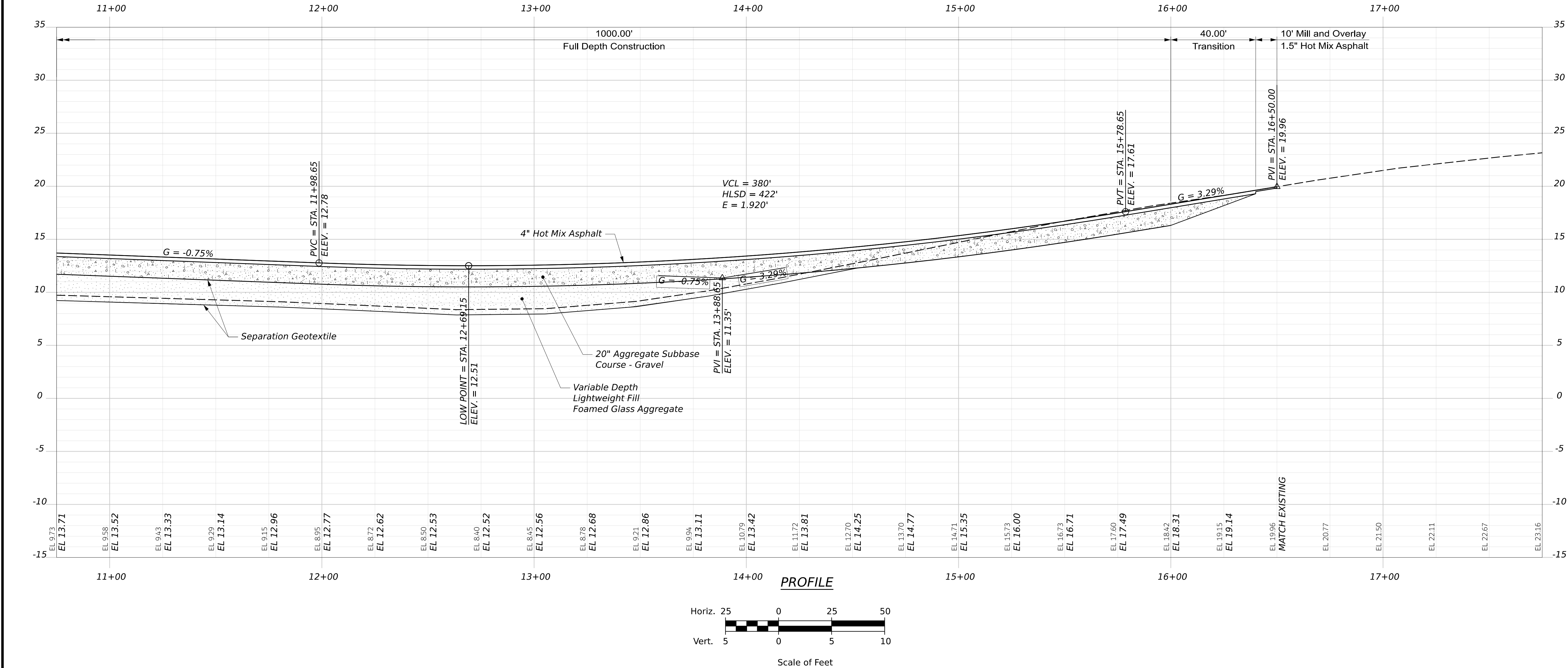


PROJ. MANAGER	CHARLES GUY	BY	T. KELLY	DATE	06/2025
DESIGN-DETAILED	T. KELLY	BY	T. KELLY	SIGNATURE	
CHECKED-REVIEWED	S. DAVIS	BY	D. MYERS		
DESIGN-DETAILED2		BY			
DESIGN-DETAILED3		BY			
REVISIONS 1		BY			
REVISIONS 2		BY			
REVISIONS 3		BY			
REVISIONS 4		BY			
FIELD CHANGES		BY			

LOT NORTON BRIDGE NO. 3754 CROSSING KNOWLES RIVER ADDISON	PROFILE 1 OF 2
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SHEET NUMBER	5
	OF 32

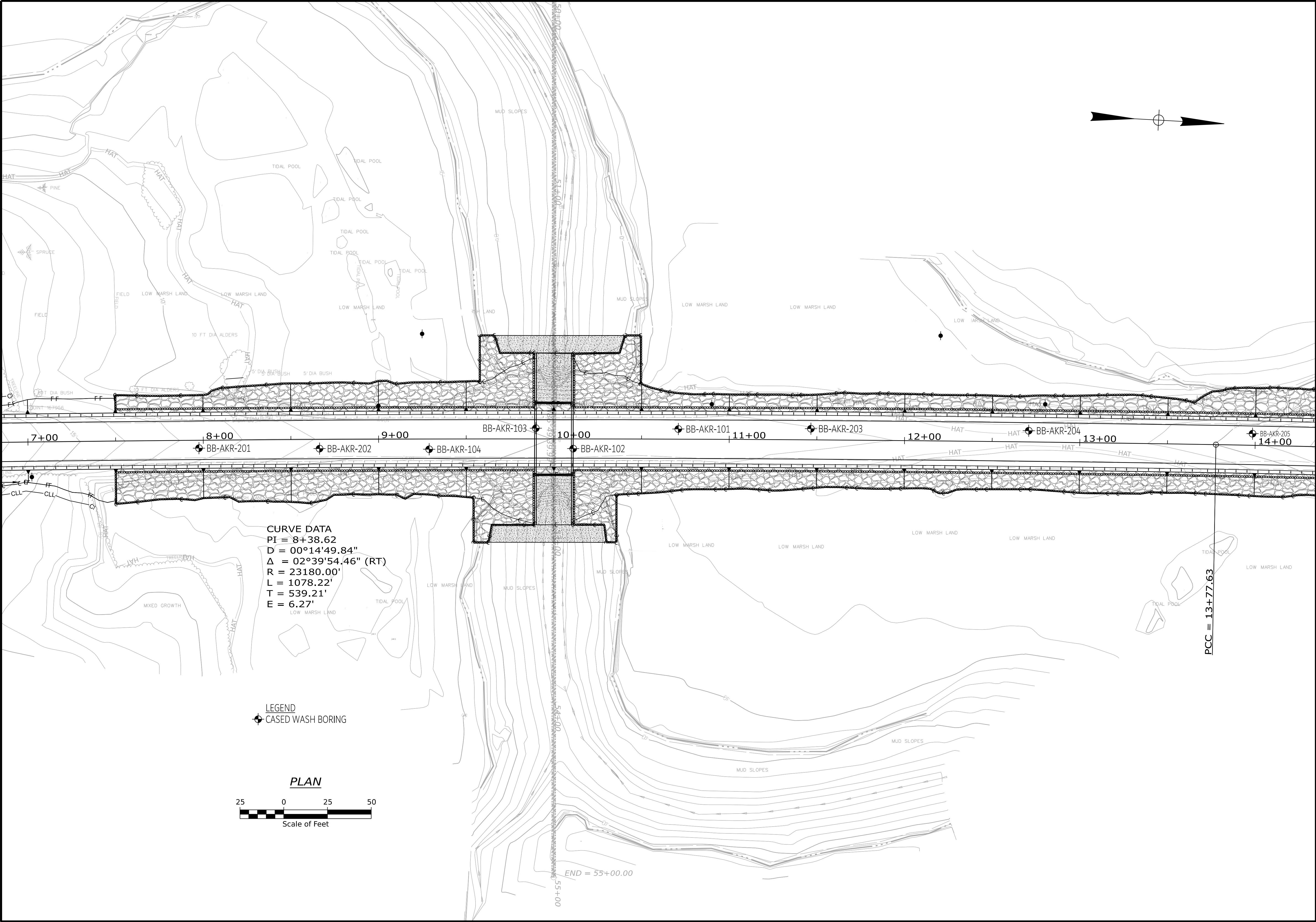




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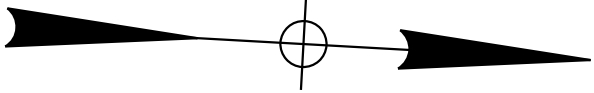
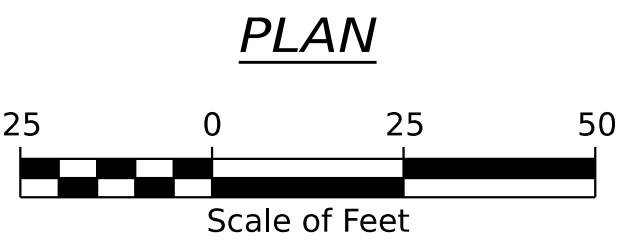
PROJ. MANAGER	CHARLES GUY	BY	DATE
DESIGN-DETAILED	T. KELLY	T. KELLY	06/2025
CHECKED-REVIEWED	S. DAVIS	D. MYERS	06/2025
DESIGN-DETAILED2			
DESIGN-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

LOT NORTON BRIDGE NO. 3754 CROSSING KNOWLES RIVER ADDISON	SIGNATURE
PROFILE 2 OF 2	P.E. NUMBER
	DATE

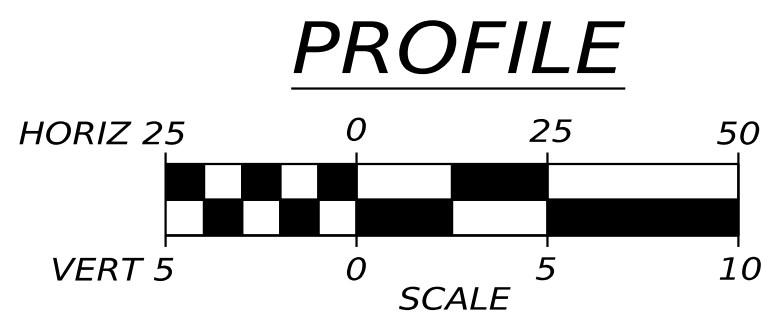
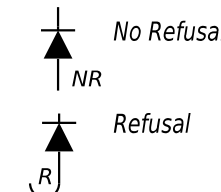
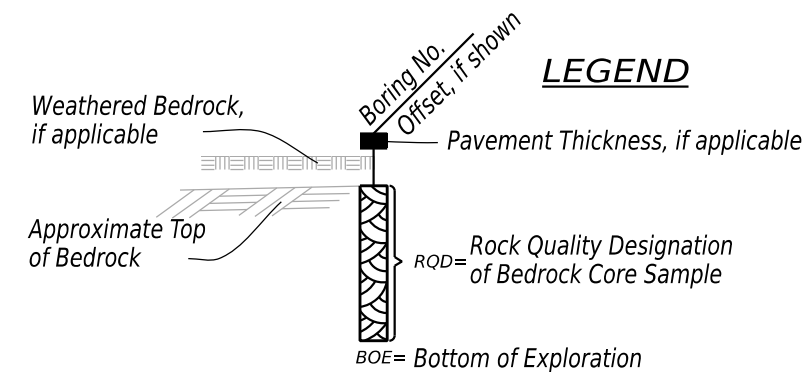
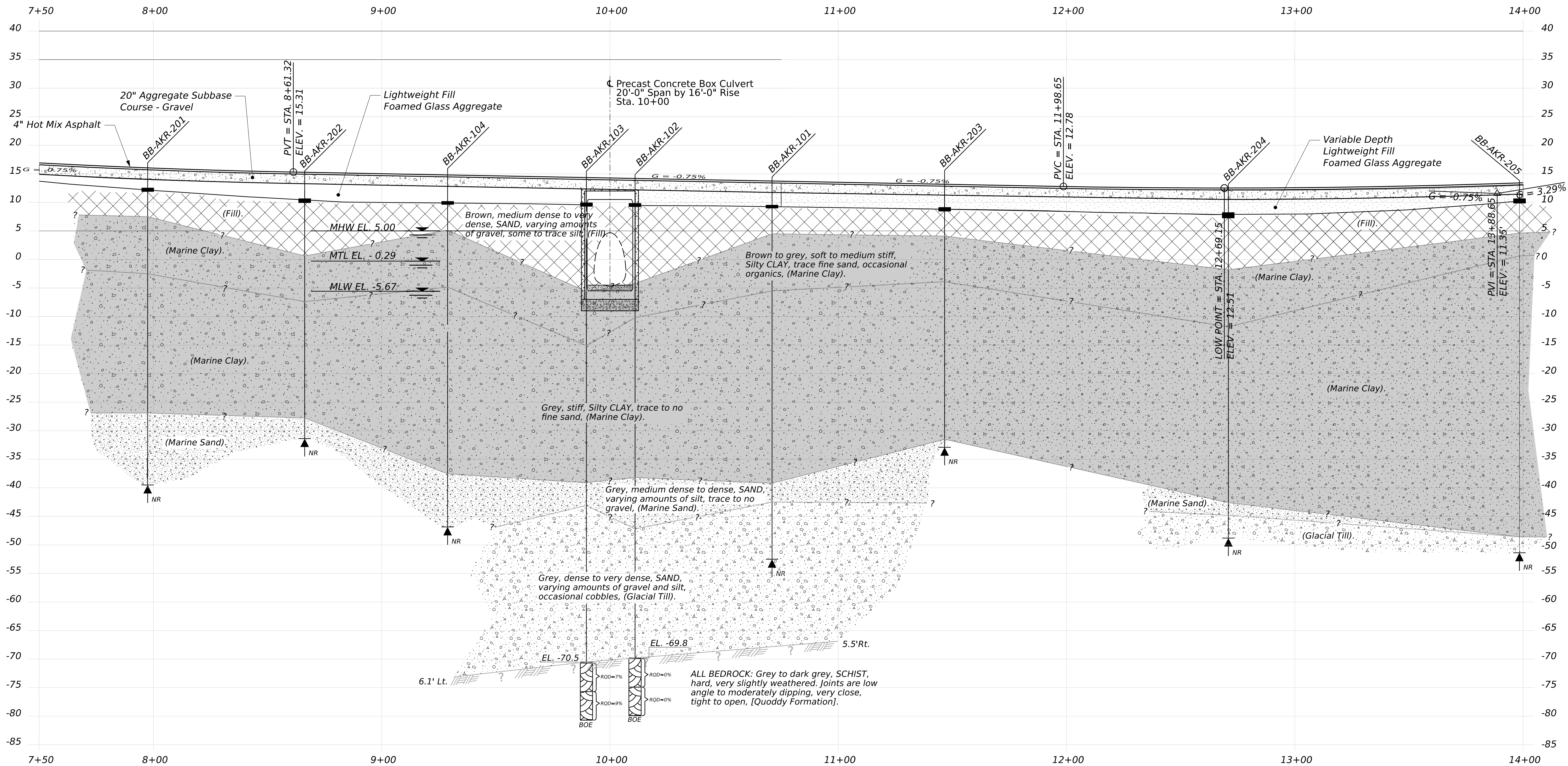


CURVE DATA
 PI = 8+38.62
 D = 00°14'49.84"
 Δ = 02°39'54.46" (RT)
 R = 23180.00'
 L = 1078.22'
 T = 539.21'
 E = 6.27'

