MAINE TURNPIKE AUTHORITY

ADDENDUM NO. 1

CONTRACT 2019.09

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
MILE 46.7

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
MILE 47.9

The bid opening date has been changed to Friday 11/09/2018 at 1:00 pm.

The following changes are made to the Proposal, Specifications and Plans.

GENERAL

Addendum No. 2, if necessary, is scheduled to be issued on November 5, 2018 (Monday). All questions regarding Contract 2019.09 should be submitted by 12:00 pm on November 2, 2018 (Friday) to be answered in Addendum No. 2. Questions received after that time may not be answered. All questions and inquiries regarding the Contract Documents shall be submitted in writing and shall be directed to Nate Carll, Purchasing Manager of the Maine Turnpike Authority. Fax No. (207) 871-7739. E-mail ncarll@maineturnpike.com.

PROPOSAL

Proposal Sheets P-2 through P-17 are deleted and replaced with P-2 (Revised 11/1/2018) through P-17 (Revised 11/1/2018) attached hereto.

1. The revisions to these proposal sheets are to add items and revise quantities for the following:
   - Item 203.24 “Common Borrow” quantity is revised.
   - Item 203.33 “Special Fill” is added to the contract.
   - Item 403.212 “Hot Mix Asphalt” quantity is revised.
   - Item 501.301 “Steel Sheet Piling – MCRR” is deleted from the contract.
   - Item 511.075 “Cofferdam Fore River Culvert – West End” is added to the contract.
   - Item 511.076 “Cofferdam Fore River Culvert – East End” is added to the contract.
   - Item 603.265 “66 Inch Reinforced Concrete Pipe – Class III” is added to the contract.
   - Item 603.281 “Fore River Concrete Collar” is added to the contract.

- Item 603.55 “Concrete Pipe Ties” is added to the contract.
- Item 605.09 “6” Underdrain Type B” quantity is revised.
- Item 605.10 “6” Underdrain Type B Outlet” quantity is revised.
- Item 610.08 “Plain Riprap” quantity is revised.
- Item 620.56 “Drainage Geotextile” is added to the contract.
- Item 620.561 “Impervious Liner” is added to the contract.
- Item 620.58 “Erosion Control Geotextile” quantity is revised.

PLANS

The following revisions to the Plans are incorporated into the Contract Documents:

1. MAINE CENTRAL RAILROAD PART II, Plan Sheet EQ-01, sheet 2 of 116 “Estimated Quantities”: This plan sheet is removed in its entirety and replaced with the attached revised sheet 2.

2. MAINE CENTRAL RAILROAD PART II, Plan Sheet GN-01, sheet 3 of 116 “General Notes and Earthwork Summary, Estimated Quantities”: This plan sheet is removed in its entirety and replaced with the attached revised sheet 3.

3. MAINE CENTRAL RAILROAD PART II, Plan Sheet BMP-1, sheet 23 of 116 “Underdrain Soil Filter Detail, Estimated Quantities”: This plan sheet is removed in its entirety and replaced with the attached revised sheet 23.

4. MAINE CENTRAL RAILROAD PART II, Plan Sheet BMP-2, sheet 24 of 116 “Grading Plan, Estimated Quantities”: This plan sheet is removed in its entirety and replaced with the attached revised sheet 24.

5. MAINE CENTRAL RAILROAD PART II, Plan Sheet GP-01, sheet 25 of 116 “General Plans 1”: This plan sheet is removed in its entirety and replaced with the attached revised sheet 25.

6. MAINE CENTRAL RAILROAD PART II, Plan Sheet GP-02, sheet 26 of 116 “General Plan 2”: This plan sheet is removed in its entirety and replaced with the attached revised sheet 26.

7. MAINE CENTRAL RAILROAD PART II, Plan Sheet LOD-01, sheet 32 of 116 “Limit of Disturbance”: This plan sheet is removed in its entirety and replaced with the attached revised sheet 32.

8. MAINE CENTRAL RAILROAD PART II, Plan Sheets XS-04 and XS-05, sheets 36 and 37 of 116 “Cross Sections”: These plan sheets are removed in their entirety and replaced with the attached revised sheet 36 and 37.

9. MAINE CENTRAL RAILROAD PART II, Plan Sheet S-01, sheet 52 of 116 "General Notes, Index, Quantities": This plan sheet is removed in its entirety and replaced with the attached revised sheet 52.

10. MAINE CENTRAL RAILROAD PART II, Plan Sheets S-40 through S-42, sheets 91 through 93 of 116 "Fore River Culvert I through III": These plan sheets are removed in their entirety and replaced with the attached revised sheet 91 through 93.

