

# STATE OF MAINE DEPARTMENT OF TRANSPORTATION



## PALMYRA SOMERSET COUNTY HANSON BRIDGE OVER SMITH BROOK SAINT ALBANS ROAD PROJECT LENGTH 0.07 mi. BRIDGE NO. 1035

### 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

### HYDROLOGIC DATA

Drainage Area .....	6.28 sq mi
Annual Discharge (Q1.1) .....	100 cfs
Design Discharge (Q50) .....	605 cfs
Check Discharge (Q100) .....	705 cfs
Headwater Elevation (Q1.1) .....	286.1 ft
Headwater Elevation (Q25) .....	289.0 ft
Headwater Elevation (Q50) .....	289.3 ft
Headwater Elevation (Q100) .....	289.7 ft
Discharge Velocity (Q1.1) .....	1.8 fps
Discharge Velocity (Q50) .....	4.6 fps
Discharge Velocity (Q100) .....	4.9 fps

### MATERIALS

Concrete:  
 Precast ..... Class "P"  
 All Other ..... Class "A"  
 Reinforcing:  
 Plain Reinforcing Steel ..... ASTM A615, Grade 60  
 Welded Wire Reinforcement ..... ASTM A1064

### BASIC DESIGN STRESSES

Concrete:  
 Class "A" ..... f 'c = 4,000 psi  
 Class "P" ..... f 'c = 5,000 psi  
 Reinforcing:  
 Plain Reinforcing Steel ..... f y = 60,000 psi  
 Welded Wire Reinforcement ..... f y = 65,000 psi

### LIST OF DRAWINGS

Title Sheet .....	1
Estimated Quantities & General Construction Notes .....	2
General Plan .....	3
Profile .....	4
Boring Location Plan and Interpretive Subsurface Profile .....	5
Boring Logs .....	6
Highway Approach Cross - Sections .....	7-13
Precast Concrete Box Culvert .....	14
Streambed Plan .....	15
Precast Concrete Box Culvert Details .....	16
Culvert-Mounted Guardrail System Details .....	17
Detour Plan .....	18
Right of Way Map .....	19

### UTILITIES

Central Maine Power Company  
 Hartland & St. Albans Telephone Company (TDS of Maine)

### TRAFFIC DATA

Current (2020) AADT .....	1420
Future (2040) AADT .....	1560
DHV - % of AADT .....	11
Design Hour Volume .....	172
Heavy Trucks (% of AADT) .....	10
Heavy Trucks (% of DHV) .....	10
Directional Distribution (% of DHV) .....	65
18 kip Equivalent P 2.0 .....	60
18 kip Equivalent P 2.5 .....	57
Design Speed (mph) .....	45

### MAINTENANCE OF TRAFFIC

Road closure with off-site detour.

<u>PROJECT LOCATION</u>	Saint Albans Road over Smith Brook. Located 0.73 miles north of Warren Hill Road. Lat./Long. 44°52'06.3" N 69°22'09.4" W
<u>OUTLINE OF WORK</u>	Bridge Replacement

STATE OF MAINE  
 DEPARTMENT OF TRANSPORTATION  
 APPROVED: *[Signature]*  
 DATE: 12-14-23  
 COMMISSIONER: *[Signature]*  
 CHIEF ENGINEER: *[Signature]*

STATE OF MAINE  
 PROFESSIONAL ENGINEER  
 Joshua Paul Hebron  
 SIGNATURE: *[Signature]*  
 14372  
 P.E. NUMBER: 13 DE 2023  
 DATE:

PROGRAM	BRIDGE
PROJECT MANAGER	M. PARLIN
DESIGNER	J. HANBROOK
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

WIN 022256.00  
 PALMYRA  
 HANSON BRIDGE  
 TITLE SHEET

SHEET NUMBER  
**1**  
 OF 19

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.19	REMOVING EXISTING BRIDGE (50 CY)	1	LS
202.202	REMOVING PAVEMENT SURFACE	480	SY
203.20	COMMON EXCAVATION	1310	CY
203.25	GRANULAR BORROW	180	CY
203.33	SPECIAL FILL	170	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	860	CY
304.16	AGGREGATE BASE COURSE - TYPE C	80	CY
403.208	HOT MIX ASPHALT 12.5MM HMA SURFACE	157	T
403.211	HOT MIX ASPHALT (SHIMMING)	10	T
403.213	HOT MIX ASPHALT 12.5 MM BASE	197	T
409.15	BITUMINOUS TACK COAT - APPLIED	75	G
508.13	SHEET WATERPROOFING MEMBRANE (160 SY)	1	LS
511.07	COFFERDAM: UPSTREAM	1	LS
511.07	COFFERDAM: DOWNSTREAM	1	LS
511.07	COFFERDAM: HANSON BROOK CHANNEL	1	LS
513.22	CRUSHED STONE SLOPE PROTECTION	40	SY
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES (82 SY)	1	LS
526.301	PORTABLE CONCRETE BARRIER TYPE 1 (60 LF)	1	LS
534.71	PRECAST CONCRETE BOX CULVERT (229 CY)	1	LS
606.1301	31" W-BM GR, MID-WAY SPLICE-SGL FACED	388	LF
606.1305	31" W-BM GR, MID-WAY SPLICE FLARED TERMINAL	4	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	8	EA
606.743	GUARDRAIL - SINGLE RAIL CULVERT MOUNTED	50	LF
610.08	PLAIN RIPRAP	117	CY
610.212	STREAMBED ROCK FEATURES	30	CY
610.213	VOID FILLED RIPRAP	150	CY
613.319	EROSION CONTROL BLANKET	327	SY
618.14	SEEDING METHOD NUMBER 2	16	UN
619.14	EROSION CONTROL MIX	194	CY
620.58	EROSION CONTROL GEOTEXTILE	301	SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	1575	LF
629.05	HAND LABOR, STRAIGHT TIME	10	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
652.312	TYPE III BARRICADE	4	EA
652.33	DRUM	25	EA
652.34	CONE	50	EA
652.35	CONSTRUCTION SIGNS	400	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES (90 CD)	1	LS
652.38	FLAGGER	360	HR
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

**GENERAL CONSTRUCTION NOTES**

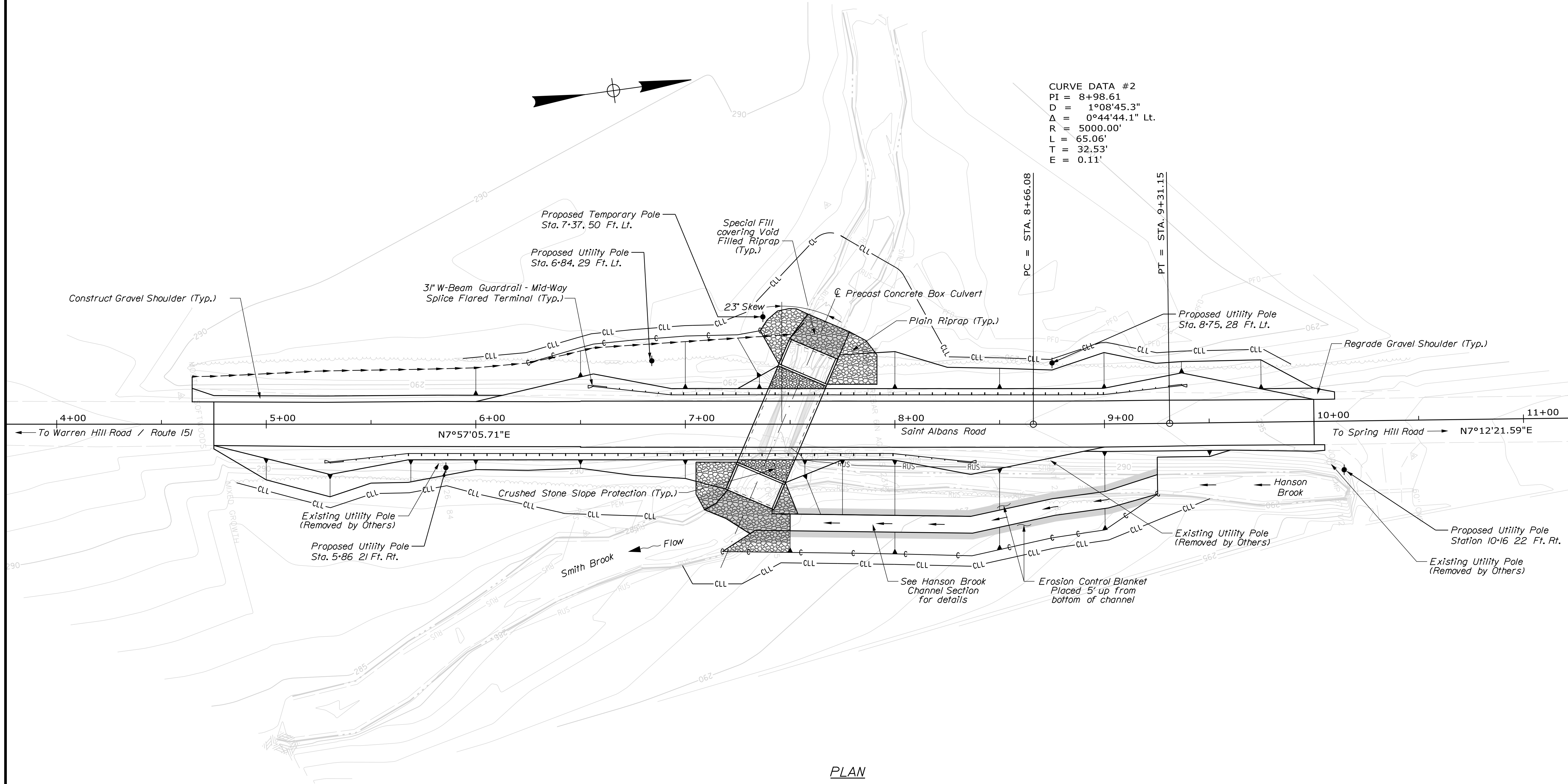
- For easements, construction limits, and right of way lines, refer to the Right of Way Map.
- The clearing limits as shown on the plans are approximate. The exact limits will be established in the field by the Resident. Payment for clearing will be considered incidental to Contract items.
- All utility 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, shall be Granular Borrow meeting the requirements of Standard Specifications Subsection 703.19, Granular Borrow, for Material for Underwater Backfill, with the additional requirement that the maximum particle size shall be limited to 4 inches.
- 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.
- Place Erosion Control Mix 4 inches deep on all new or reconstructed sideslopes or as directed by the Resident.
- Place a 24 inch wide strip of Erosion Control Blanket on the sideslopes along the top of the riprap.
- 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:  
  - 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.
- Project information referred to below may be accessed at the following MaineDOT web address: <http://www.maine.gov/mdot/contractors/>
- 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.
- The project geotechnical report titled: Geotechnical Design Report for the Replacement of Hanson Bridge, Palmyra, Maine, Soils Report 2023-27, dated December 6, 2023, 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.

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2225600		WIN		BRIDGE NO. 1035		BRIDGE PLANS	
HANSON BRIDGE		SMITH BROOK		SOMERSET COUNTY		PALMYRA		ESTIMATED QUANTITIES AND		GENERAL CONSTRUCTION NOTES	
SHEET NUMBER		2		OF 19							

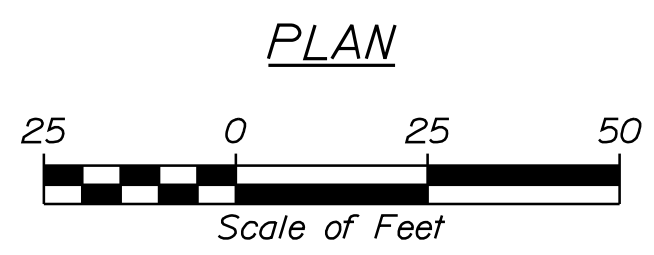
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Username: David Shaw

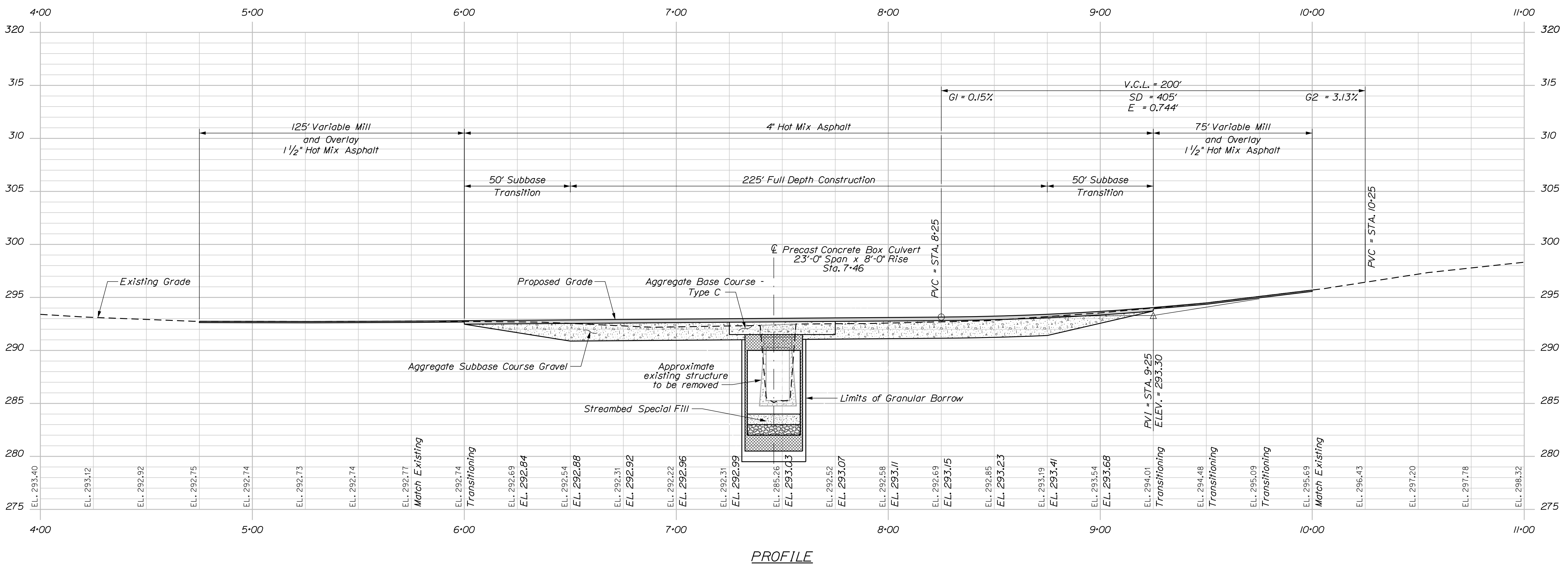
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CURVE DATA #2  
 PI = 8+98.61  
 D = 1°08'45.3"  
 Δ = 0°44'44.1" Lt.  
 R = 5000.00'  
 L = 65.06'  
 T = 32.53'  
 E = 0.11'



STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2225600	
HANSON BRIDGE		SOMERSET COUNTY		PALMYRA	
SMITH BROOK		GENERAL PLAN		SHEET NUMBER	
3		OF 19		BRIDGE NO. 1035	
WIN		022256.00		BRIDGE PLANS	
PROJ. MANAGER	M. PARLIN	BY	D. SHAW	DATE	Dec. 2023
CHECKED/REVIEWED	J. HASBROUCK	DESIGNED	N. PIKAY	DATE	Feb. 2022
DESIGNED/REVIEWED	N. PIKAY	DATE	Feb. 2022	SIGNATURE	
REVISIONS 1				P.E. NUMBER	
REVISIONS 2				DATE	
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					