LEGEND
 ◆ CASED WASH BORING

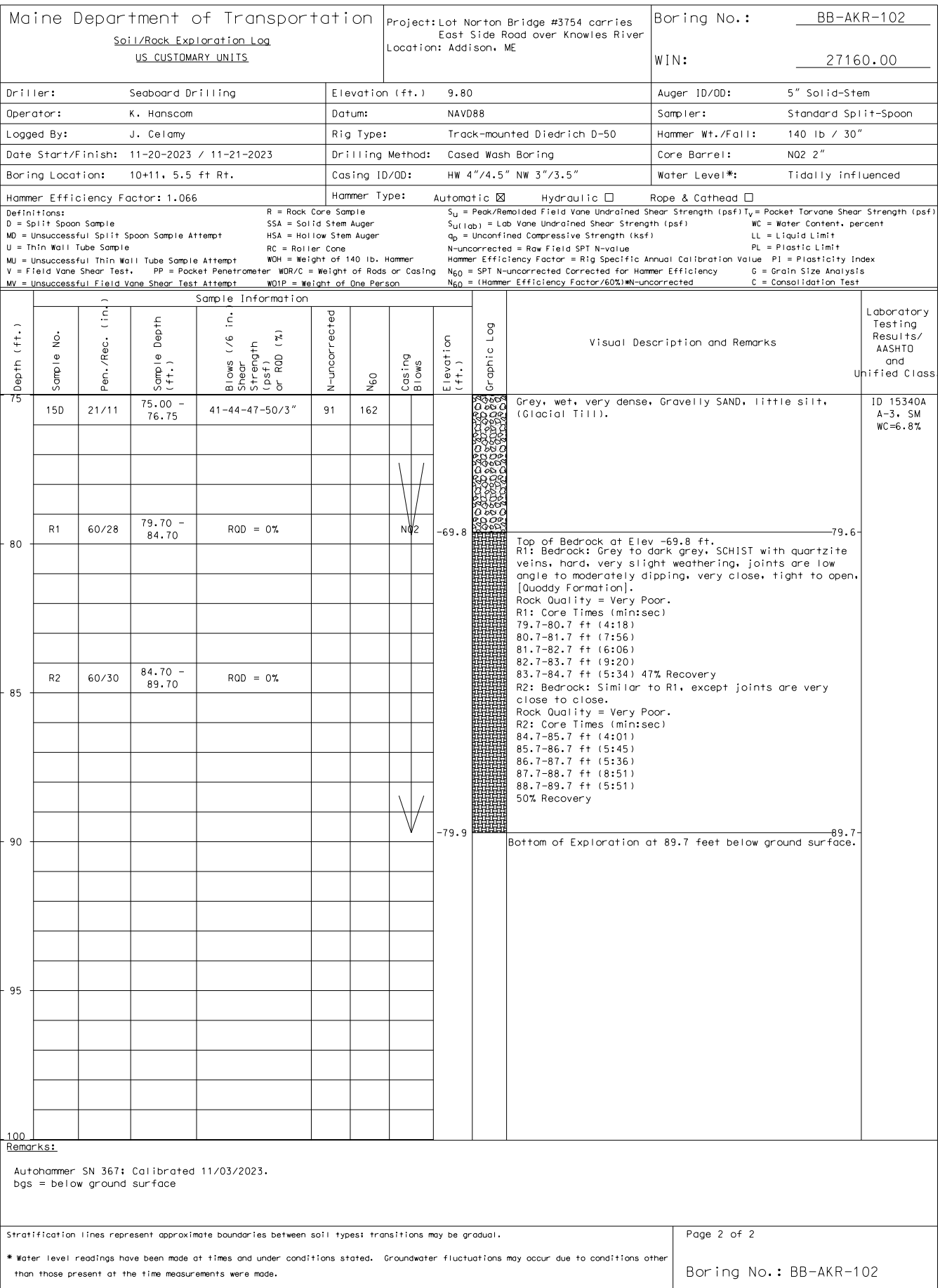
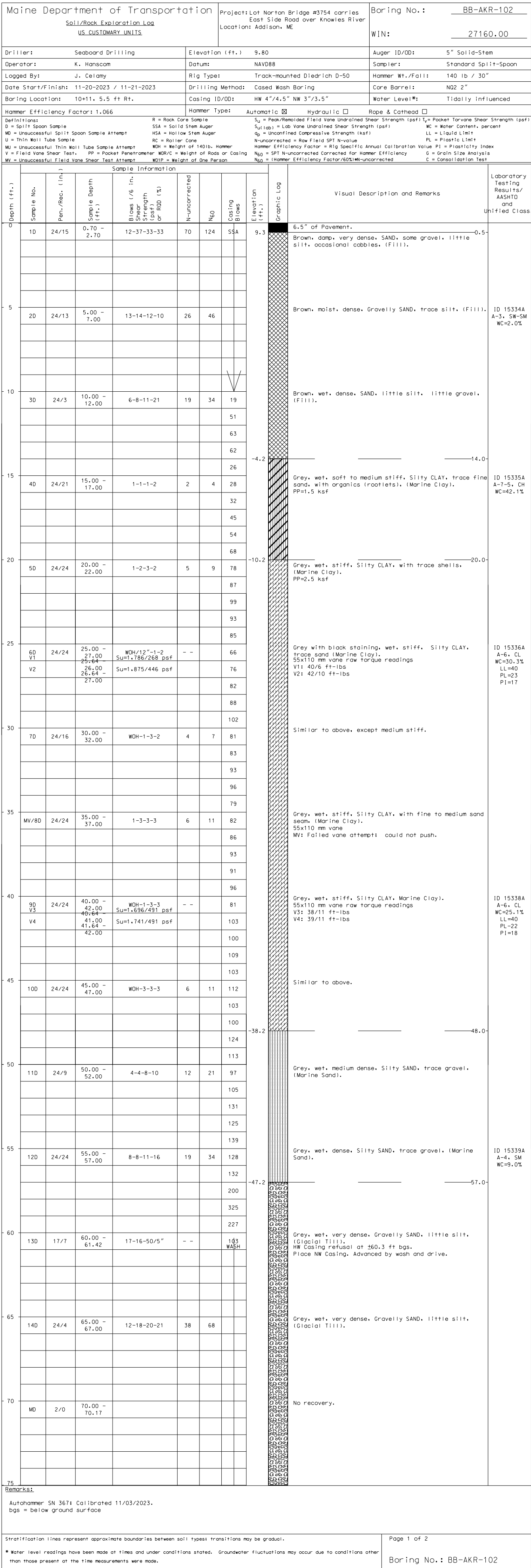
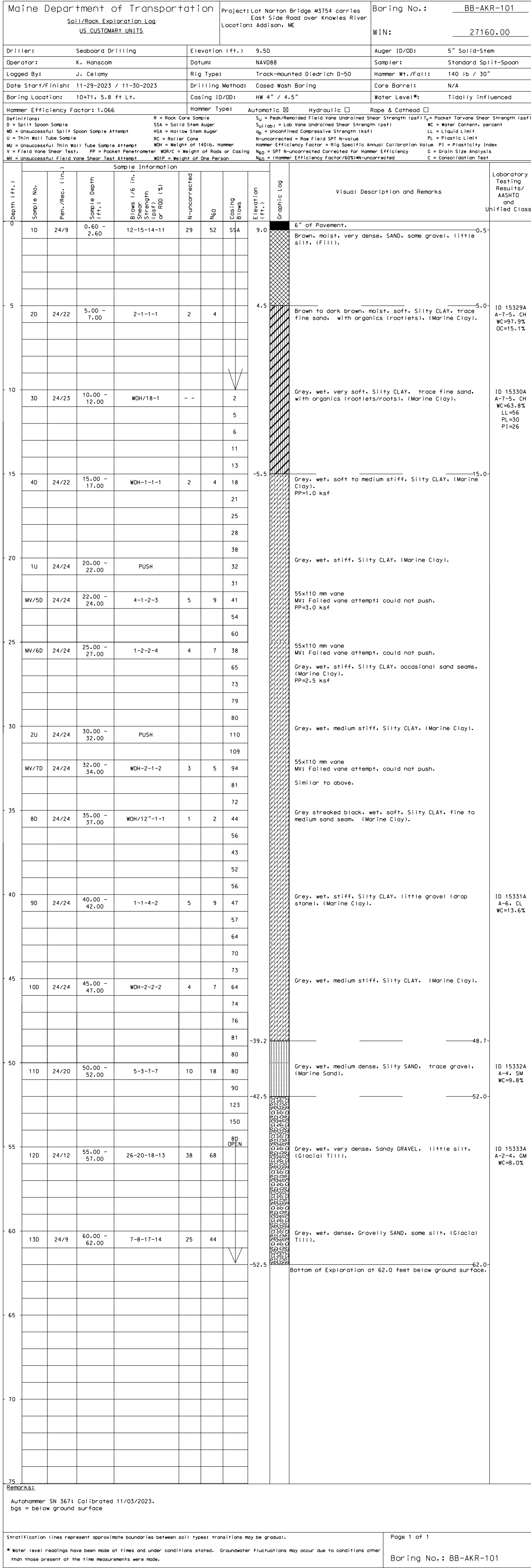


SHEET NUMBER 7 OF 32	LOT NORTON BRIDGE KNOWLES RIVER ADDISON WASHINGTON CO.				PROJ. MANAGER	C. CUYI	BY	DATE	STATE OF MAINE DEPARTMENT OF TRANSPORTATION	
					DESIGN-DETAILED					
					CHECKED-REVIEWED					
					DESIGN-DETAILED02	M.STPIERRE	T. WHITE	JUN. 2026	SIGNATURE	
					DESIGN-DETAILED03				P.E. NUMBER	
				REVISIONS 1					2716000	
				REVISIONS 2						
				REVISIONS 3						
				REVISIONS 4						
				FIELD CHANGES					DATE	
									BRIDGE NO. 3754	
									WIN 27160.00	
									BRIDGE PLANS	



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

LOT NORTON BRIDGE KNOWLES RIVER WASHINGTON CO. ADDISON					PROJ. MANAGER		C. GUY	BY	DATE	STATE OF MAINE DEPARTMENT OF TRANSPORTATION	
					DESIGN-DETAILED	CHECKED-REVIEWED					
INTERPRETIVE SUBSURFACE PROFILE					DESIGN-DETAILED2	M. STREIBER	T. WHITE		JUN 2026	SIGNATURE	
					DESIGN-DETAILED3					P.E. NUMBER	
					REVISIONS 1						
					REVISIONS 2						
					REVISIONS 3						
					REVISIONS 4					DATE	
					FIELD CHANGES						
SHEET NUMBER					BRIDGE NO. 3754						
8					27160.00						
OF 32					WIN						
					2716000						



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2716000

BRIDGE NO. 3754

BRIDGE PLANS

LOT NORTON BRIDGE
KNOWLES RIVER
ADDISON

WASHINGTON CO.

27160.00

BRIDGE PLANS

PROJ. MANAGER

DESIGN-DETAILED

DESIGN-DETAILED

DESIGN-DETAILED

REVISIONS 1

REVISIONS 2

REVISIONS 3

REVISIONS 4

FIELD CHANGES

BY

C. CUY

DATE

JUN 2026

T. WHITE

M. PIERRE

SIGNATURE

P.E. NUMBER

DATE

9

OF 32

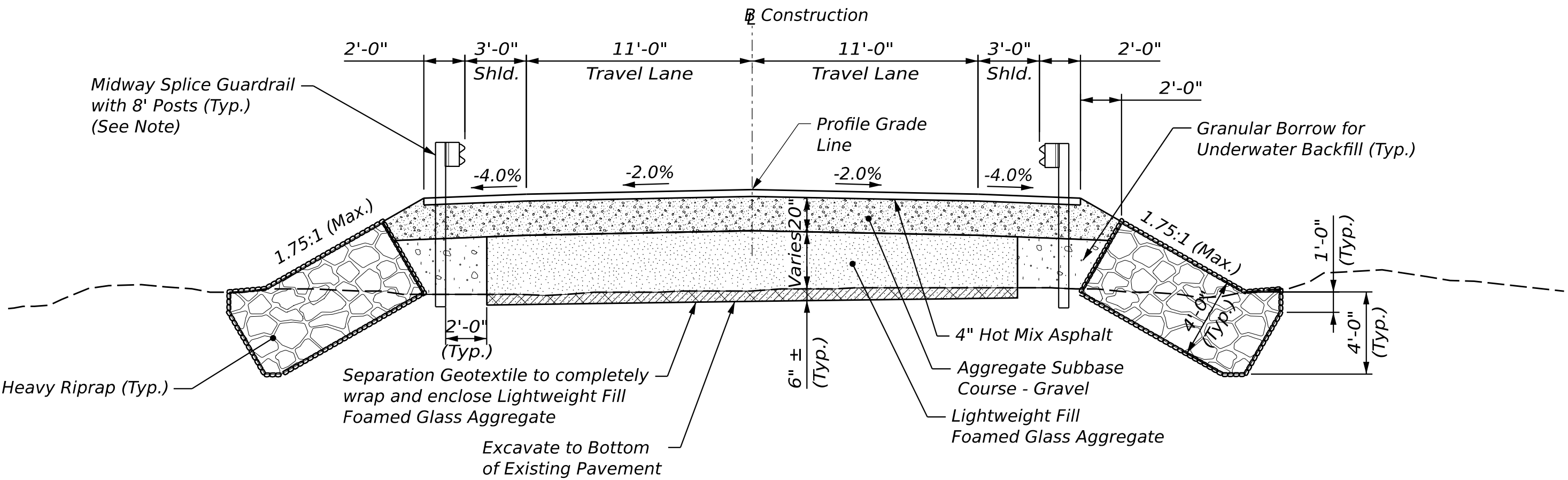
SHEET NUMBER

BORING LOGS

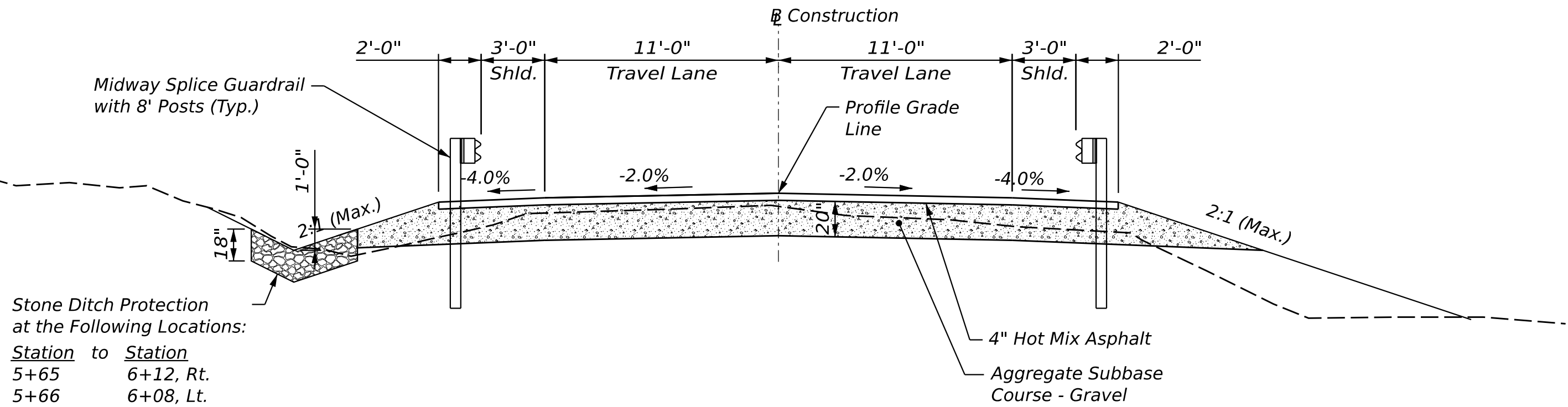
Maine Department of Transportation				Project: Lot Norton Bridge #W34 carries East Side Road over Knowles River Location: ASD-101 MC		Boring No.: BB-AKR-202	
Soil/Bore Exploration Log US CUSTOMARY UNITS						WIN: 27100.00	
Driller: Seaboard Drilling		Elevation (ft.): 10.63		Auger ID/OD: 5" Solid-Stem			
Operator: R. Hackett		Datum: NAVD88		Sampler: Standard Split-Spoon			
Logged By: E. Dennis		Rig Type: Track-mounted Diechid D-50		Hammer Wt./Fall: 140 lb / 30"			
Date Start/Finish: 09-15-2025 / 09-16-2025		Drilling Method: Cased Wash Boring		Core Barrel: N/A			
Boring Location: #B66.3, 5.2 ft Ry.		Casing ID/OD: H# 4" / 4.5"		Water Level: Tideally Influenced			
Hammer Efficiency Factor: 0.985		Hammer Type: Automatic S		Hydraulic C		Rope & Catched C	
Definitions: D = Split Spoon Sample MS = Unconsolidated Split Spoon Sample Arrangement U = Thin Wall Tube Sample ML = Unconsolidated Thin Wall Tube Sample Arrangement V = Field Vane Shear Test MC = Unconsolidated Little Pipe Shear Test Attempts		R = Rock Core Sample SSA = Solid Stem Auger NSA = Hollow Stem Auger HC = Hammer Core WH = Weight of 140lb. Hammer NWS = Weight of Rod or Casing WHL = Weight of One Foot Log		S _u = Peak Recorded Fall from Undrained Shear Strength (psf) S _u (avg) = Lab vane undrained shear strength (psf) q _s = Undrained Compressive Strength (psf) Unconsolidated - Raw Data SPI Number Hammer Efficiency Factor = $\frac{H \times S}{S_u}$ Specific Annual Calibration Value FI = Plasticity Index C = Grain Size Analysis L = Liquid Limit Test		P = Pocket Torque Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PI = Plasticity Index C = Grain Size Analysis L = Liquid Limit Test	
Sample Information						Visual Description and Remarks	
Object (ft.)	Samp. No.	Rem./Rec. (in.)	Samp. Depth (ft.)	Blows / 6 in. (in.)	Number of Blows	NAG	Notes
0	ID	24/15	0.0-2.0	17-19-15-13	34	56	SSA
5	20	24/18	5.00-7.00	2-1-1-2	2	3	13
10	30	24/21	10.00-12.00	1-1-2-1	3	5	15
15	40	24/24	15.00-17.00	1-2-5-5	5	8	30
20	50	24/18	20.00-22.00	PUSH			OPEN
25	MV/D	24/24	25.00-27.00	WDH/12"-1-2	-	-	-
30	TD	24/24	30.00-32.00	WDH-WDH-1-2	-	-	-
35	MV/D	24/24	35.00-37.00	WDH/12"-2-3	2	3	3
40	SD	24/24	40.00-42.00	3-5-4-2	9	15	15
45							
50							
Remarks: Automaker SN 3621 Calibrated 10-11-2024. Bgs = below ground surface							
Stratification lines represent approximate boundaries between soil typical transitions may be gradual.							
* Water level readings have been made of times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.							
Boring No.: BB-AKR-202							