SPECIFICATIONS

The following revisions to the Special Provisions are incorporated into the Contract Documents:

1. Special Provision Section 105.8.2, PERMIT REQUIREMENTS, Page SP-11: After the second paragraph add the following:

   "The MCRR Overpass is being constructed under the Maine Department of Environmental Protection (MDEP) Natural Resources Protection Act Permit by Rule regulations Section 11 – State Transportation Facilities, updated June 8, 2012. A copy of the Section 11 – State Transportation Facilities Permit by Rule regulations are provided on the Maine Turnpike Authority website.

   The Fore River Culvert extension is being permitted under Section 404 of the Clean Water Act, through the US Army Corps of Engineers Programmatic General Permit. Final permit authorization is anticipated by July 2019, work in Fore River and the surrounding wetlands may not occur until authorization is received."

2. Special Provision Section 107.4.6, PROSECUTION OF WORK, Page SP-13: The paragraph following bullet "a." is deleted and replaced with the following:

   "All Contract work that requires in-water work in the Stroudwater River or Fore River shall be completed between July 15, 2019 and October 1, 2019 or July 15, 2020 and October 1, 2020."

3. Special Provision Section 107.4.6, PROSECUTION OF WORK, Page SP-13: The paragraph following bullet "b." is deleted and replaced with the following:

   "Phase 1 traffic control has been established to minimize impacts to traffic operations, specifically vehicles merging onto the highway from adjacent interchanges. Phase 1A restricts the limits of work to avoid disruption to the acceleration lanes from the interchanges. Phase 1B allows for an extension of the work area and results in a reduction in the acceleration lane length. The duration of Phase 1B shall not exceed 14 calendar days to minimize disruptions to traffic operations. Earthwork and clearing necessary to construct Phase 1B may occur during Phase 1A provided the work is conducted at least 30' from the existing travel lanes, or is behind barrier. Liquidated damages shall be assessed at $5,000/day for every day that the Phase 1B maintenance of traffic configuration is in place past the 14 calendar days allowed."

4. Special Provision Section 107.4.7, LIMITATIONS OF OPERATIONS, Page SP-13: The first paragraph is deleted and replaced with the following:

   "Pile driving will not be allowed within 10 feet of traffic."

5. Special Provision Section 107.4.7, LIMITATIONS OF OPERATIONS, Page SP-14: The third paragraph is deleted and replaced with the following:

   "Construction activities at the MCRR Bridge shall not reduce the existing railroad horizontal or vertical clearance during construction. The construction of temporary access roads, filling of ditches, or other alterations within the railroad right-of-way shall not be permitted."

6. Special Provision Section 107.4.7, LIMITATIONS OF OPERATIONS, Page SP-14: The last paragraph is deleted and replaced with the following:

   "Where anchored temporary concrete barrier is located on a new concrete deck, thru-bolting will be prohibited."

7. Special Provision Section 203, EXCAVATION AND EMBANKMENT (Special Fill – Streambed Materials), included herein, is inserted following page SP-23.

8. Special Provision Section 501, FOUNDATION PILES (Sheet Pile Wall): The special provision is removed in its entirety and not replaced.

9. Special Provision Section 504, STRUCTURAL STEEL, subsection 504.03 Drawings, Page SP-55: The second paragraph is deleted and not replaced.

10. Special Provision Section 504, STRUCTURAL STEEL, subsection 504.53 Inspection, Page SP-55: This subsection is deleted and replaced with the following:

    "This Subsection is amended by the addition of the following:

    The Contractor shall provide access to the Resident to inspect all bottom flange cover plate welded ends at midspans and all top flange cover plate welded ends over piers at the Stroudwater River Overpass (NB & SB) bridges and Maine Central Railroad Overpass (NB & SB) bridges. Access shall provide adequate space to perform a hands-on inspection of the cover plate welded ends. Cover plates that are encased in the concrete deck will require inspection once the deck has been removed.

    Suspected areas of cracking shall be called to the attention of the Engineer. At that time, the Authority reserves the right to hire an independent subconsultant to perform non-destructive testing. The Contractor shall provide access to facilitate the independent non-destructive testing as required."

11. Special Provision Section 504, STRUCTURAL STEEL (Peening Cover Plate Welds), subsection 504.01 Description, Page SP-57: This subsection is deleted and replaced with the following:

    "This work shall consist of peening welds at the ends of cover plates at the locations designated on the Plans."