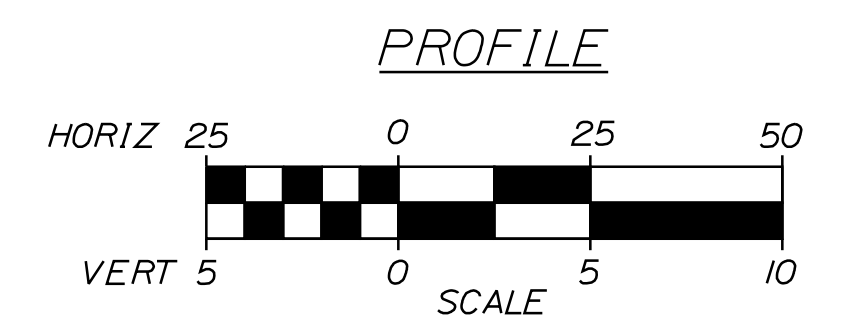
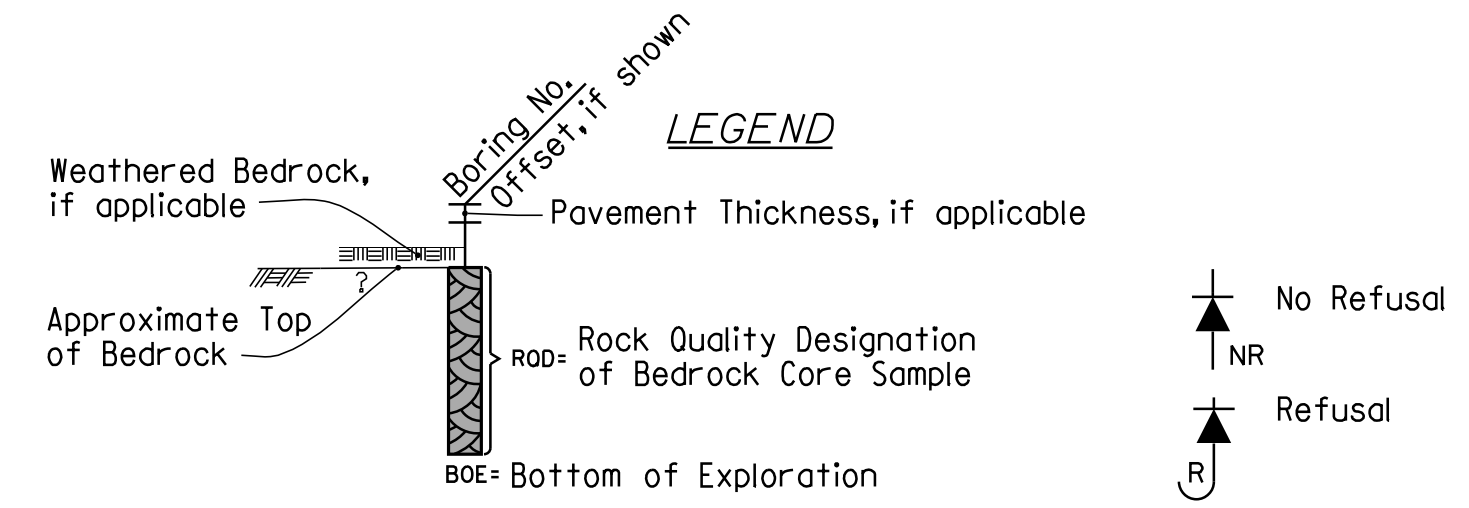
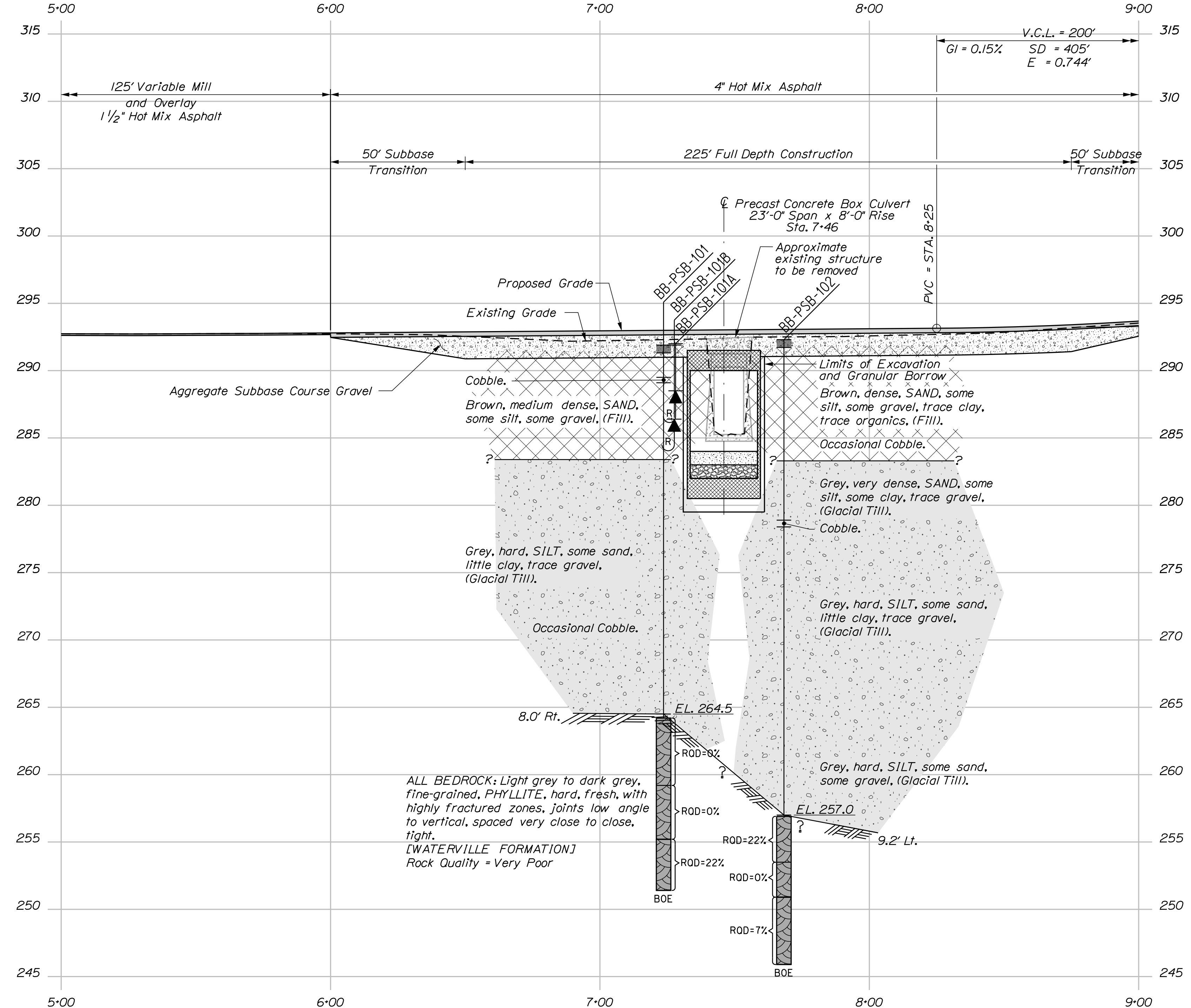
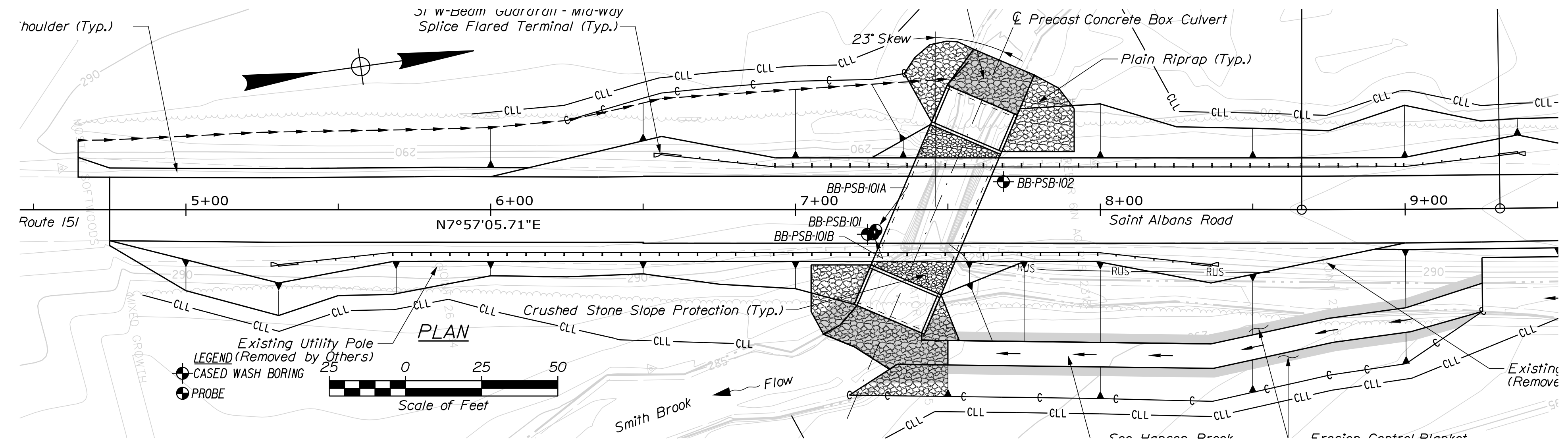
PROFILE

STATE OF MAINE DEPARTMENT OF TRANSPORTATION		2225600	
BRIDGE NO. 1035		WIN 022256.00	
BRIDGE PLANS			
HANSON BRIDGE SMITH BROOK PALMYRA		SOMERSET COUNTY	
PROJECT MANAGER M. PARLIN		BY D. SHAW	
DESIGN-DETAILED J. HASBROUCK		DATE Dec. 2023	
CHECKED-REVIEWED N. PIKAY		SIGNATURE I. WHITE	
DESIGN-DETAILED REVISIONS 1		P.E. NUMBER	
DESIGN-DETAILED REVISIONS 2		DATE	
DESIGN-DETAILED REVISIONS 3			
DESIGN-DETAILED REVISIONS 4			
FIELD CHANGES			
SHEET NUMBER		4	
OF 19			

Date: 12/13/2023

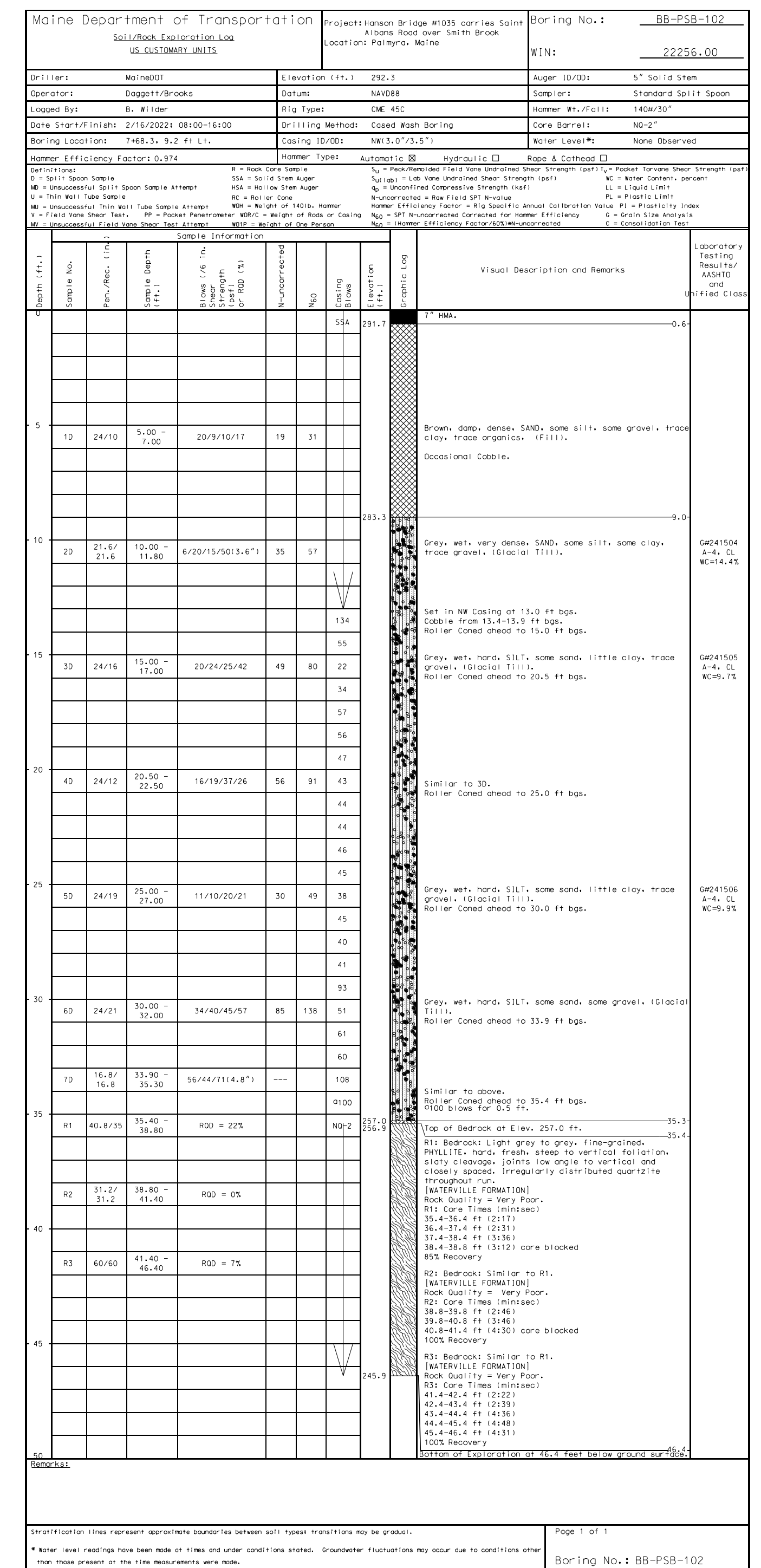
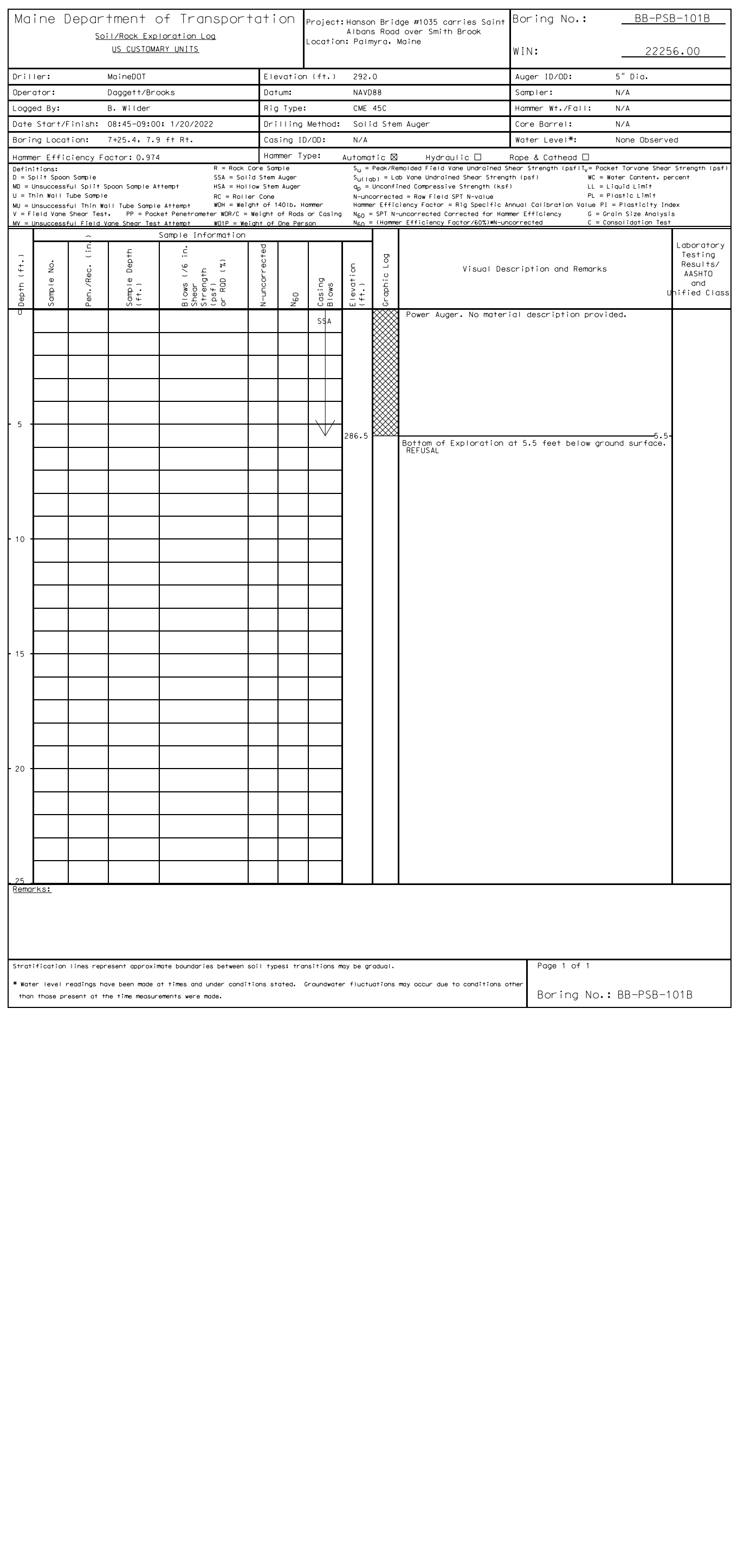
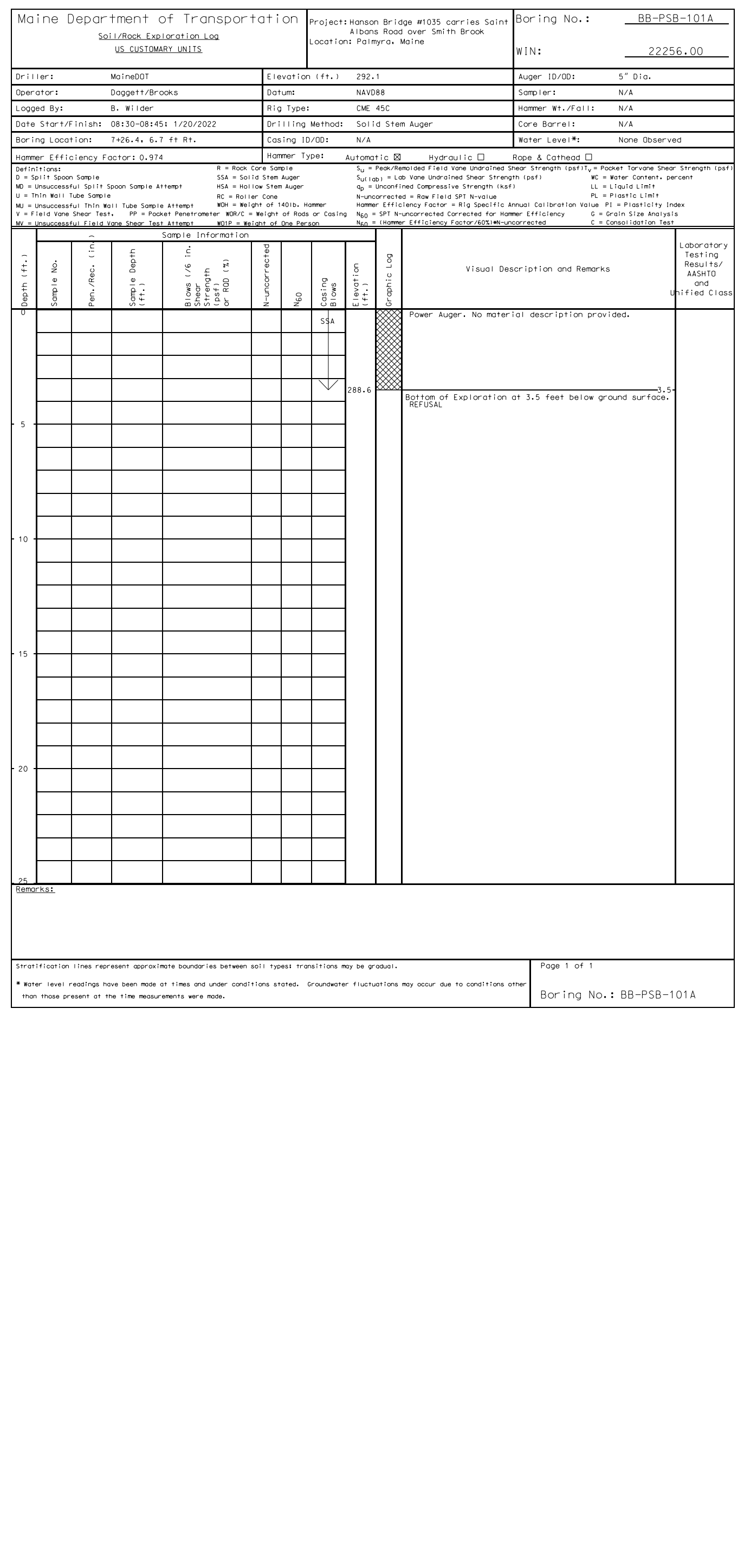
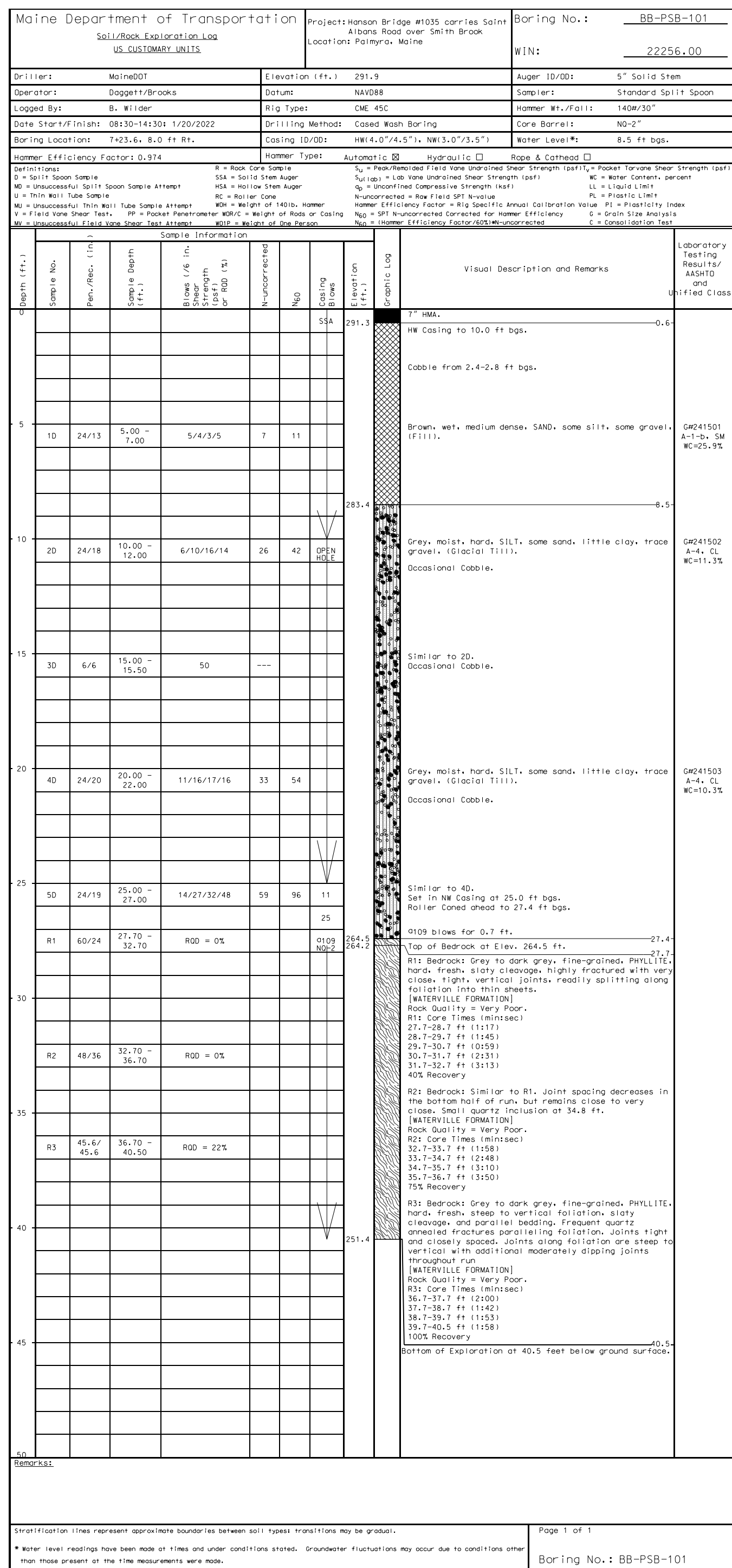
Username: David.Shaw