Maine Department of Transportation				Project: Lot Norton Bridge #3754 carries East Side Road over Knowles River Location: Addison, ME				Boring No.: BB-AKR-203		
Soil/Bore Exploration Log US CUSTOMARY UNITS								WIN: 27160.00		
Driller: Seaboard Drilling		Elevation (ft.): 9.09		Auger 10/00:		5" Solid-Stem				
Operator: R. Hackett		Datum: NAVD88		Sampler:		Standard Split-Spoon				
Logged By: E. Dennis		Rig Type: Track-mounted Dierich 0-50		Hammer Mt./Fall: 140 lb / 30"						
Date Start/Finish: 09-18-2025		Drilling Method: Cased Wash Boring		Core Barrel#: N/A						
Boring Location: 11+46.6, 6.4 ft Lr.		Casing 10/00:		HW 4" / 4.5"		Water Level*: Tidyly Influent				
Hammer Efficiency Factor: 0.985		Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐								
Definitions: S = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt V = Thin Wall Test Sample W = Unsuccessful Thin Wall Test Sample Attempt WFL = Failed Weak Force Layer Test PP = Pocket Torque Meter MGR = Weight of Moisture WGL = Weight of Loss (Gravel) N = Root Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger BSL = Blade Scan SPS = Shear Strength SPS-13 = Shear Strength at 13" F = Fractured UH = Undisturbed Nsp = N-Spoon Correlated for Hammer Efficiency Nsp = Hammer Efficiency Factor Nsp = Specific Annual Calibration Value Nsp = UH Undisturbed Specimen for Hammer Efficiency Nsp = Hammer Efficiency Factor for undisturbed specimen										
Sample Information										
Depth (ft.)	Samp ID No.	Pen./Rec. (in.)	Samp Depth (ft.)	Blade / S.P. In. / S.P. Strength (psi)	N-Spoon (lb)	Casing (ft.)	Elevation (ft.)	Visual Description and Remarks	Laboratory Testing Result AASHTO and Unified Class	
	20	24/16	5.00 ± 2.80	16-15-13-12	28	46	SSA	8.5	Brown, dark, dense, SAND, some gravel, little silt. (FILL).	-0.6'
5	20	24/4	5.00 ± 7.00	5-3-2-2	5	8	SSA	4.1	Brown, wet, medium stiff, Clayey SILT, with organic rootlets and roots. Marine Clay.	-5.0'
10	MD								Root obstructing casing. Advanced by rollercone to clear.	
15	30	24/22	15.00 ± 11.00	1-1-1-1	2	3	SSA		Grey, wet, medium stiff, Silty CLAY, occasional rootlets. (Marine Clay).	ID 16703A A=6, CL MC=35, LL=49 PL=24 PI=25
20	M/SD	24/23	20.00 ± 22.00	3-7-2-6	14	23	SSA		Grey streaked black, very stiff, Silty CLAY, with fine sand layers, and shell fragments. (Marine Clay). Wet Failed vane attempt; could not push	
25	M/SD	24/20	25.00 ± 27.00	NDH-2-3-3	5	8	SSA		Grey, wet, stiff, Silty CLAY, with sand layers. (Marine Clay). 55x10 mm vane Wet Failed vane attempt; could not push	
30	IU	24/15	32.00 ± 32.00	PUSH					Grey streaked black, wet, stiff, Silty CLAY. (Marine Clay). 55x10 mm vane low torque readings V1: 50.7/8.4 ft-lbs Wet Failed vane attempt; could not push	
35	WV	24/24	32.00 ± 37.00 32.60 31.00	MGR-3-2-4 Su=1,511/393 psf	--	--			Grey, wet, medium stiff to stiff, Silty CLAY. (Marine Clay). 55x10 mm vane low torque readings V2: 19.1/4.8 ft-lbs V3: 24.2/6.8 ft-lbs	ID 16704A A=6, CL MC=35, LL=37 PL=18 PI=19
40	V3	24/24	35.00 ± 37.00 36.20 35.40	MGR-12-12 Su=1,080/304 psf	--	--			80x11 Grey, wet, stiff, Silty CLAY, with sand seams. (Marine Clay). 80x11 Grey, wet, medium dense, Silty SAND, some clay. little gravel. (MARINE SAND).	
45	M/SD	24/24	40.00 ± 42.00	1-3-11-25	14	23	SSA	-31.5	Bottom of Exploration at 42.0 feet below ground surface.	-42.0'
50										
General										
Autumnair SN 3621 Calibrated 10-11-2024. bg = Below ground surface										
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.								Page 1 of 1		
* 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.										
								Boring No.: BB-AKR-203		

[illegible][illegible]



**FULL RECONSTRUCTION
with LIGHTWEIGHT FILL
FOAMED GLASS AGGREGATE**



FULL RECONSTRUCTION

Stone Ditch Protection
at the Following Locations:
Station to Station
5+65 6+12, Rt.
5+66 6+08, Lt.
15+87 16+37, Lt.
15+93 16+39, Rt.

SUPERELEVATION TABLE				
LT. SHOULDER	LT. TRAVEL LANE	STATION	RT. TRAVEL LANE	RT. SHOULDER
Match Existing	Match Existing	5+50	Match Existing	Match Existing
-6.7%	-5.3%	5+80	-7.9%	-2.8%
-6.1%	-4.6%	6+00	-6.7%	-4.0%
-5.8%	-4.2%	6+50	-5.9%	-4.0%
-4.9%	-3.1%	7+00	-4.0%	-4.0%
-4.0%	-2.0%	to	-2.0%	-4.0%
-4.0%	-2.0%	13+50	-2.0%	-4.0%
-5.4%	-2.0%	14+00	-2.0%	-5.9%
-6.8%	-2.0%	14+50	-2.0%	-7.9%
-8.2%	-2.0%	15+00	-2.0%	-9.8%
-8.9%	-2.0%	15+25	-2.0%	-10.7%
-9.6%	-2.4%	15+50	-2.9%	-11.7%
-11.00%	-3.3%	16+00	-4.8%	-13.6%
-12.6%	-4.1%	16+50	-6.6%	-15.5%
Match Existing	Match Existing		Match Existing	Match Existing

Note:
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.

PROJ. MANAGER	CHARLES GUY	BY	DATE
DESIGN-DETAILED	T. KELLY	T. KELLY	06/2025
CHECKED-REVIEWED	S. DAVIS	D. MYERS	06/2025
DESIGN-DETAILED2			
DESIGN-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

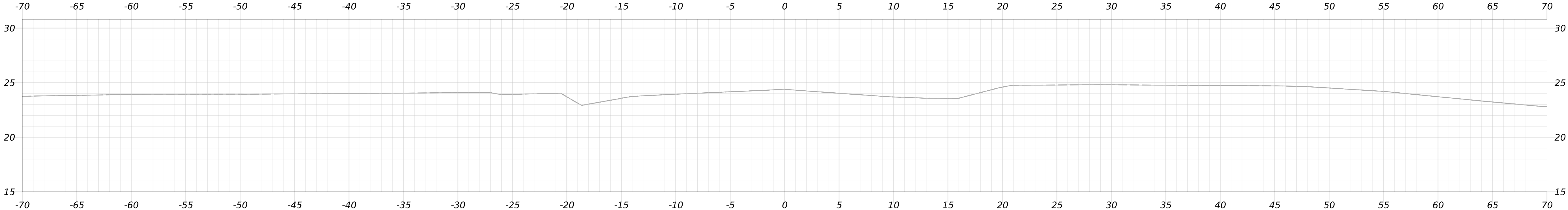
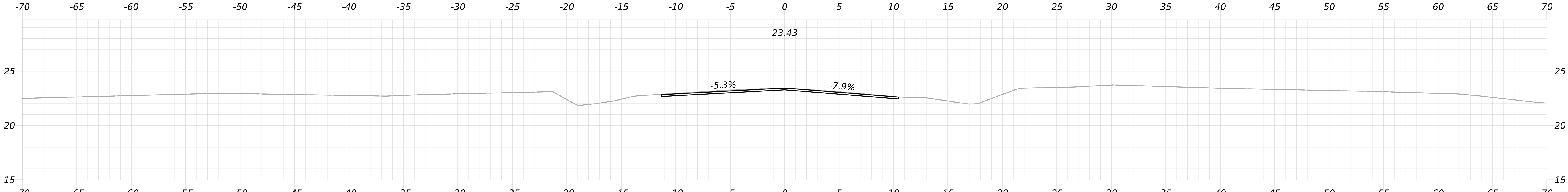
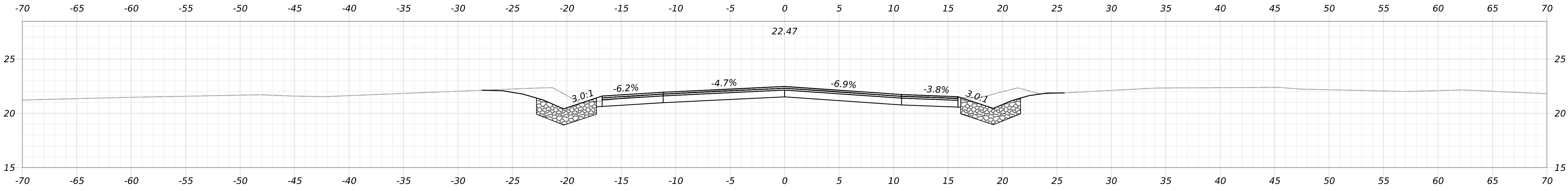
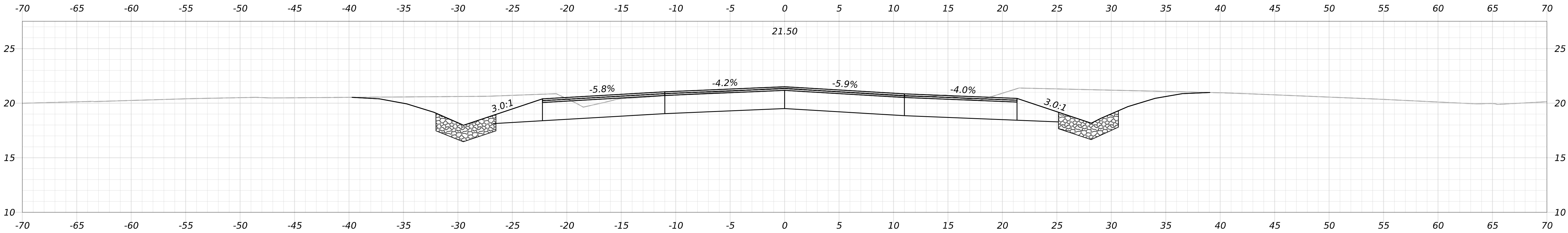
LOT NORTON BRIDGE NO. 3754
CROSSING KNOWLES RIVER
ADDISON

TYPICAL SECTIONS

SHEET NUMBER

12
OF 32

Username: danielmyers Date: 8/26/2026



TYLin

STATE OF MAINE

DEPARTMENT OF TRANSPORTATION

Federal Project No. 2716000

WIN 27160.00

PROJ. MANAGER	CHARLES GUY	BY	DATE
DESIGN-DETAILED	T. KELLY	T. KELLY	10/2024
CHECKED-REVIEWED	S. DAVIS	D. MYERS	10/2024
DESIGN-DETAILED2			
DESIGN-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

LOT NORTON BRIDGE NO. 3754

CROSSING KNOWLES RIVER

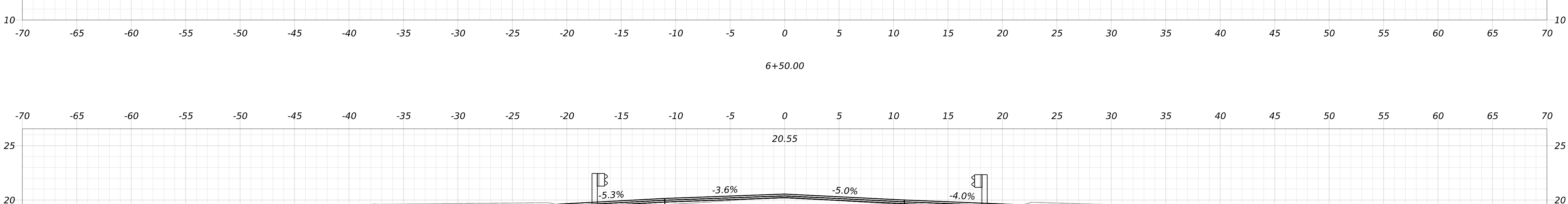
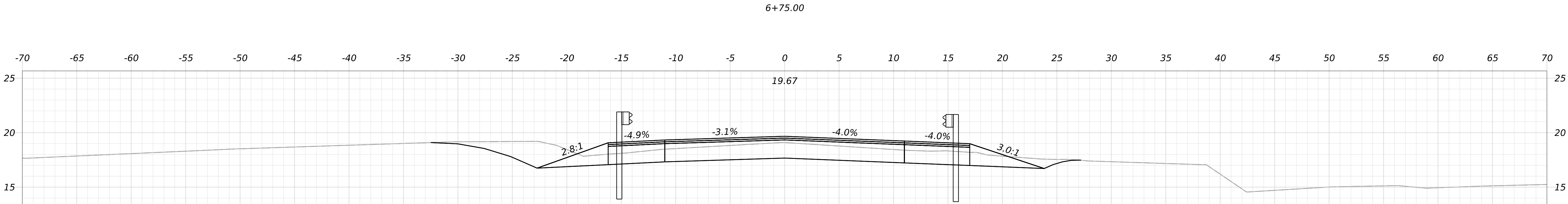
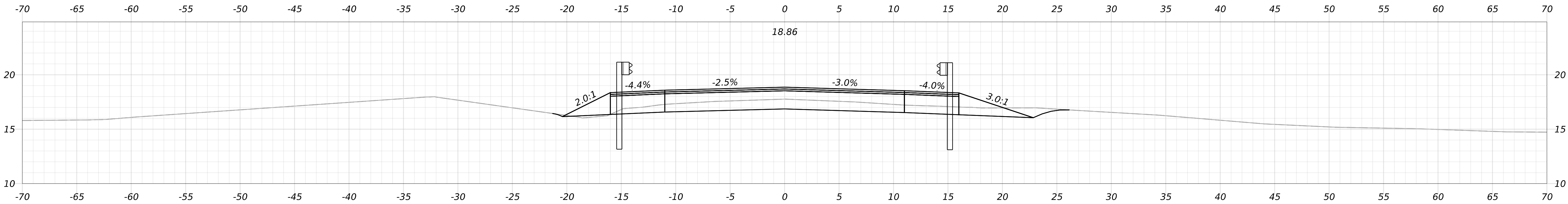
ADDISON