12. Special Provision Section 603, PIPE CULVERTS AND STORM DRAINS (Fore River Concrete Collar), included herein, is inserted following page SP-110.

13. Special Provision Section 620, DRAINAGE GEOTEXTILE (Impervious Liner), included herein, is inserted following page SP-134.

14. Special Provision Section 652, MAINTENANCE OF TRAFFIC (Specific Project Maintenance of Traffic Requirements): Is removed in its entirety and replaced with the revised special provision included herein.

QUESTIONS

The following are questions asked at the pre-bid meeting held on October 2, 2018 or submitted to the Maine Turnpike Authority in writing. Answers to the questions are noted. Bidders shall utilize this information in preparing their bid.

Question 1: Will all temporary concrete barrier be supplied by the Contractor?

Answer: Yes, all temporary concrete barrier shall be supplied by the Contractor.

Question 2: What condition does the temporary concrete barrier that will remain on the project need to be in?

Answer: The "Temporary Concrete Barrier, Type I: To Remain" provided by the Contractor shall be in serviceable condition. Serviceable condition shall meet the definition included in MaineDOT Standard Specification Section 526, Subsection 526.03 Construction Requirements. The Resident shall have the authority to accept or reject the concrete barrier used on the Project per Special Provision Section 526, Subsection 526.021 Acceptance.

Question 3: The bid opening date is the day after a holiday (Veteran's Day), can that be moved?

Answer: Yes, the bid opening date has been moved to Friday, November 9, 2018 at 1:00 pm.

Question 4: Temporary striping tape is difficult to maintain in the winter. Is tape required?

Answer: For the installation of Phase 1 traffic control the Contractor has the option of using either paint or tape for temporary roadway markings. The Phase 1 striping is currently quantified as painted lines. The option to use tape is intended to provide the Contractor with the flexibility to implement the Phase 1 traffic control during the winter months if desired. Payment for the installation of taped roadway markings for Phase 1 traffic control, if used, shall be made under Pay Item 627.73 Temporary 6 Inch Pavement Marking Tape and shall include all labor, materials and equipment necessary to maintain and/or reinstall the lines as required.

Question 4: Is the sheet pile wall at the Fore River Culvert required? Can it be eliminated?

Answer: The sheet pile wall shown on the Plans is deleted. In lieu of installing a sheet pile wall system the Contractor shall extend the existing Fore River culverts as shown on the revised plan sheets. Note that this work will not be allowed to occur until after approved permits are received from MaineDEP and the U.S. Army Corps of Engineers. These permits are expected to be received on or before July 2019. Additionally, all work related to the culvert extensions shall be completed during the designated in-stream work windows defined in Special Provision 107.4.6, Prosecution of Work.

ATTACHMENTS

- Proposal Sheets (16 pages)
- Plan Sheets (13 Sheets)
- Special Provisions (7 Sheets)
- Pre-Bid Agenda (6 pages)
- Pre-Bid Sign-In Sheet (1 page)

Notes: The above items shall be considered as part of the bid submittal.

The total number of pages included with this addendum is Forty-Nine (49).

All bidders are requested to acknowledge the receipt of the Addendum No. 1 by signing below and faxing this sheet to Nathaniel Carll, Purchasing Department, Maine Turnpike Authority at 207-871-7739. Bidders are also required to acknowledge receipt of this Addendum No. 1 on Page P-18 of the bid package.