Filename: ... \GEO\TECH\MSTA\005\_BLP&ISP1.dgn Division: BRIDGE



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.

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2225600		WIN		BRIDGE NO. 1035		BRIDGE PLANS	
HANSON BRIDGE		SMITH BROOK		SOMERSET COUNTY		PALMYRA		BORING LOCATION PLAN & INTERPRETIVE SUBSURFACE PROFILE		SHEET NUMBER	
DESIGN DETAILED		CHECKED/REVIEWED		DESIGN DETAILED		DESIGN DETAILED		REVISIONS 1		REVISIONS 2	
BY		DATE		SIGNATURE		P.E. NUMBER		DATE		DATE	
T. WHITE		OCT 2023		T. WHITE		P.E. NUMBER		DATE		DATE	
REVISIONS 3		REVISIONS 4		FIELD CHANGES		DATE		DATE		DATE	
5		OF 19									



**STATE OF MAINE**  
**DEPARTMENT OF TRANSPORTATION**

**2225600**  
**WIN**  
**22256.00**  
**BRIDGE NO. 1035**  
**BRIDGE PLANS**

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**HANSON BRIDGE**  
**SMITH BROOK**  
**SOMERSET COUNTY**  
**PALMYRA**

**BORING LOGS**

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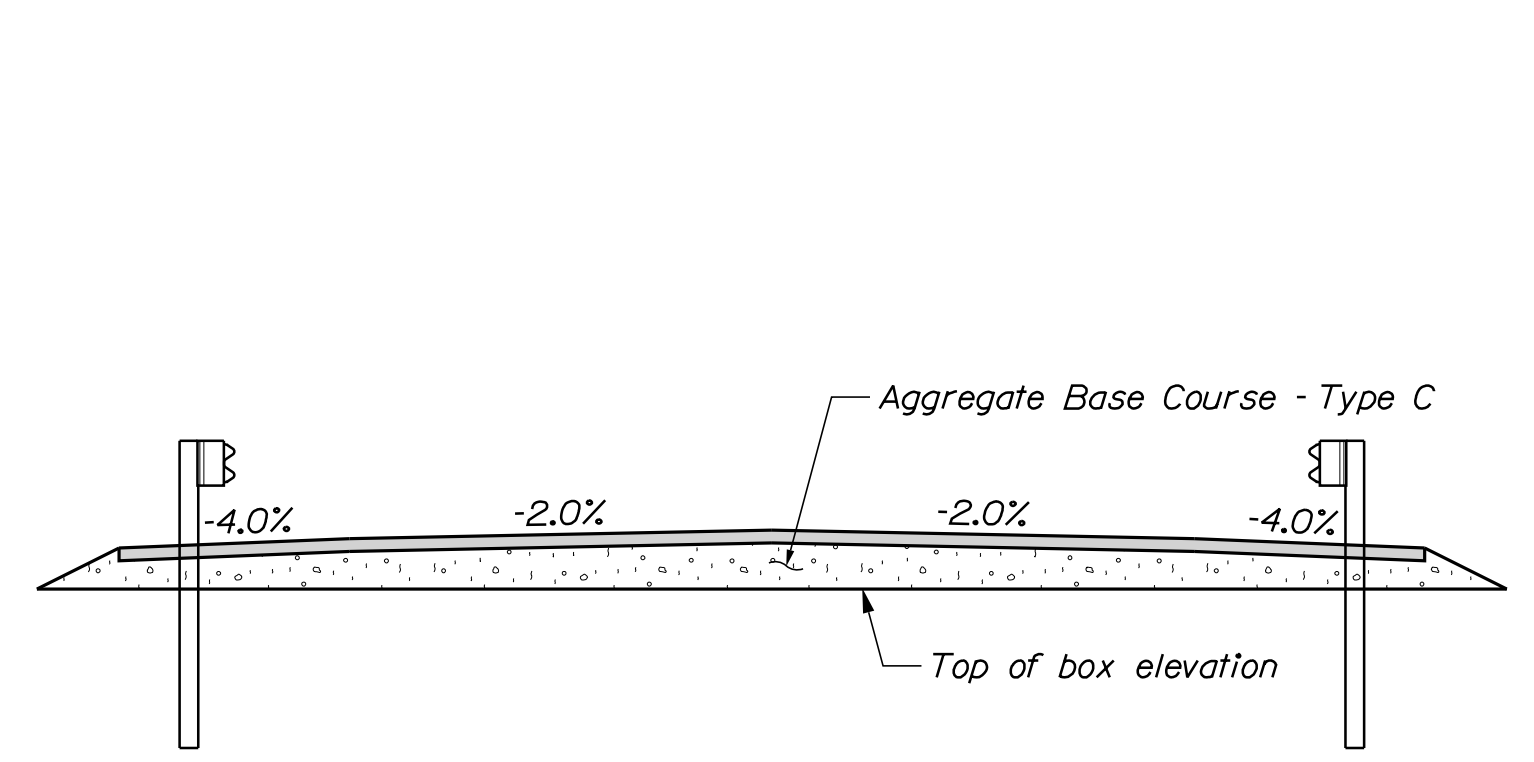
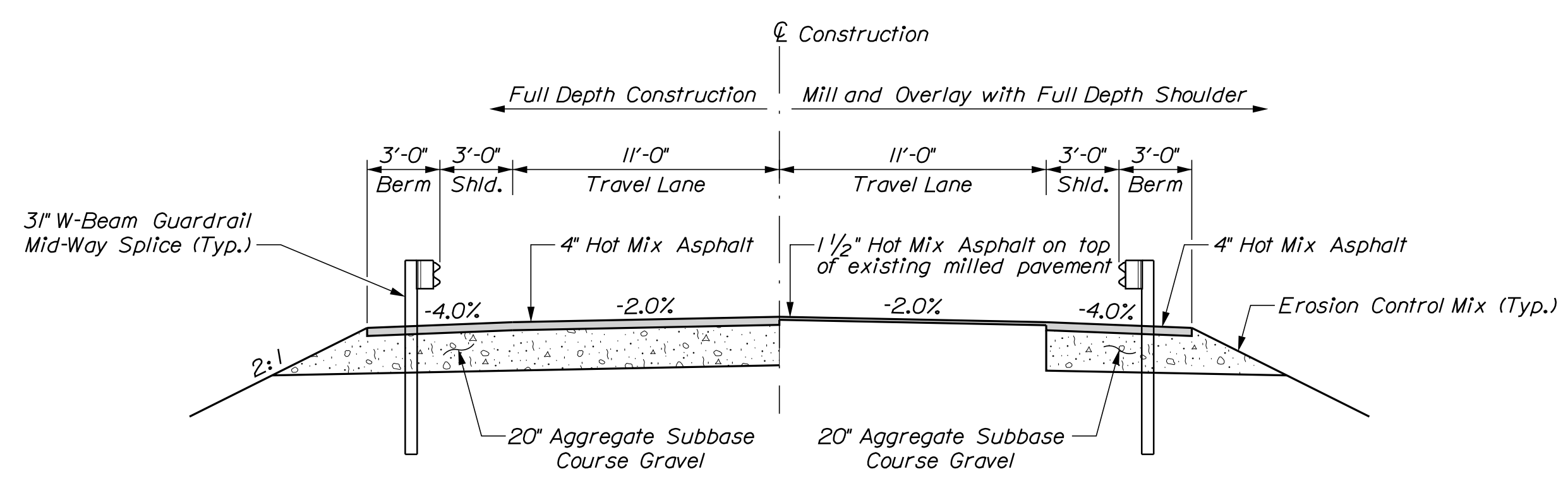
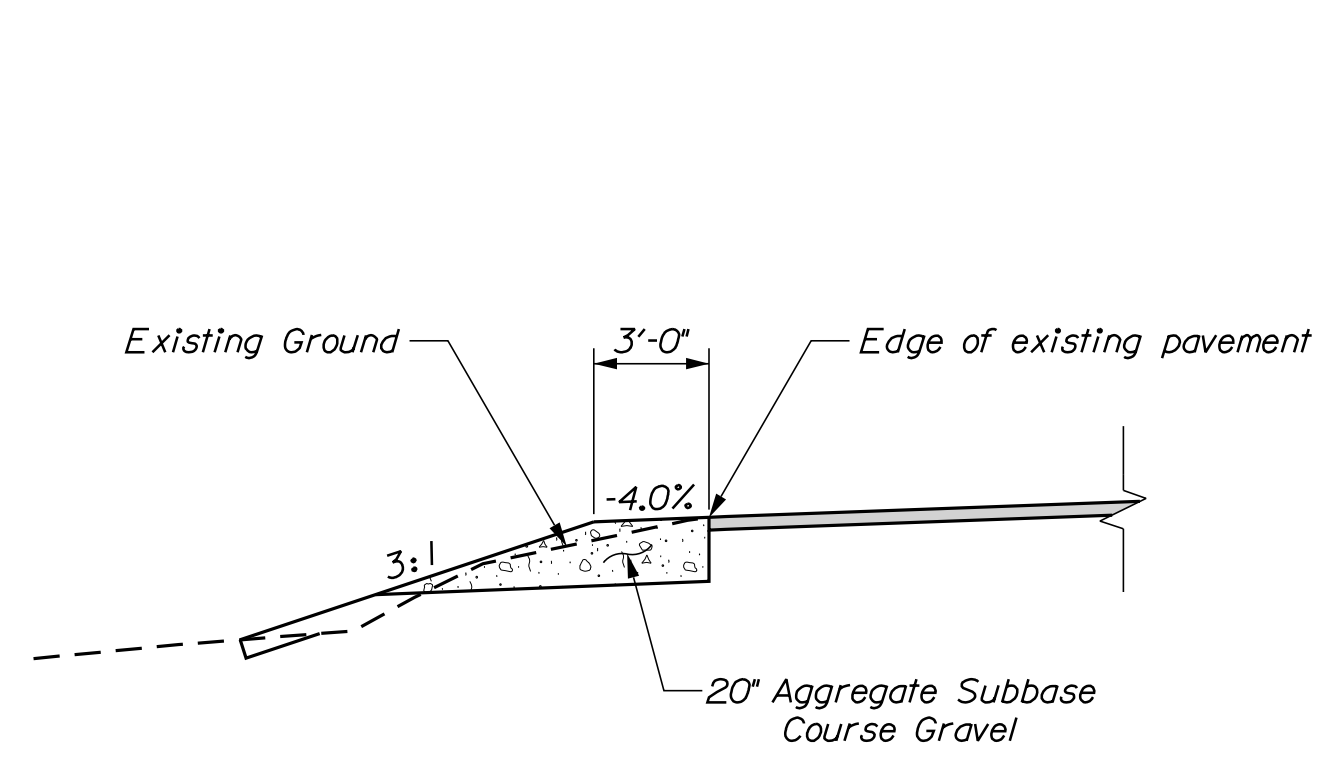
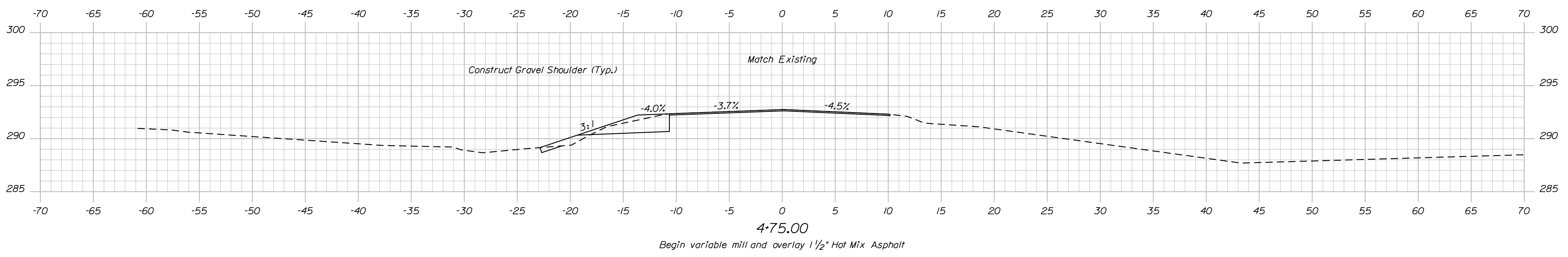
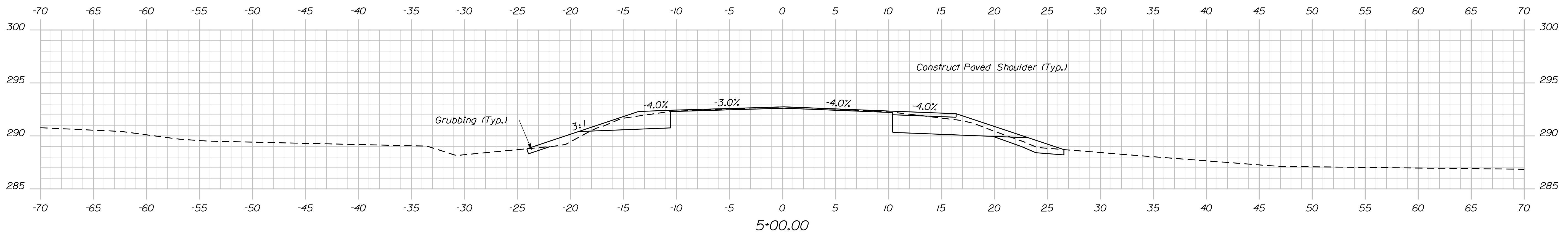
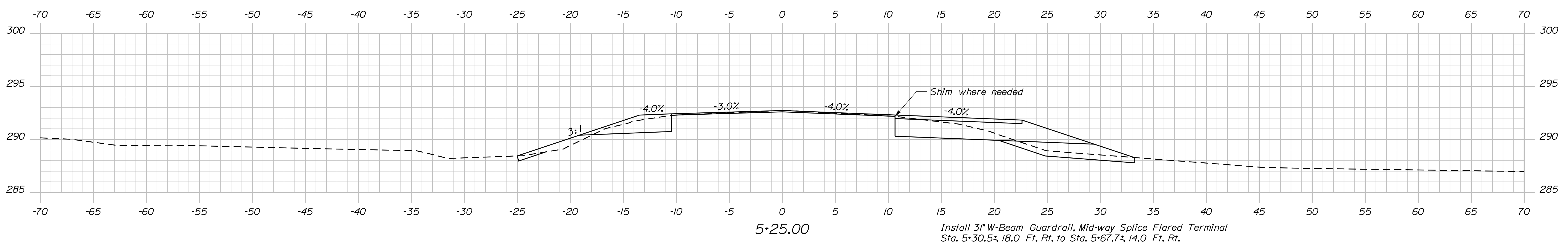
SHEET NUMBER  
**6**  
OF 19