APPROACH CROSS SECTIONS

SHEET NUMBER

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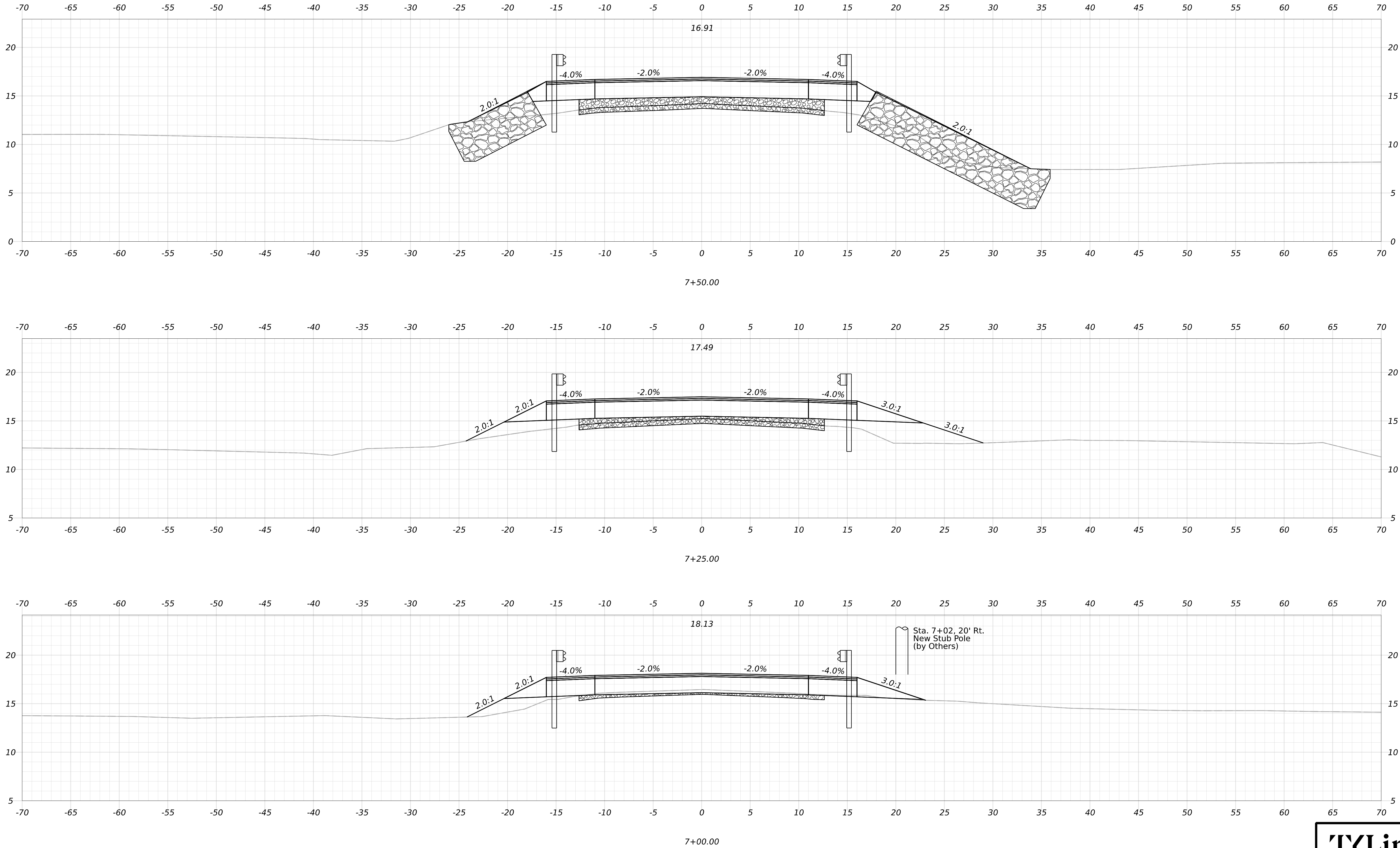
OF 32



PROJ. MANAGER	CHARLES GUY	BY	DATE
DESIGN-DETAILED	T. KELLY	T. KELLY	10/2024
CHECKED-REVIEWED	S. DAVIS	DIWYERS	10/2024
DESIGN-DETAILED2			
DESIGN-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

LOT NORTON BRIDGE NO. 3754
CROSSING KNOWLES RIVER
ADDISON
APPROACH CROSS SECTIONS

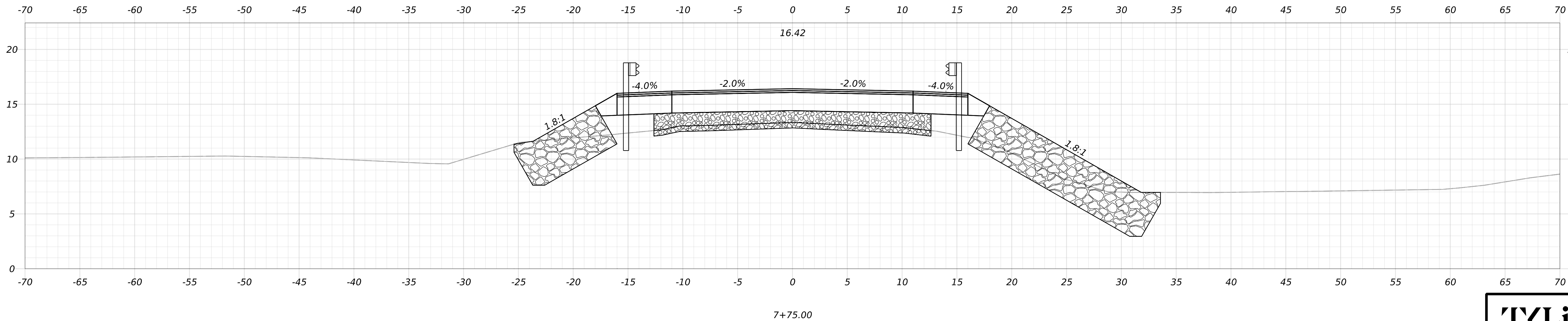
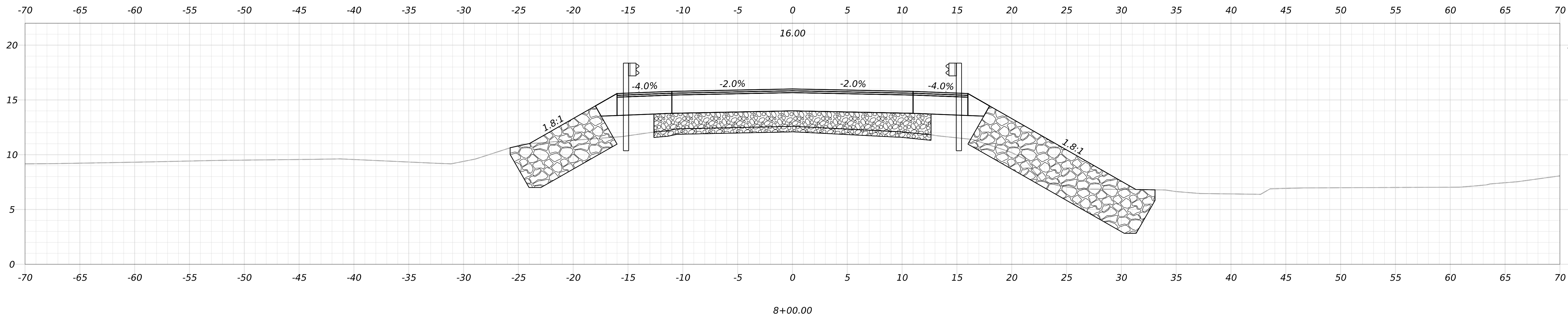
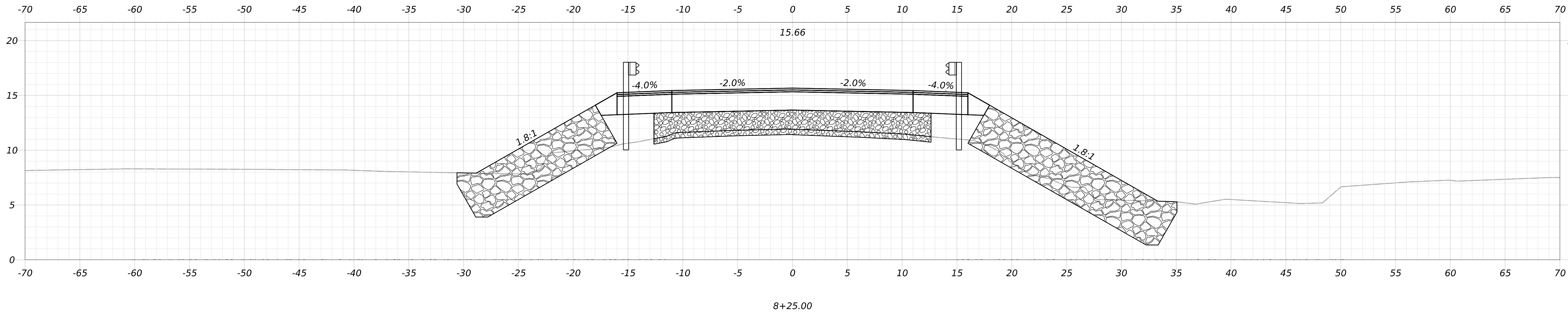




PROJ. MANAGER	CHARLES GUY	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	T. KELLY	T. KELLY	10/2024			
CHECKED-REVIEWED	S. DAVIS	D. MYERS	10/2024			
DESIGN-DETAILED2						
DESIGN-DETAILED3						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

LOT NORTON BRIDGE NO. 3754
CROSSING KNOWLES RIVER
ADDISON
APPROACH CROSS SECTIONS





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DEPARTMENT OF TRANSPORTATION
Federal Project No. 2716000
WIN 27160.00

LOT NORTON BRIDGE NO. 3754
CROSSING KNOWLES RIVER
ADDISON

APPROACH CROSS SECTIONS

SHEET NUMBER
16
OF 32

PROJ. MANAGER: CHARLES GUY
DESIGN-DETAILED: T. KELLY
CHECKED-REVIEWED: S. DAVIS
DESIGN-2-DETAILED2: [blank]
DESIGN-3-DETAILED3: [blank]
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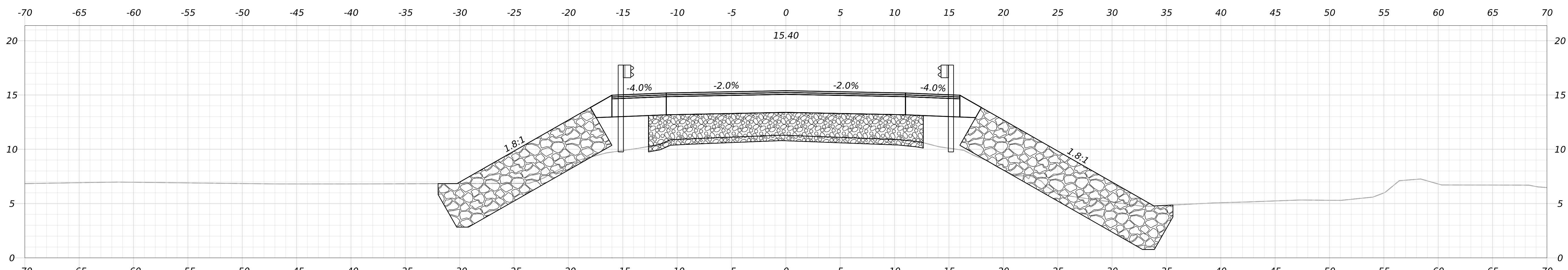
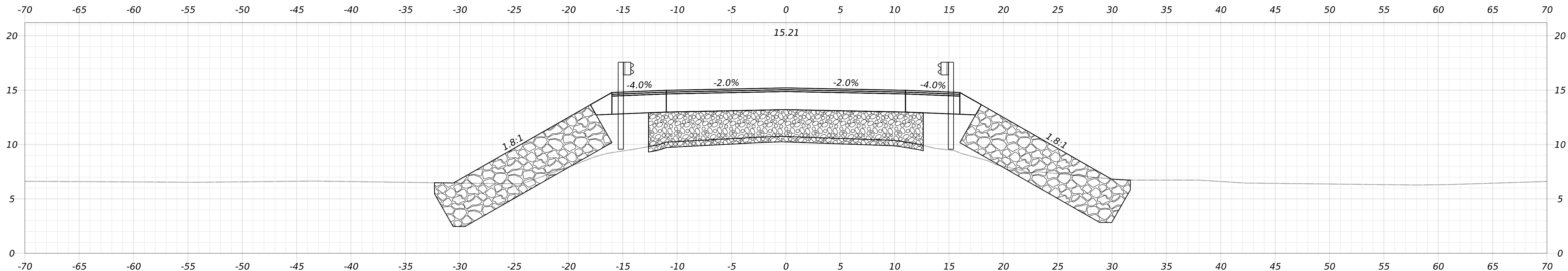
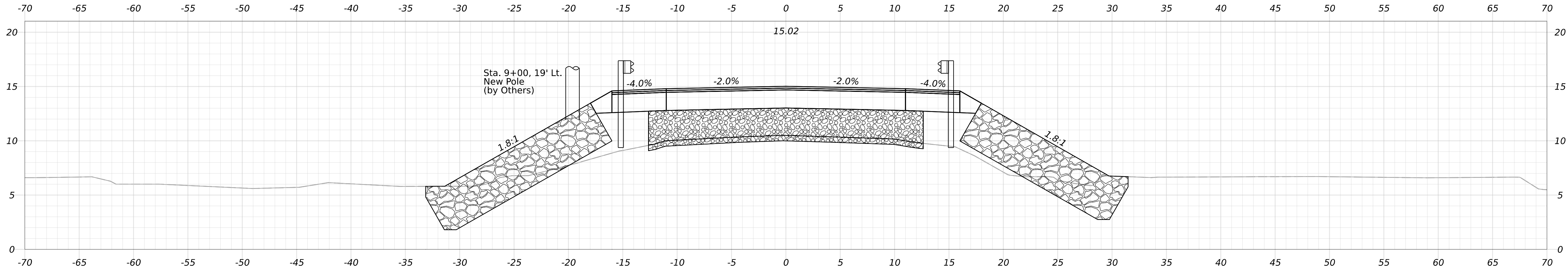
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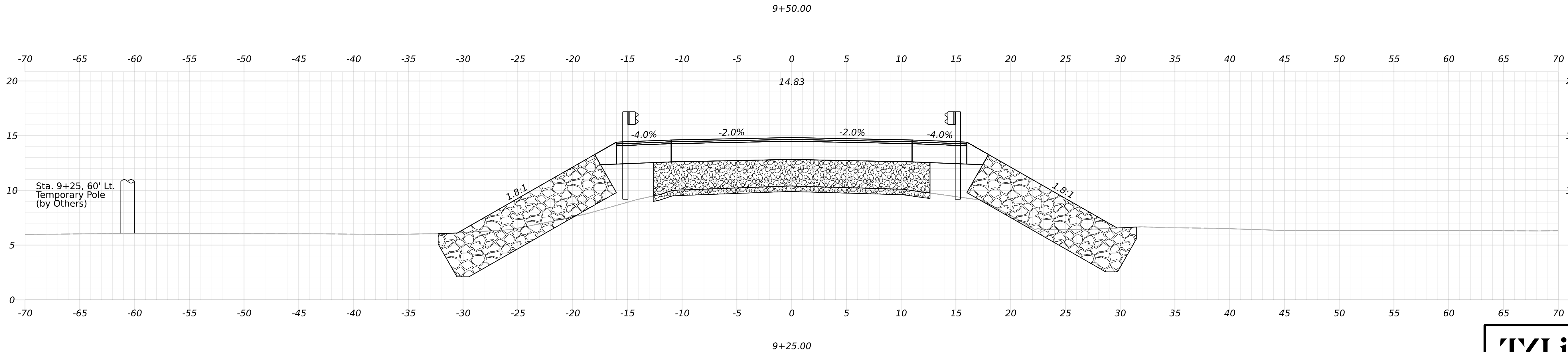
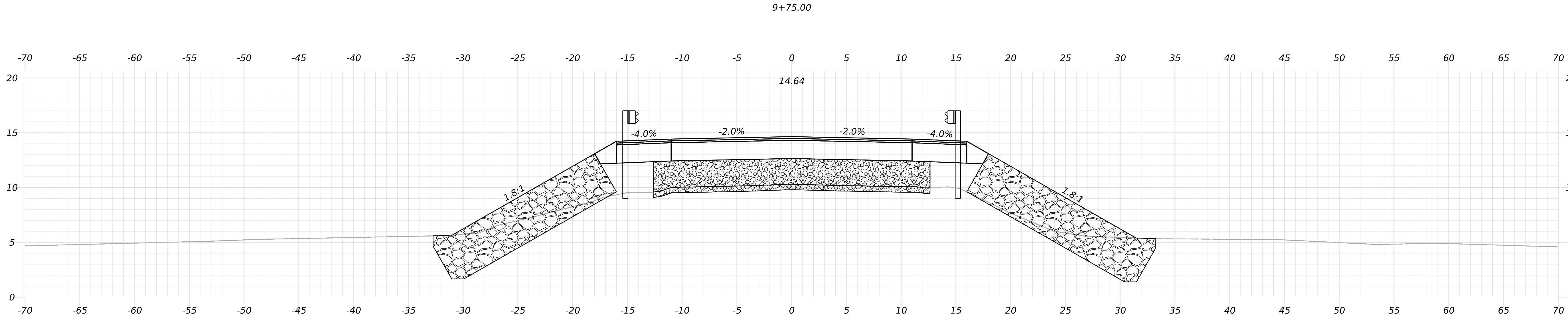
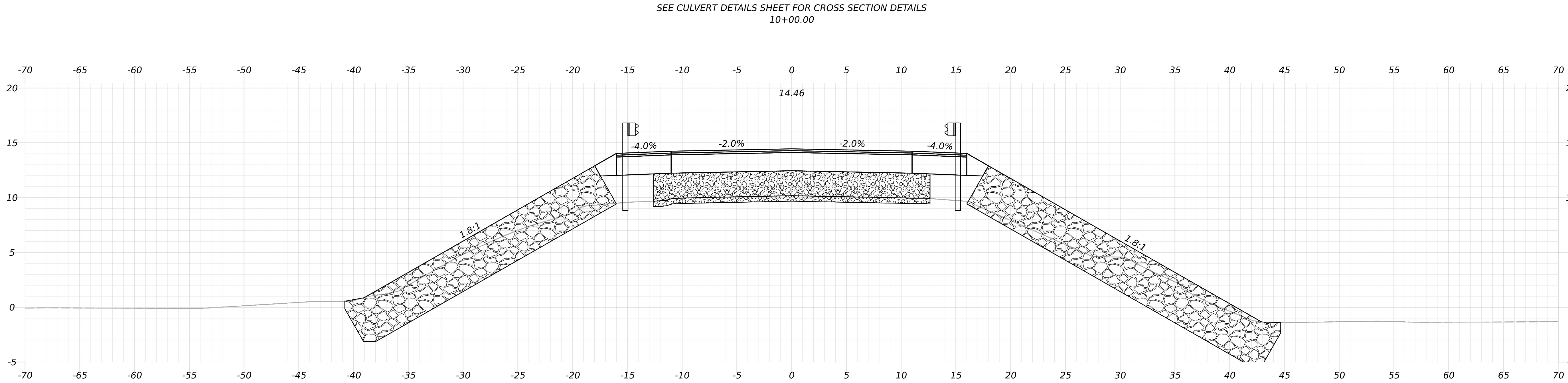
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TYLin