_____
Business Name

_____
Print Name and Title

_____
Signature

_____
Date
November 1, 2018

Very truly yours,

MAINE TURNPIKE AUTHORITY

_____
Nathaniel Carll
Purchasing Department
Maine Turnpike Authority

SCHEDULE OF BID PRICES
CONTRACT NO. 2019.09
BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS AND MCRR OVERPASS

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
201.11	Clearing	Acre	1.5				
202.10	Removing Existing Superstructure Property of Contractor - Stroudwater	Lump Sum	1				
202.10	Removing Existing Superstructure Property of Contractor - MCRR	Lump Sum	1				
202.12	Removing Existing Structural Concrete	Cubic Yard	255				
202.13	Removing Existing Railings Retained by Authority	Linear Foot	2,240				
202.15	Removing Existing Manhole or Catch Basin	Each	6				
202.202	Removing Pavement Surface	Square Yard	5,650				
202.206	Removing Rumble Strips	Linear Foot	1,230				
203.20	Common Excavation	Cubic Yard	28,650				
203.21	Rock Excavation	Cubic Yard	150				
203.24	Common Borrow	Cubic Yard	17,600				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
203.25	Granular Borrow	Cubic Yard	9,800				
203.33	Special Fill	Cubic Yard	46				
203.45	Clay Borrow	Cubic Yard	95				
203.35	Crushed Stone 3/4 - inch	Cubic Yard	40				
206.07	Structural Rock Excavation - Drainage & Minor Structures	Cubic Yard	20				
206.082	Structural Earth Excavation - Major Structures, Plan Quantity	Cubic Yard	850				
206.10	Structural Earth Excavation - Piers	Cubic Yard	1,440				
304.10	Aggregate Subbase Course - Gravel	Cubic Yard	4,750				
304.14	Aggregate Base Course - Type A	Cubic Yard	3,900				
403.207	Hot Mix Asphalt, 19 mm Nominal Maximum Size	Ton	8,550				
403.2081	Hot Mix Asphalt, 12.5 mm (Polymer Modified) - RAP	Ton	2,920				
403.212	Hot Mix Asphalt, 4.75 mm	Ton	270				
			CARRIED FORWARD:				