Date: 12/13/2023

Username: David Shaw

Division: BRIDGE

Filename: ... \MSTA\007\_XSECT\_4+75-5+25.dgn



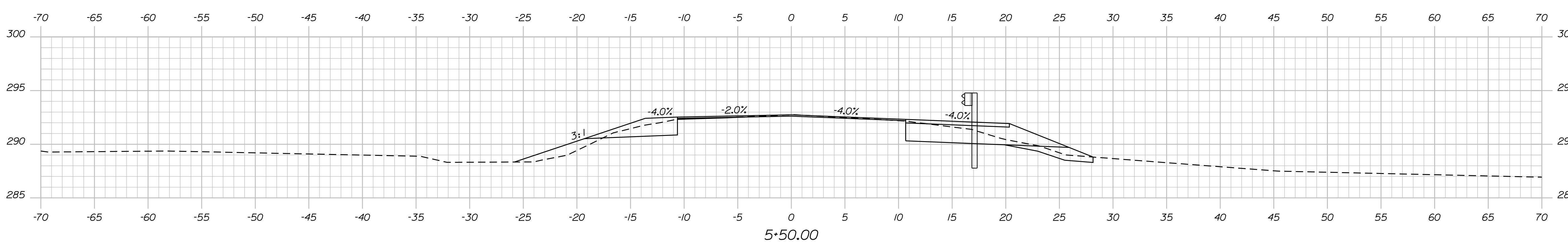
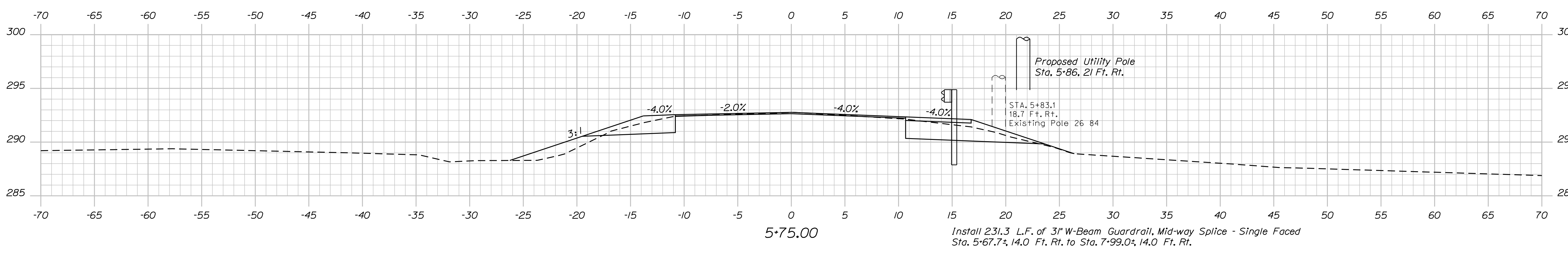
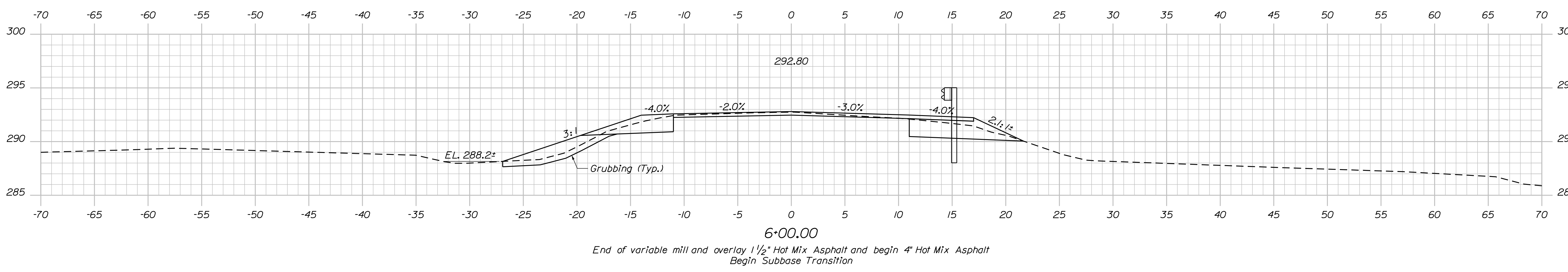
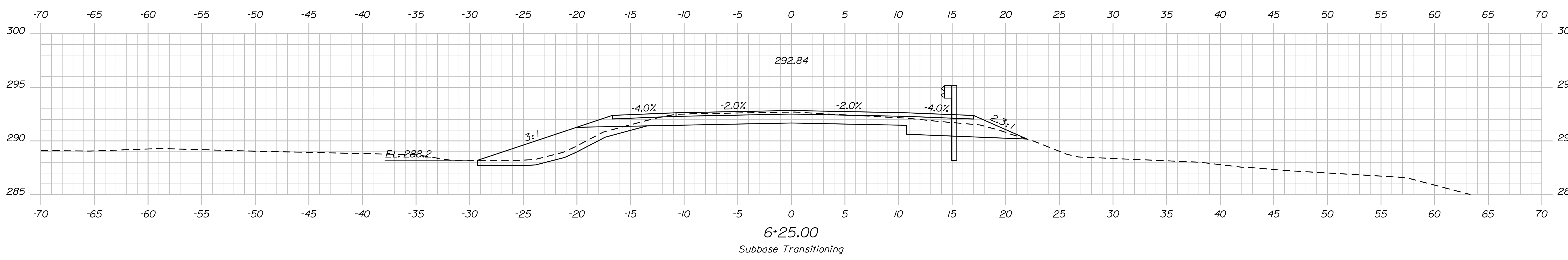
STATE OF MAINE DEPARTMENT OF TRANSPORTATION		2225600		BRIDGE NO. 1035		BRIDGE PLANS	
HANSON BRIDGE SMITH BROOK SOMERSET COUNTY		PALMYRA		CROSS SECTIONS		WIN 022256.00	
PROJ. MANAGER	M. PARLIN	BY	D. SHAW	DATE	Dec. 2023	SIGNATURE	
CHECKED-REVIEWED	J. HASBROUCK	DESIGNED-DETAILED	N. PIKAY	DATE	Feb. 2022	P.E. NUMBER	
DESIGNED-DETAILED		REVISIONS 1				DATE	
REVISIONS 2		REVISIONS 3					
REVISIONS 4		FIELD CHANGES					
SHEET NUMBER		7		OF 19			

Date: 12/13/2023

Username: David Shaw

Division: BRIDGE

Filename: ... \MSTA\008\_XSECT\_5+50-6+25.dgn



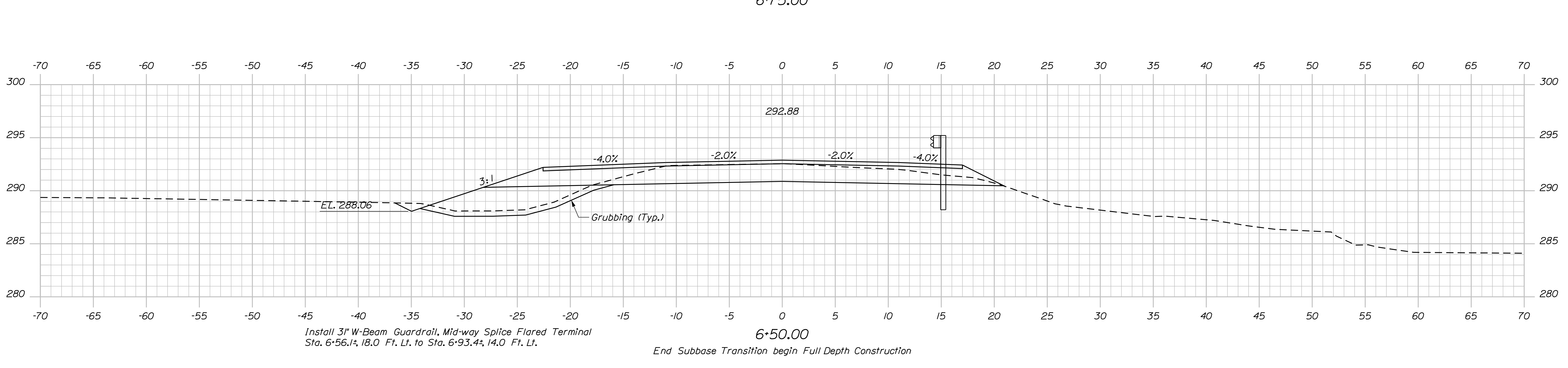
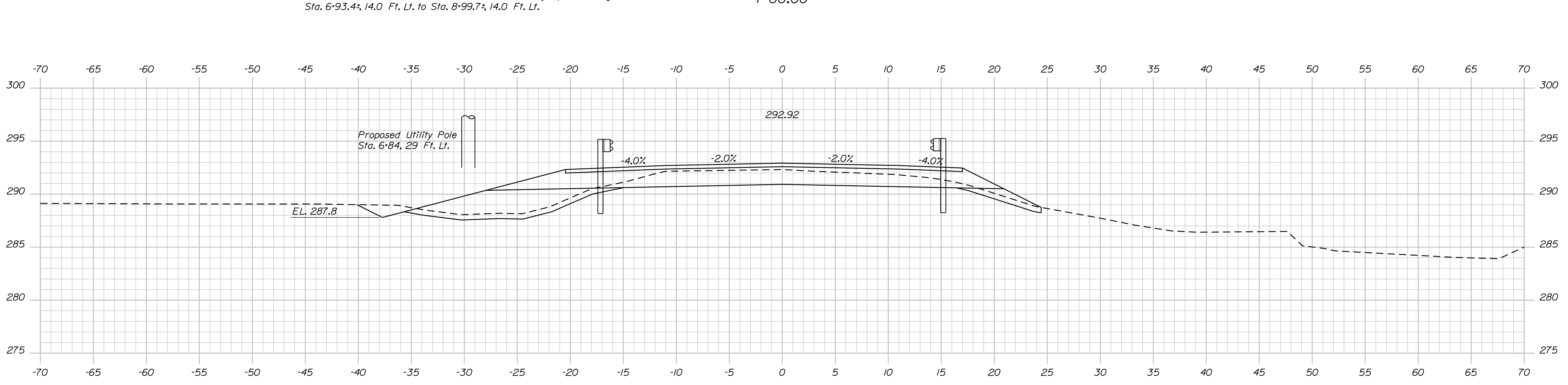
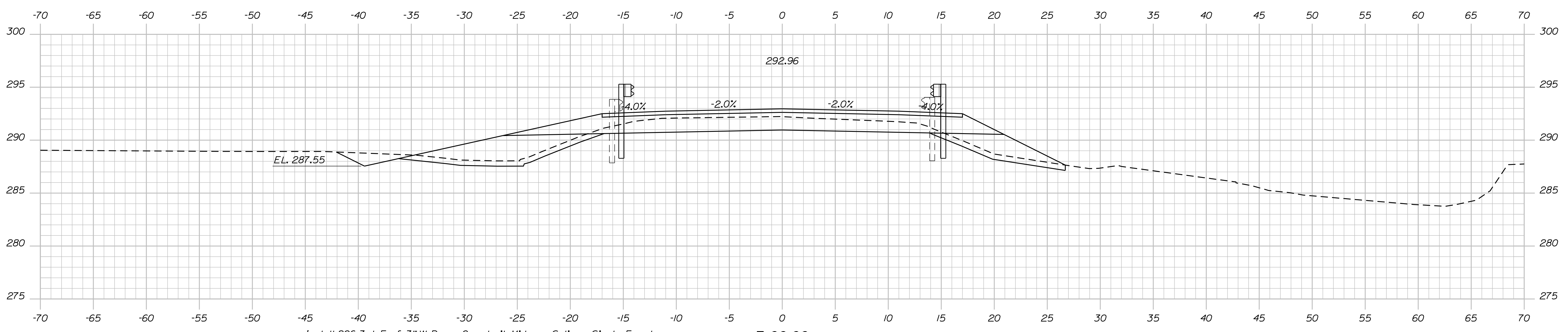
STATE OF MAINE DEPARTMENT OF TRANSPORTATION		2225600		BRIDGE NO. 1035		WIN		022256.00		BRIDGE PLANS	
HANSON BRIDGE SMITH BROOK SOMERSET COUNTY		PALMYRA		CROSS SECTIONS		SHEET NUMBER		8		OF 19	
PROJ. MANAGER	M. PARLIN	DESIGN-DETAILED	J. HASBROUCK	CHECKED-REVIEWED	D. SHAW	DATE	Dec. 2023	SIGNATURE		P.E. NUMBER	
DESIGN-DETAILED	N. PIKAY	DESIGN-DETAILED	I. WHITE	DATE	Nov. 2022						
REVISIONS 1		REVISIONS 2		REVISIONS 3		REVISIONS 4		FIELD CHANGES			

Date: 12/13/2023

Username: David.Shaw

Division: BRIDGE

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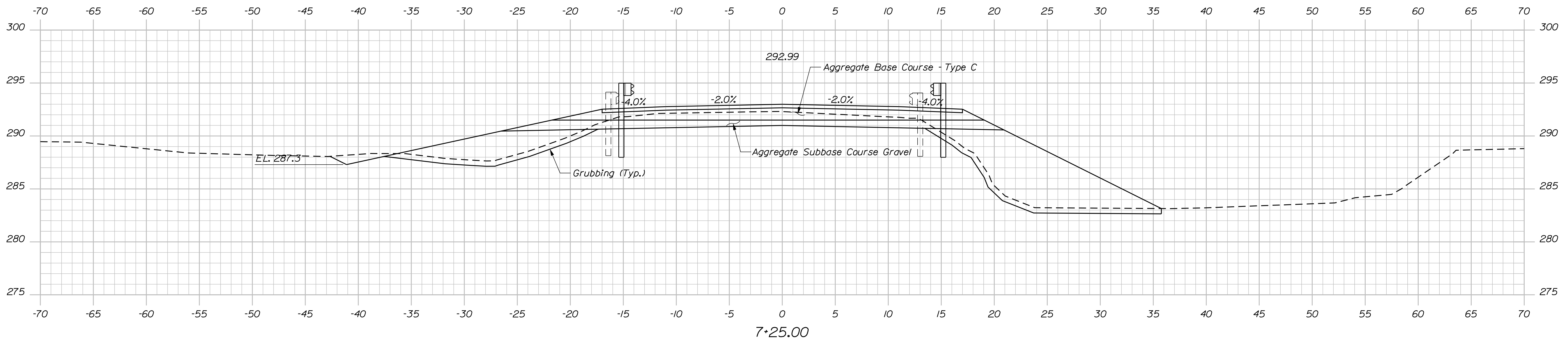
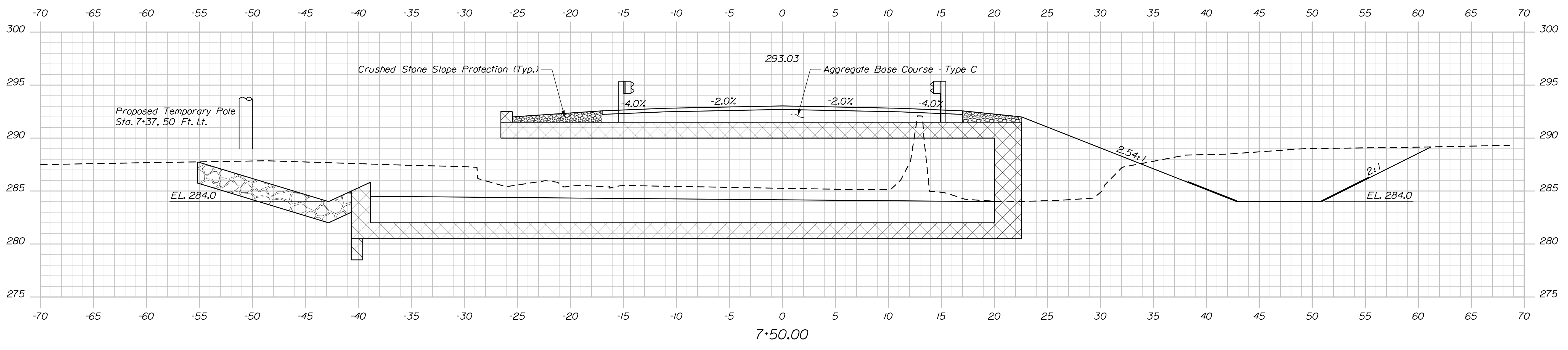
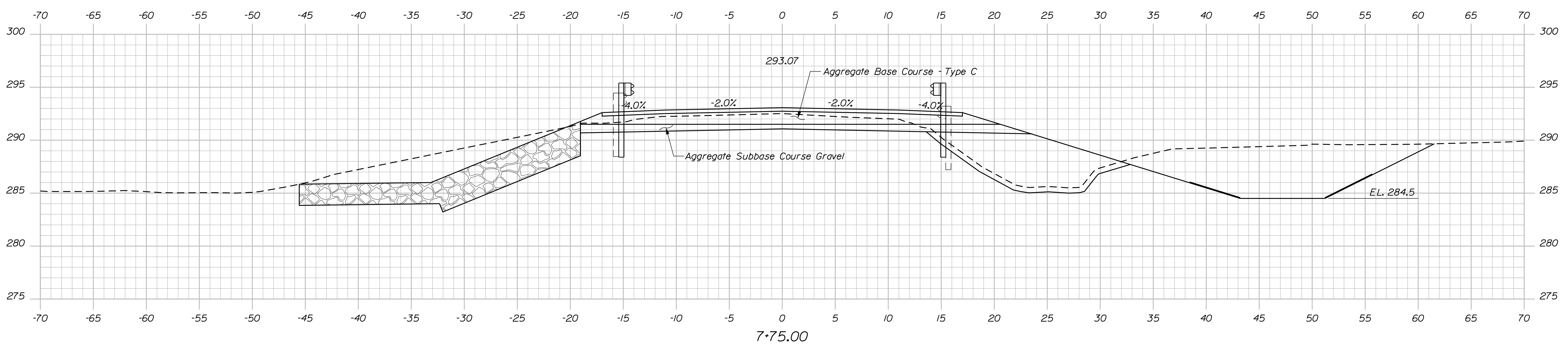
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HANSON BRIDGE SMITH BROOK SOMERSET COUNTY		PALMYRA		CROSS SECTIONS		SHEET NUMBER	
9		OF 19		WIN		022256.00	
PROJ. MANAGER	M. PARLIN	BY	D. SHAW	DATE	Dec. 2023	SIGNATURE	
CHECKED-REVIEWED	J. HASBROUCK						
DESIGNS DETAILED	N. PIKAY						
REVISIONS 1						P.E. NUMBER	
REVISIONS 2						DATE	
REVISIONS 3							
REVISIONS 4							
FIELD CHANGES							