PROJ. MANAGER	CHARLES GUY	BY	DATE
DESIGN-DETAILED	T. KELLY	T. KELLY	10/2024
CHECKED-REVIEWED	S. DAVIS	D. MYERS	10/2024
DESIGN-DETAILED2			
DESIGN-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

Username: danielmyers Date: 8/26/2026



Sta. 9+25, 60' Lt.
Temporary Pole
(by Others)

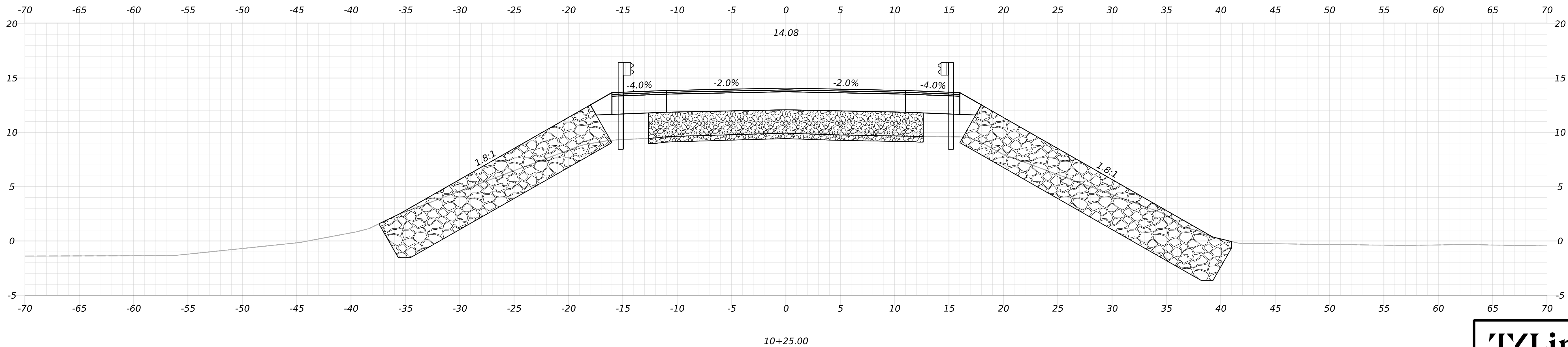
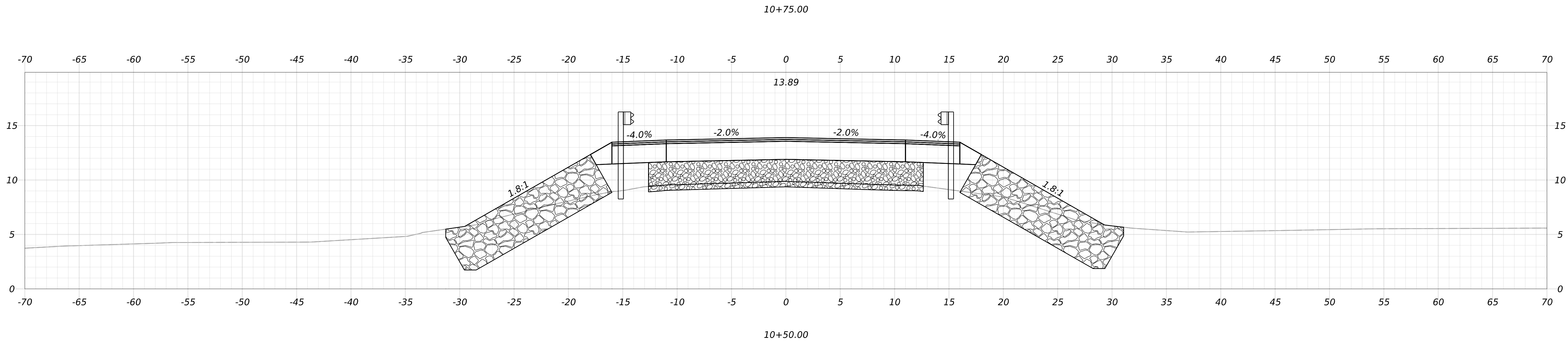
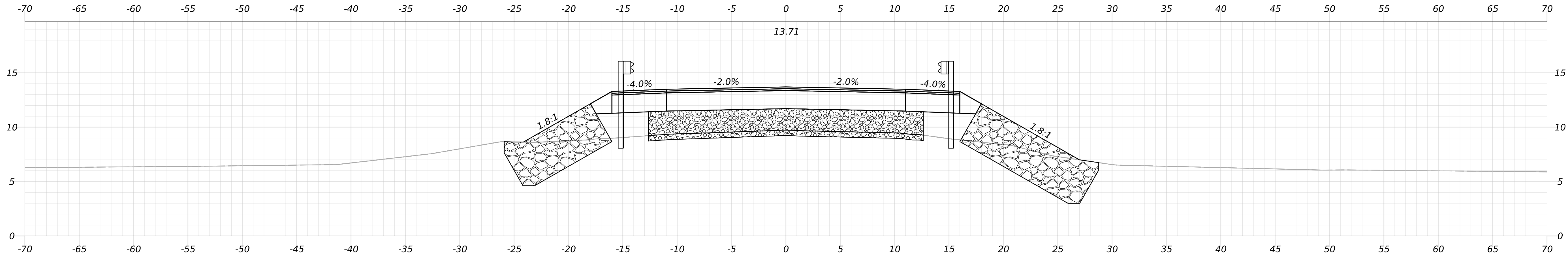
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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 2716000
WIN 27160.00

PROJ. MANAGER	CHARLES GUY	BY	DATE
DESIGN-DETAILED	T. KELLY	T. KELLY	10/2024
CHECKED-REVIEWED	S. DAVIS	D. MYERS	10/2024
DESIGN-DETAILED2			
DESIGN-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

LOT NORTON BRIDGE NO. 3754
CROSSING KNOWLES RIVER
ADDISON
APPROACH CROSS SECTIONS

SHEET NUMBER
18
OF 32



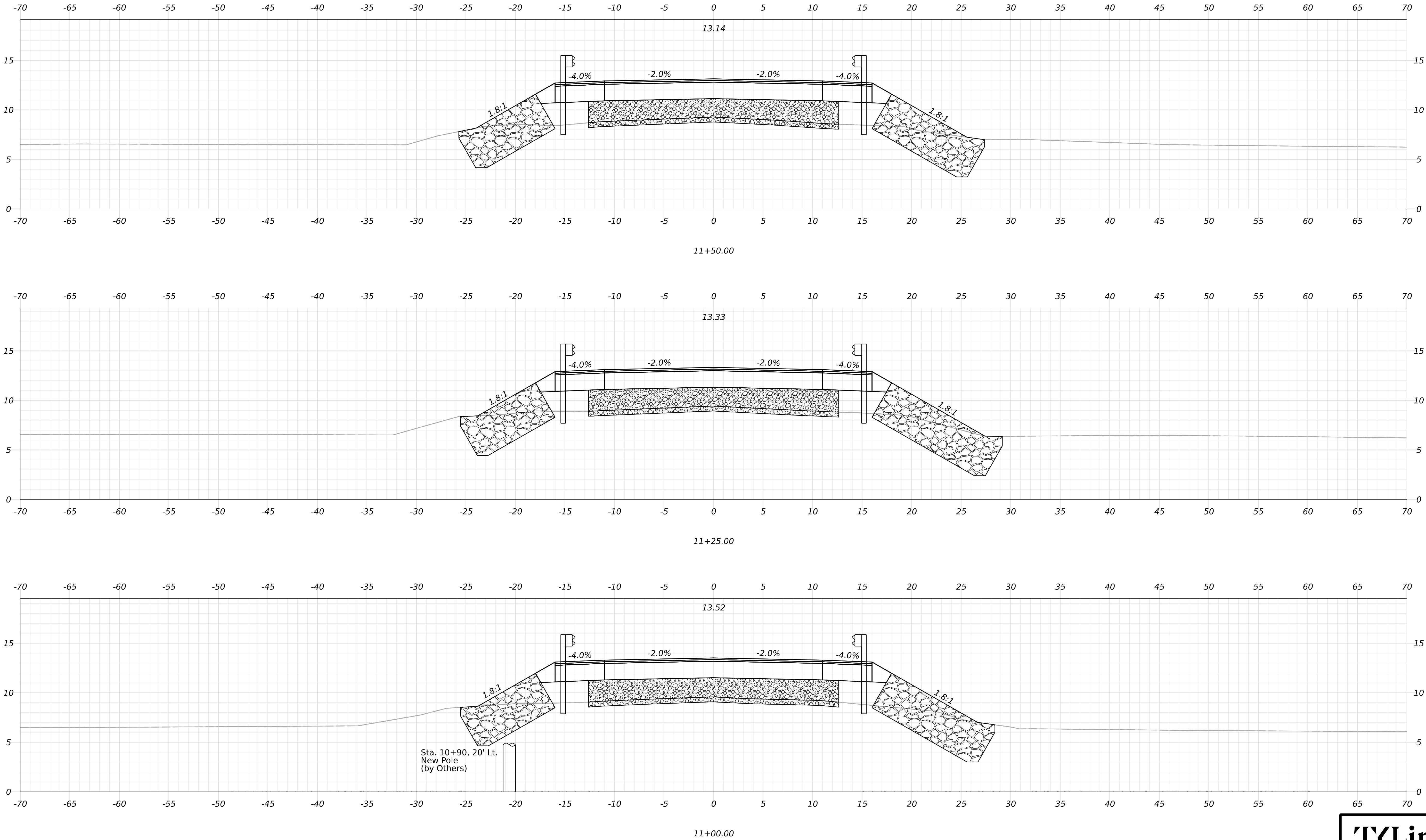
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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 2716000
WIN 27160.00

PROJ. MANAGER	CHARLES GUY	BY	DATE
DESIGN-DETAILED	T. KELLY	T. KELLY	10/2024
CHECKED-REVIEWED	S. DAVIS	D. MYERS	10/2024
DESIGN-DETAILED2			
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REVISIONS 1			
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REVISIONS 3			
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LOT NORTON BRIDGE NO. 3754 CROSSING KNOWLES RIVER ADDISON
APPROACH CROSS SECTIONS

SHEET NUMBER
19
OF 32



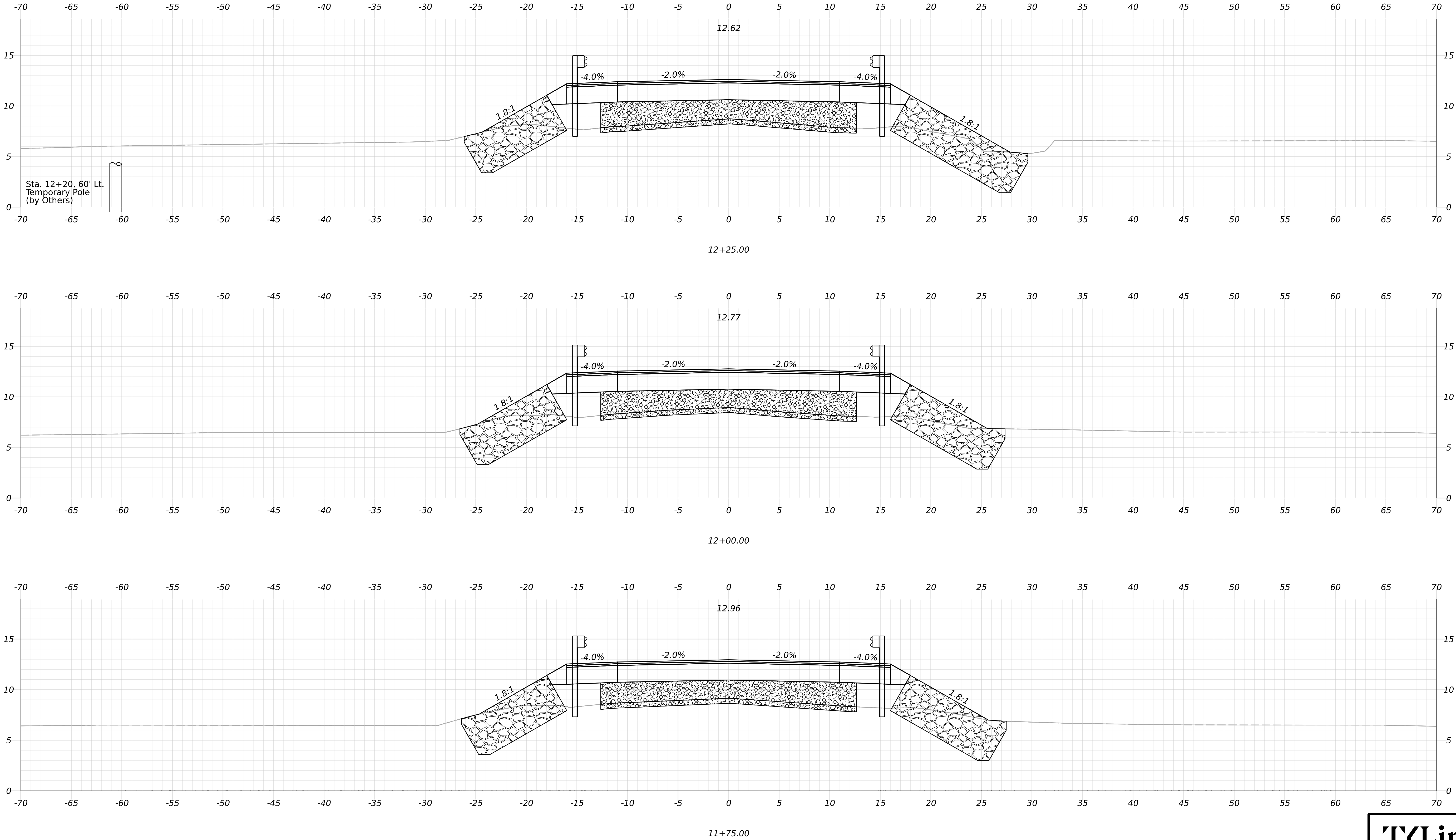
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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 2716000
WIN 27160.00

PROJ. MANAGER	CHARLES GUY	BY	DATE
DESIGN-DETAILED	T. KELLY	T. KELLY	10/2024
CHECKED-REVIEWED	S. DAVIS	D. MYERS	10/2024
DESIGN-DETAILED2			
DESIGN-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