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
403.213	Hot Mix Asphalt, 12.5 mm (base and intermediate course)	Ton	2,950				
409.15	Bituminous Tack Coat, Applied	Gallon	4,550				
419.30	Sawing Bituminous Pavement	Linear Foot	7,250				
470.08	Berm Dropoff Correction - Grindings	Ton	217				
470.081	Berm Correction	Linear Foot	200				
501.231	Dynamic Loading Test	Each	16				
501.42	Steel H-beam Piles 57 lb/ft, delivered	Linear Foot	4,214				
501.421	Steel H-beam Piles 57 lb/ft, in place	Linear Foot	4,214				
501.44	Steel H-beam Piles 63 lb/ft, delivered	Linear Foot	2,968				
501.441	Steel H-beam Piles 63 lb/ft, in place	Linear Foot	2,968				
501.54	Steel H-beam Piles 117 lb/ft, delivered	Linear Foot	195				
501.541	Steel H-beam Piles 117 lb/ft, in place	Linear Foot	195				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
501.90	Pile Tips	Each	136				
501.91	Pile Splices	Each	49				
501.92	Pile Driving Equipment Mobilization - Stroudwater	Lump Sum	1				
501.92	Pile Driving Equipment Mobilization - MCRR	Lump Sum	1				
502.219	Structural Concrete, Abutments and Retaining Walls - Stroudwater	Lump Sum	1				
502.219	Structural Concrete, Abutments and Retaining Walls - MCRR	Lump Sum	1				
502.239	Structural Concrete Piers - Stroudwater	Lump Sum	1				
502.239	Structural Concrete Piers - MCRR	Lump Sum	1				
502.249	Structural Concrete Piers (Placed Under Water)	Cubic Yard	640				
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges - Stroudwater	Lump Sum	1				
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges - MCRR	Lump Sum	1				
502.264	Structural Concrete Parapets - Stroudwater	Lump Sum	1				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
502.264	Structural Concrete Parapets - MCRR	Lump Sum	1				
503.14	Epoxy-Coated Reinforcing Steel, Fabricated and Delivered	Pound	799,000				
503.15	Epoxy-Coated Reinforcing Steel, Placing	Pound	799,000				
503.17	Mechanical/Welded Splice	Each	4,512				
504.702	Structural steel fabricated and delivered, welded - Stroudwater	Lump Sum	1				
504.702	Structural steel fabricated and delivered, welded - MCRR	Lump Sum	1				
504.71	Structural steel erection - Stroudwater	Lump Sum	1				
504.71	Structural steel erection - MCRR	Lump Sum	1				
504.7111	Peening Cover Plate Welds	Each	64				
505.08	Shear Connectors - Stroudwater	Lump Sum	1				
505.08	Shear Connectors - MCRR	Lump Sum	1				
506.9102	Zinc Rich Coating System (Shop Applied) - Stroudwater	Lump Sum	1				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
506.9102	Zinc Rich Coating System (Shop Applied) - MCRR	Lump Sum	1				
506.9105	Field Touch-Up of Existing Steel - Stroudwater	Lump Sum	1				
506.9105	Field Touch-Up of Existing Steel - MCRR	Lump Sum	1				
507.091	Aluminum Bridge Railing, 1 Bar - Stroudwater	Lump Sum	1				
507.091	Aluminum Bridge Railing, 1 Bar - MCRR	Lump Sum	1				
508.14	High Performance Waterproofing Membrane - Stroudwater	Lump Sum	1				
508.14	High Performance Waterproofing Membrane - MCRR	Lump Sum	1				
511.071	Cofferdam Pier 1 - NB - Stroudwater	Lump Sum	1				
511.072	Cofferdam Pier 1 - SB - Stroudwater	Lump Sum	1				
511.073	Cofferdam Pier 2 - NB - Stroudwater	Lump Sum	1				
511.074	Cofferdam Pier 2 - SB - Stroudwater	Lump Sum	1				
511.075	Cofferdam Fore River Culvert - West End	Lump Sum	1				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
511.076	Cofferdam Fore River Culvert - East End	Lump Sum	1				
511.091	Temporary Earth Support Systems - Stroudwater	Lump Sum	1				
511.091	Temporary Earth Support Systems - MCRR	Lump Sum	1				
514.06	Curing Box for Concrete Cylinders	Each	2				
515.202	Clear Protective Coating for Concrete Surfaces	Square Yard	2,630				
515.23	Anti-Graffiti Coating	Square Yard	3,230				
518.30	Abutment Seat Refacing	Cubic Yard	7				
518.40	Epoxy Injection Crack Repair	Linear Foot	99				
518.51	Repair of Upward Facing Surfaces - below Reinforcing Steel < 8 inches	Square Foot	160				
518.60	Repair of Vertical Surfaces < 8 inches	Square Foot	250				
520.221	Expansion Device - Locking Compression Seal with Steel Edge Beams	Each	6				
520.23	Asphaltic Plug Joint	Linear Foot	116				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
523.52	Bearing Installation	Each	36				
523.5303	Steel Bearings, Fixed, Rocker	Each	8				
523.5304	Steel Bearings, Expansion, Rocker	Each	28				
523.56	Clean and Paint Bearing	Each	49				
523.561	Clean, Paint, and Reset Bearing	Each	23				
524.301	Temporary Structural Support - Jacking - Stroudwater	Lump Sum	1				
524.301	Temporary Structural Support - Jacking - MCRR	Lump Sum	1				
524.302	Temporary Structural Support - Girders - Stroudwater	Lump Sum	1				
524.303	Temporary Structural Support - Braces - Stroudwater	Lump Sum	1				
524.303	Temporary Structural Support - Braces - MCRR	Lump Sum	1				
524.40	Protective Shielding - Steel Girders	Square Yard	5,900				
526.301	Temporary Concrete Barrier, Type I - Stroudwater	Lump Sum	1				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
526.301	Temporary Concrete Barrier, Type I - MCRR	Lump Sum	1				
526.3011	Temporary Concrete Barrier, Type I: To Remain - Stroudwater	Lump Sum	1				
526.3011	Temporary Concrete Barrier, Type I: To Remain - MCRR	Lump Sum	1				
526.304	Temporary Concrete Barrier, Anchored - Stroudwater	Lump Sum	1				
526.304	Temporary Concrete Barrier, Anchored - MCRR	Lump Sum	1				
526.307	Concrete Barrier Type I - Stormwater Filter	Linear Foot	40				
527.341	Work Zone Crash Cushion - TL3	Unit	4				
603.155	12 inch Reinforced Concrete Pipe - Class III	Linear Foot	320				
603.165	15 inch Reinforced Concrete Pipe - Class III	Linear Foot	65				
603.175	18 inch Reinforced Concrete Pipe - Class III	Linear Foot	77				
603.265	66 inch Reinforced Concrete Pipe - Class III	Linear Foot	168				
603.28	Concrete Collar	Each	4				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
603.281	Fore River Concrete Collar	Each	2				
603.55	Concrete Pipe Ties	Group	12				
604.09	Catch Basin Type B1	Each	7				
604.15	Manhole	Each	1				
604.246	Catch Basin Type F5	Each	1				
604.26	Catch Basin Type B5	Each	5				
604.40	Secure Catch Basin Grate	Each	14				
605.016	6 Inch PVC Underdrain	Linear Foot	590				
605.018	8 Inch PVC Underdrain	Linear Foot	240				
605.09	6" Underdrain Type B	Linear Foot	820				
605.10	6" Underdrain Type B Outlet	Linear Foot	160				
605.11	12" Underdrain Type C	Linear Foot	140				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
606.1301	31" W-Beam Guardrail - Mid-Way Splice (7' Steel Post, 8" Offset Blocks, Single Faced)	Linear Foot	4,137.5				
606.1305	31" W-Beam Guardrail - Mid-Way Splice Flared Terminal (31" Height)	Each	3				
606.1351	Terminal End - Anchored End - 31" W-Beam Guardrail	Each	3				
606.1723	Bridge Transition - Type III	Each	8				
606.353	Reflectorized Flexible Guardrail Marker	Each	4				
606.354	Remove and Reset Reflectorized Flexible Guardrail Marker	Each	10				
606.3622	Guardrail Adjust - Double Rail	Linear Foot	530				
607.09	Woven Wire Fence - Metal Posts	Linear Foot	1,500				
607.17	Chain Link Fence - 6 foot	Linear Foot	1,760				
607.32	Bracing Assembly Type I - Metal Posts	Each	2				
607.33	Bracing Assembly Type II - Metal Posts	Each	10				
609.15	Sloped Curb Type I	Linear Foot	1,600				
			CARRIED FORWARD:				