Date: 12/13/2023

Username: David Shaw

Division: BRIDGE

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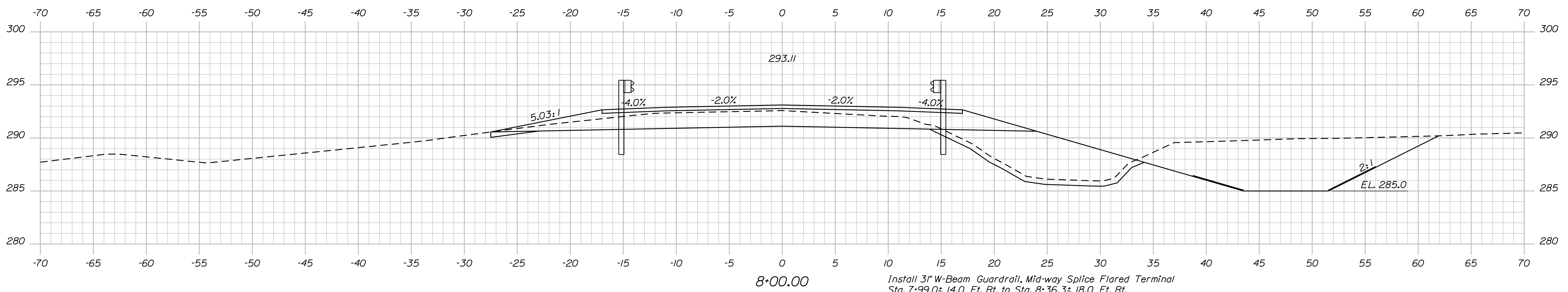
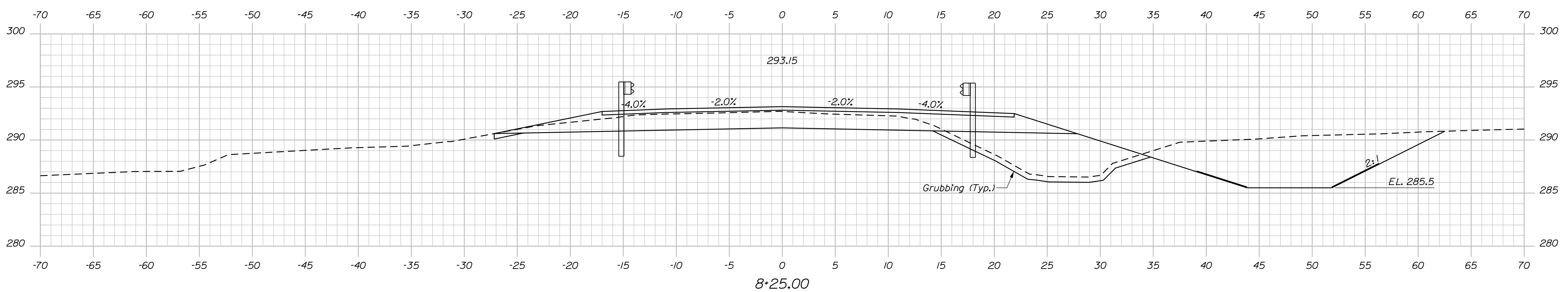
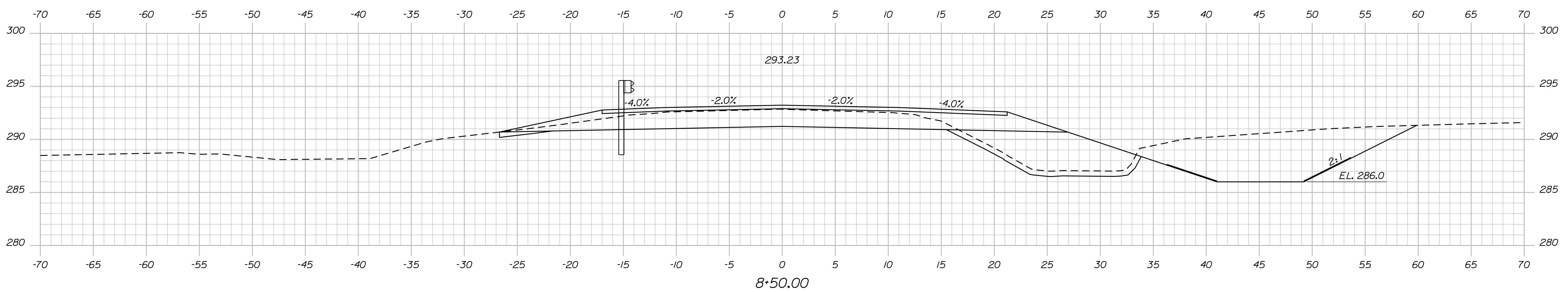
STATE OF MAINE DEPARTMENT OF TRANSPORTATION		2225600		WIN		022256.00		BRIDGE NO. 1035		BRIDGE PLANS	
HANSON BRIDGE SMITH BROOK PALMYRA		SOMERSET COUNTY		CROSS SECTIONS		SHEET NUMBER		10		OF 19	
PROJ. MANAGER	M. PARIN	BY	J. HASBROUCK	DATE	Dec. 2023	CHECKED/REVIEWED	D. SHAW	SIGNATURE		P.E. NUMBER	
DESIGN/DETAILED	J. HASBROUCK	DESIGN/DETAILED	N. PIKAY	DATE	Feb. 2022	DESIGN/DETAILED					
REVISIONS 1		REVISIONS 1				REVISIONS 2					
REVISIONS 3		REVISIONS 3				REVISIONS 4					
REVISIONS 4		FIELD CHANGES									

Date: 12/13/2023

Username: David.Shaw

Division: BRIDGE

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Install 3" W-Beam Guardrail, Mid-way Splice Flared Terminal  
 Sta. 7+99.0+; 14.0 Ft. Rt. to Sta. 8+36.3+; 18.0 Ft. Rt.

STATE OF MAINE  
 DEPARTMENT OF TRANSPORTATION  
 2225600  
 WIN  
 BRIDGE NO. 1035  
 BRIDGE PLANS

PROJ. MANAGER	M. PARLIN	BY	D. SHAW	DATE	Dec. 2023
CHECKED-REVIEWED	J. HASBROUCK	DESIGNED-REVIEWED	N. PIKAY	DATE	Feb. 2022
DESIGNS DETAILED		DESIGNS DETAILED			
REVISIONS 1		REVISIONS 1			
REVISIONS 2		REVISIONS 2			
REVISIONS 3		REVISIONS 3			
REVISIONS 4		REVISIONS 4			
FIELD CHANGES		FIELD CHANGES			

HANSON BRIDGE  
 SMITH BROOK  
 SOMERSET COUNTY  
 PALMYRA

CROSS SECTIONS

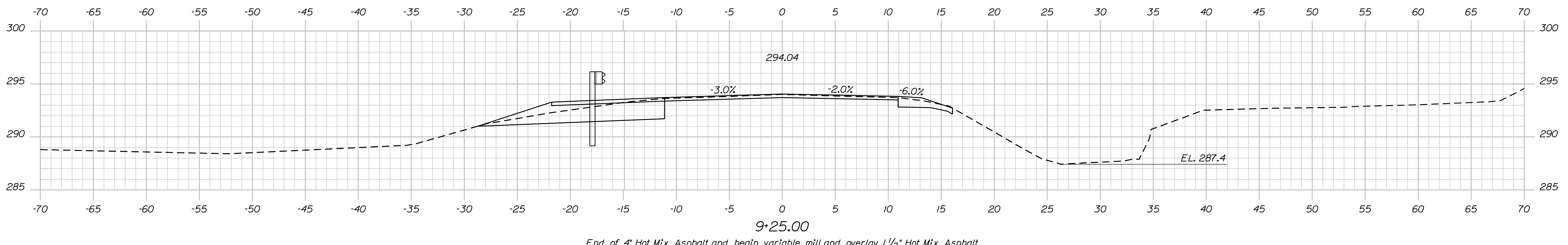
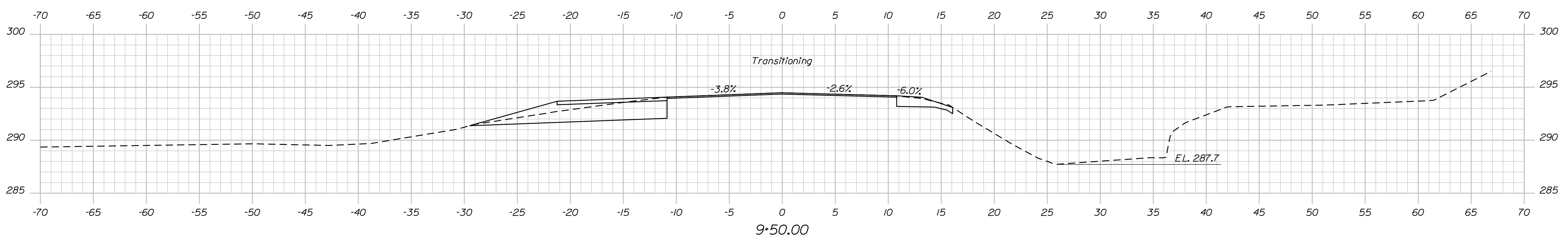
SHEET NUMBER  
 11  
 OF 19

Date: 12/13/2023

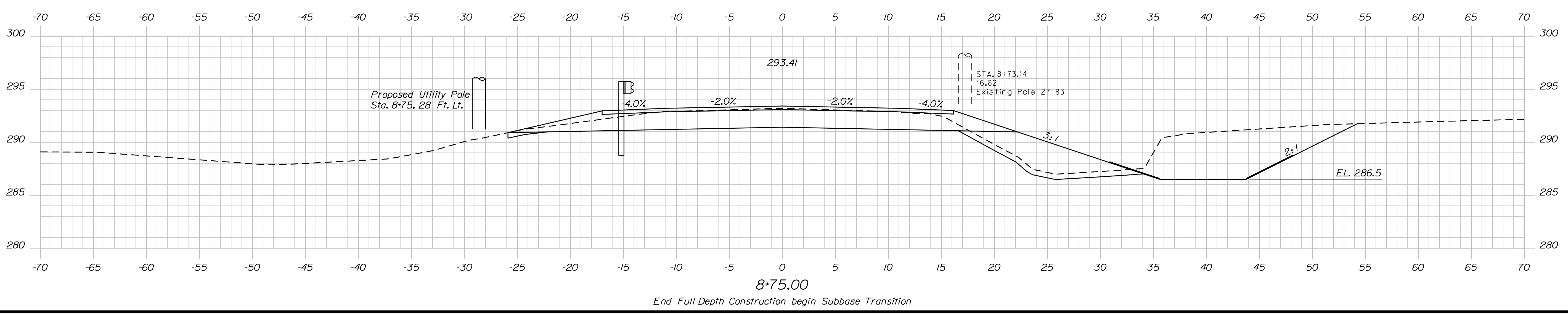
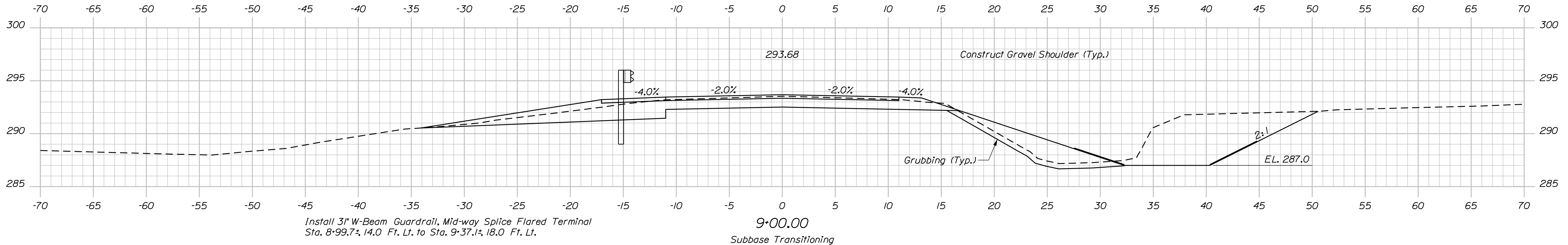
Username: David.Shaw

Division: BRIDGE

Filename: ... \MSTAD12\_XSECT\_8+75-9+50.dgn



End of 4" Hot Mix Asphalt and begin variable mill and overlay 1 1/2" Hot Mix Asphalt  
End Subbase Transition



STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
2225600  
WIN  
022256.00  
BRIDGE NO. 1035  
BRIDGE PLANS

SIGNATURE  
P.E. NUMBER  
DATE

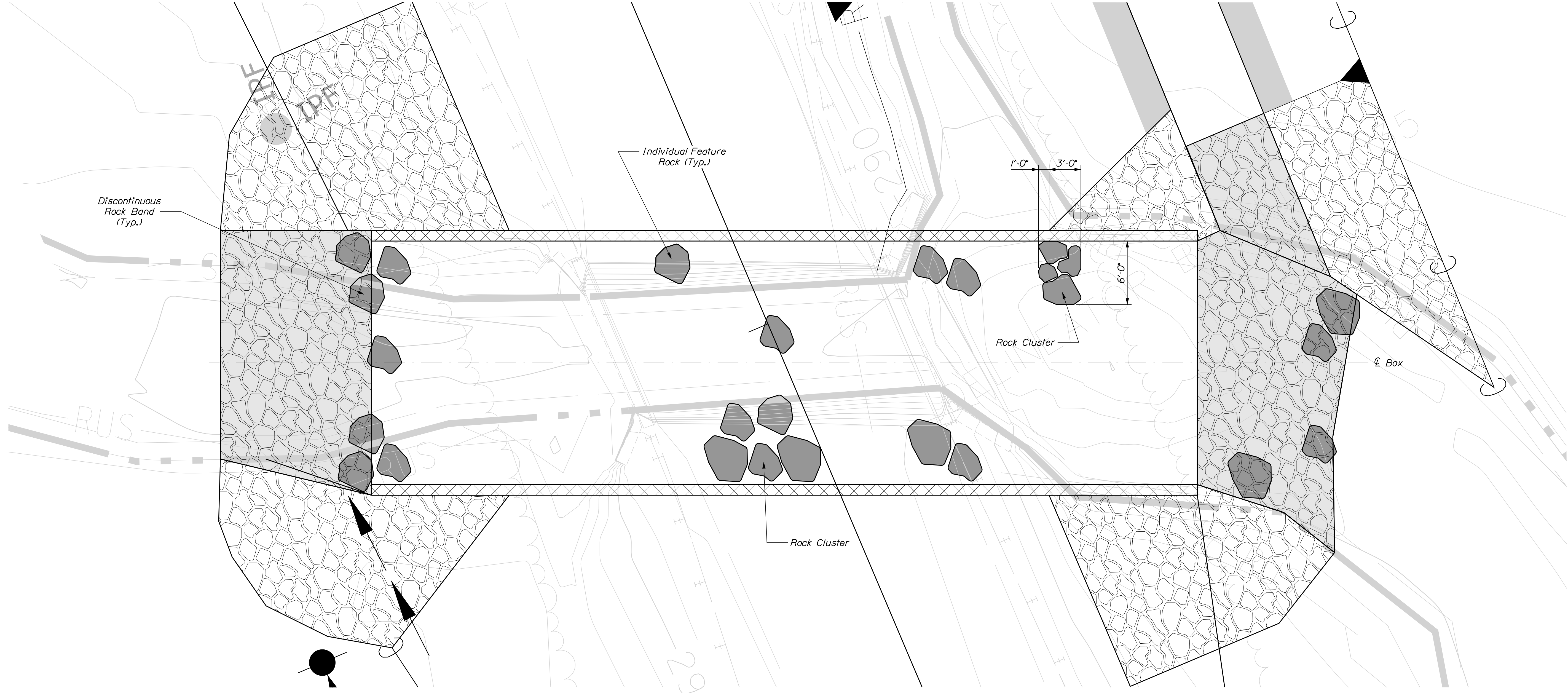
PROJ. MANAGER	BY	DATE
M. PARLIN	D. SHAW	Dec. 2023
CHECKED/REVIEWED	J. HASBROUCK	
DESIGNS DETAILER	N. PIKAY	Feb. 2022
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