LOT NORTON BRIDGE NO. 3754 CROSSING KNOWLES RIVER ADDISON
APPROACH CROSS SECTIONS

SHEET NUMBER
20
OF 32



TYLin

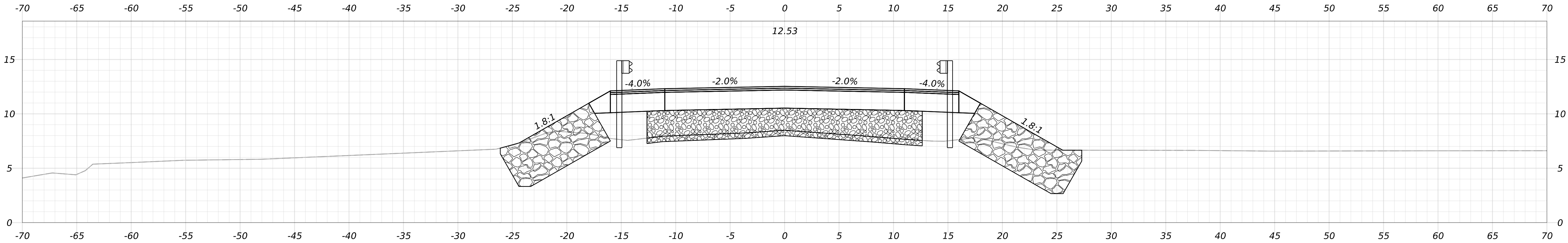
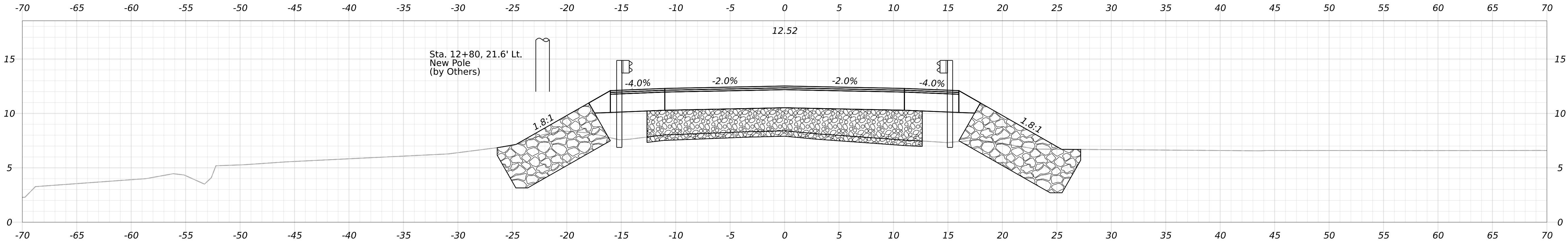
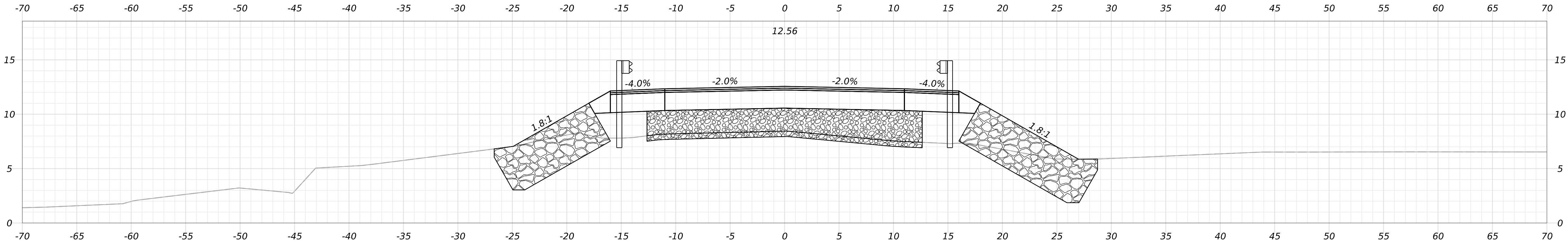
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 2716000
WIN 27160.00

PROJ. MANAGER	CHARLES GUY	BY	DATE
DESIGN-DETAILED	T. KELLY	T. KELLY	10/2024
CHECKED-REVIEWED	S. DAVIS	D. MYERS	10/2024
DESIGN-DETAILED2			
DESIGN-DETAILED3			
REVISIONS 1			
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REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

LOT NORTON BRIDGE NO. 3754
CROSSING KNOWLES RIVER
ADDISON
APPROACH CROSS SECTIONS

SHEET NUMBER
21
OF 32

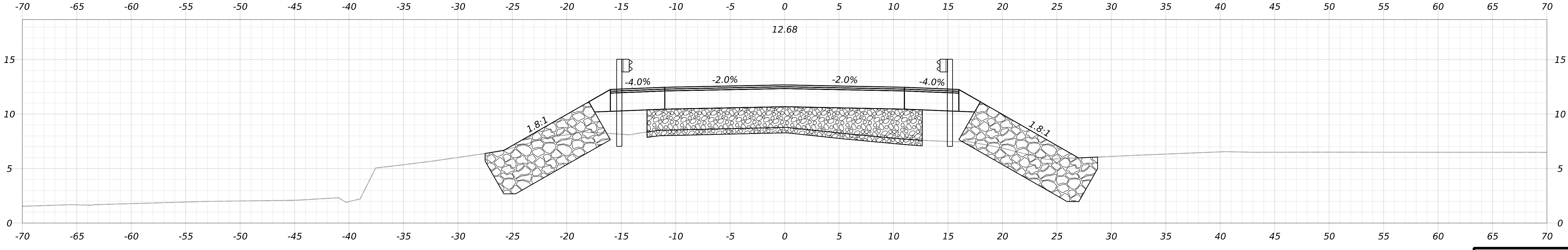
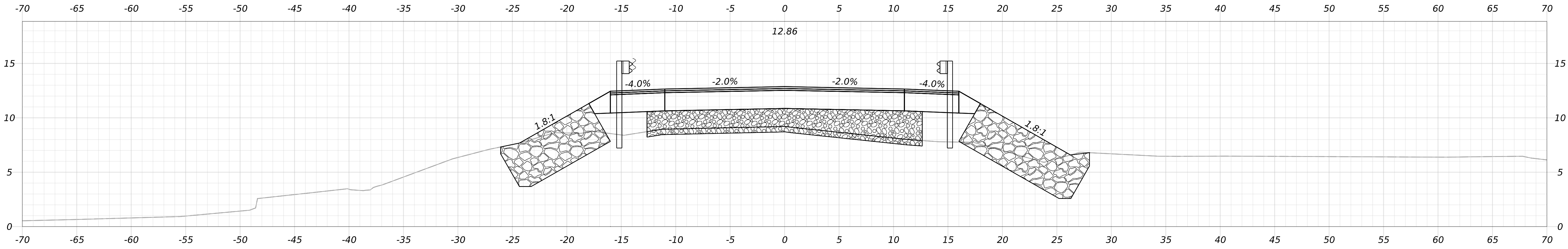
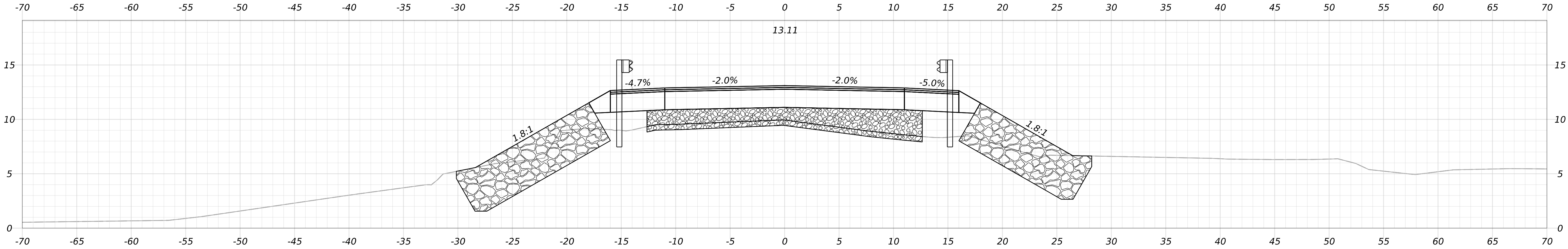
Username: danielmyers Date: 8/26/2026



TYLin

PROJ. MANAGER	CHARLES GUY	BY	DATE
DESIGN-DETAILED	T. KELLY	T. KELLY	10/2024
CHECKED-REVIEWED	S. DAVIS	D. MYERS	10/2024
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FIELD CHANGES			

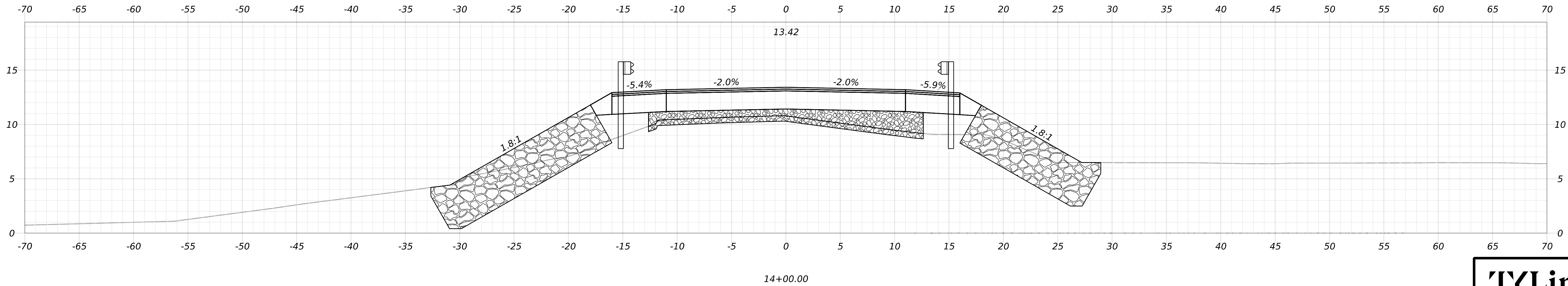
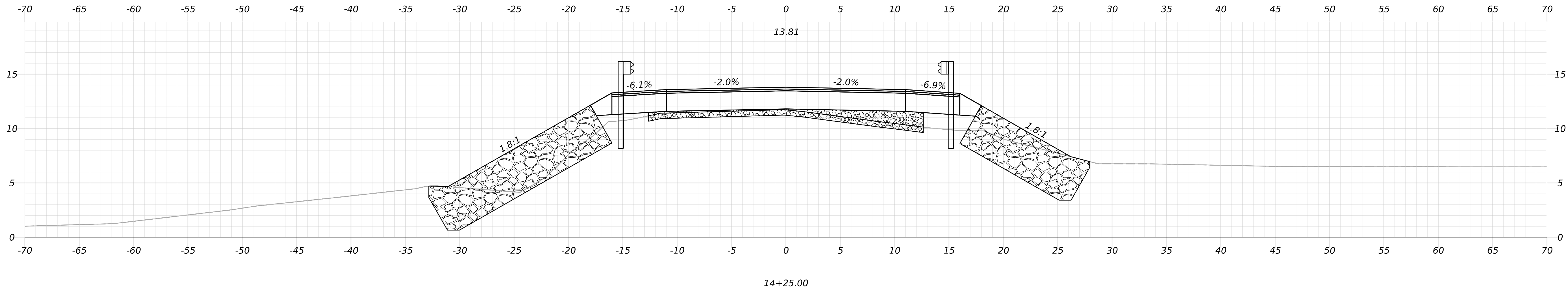
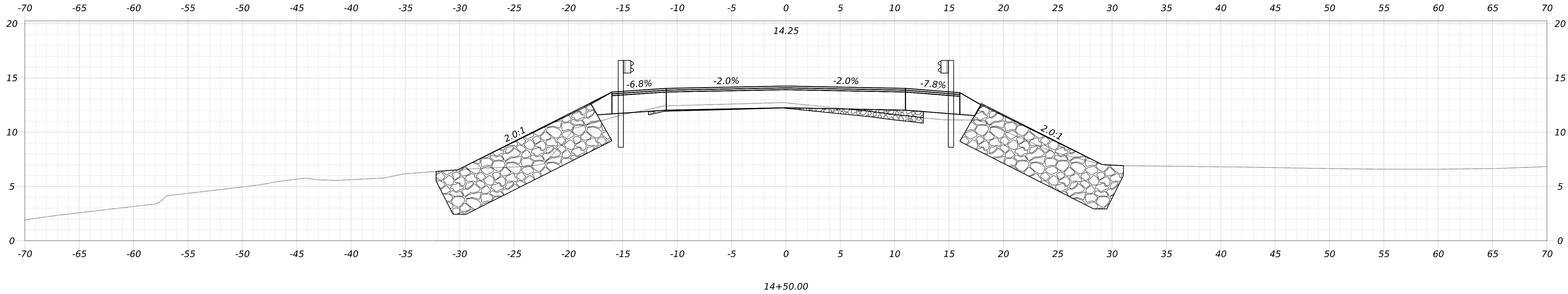
LOT NORTON BRIDGE NO. 3754
CROSSING KNOWLES RIVER
ADDISON
APPROACH CROSS SECTIONS



TYLin

PROJ. MANAGER	CHARLES GUY	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	T. KELLY	T. KELLY	10/2024			
CHECKED-REVIEWED	S. DAVIS	D. MYERS	10/2024			
DESIGN-DETAILED2						
DESIGN-DETAILED3						
REVISIONS 1						
REVISIONS 2						
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FIELD CHANGES						

LOT NORTON BRIDGE NO. 3754
CROSSING KNOWLES RIVER
ADDISON
APPROACH CROSS SECTIONS



TYLin

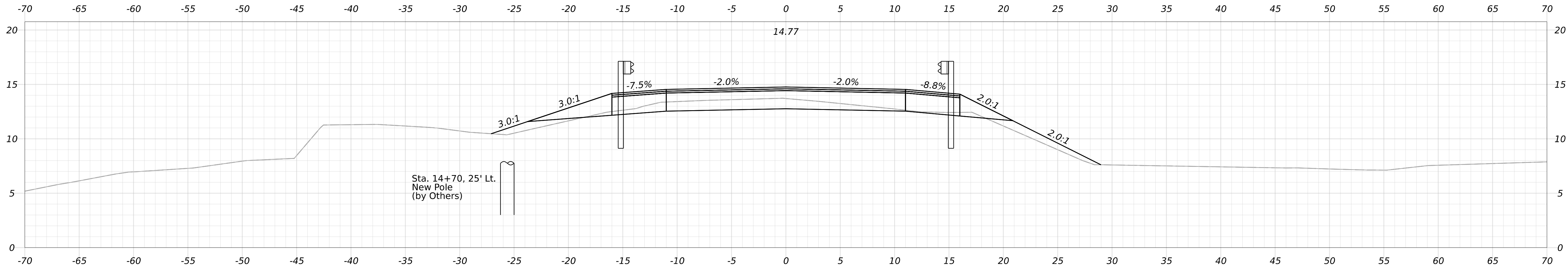
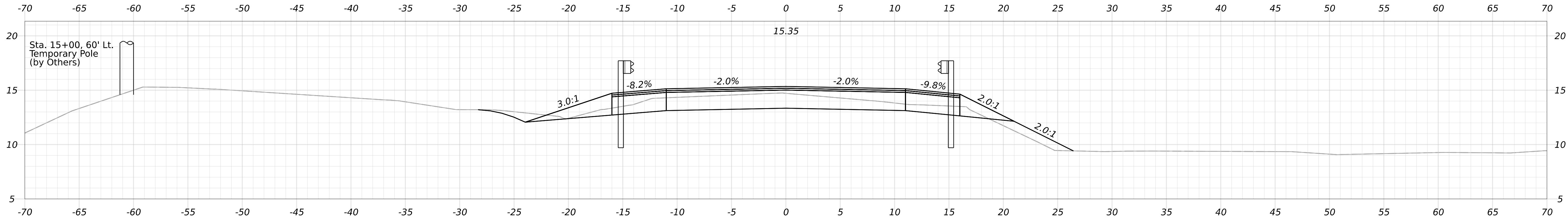
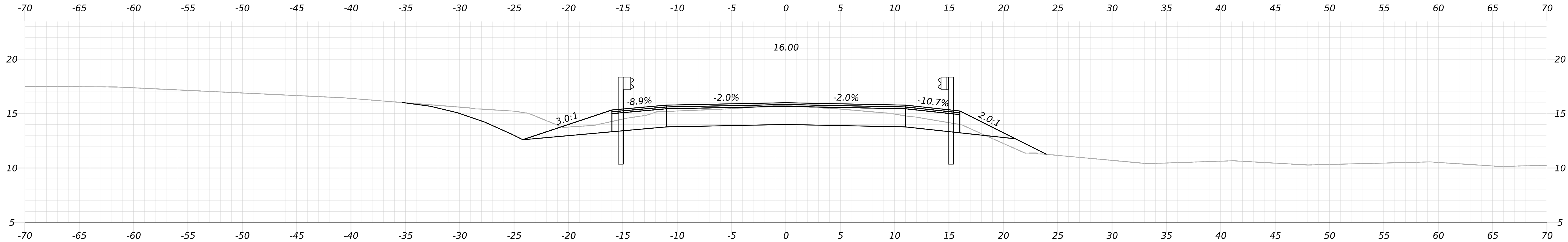
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 2716000
WIN 27160.00