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
610.08	Plain Riprap	Cubic Yard	1,797				
610.18	Stone Ditch Protection	Cubic Yard	327				
610.181	Temporary Stone Check Dam	Cubic Yard	60				
613.319	Erosion Control Blanket	Square Yard	14,700				
615.07	Loam	Cubic Yard	3,850				
618.14	Seeding Method Number 2	Unit	310				
618.143	Special Seeding	Unit	6				
619.1201	Mulch - Plan Quantity	Unit	320				
619.1202	Temporary Mulch - Stroudwater	Lump Sum	1				
619.1202	Temporary Mulch - MCRR	Lump Sum	1				
620.56	Drainage Geotextile	Square Yard	1,350				
620.561	Impervious Liner	Square Yard	670				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
620.58	Erosion Control Geotextile	Square Yard	2,073				
627.712	White or Yellow Pavement Marking Line	Linear Foot	41,700				
627.73	Temporary 6 Inch Pavement Marking Tape	Linear Foot	3,300				
627.77	Removing Existing Pavement Marking	Square Foot	31,600				
627.78	Temporary Painted Pavement Marking Line, White or Yellow	Linear Foot	61,300				
629.05	Hand Labor, Straight Time	Hour	40				
631.1	Air Compressor (Including Operator)	Hour	40				
631.11	Air Tool (Including Operator)	Hour	40				
631.12	All Purpose Excavator (Including Operator)	Hour	40				
631.172	Truck - Large (Including Operator)	Hour	40				
631.32	Culvert Cleaner (Including Operator)	Hour	40				
631.36	Foreman	Hour	40				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
645.272	Regulatory, Warning and Bridge Number Signs, Type 1 - Supplied By Authority	Each	4				
645.501	Remove and Reset Mainline Sign No. 1	Lump Sum	1				
645.502	Remove and Reset Mainline Sign No. 2	Lump Sum	1				
645.503	Remove and Reset Mainline Sign No. 3	Lump Sum	1				
645.504	Remove and Reset Mainline Sign No. 4	Lump Sum	1				
645.505	Remove and Reset Mainline Sign No. 5	Lump Sum	1				
645.506	Remove and Reset Mainline Sign No. 6	Lump Sum	1				
645.507	Remove and Reset Mainline Sign No. 7	Lump Sum	1				
645.508	Remove and Reset Mainline Sign No. 8	Lump Sum	1				
645.509	Remove and Reset Mainline Sign No. 9	Lump Sum	1				
645.510	Remove and Reset Mainline Sign No. 10	Lump Sum	1				
645.511	Remove and Reset Mainline Sign No. 11	Lump Sum	1				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
645.512	Remove and Reset Mainline Sign No. 12	Lump Sum	1				
645.513	Remove and Reset Mainline Sign No. 13	Lump Sum	1				
645.514	Remove and Reset Mainline Sign No. 14	Lump Sum	1				
645.515	Remove and Reset Mainline Sign No. 15	Lump Sum	1				
652.30	Flashing Arrow	Each	4				
652.312	Type III Barricades	Each	2				
652.33	Drum	Each	510				
652.34	Cone	Each	510				
652.35	Construction Signs	Square Foot	2,250				
652.361	Maintenance of Traffic Control Devices - Stroudwater	Lump Sum	1				
652.361	Maintenance of Traffic Control Devices - MCRR	Lump Sum	1				
652.41	Portable-Changeable Message Sign	Each	4				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
652.45	Truck Mounted Attenuator	Calendar Day	130				
652.451	Automated Trailer Mounted Speed Limit Sign	Calendar Day	130				
656.50	Baled Hay, In Place	Each	40				
656.60	Temporary Berms	Linear Foot	1,000				
656.62	Temporary Slope Drains	Linear Foot	200				
656.632	30 Inch Temporary Silt Fence	Linear Foot	8,850				
656.64	Boom Supported Floating Silt Fence	Linear Foot	500				
659.10	Mobilization	Lump Sum	1				
673.01	Stormwater Filter Bed	Cubic Yard	170				
					TOTAL:		