HANSON BRIDGE  
SMITH BROOK  
SOMERSET COUNTY  
PALMYRA  
CROSS SECTIONS

SHEET NUMBER  
12  
OF 19







SHEET NUMBER

15

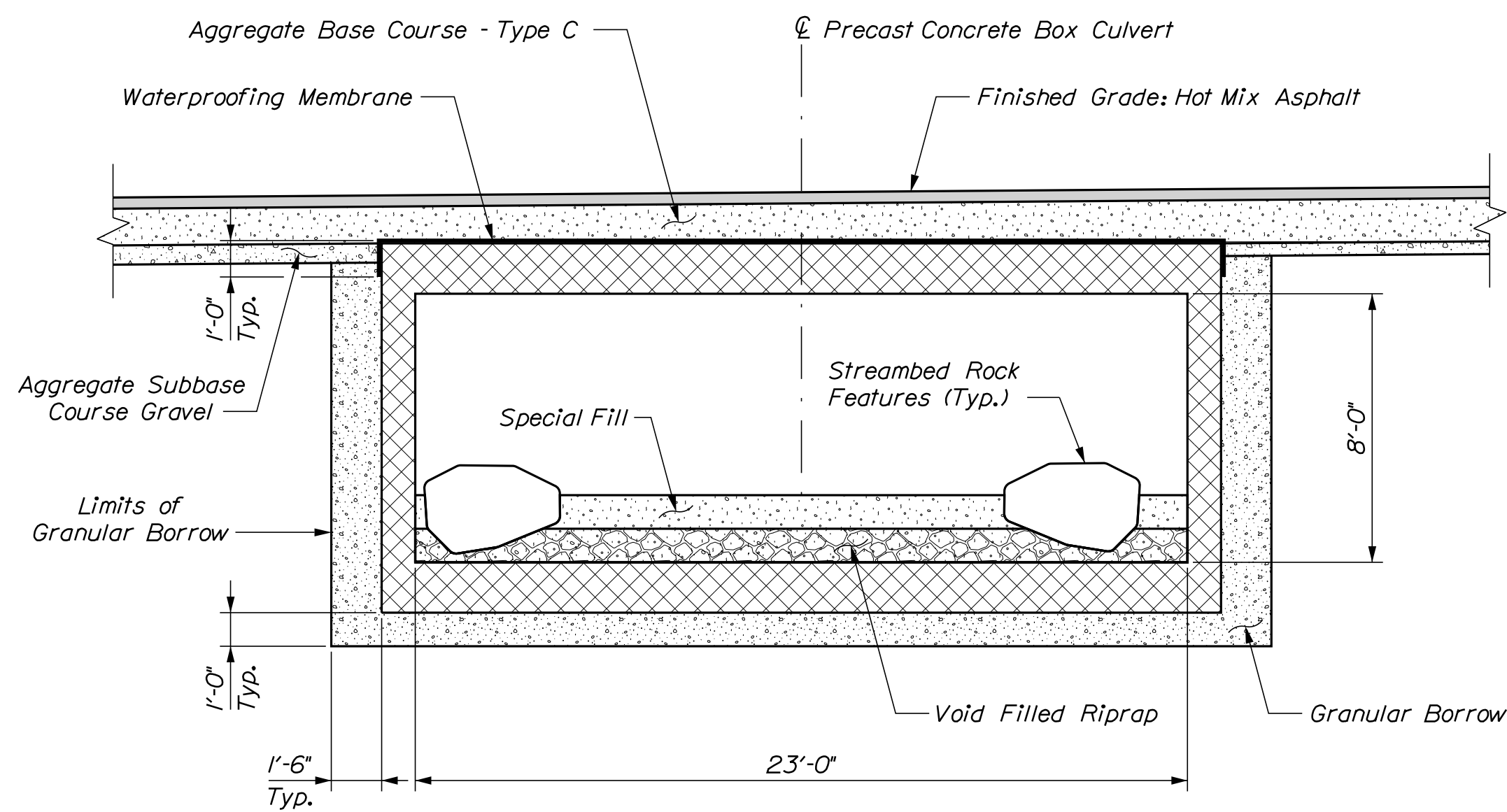
OF 19

HANSON BRIDGE  
 SMITH BROOK  
 PALMYRA  
 SOMERSET COUNTY  
 STREAMBED PLAN

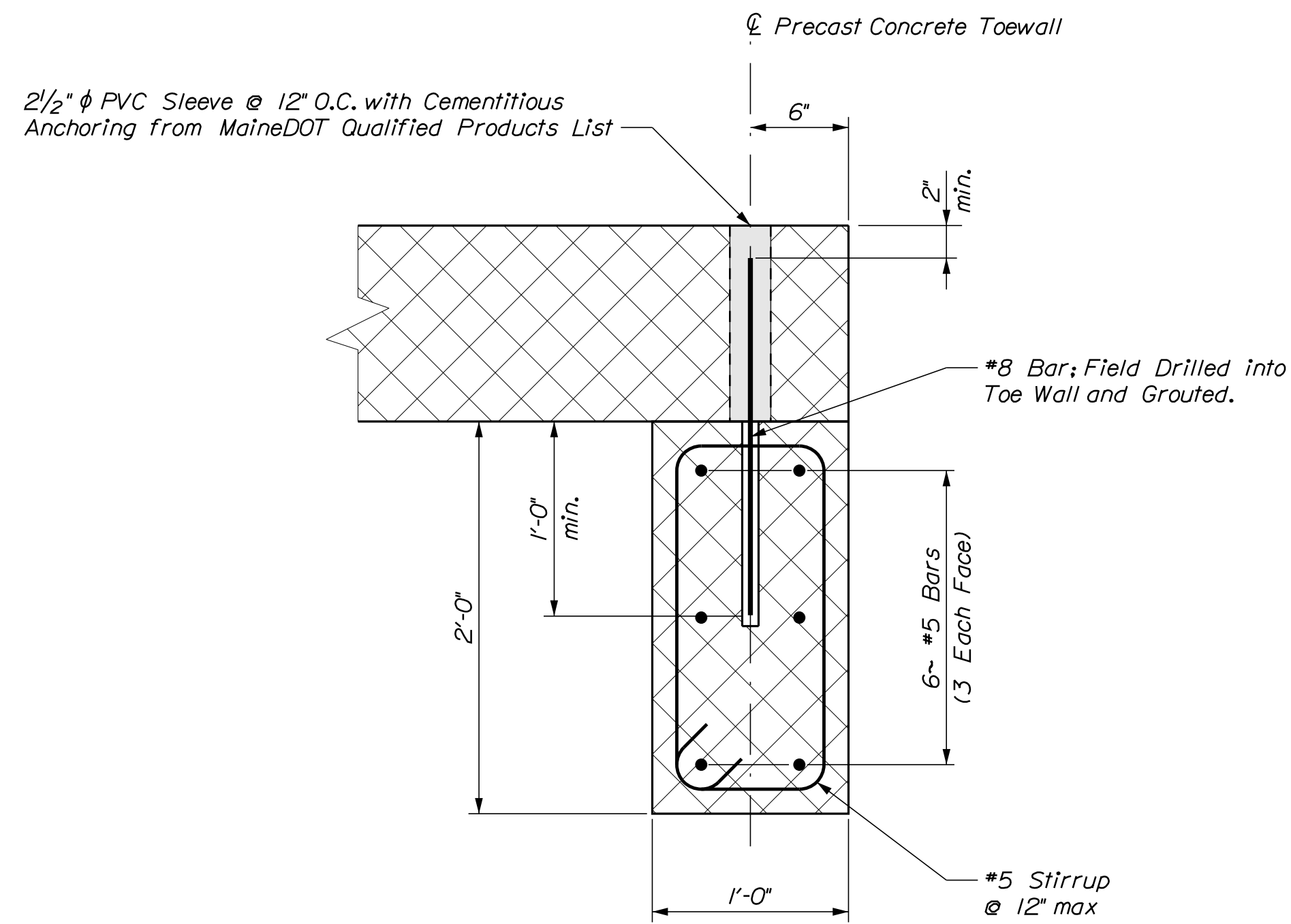
PROJ. MANAGER	M. PARLIN	BY	DATE
CHECKED/REVIEWED	J. HASBROUCK	D. SHAW	Dec. 2023
DESIGNS DETAILED	N. PIKAY	I. WHITE	Feb. 2022
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE  
 P.E. NUMBER  
 DATE

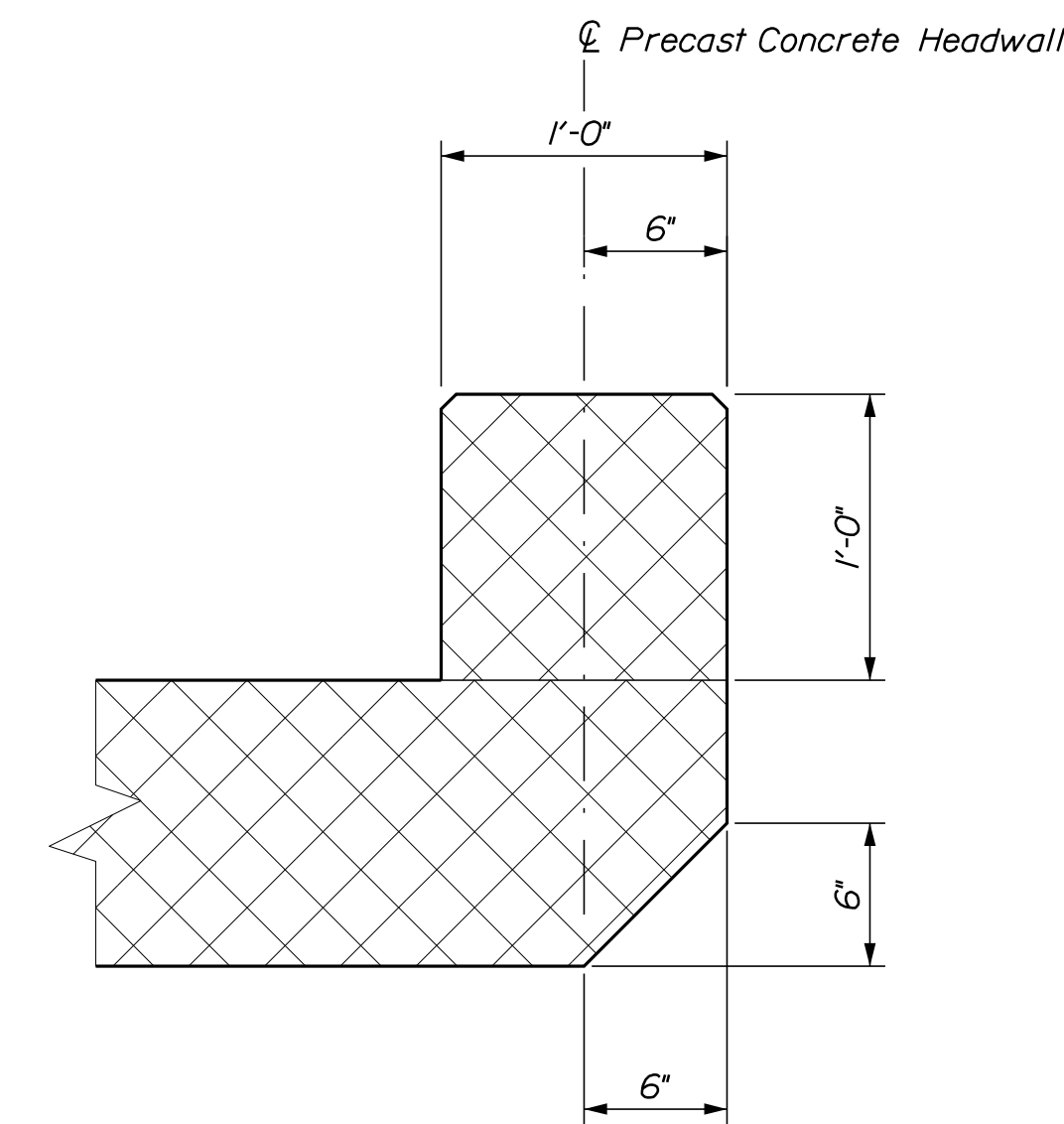
STATE OF MAINE  
 DEPARTMENT OF TRANSPORTATION  
 2225600  
 WIN  
 022256.00  
 BRIDGE NO. 1035  
 BRIDGE PLANS



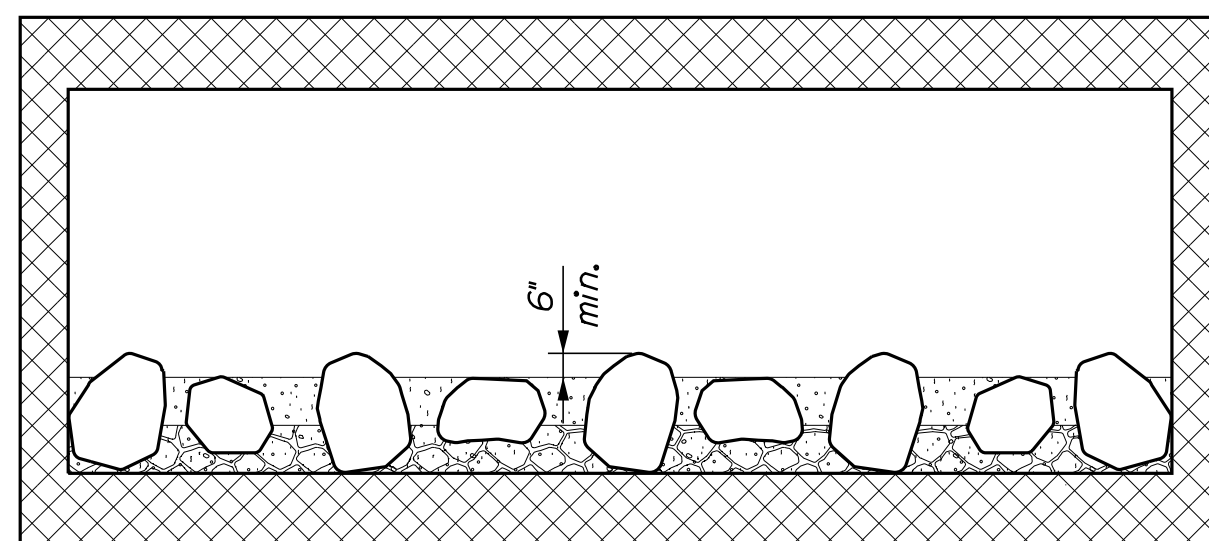
TYPICAL PRECAST CONCRETE BOX TRANSVERSE SECTION



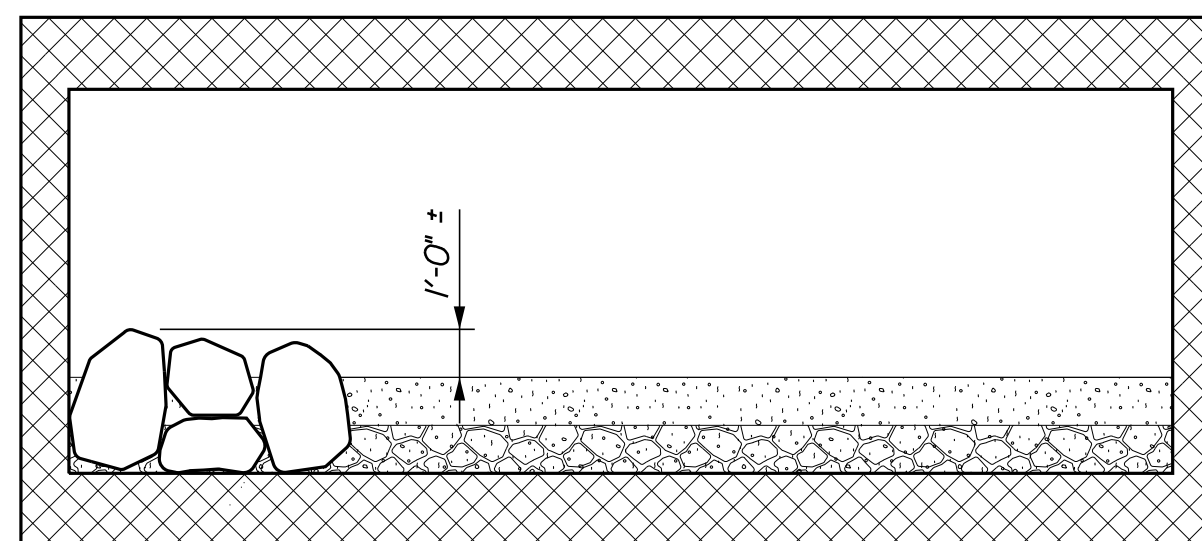
PRECAST CONCRETE TOEWALL DETAIL



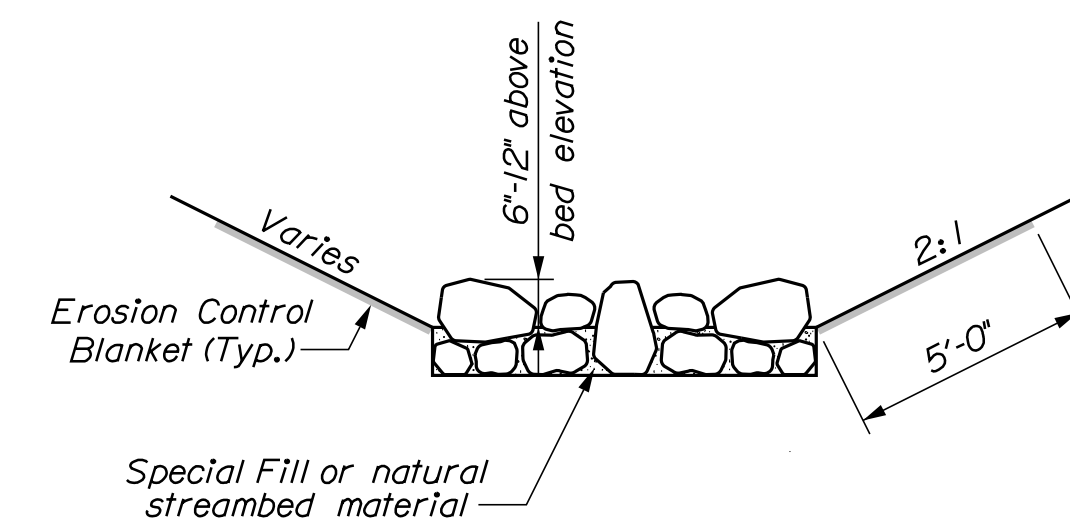
PRECAST CONCRETE HEADWALL DETAIL



DISCONTINUOUS ROCK BAND SECTION



ROCK CLUSTER SECTION

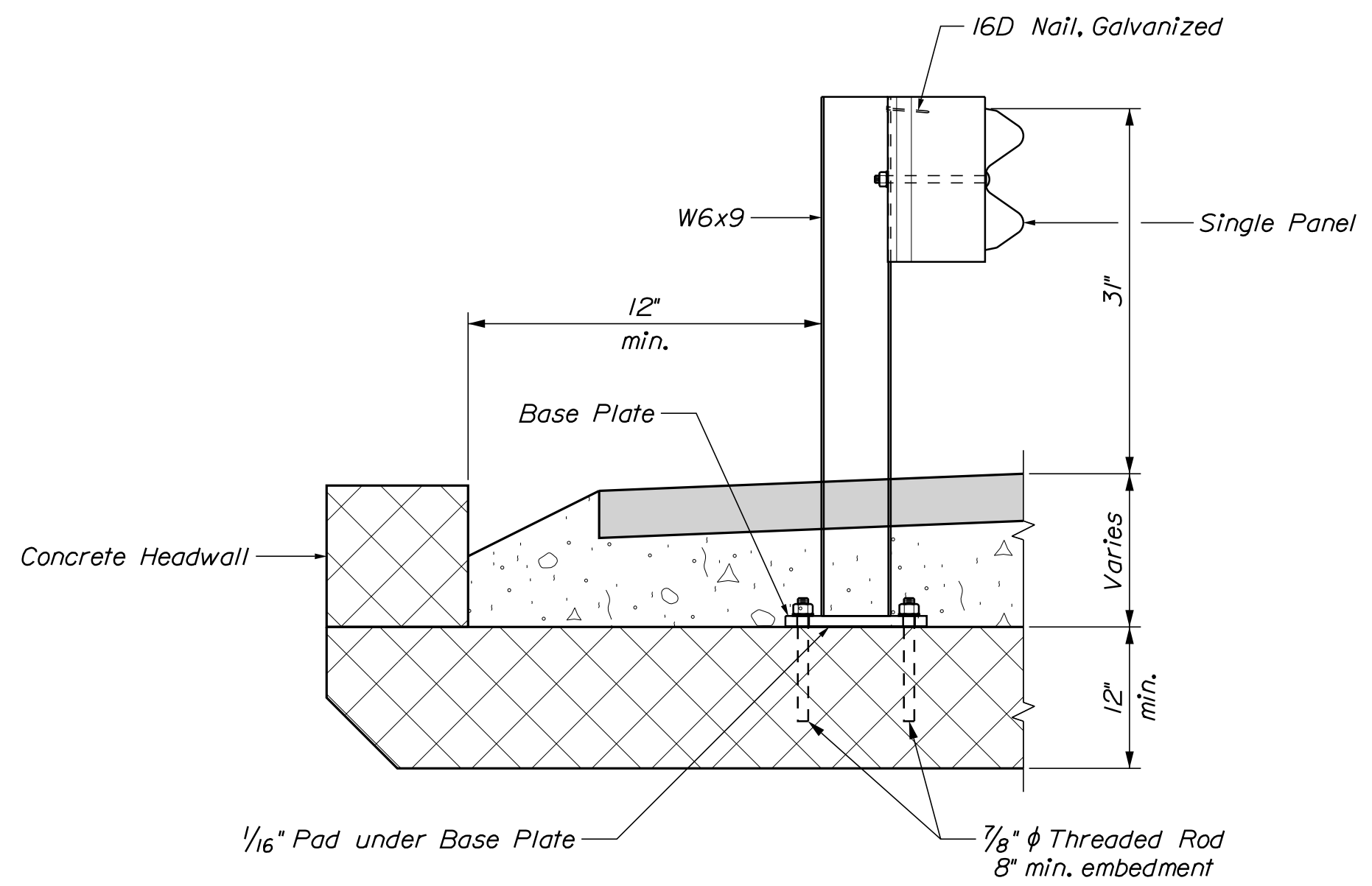
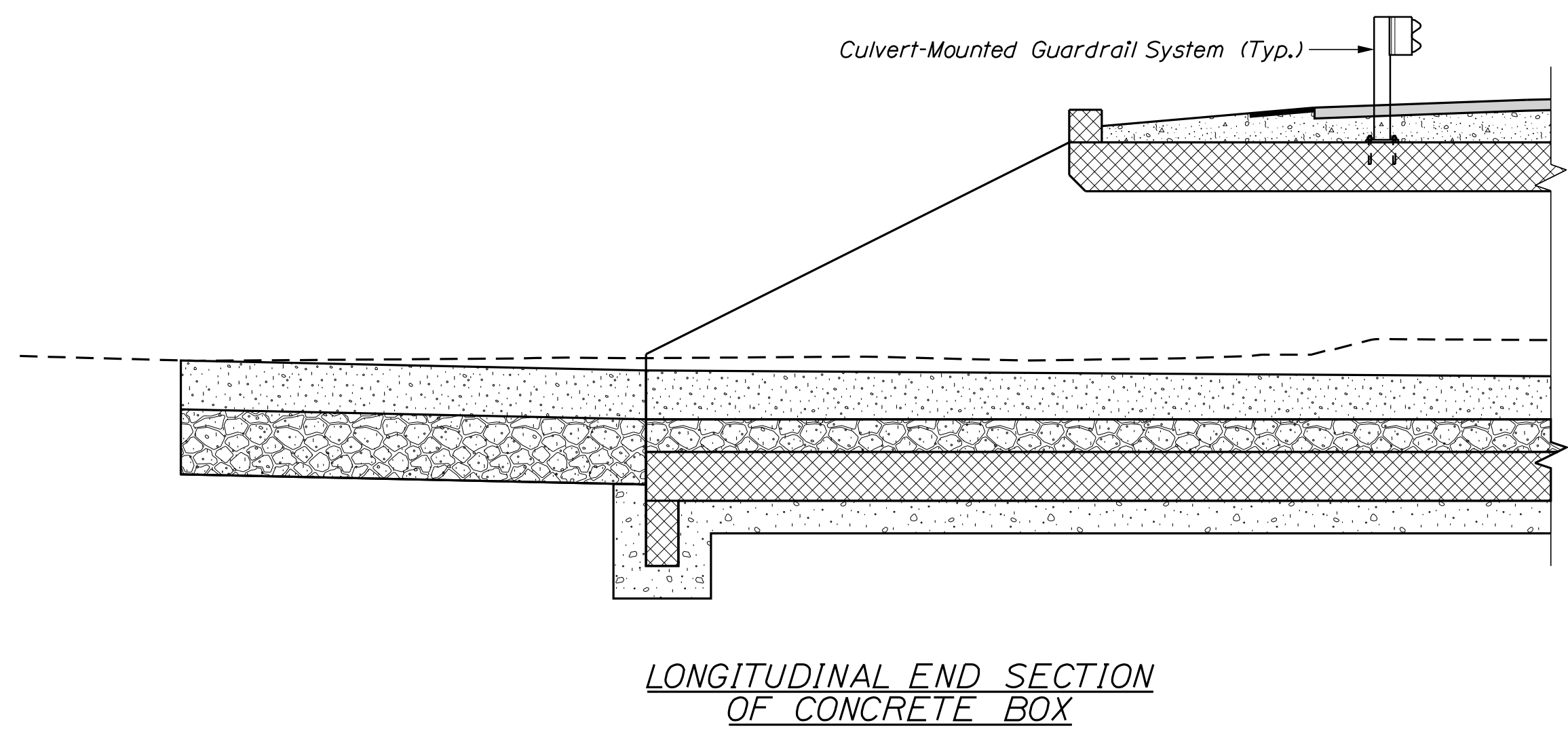