PROJ. MANAGER	CHARLES GUY	BY	DATE
DESIGN-DETAILED	T. KELLY	T. KELLY	10/2024
CHECKED-REVIEWED	S. DAVIS	D. MYERS	10/2024
DESIGN-DETAILED2			
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REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

LOT NORTON BRIDGE NO. 3754 CROSSING KNOWLES RIVER ADDISON
APPROACH CROSS SECTIONS

SHEET NUMBER
24
OF 32

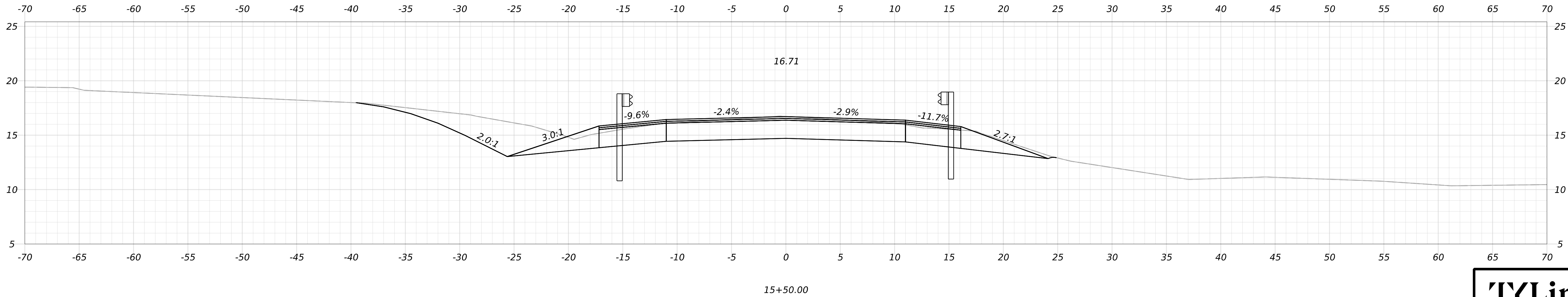
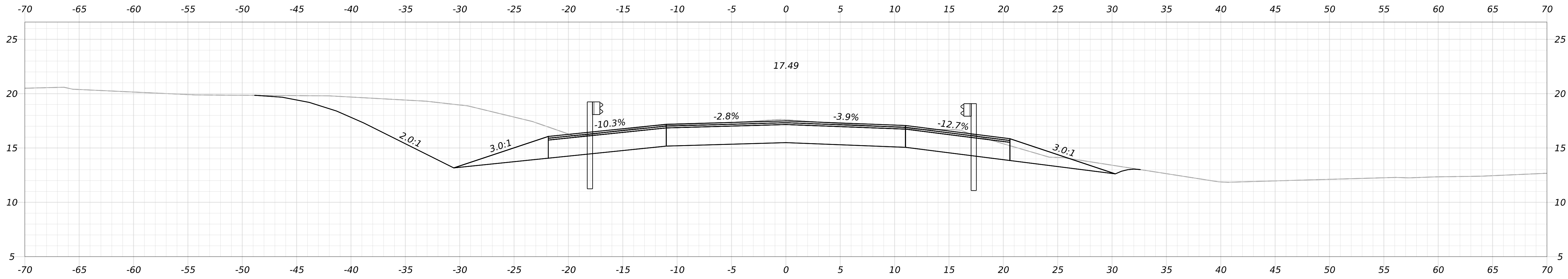
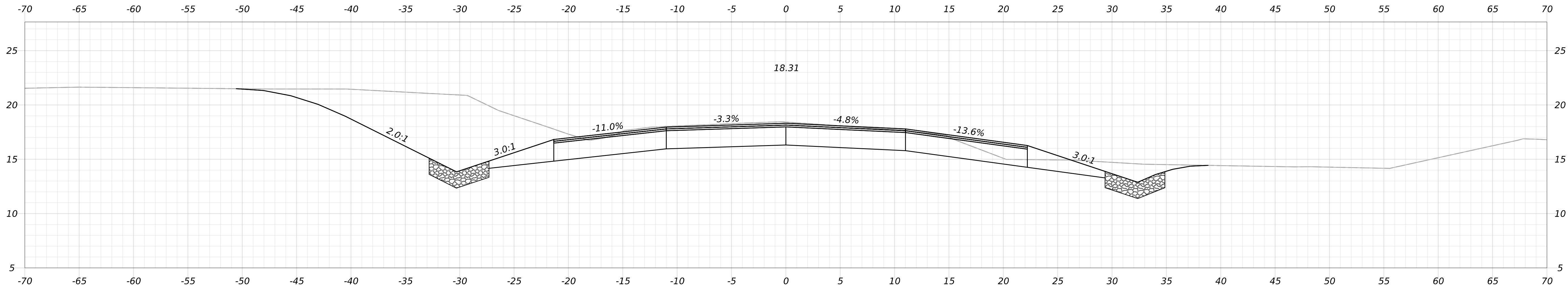
Username: danielmyers Date: 8/26/2026



PROJ. MANAGER	CHARLES GUY	BY	DATE
DESIGN-STARTED	T. KELLY	T. KELLY	10/2024
CHECKED-REVIEWED	S. DAVIS	D. MYERS	10/2024
DESIGN-DETAILED2			
DESIGN-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

LOT NORTON BRIDGE NO. 3754
CROSSING KNOWLES RIVER
ADDISON
APPROACH CROSS SECTIONS





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STATE OF MAINE DEPARTMENT OF TRANSPORTATION	Federal Project No. 2716000	
	WIN 27160.00	

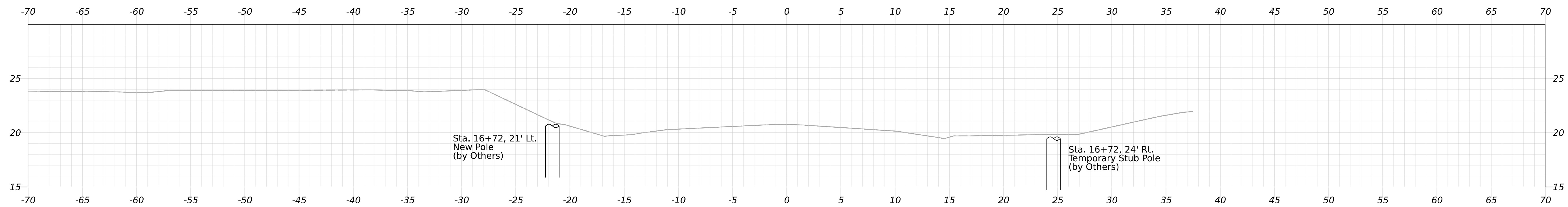
PROJ. MANAGER	CHARLES GUY	BY	DATE
DESIGN-DETAILED	T. KELLY	T. KELLY	10/2024
CHECKED-REVIEWED	S. DAVIS	D. MYERS	10/2024
DESIGN-2-DETAILED2			
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REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

LOT NORTON BRIDGE NO. 3754 CROSSING KNOWLES RIVER ADDISON	APPROACH CROSS SECTIONS

SHEET NUMBER	
26	OF 32

Username: daniel.myers

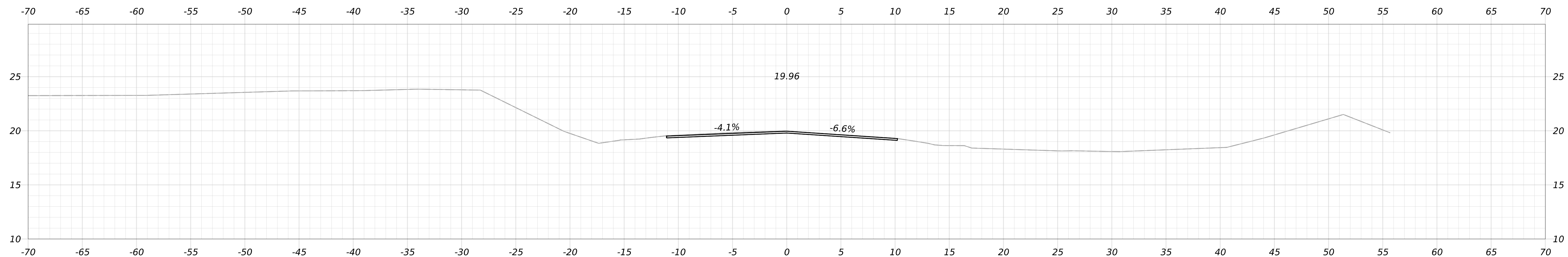
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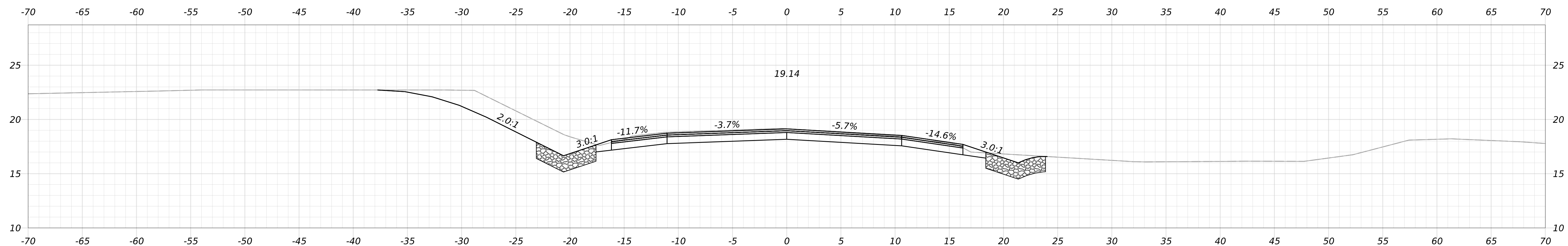
Sta. 16+72, 21' Lt.
New Pole
(by Others)

Sta. 16+72, 24' Rt.
Temporary Stub Pole
(by Others)