ITEM NO.	ITEM DESCRIPTION	REFERENCE QUANTITY	UNIT	CIVIL QUANTITY	BRIDGE QUANTITY	TOTAL QUANTITY
202.10	Removing Existing Superstructure Property of Contractor - MCRR	550 CY	LS		1	1
202.12	Removing Existing Structural Concrete		CY		135	135
202.13	Removing Existing Railings Retained by Authority		LF		968	968
202.202	Removing Pavement Surface		SY	3150		3150
202.206	Removing Rumble Strips		LF	600		600
203.20	Common Excavation		CY	7450		7450
203.21	Rock Excavation		CY	50		50
203.24	Common Borrow		CY	17600		17600
203.25	Granular Borrow		CY	4450		4450
203.33	Special Fill		CY	46		46
203.45	Clay Borrow		CY	95		95
206.082	Structural Earth Excavation - Major Structures, Plan Quantity		CY		680	680
206.10	Structural Earth Excavation - Piers		CY		240	240
206.07	Structural Rock Excavation - Drainage & Minor Structures		CY	20		20
304.10	Aggregate Subbase Course - Gravel		CY	2050		2050
304.14	Aggregate Base Course - Type A		CY	1600		1600
403.207	Hot Mix Asphalt, 19.0 mm Nominal Maximum Size		Ton	3900		3900
403.2081	Hot Mix Asphalt, 12.5 mm (Polymer Modified) - RAP		Ton	1100	230	1330
403.212	Hot Mix Asphalt, 4.75 mm Nominal Maximum Size		Ton	160		160
403.213	Hot Mix Asphalt, 12.5 mm (base and intermediate course)		Ton	1000	460	1460
409.15	Bituminous Tack Coat, Applied		GAL	2000	180	2180
419.30	Sawing Bituminous Pavement		LF	3200		3200
470.08	Berm Dropoff Correction - Grindings		Ton	87		87
470.081	Berm Correction		LF	100		100
501.231	Dynamic Loading Test		EA		8	8
501.42	Steel H-beam Piles 57 lb/ft, delivered		LF		1744	1744
501.421	Steel H-beam Piles 57 lb/ft, in place		LF		1744	1744
501.44	Steel H-beam Piles 63 lb/ft, delivered		LF		1168	1168
501.441	Steel H-beam Piles 63 lb/ft, in place		LF		1168	1168
501.90	Pile Tips		EA		64	64
501.91	Pile Splices		EA		5	5
501.92	Pile Driving Equipment Mobilization - MCRR		LS		1	1
502.219	Structural Concrete, Abutments and Retaining Walls - MCRR	253 CY	LS		1	1
502.239	Structural Concrete Piers - MCRR	227 CY	LS		1	1
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges - MCRR	700 CY	LS		1	1
502.264	Structural Concrete Parapets - MCRR	110 CY	LS		1	1
503.14	Epoxy-Coated Reinforcing Steel, Fabricated and Delivered		LB		336000	336000
503.15	Epoxy-Coated Reinforcing Steel, Placing		LB		336000	336000
503.17	Mechanical/Welded Splice		EA		2040	2040
504.702	Structural steel, fabricated and delivered, welded - MCRR	334000 LB	LS		1	1
504.71	Structural steel erection - MCRR	334000 LB	LS		1	1
504.7111	Peening Cover Plate Welds		EA		64	64
505.08	Shear Connectors - MCRR	15036 EA	LS		1	1
506.9102	Zinc Rich Coating System (Shop Applied) - MCRR	285000 LB	LS		1	1
506.9105	Field Touch-Up of Existing Steel - MCRR	56528 LB	LS		1	1
507.091	Aluminum Bridge Railing, 1 Bar - MCRR	968 LF	LS		1	1
508.14	High Performance Waterproofing Membrane - MCRR	2960 SY	LS		1	1
511.075	Cofferdam Fore River Culvert - West End		LS		1	1
511.076	Cofferdam Fore River Culvert - East End		LS		1	1
511.091	Temporary Earth Support Systems - MCRR		LS		1	1
514.06	Curing Box for Concrete Cylinders		EA		1	1
515.202	Clear Protective Coating for Concrete Surfaces		SY		1130	1,130
515.23	Anti-Graffiti Coating		SY		1180	1,180
518.30	Abutment Seat Refacing		CY		7	7
518.40	Epoxy Injection Crack Repair		LF		44	44
518.51	Repair of Upward Facing Surfaces - below Reinforcing Steel < 8 inches		SF		66	66
518.60	Repair of Vertical Surfaces < 8 inches		SF		114	114
520.221	Expansion Device - Locking Compression Seal with Steel Edge Beams		EA		2	2
520.23	Asphaltic Plug Joint		LF		116	116
523.52	Bearing Installation		EA		16	16
523.5303	Steel Bearings, Fixed, Rocker		EA		4	4
523.5304	Steel Bearings, Expansion, Rocker		EA		12	12
523.56	Clean and Paint Bearing		EA		38	38
523.561	Clean, Paint, and Reset Bearing		EA		10	10
524.301	Temporary Structural Support - Jacking		LS		1	1
524.303	Temporary Structural Support - Braces		LS		1	1
524.40	Protective Shielding - Steel Girders		SY		3140	3140
526.301	Temporary Concrete Barrier, Type I - MCRR	4034 LF	LS	1		1
526.3011	Temporary Concrete Barrier, Type I: To Remain - MCRR	380 LF	LS	1		1
526.304	Temporary Concrete Barrier, Anchored - MCRR	484 LF	LS		1	1