HANSON BROOK CHANNEL SECTION Facing Upstream

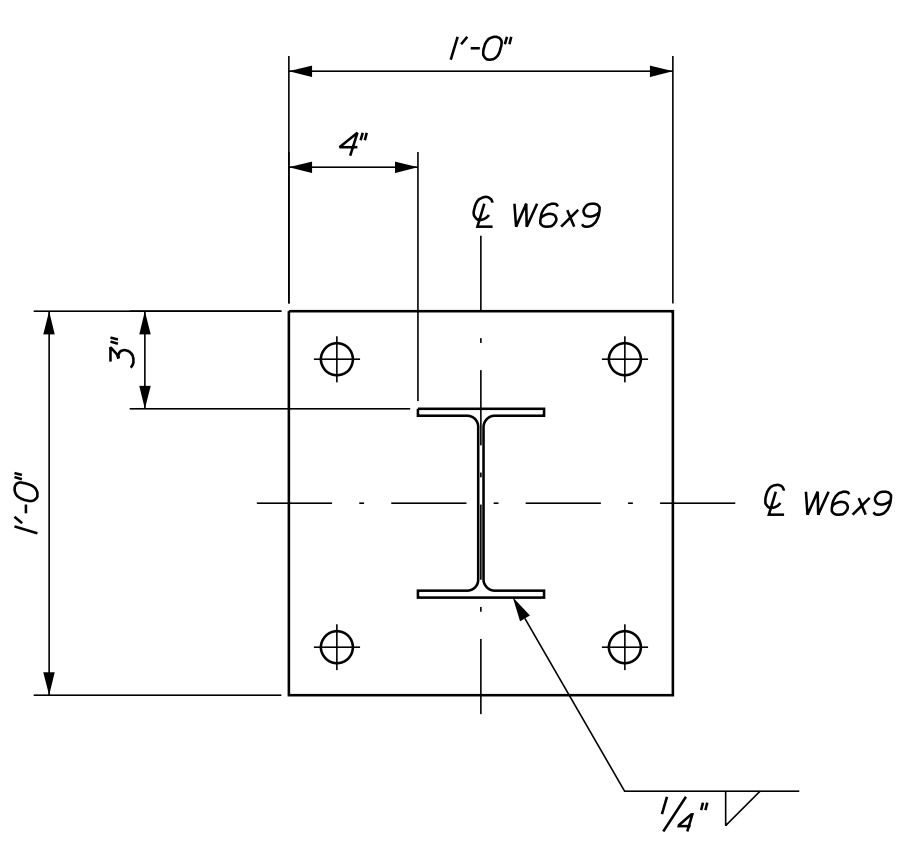
NOTES

- Two Rock Clusters shall be placed in the approximate locations shown on the Streambed Plan.
- 3-4 Discontinuous Rock Bands shall be placed at uneven locations along the culvert, including one near the downstream end.
- 15-20 Individual Feature Rocks shall be placed randomly throughout the culvert with spacing between 5'-15'.
- The location and number of all the Rock Features may be adjusted at the discretion of the Resident.
- The Hanson Brook Channel shall be constructed with either stones relocated from the existing channel or Special Fill - Streambed Material. No larger feature rocks are required.

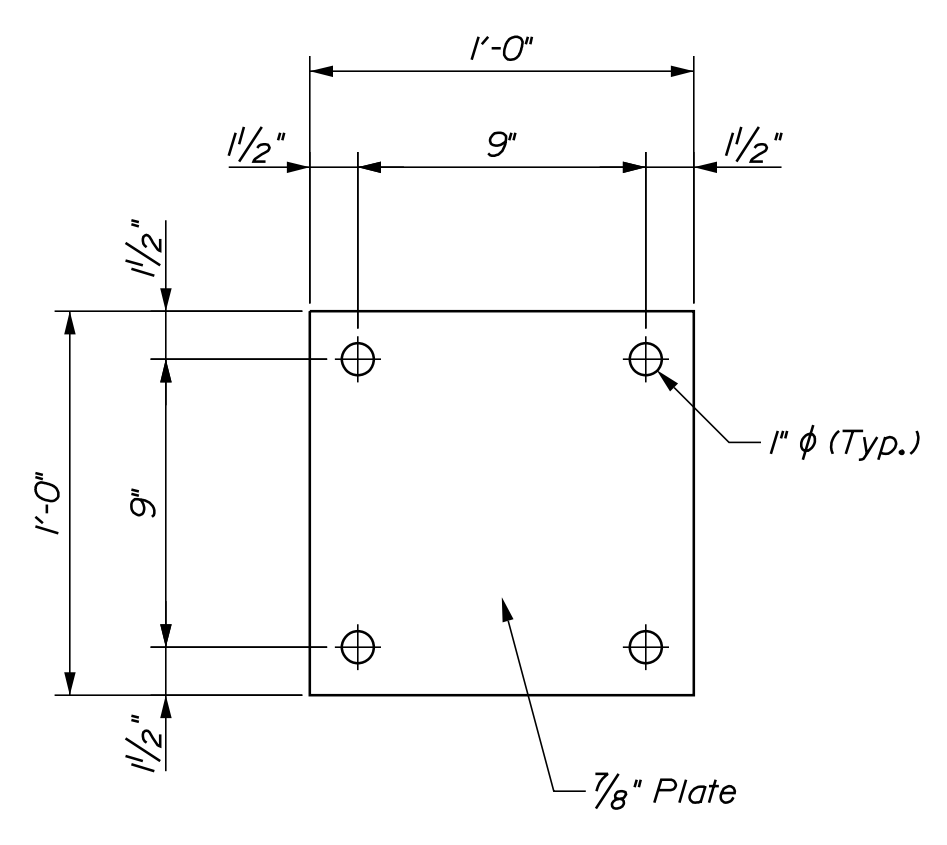
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2225600	
HANSON BRIDGE		SMITH BROOK		PALMYRA	
SOMERSET COUNTY		PRECAST CONCRETE		BOX CULVERT DETAILS	
PROJ. MANAGER	M. PARLIN	BY	D. SHAW	DATE	Dec. 2023
DESIGN DETAILED	J. HASBROUCK	CHECKED/REVIEWED	T. WHITE	DATE	Feb. 2022
DESIGNS DETAILED	N. PIKAY	DESIGNS DETAILED		SIGNATURE	
REVISIONS 1		REVISIONS 1		P.E. NUMBER	
REVISIONS 2		REVISIONS 2		DATE	
REVISIONS 3		REVISIONS 3			
REVISIONS 4		REVISIONS 4			
FIELD CHANGES					
SHEET NUMBER		16		OF 19	
HANSON BRIDGE		SMITH BROOK		PALMYRA	
SOMERSET COUNTY		PRECAST CONCRETE		BOX CULVERT DETAILS	
BRIDGE NO. 1035		WIN		022256.00	
BRIDGE PLANS					