16+75.00



16+50.00

 $16+25.00$

TYLin

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

Federal Project No. 2716000

WIN 27160.00

PROJ. MANAGER	CHARLES GUY	BY	DATE
DESIGN-DETAILED	T. KELLY	T. KELLY	10/2024
CHECKED-REVIEWED	S. DAVIS	D. MYERS	10/2024

P.E. NUMBER

DATE _____

LOT NORTON BRIDGE NO. 3754
CROSSING KNOWLES RIVER
ADDISON

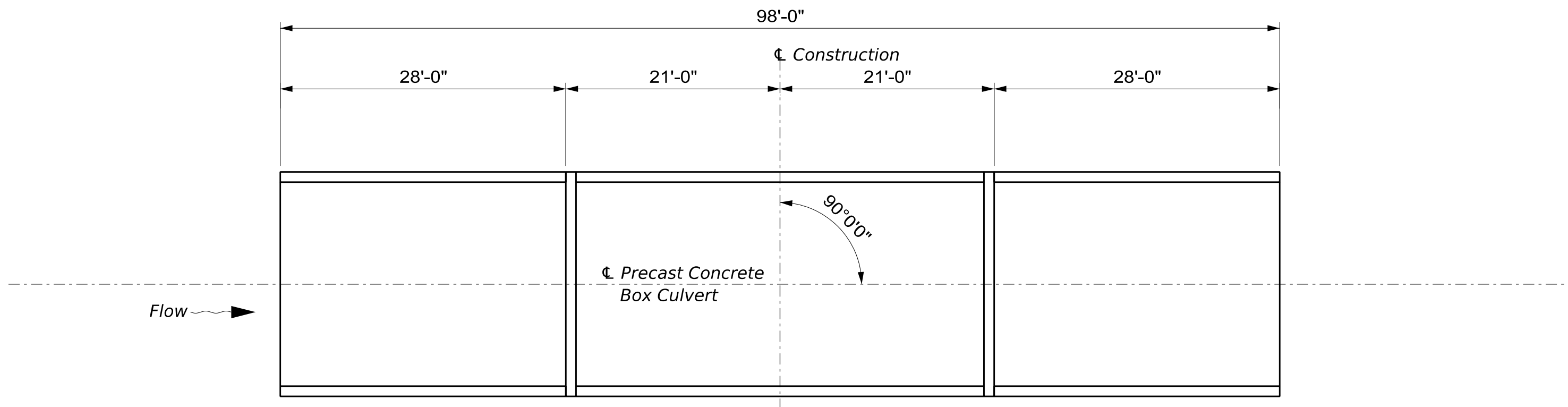
ADDISON

APPROACH CROSS SECTIONS

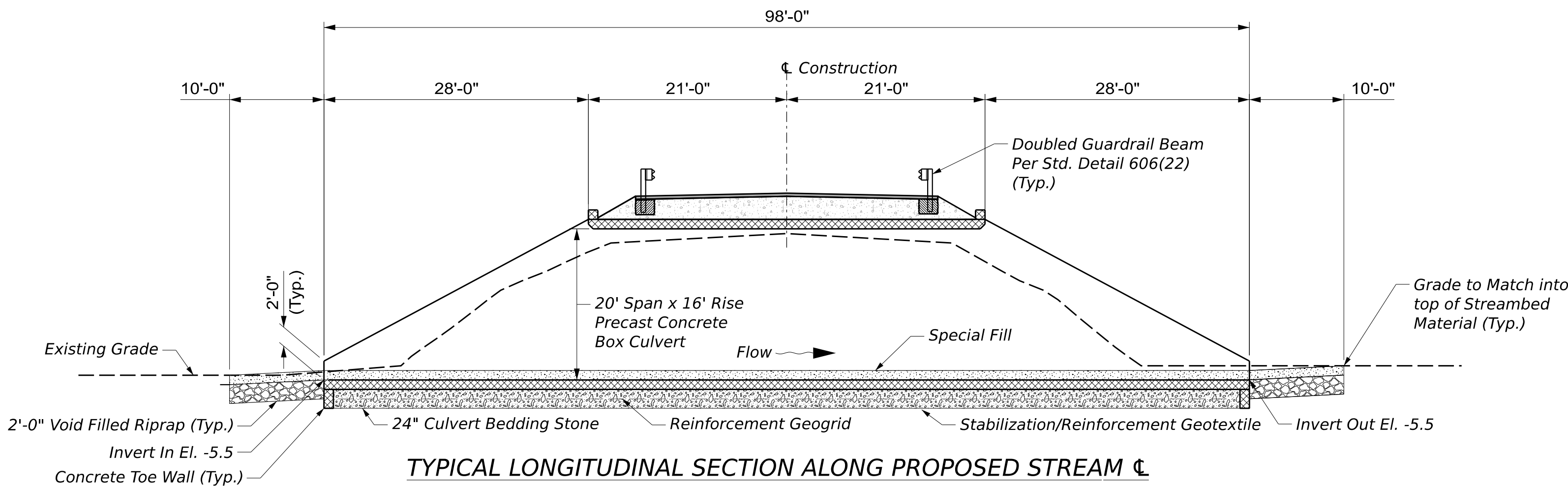
SHEET NUMBER

27

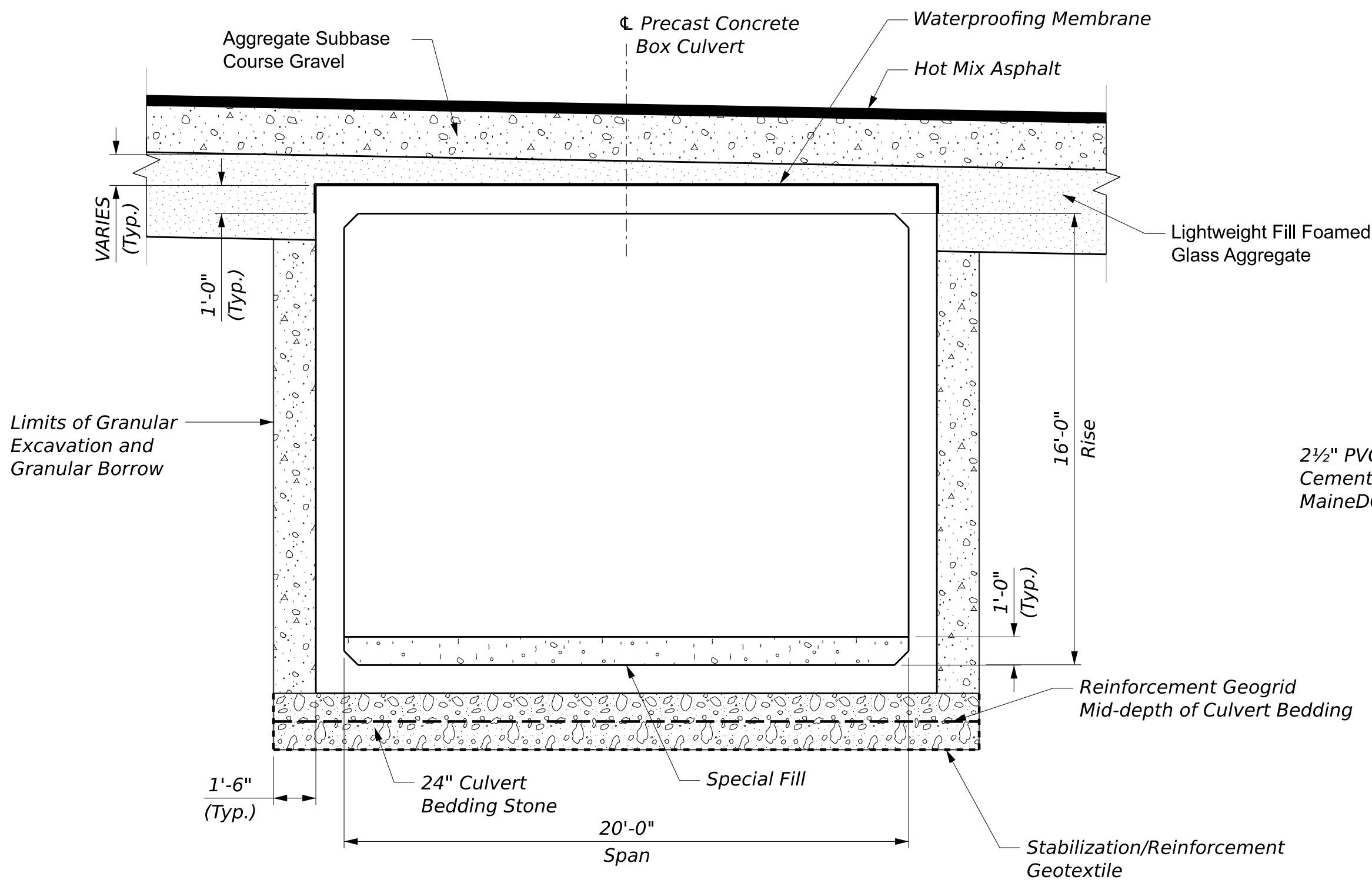
OF 32



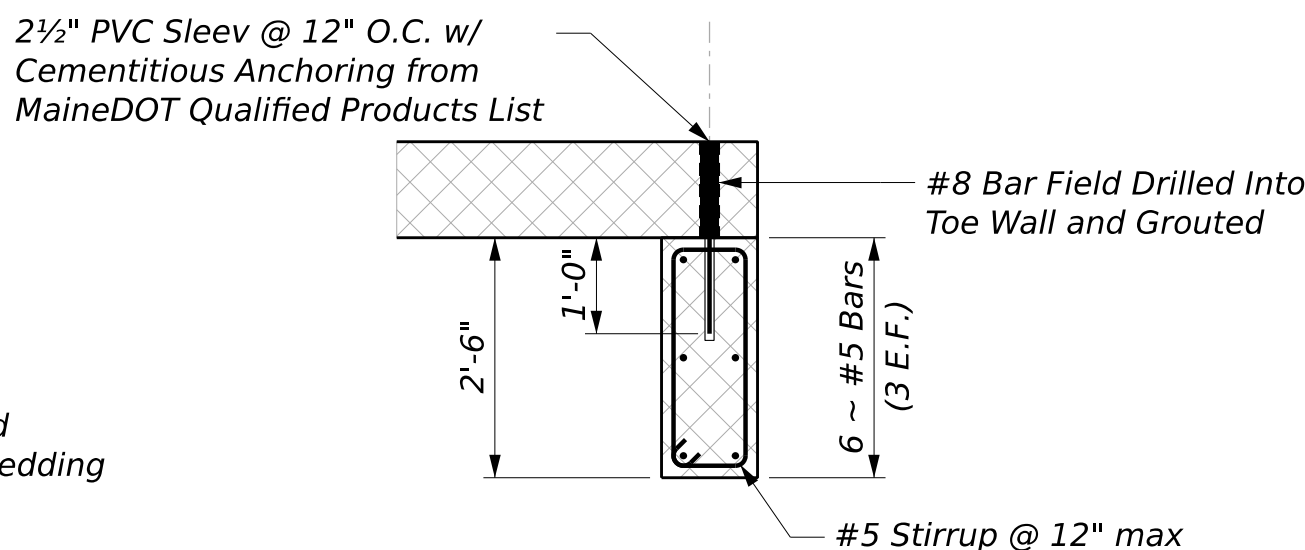
PRECAST CONCRETE BOX CULVERT



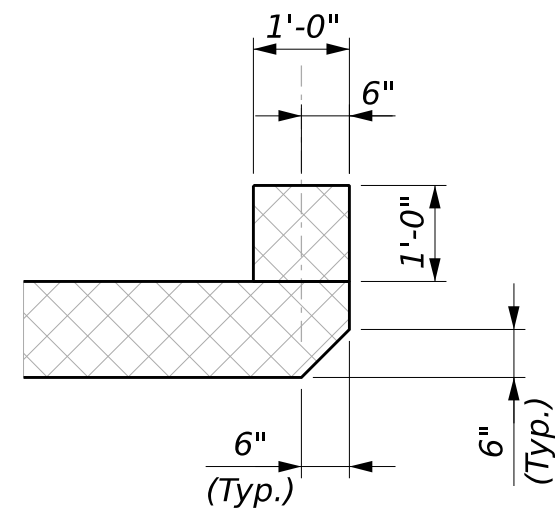
TYPICAL LONGITUDINAL SECTION ALONG PROPOSED STREAM CL



BOX CULVERT SECTION



PRECAST CONCRETE TOE WALL DETAIL



PRECAST CONCRETE HEADWALL DETAIL

PRECAST CONCRETE BOX NOTES

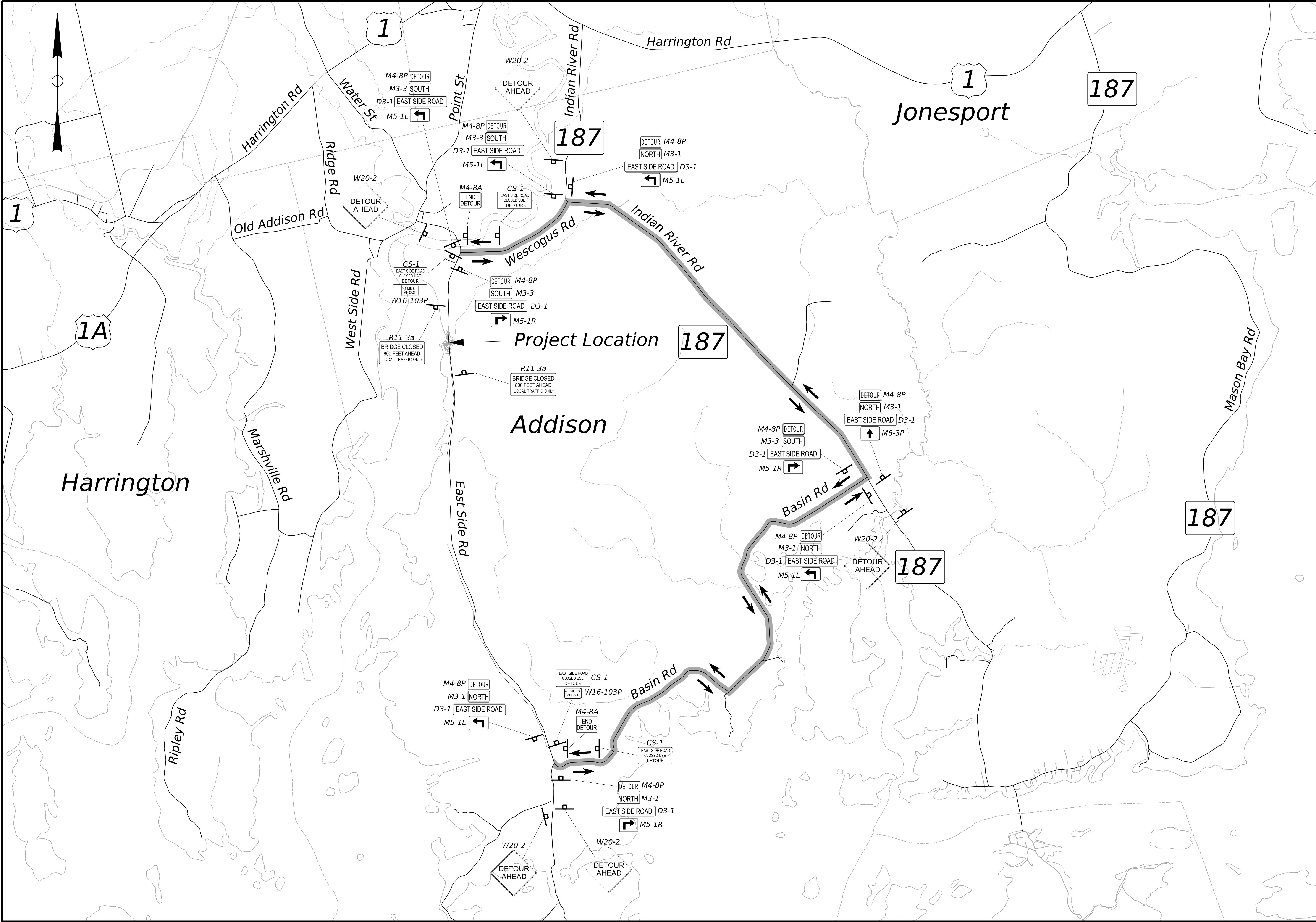
- The precast units shall be designed to carry construction loadings with a minimum fill cover of 18 inches over the top of the units.
- In accordance with Standard Specification Subsection 534.04, Precast Structural Concrete. The Contractor shall submit design calculations for the precast structure to the Department for review. The calculations shall demonstrate that the factored bearing pressures at the Strength Limit and Service Limit States do not exceed the factored geotechnical bearing resistances provided in the project geotechnical design report.
- The bearing surface for the Box Culvert bearing pad, below the geotextile-underlain crushed stone (Culvert Bedding Stone), is within a tidal area and anticipated to be below groundwater. It is in a sensitive, marine silty clay deposit. The full nature of the bearing surface will not be evident until the culvert excavation is made. More information is provided in the project geotechnical design report.
- A temporary earth support system will be necessary to maintain a stable excavation. Sloping the sides of the excavation should not be considered feasible. Should the Contractor propose sloping the sideslopes (open cutting), it shall be at the contractor's risk. Regardless of the method of excavation, all excavations and earth support systems shall meet all applicable OSHA regulations.
- The contractor's temporary earth support system (cofferdam) design shall include provisions for continuous dewatering, shall have adequate embedment to protect against bottom heave, and shall address phasing the shut down of the dewatering system to avoid a condition under which the culvert floats. Payment for design, installation, and removal of the temporary earth support system shall be incidental to the cofferdam pay item.
- The Contractor shall maintain the excavation so that the box culvert and culvert bedding layer are installed in-the-dry. Groundwater shall be controlled by pumping from sumps or other dewatering systems selected by the Contractor.
- The native soil subgrade shall be excavated using a smooth-edged bucket and proper grade control to avoid disturbance of the subgrade and underlying deposits. The contractor shall not operate heavy equipment over the excavated subgrade to minimize subgrade disturbance and limit vibration-induced disturbance to the saturated subgrade. If the subgrade becomes disturbed, weakened, or excavated below the design bearing surface, the Contractor shall remove the disturbed soils, place non-woven Stabilization/ Reinforcement Geotextile and backfill with additional culvert bedding stone. Additional bedding stone (beyond the design 2-foot depth) to make up for the overexcavation will be at no additional cost to the Department.
- The box culvert will bear on a 2-foot thick layer of crushed stone (Culvert Bedding Stone) that is surrounded by (Up 2-foot sidewalls and underlain) non-woven Stabilization/Reinforcement Geotextile fabric. A geogrid will be embedded at the midpoint of geotextile-wrapped, 2-foot thick crushed stone layer. Payment for the Stabilization/Reinforcement Geotextile fabric and embedded geogrid that is part of the bearing pad shall be part of the 620.54 Stabilization/ Reinforcement Geotextile and 620.65 Reinforcement Geogrid pay items.
- The Stabilization/Reinforcement Geotextile shall be placed on the excavated subgrade surface prior to placement of the culvert bedding stone. Adjoining sections of the geotextile shall be overlapped by a minimum of 2 feet. The culvert bedding material shall be placed in maximum 6-inch-thick lifts and each lift compacted with a walk-behind vibrator-type compactor.

STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
Federal Project No. 2716000	
WIN 27160.00	

PROJ. MANAGER	DESIGN-DETAILED	CHECKED-REVIEWED	DESIGN-DETAILED2	DESIGN-DETAILED3	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES
CHARLES GUY	N. DIMARIANO	D. MYERS							
BY	DATE	SIGNATURE	P.E. NUMBER	DATE					
	10/20/2024								

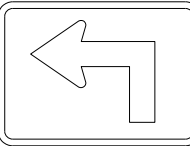
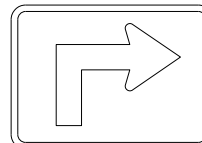
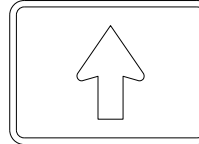
LOT NORTON BRIDGE NO. 3754	
CROSSING KNOWLES RIVER	
ADDISON	
CULVERT DETAILS	

SHEET NUMBER	
28	
OF 32	



STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
Federal Project No. 2716000		WIN 27160.00	
LOT NORTON BRIDGE NO. 3754 CROSSING KNOWLES RIVER ADDISON		DETOUR PLAN	
SHEET NUMBER		29 OF 32	
PROJ. MANAGER	CHARLES GUY	BY	DATE
DESIGN-DETAILED	J. MCCLURE	P. MCCLURE	06/2026
CHECKED-REVIEWED	J. MYERS	D. MYERS	06/2026
DESIGN-2-DETAILED2			
DESIGN-3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
SIGNATURE		P.E. NUMBER	
DATE			

DETOUR SIGN SUMMARY

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)				NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET	NOTES
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.			BACK- GROUND	LEGEND BORDER			
CS-1	60"	40"	EAST SIDE ROAD CLOSED USE DETOUR	TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 2009 (TYP.)				4	WHITE	BLACK		16.67 (66.68)	
D3-1	54"	12"	EAST SIDE ROAD					9	ORANGE	BLACK		4.50 (40.5)	
M3-1	24"	12"	NORTH					5	WHITE	BLACK		2.00 (10)	
M3-3	24"	12"	SOUTH					4	WHITE	BLACK		2.00 (8)	
M4-8A	24"	18"	END DETOUR					2	ORANGE	BLACK		3.00 (6)	
M4-8P	24"	12"	DETOUR					9	ORANGE	BLACK		2.00 (18)	
M5-1L	21"	15"						5	WHITE	BLACK		2.19 (10.95)	
M5-1R	21"	15"						3	WHITE	BLACK		2.19 (6.57)	
M6-3P	21"	15"						1	WHITE	BLACK		2.19 (2.19)	
R11-3a	60"	30"	BRIDGE CLOSED 800 FEET AHEAD LOCAL TRAFFIC ONLY					2	WHITE	BLACK		12.50 (25)	
W16-103P (1)	24"	18"	1 MILE AHEAD					1	WHITE	BLACK		3.00 (3)	
W16-103P (4.5)	24"	18"	4.5 MILES AHEAD					1	WHITE	BLACK		3.00 (3)	
W20-2	36"	36"						5	ORANGE	BLACK		9.00 (45)	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 2716000
WIN 27160.00

LOT NORTON BRIDGE NO. 3754
CROSSING KNOWLES RIVER
ADDISON

DETOUR SIGN SUMMARY

SHEET NUMBER
30
OF 32

PROJ. MANAGER
DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-D2-DETAILED2
DESIGN-D3-DETAILED3
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

CHARLES GUY
J. MCCLURE
D. MYERS

BY
P. MCCLURE
D. MYERS

DATE
06/2026
06/2026

SIGNATURE
P.E. NUMBER
DATE

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