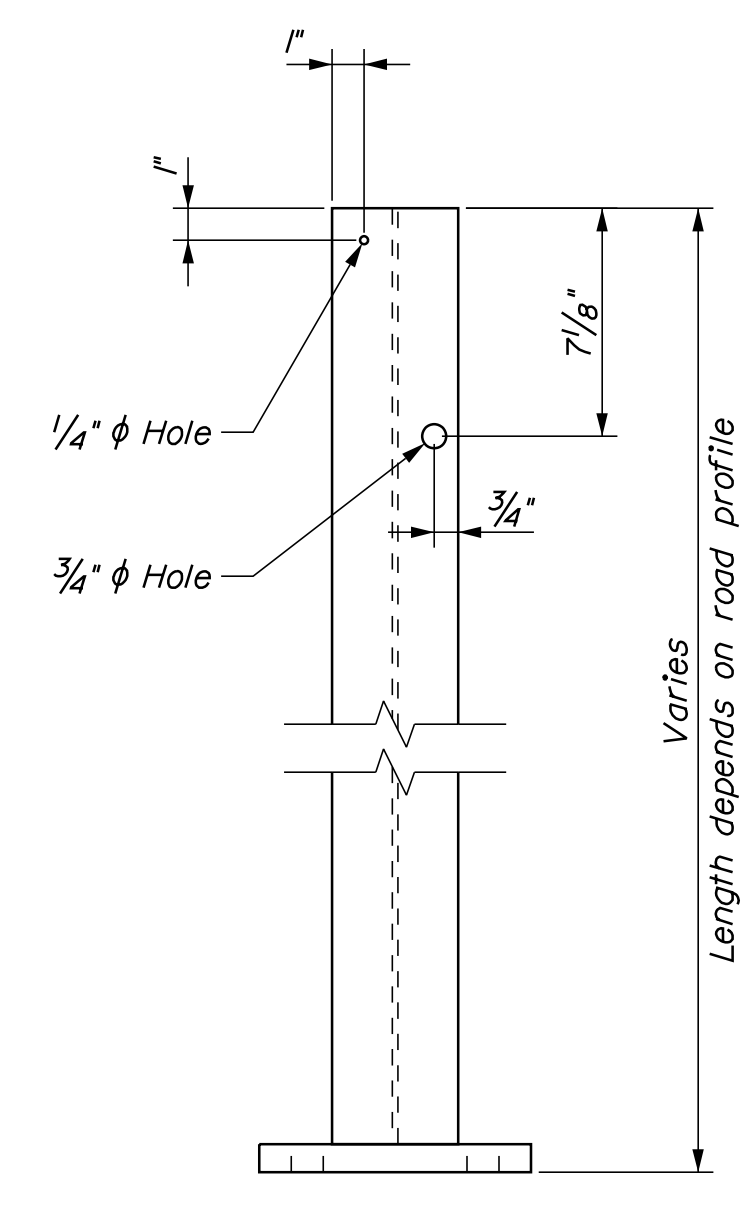
CULVERT-MOUNTED GUARDRAIL SYSTEM



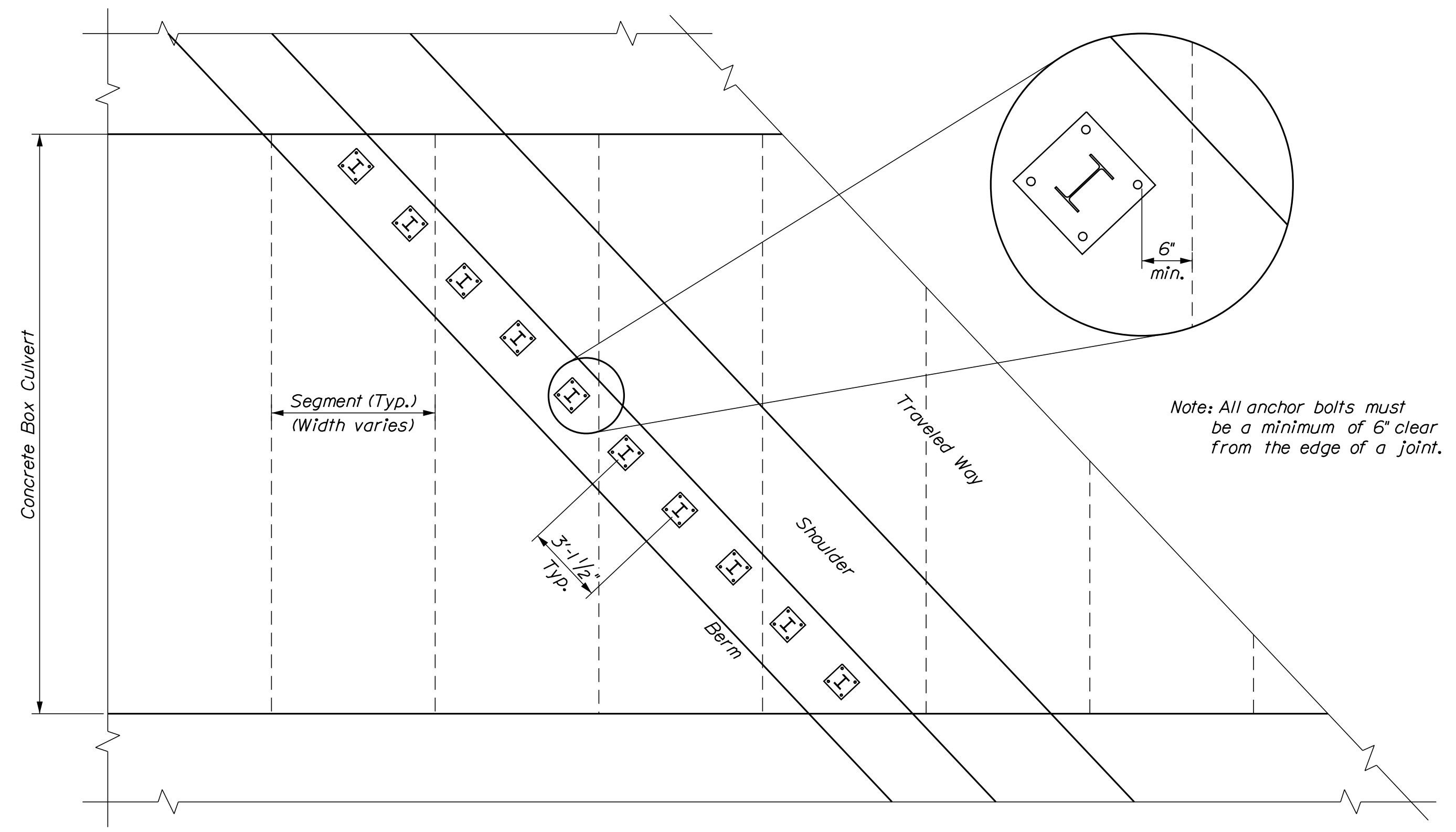
POST ASSEMBLY



BASE PLATE



ELEVATION

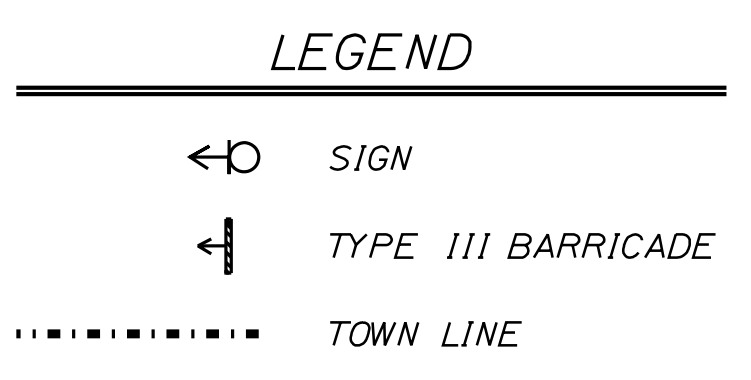
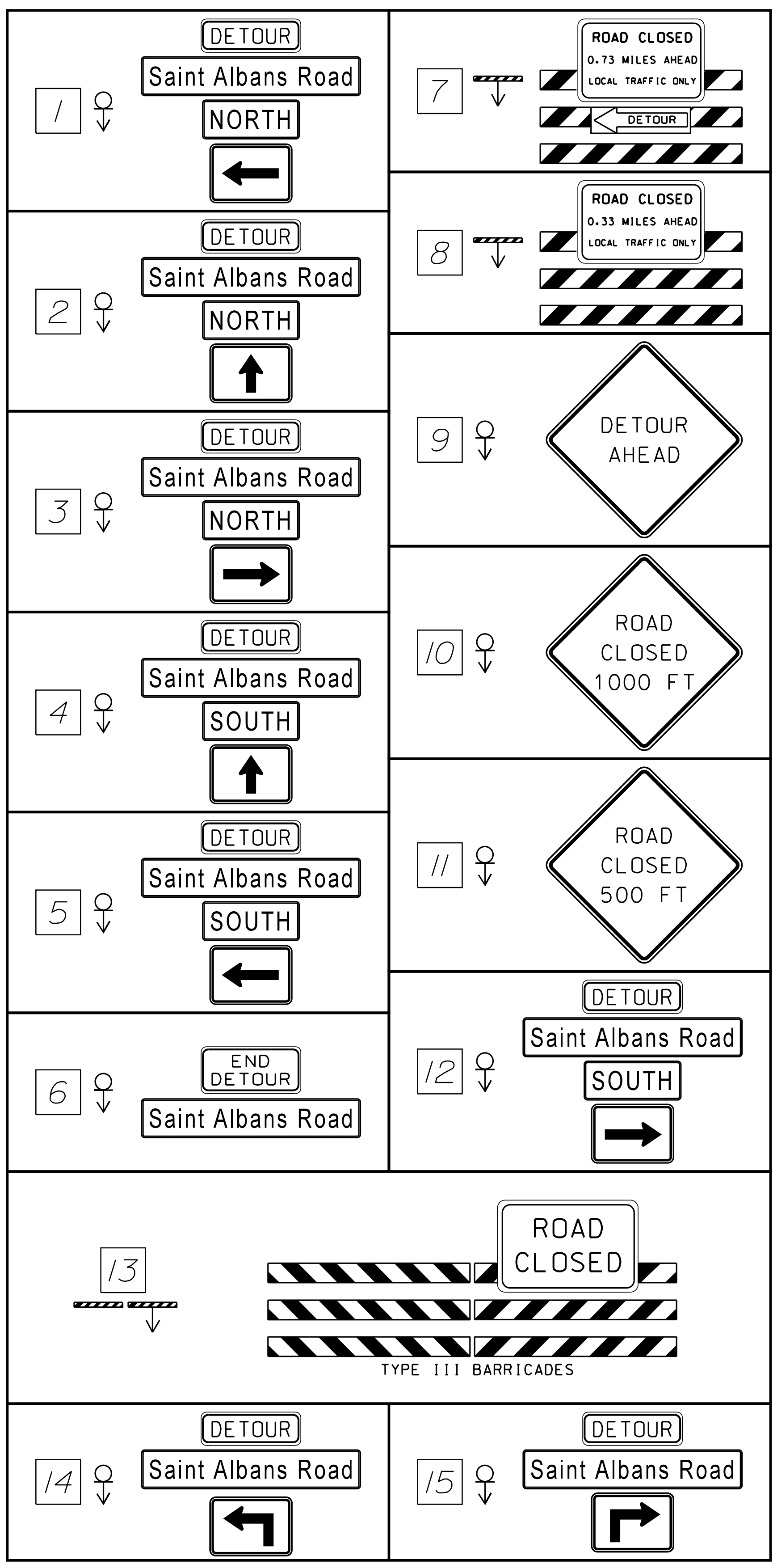
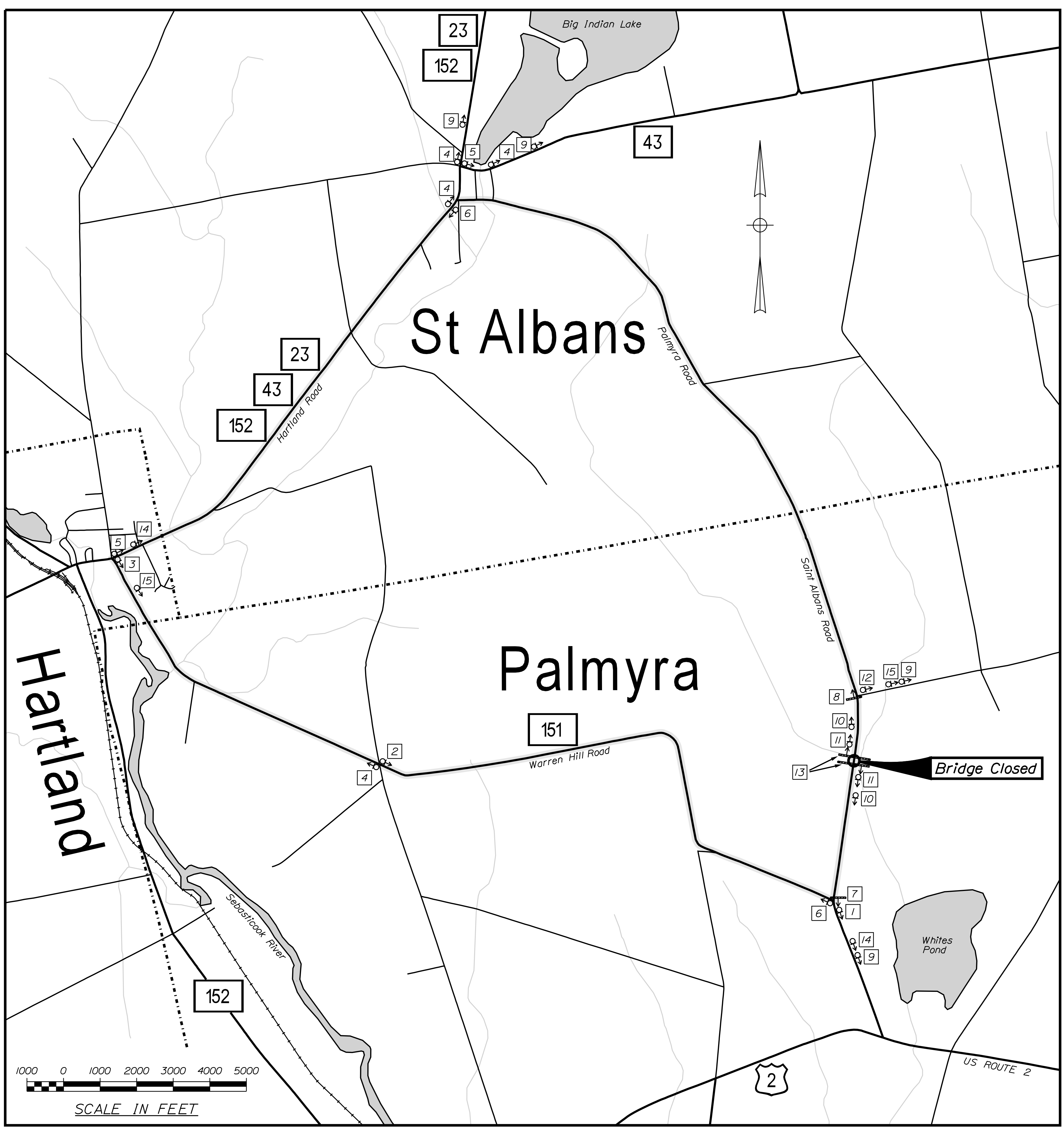


SKEWED BOX POST LAYOUT  
Guardrail Offset Blocks and Rail not shown for clarity

**BOLTED GUARDRAIL NOTES**

- All work and materials shall comply with Standard Specification Section 606 Guardrail. All work and materials associated with the Culvert-Mounted Guardrail System shall be paid under Pay Item 606.743.
  - Bolted post and materials shall be installed prior to backfilling the concrete box culvert.
  - Pavement around the Culvert-Mounted Posts shall be compacted with a plate compactor prior to installing the W-Beam Rail.
  - Posts may be cut to length and drilled in the field. Cut posts shall be repaired according to ASTM A780. If Annex A1 or A3 is used, the repair coating thickness shall match the original specified coating thickness. If Annex A2 is used, the minimum repair coating thickness shall be 3.0 mils and the maximum repair coating thickness shall be 4.0 mils.
  - Threaded rod shall be ASTM F1554 Grade 55.
  - Anchor bolts drilled and grouted into the precast boxes shall use an approved epoxy bonding agent from MaineDOT's Qualified Products List with a minimum bond strength of 1300 psi. The bolt anchorage shall be installed in strict accordance with the selected manufacturer's recommendations.
- The embedment depth of the epoxy anchors shall be the greater of 8" or the manufacturer's requirements. A minimum of 3" of concrete must remain under the drilled hole.
- Payment for drilling and grouting anchor bolts shall not be paid for separately, and shall be considered incidental to the guardrail pay item.
- Anchor bolts shall be set with a template. Nuts securing the post base shall be tightened to a snug fit and given an additional 1/8" turn.
  - All posts, plates, bolts, nuts, washers, threaded rod, and other misc. hardware shall be galvanized in accordance with Standard Specifications Subsection 710.08.

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2225600		BRIDGE NO. 1035		BRIDGE PLANS	
HANSON BRIDGE		SMITH BROOK		SOMERSET COUNTY		PALMYRA		CULVERT-MOUNTED GUARDRAIL SYSTEM DETAILS (MASH 2009)	
PROJ. MANAGER	M. PARLIN	BY	D. SHAW	DATE	Dec. 2023	SIGNATURE		P.E. NUMBER	WIN
DESIGN-DETAILED	J. HASBROUCK	CHECKED-REVIEWED	I. WHITE	DATE	Feb. 2022	P.E. NUMBER		DATE	022256.00
DESIGN-DETAILED	N. PIKAY	DESIGN-DETAILED							
REVISIONS 1		REVISIONS 1							
REVISIONS 2		REVISIONS 2							
REVISIONS 3		REVISIONS 3							
REVISIONS 4		REVISIONS 4							
FIELD CHANGES		FIELD CHANGES							
SHEET NUMBER		17							
		OF 19							



**NOTES:**

1. Other signs may be needed as directed by the Resident.
2. Cover all conflicting route and directional signs.
3. All signs and sizes must be in conformance with Standard Details/MUTCD.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	2225600 WIN 022256.00	BRIDGE NO. 1035 BRIDGE PLANS
HANSON BRIDGE SMITH BROOK SOMERSET COUNTY PALMYRA <b>DETOUR PLAN</b>		
PROJ. MANAGER: M. PARLIN CHECKED-REVIEWED: J. HASBROUCK DESIGNED-DETAILED: N. PIKAY REVISIONS 1: REVISIONS 2: REVISIONS 3: REVISIONS 4: FIELD CHANGES:		DATE: Dec. 2023 SIGNATURE: I. WHITE P.E. NUMBER: DATE:
SHEET NUMBER <h1 style="margin: 0;">18</h1>		OF 19

Date: 12/13/2023

Username: David.Shaw

Division: BRIDGE

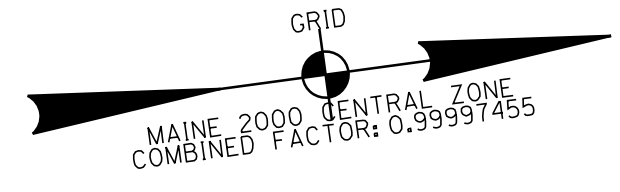
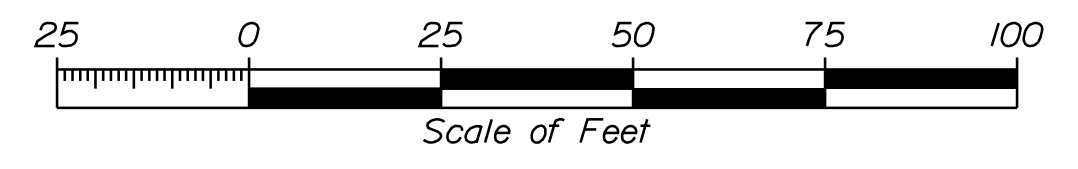
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PLAN LEGEND	
Sanitary Sewer	Existing: [Symbol] Proposed: [Symbol]
Telephone Line	Existing: [Symbol] Proposed: [Symbol]
Electric Line	Existing: [Symbol] Proposed: [Symbol]
Water Line	Existing: [Symbol] Proposed: [Symbol]
Underdrain Line	Existing: [Symbol] Proposed: [Symbol]
Gas Line	Existing: [Symbol] Proposed: [Symbol]
Guardrail	Existing: [Symbol] Proposed: [Symbol]
Culvert	Existing: [Symbol] Proposed: [Symbol]
Travelled Way	Existing: [Symbol] Proposed: [Symbol]
Ditch	Existing: [Symbol] Proposed: [Symbol]
Catch Basin	Existing: [Symbol] Proposed: [Symbol]
Manhole	Existing: [Symbol] Proposed: [Symbol]
Sewer Manhole	Existing: [Symbol] Proposed: [Symbol]
Utility Pole	Existing: [Symbol] Proposed: [Symbol]
Fire Hydrant	Existing: [Symbol] Proposed: [Symbol]
Curbing	Existing: [Symbol] Proposed: [Symbol]
Cut Line	Existing: [Symbol] Proposed: [Symbol]
Stonewall	Existing: [Symbol] Proposed: [Symbol]
Baseline	Existing: [Symbol] Proposed: [Symbol]
Monument	Existing: [Symbol] Proposed: [Symbol]
Iron Rod Found	Existing: [Symbol] Proposed: [Symbol]
Replacement Pin Set	Existing: [Symbol] Proposed: [Symbol]
Fill Line	Existing: [Symbol] Proposed: [Symbol]
Retaining Wall	Existing: [Symbol] Proposed: [Symbol]
Traverse Point	Existing: [Symbol] Proposed: [Symbol]
Pipe Found	Existing: [Symbol] Proposed: [Symbol]

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.

STATE OF MAINE  
REGISTRY OF DEEDS

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



BOUNDARY SURVEY FOR  
EARL E. CLAY  
EVELYN F. CLAY  
MAY 20, 2003  
REC. SOMERSET CO. REG. OF DEEDS  
PLAN FILE 2003-61

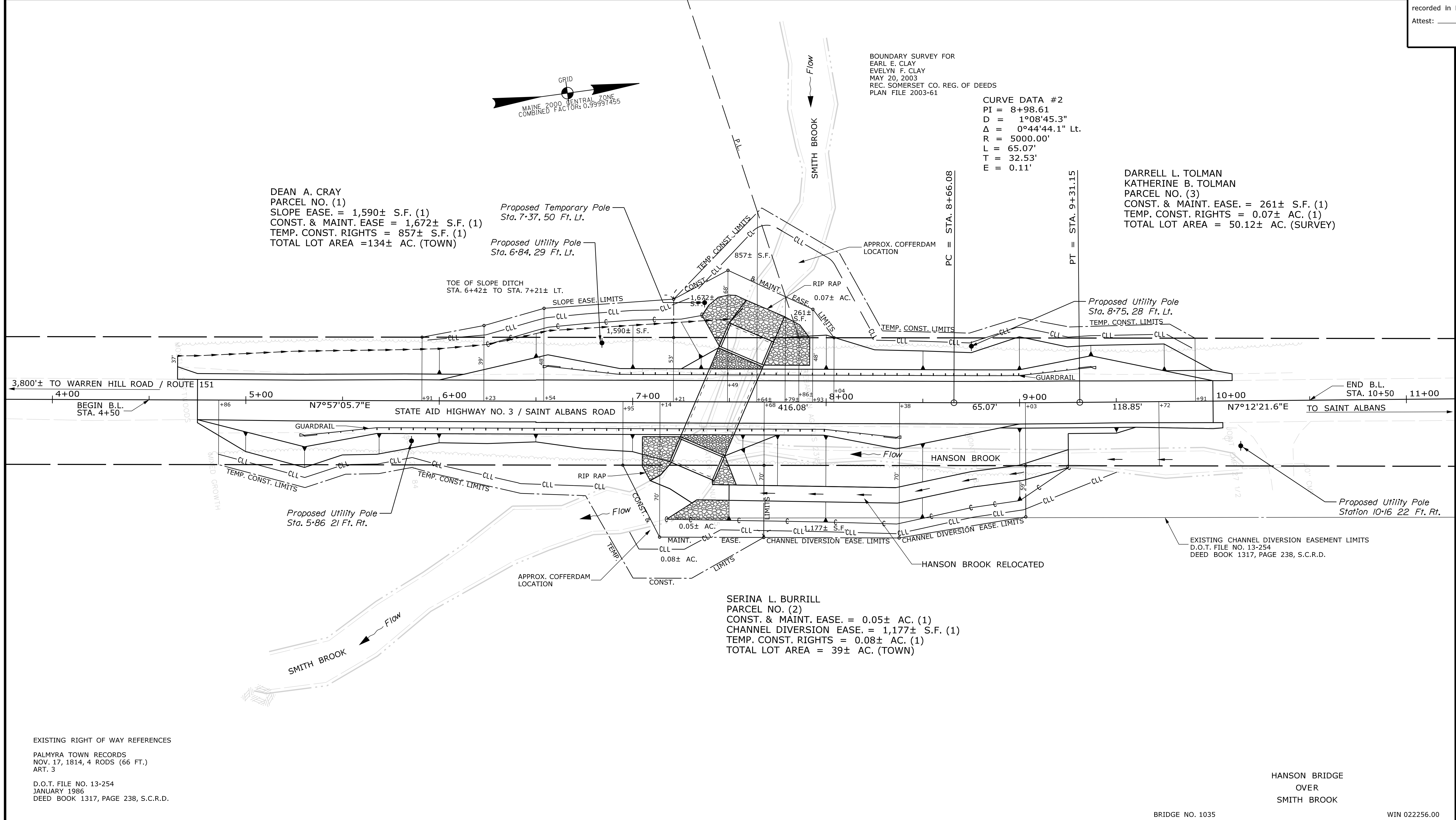
CURVE DATA #2  
PI = 8+98.61  
D = 1°08'45.3"  
Δ = 0°44'44.1" Lt.  
R = 5000.00'  
L = 65.07'  
T = 32.53'  
E = 0.11'

DARRELL L. TOLMAN  
KATHERINE B. TOLMAN  
PARCEL NO. (3)  
CONST. & MAINT. EASE. = 261± S.F. (1)  
TEMP. CONST. RIGHTS = 0.07± AC. (1)  
TOTAL LOT AREA = 50.12± AC. (SURVEY)

DEAN A. CRAY  
PARCEL NO. (1)  
SLOPE EASE. = 1,590± S.F. (1)  
CONST. & MAINT. EASE. = 1,672± S.F. (1)  
TEMP. CONST. RIGHTS = 857± S.F. (1)  
TOTAL LOT AREA = 134± AC. (TOWN)

Proposed Temporary Pole  
Sta. 7+37, 50 Ft. Lt.

Proposed Utility Pole  
Sta. 6+84, 29 Ft. Lt.



SERINA L. BURRILL  
PARCEL NO. (2)  
CONST. & MAINT. EASE. = 0.05± AC. (1)  
CHANNEL DIVERSION EASE. = 1,177± S.F. (1)  
TEMP. CONST. RIGHTS = 0.08± AC. (1)  
TOTAL LOT AREA = 39± AC. (TOWN)

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	C.D.P.	B.S.
FINAL RIGHT OF WAY	C.D.P.	B.M.
AREAS	C.D.P.	B.S.

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

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

BRUCE A. VAN NOTE  
COMMISSIONER  
JOYCE NOEL TAYLOR  
CHIEF ENGINEER

DATE \_\_\_\_\_

STATE AID HIGHWAY NO. 3  
SAINT ALBANS ROAD  
PALMYRA SOMERSET COUNTY  
STATE PROJECT NO. 22256.00

MAY 2023  
SCALE 1" = 25'

RIGHT-OF-WAY MAP  
SHEET 1 OF 1

D.O.T. FILE NO. 13-409

SHEET NUMBER  
**19**  
OF 19