ITEM NO.	ITEM DESCRIPTION	REFERENCE QUANTITY	UNIT	CIVIL QUANTITY	BRIDGE QUANTITY	TOTAL QUANTITY
526.307	Concrete Barrier Type I - Stormwater Filter		LF	40		40
527.341	Work Zone Crash Cushion - TL3		UNIT	2		2
603.155	12" Reinforced Concrete Pipe Class III		LF	150		150
603.265	66" Reinforced Concrete Pipe Class III		LF	128		128
603.28	Concrete Collar		EA	1		1
603.281	Fore River Concrete Collar		EA		2	2
603.55	Concrete Pipe Ties		GP	12		12
604.09	Catch Basin Type B1		EA	3		3
604.40	Secure Catch Basin Grate		EA	3		3
605.016	6 Inch PVC Underdrain		LF	590		590
605.018	8 Inch PVC Underdrain		LF	240		240
605.09	6" Underdrain Type B		LF	820		820
605.10	6" Underdrain Type B Outlet		LF	160		160
606.1301	31" W-Beam Guardrail - Mid-way Splice (7' Steel Posts, 8" Offset Blocks, Single Faced)		LF	2237.5		2237.5
606.1305	31" W-Beam Guardrail - Mid-way Splice Flared Terminal (31" Height)		EA	1		1
606.1351	Terminal End - Anchored End - 31" W-Beam Guardrail		EA	1		1
606.1723	Bridge Transition - Type III		EA		4	4
606.265	66 Inch Reinforced Concrete Pipe - Class III		LF			168
606.353	Reflectorized Flexible Guardrail Marker		EA	2		2
606.354	Remove and Reset Reflectorized Flexible Guardrail Marker		EA	4		4
606.3622	Guardrail Adjust - Double Rail		LF	340		340
607.09	Woven Wire Fence - Metal Posts		LF	1500		1500
607.17	Chain Link Fence - 6 Foot		LF	1540		1540
607.32	Bracing Assembly Type I - Metal Posts		EA	2		2
607.33	Bracing Assembly Type II - Metal Posts		EA	10		10
609.15	Sloped Curb Type I		LF		250	250
610.08	Plain Riprap		CY	200	224	424
610.18	Stone Ditch Protection		CY	165	45	210
610.181	Temporary Stone Check Dam		CY	20		20
613.319	Erosion Control Blanket		SY	12550		12550
615.07	Loam		CY	2000		2000
618.14	Seeding Method Number 2		UNIT	160		160
618.143	Special Seeding		UNIT	6		6
619.1201	Mulch - Plan Quantity		UNIT	170		170
619.1202	Temporary Mulch		LS	1		1
620.56	Drainage Geotextile		SY	1350		1350
620.561	Impervious Liner		SY	670		670
620.58	Erosion Control Geotextile		SY	910	143	1053
627.712	White or Yellow Pavement Marking Line		LF	25800		25800
627.73	Temporary 6 Inch Pavement Marking Tape		LF	1500		1500
627.77	Removing Existing Pavement Marking		SF	11500		11500
627.78	Temporary Pavement Marking Line, White or Yellow		LF	29800		29800
629.05	Hand Labor, Straight Time		HR	20		20
631.10	Air Compressor (Including Operator)		HR	20		20
631.11	Air Tool (Including Operator)		HR	20		20
631.12	All Purpose Excavator (Including Operator)		HR	20		20
631.172	Truck - Large (Including Operator)		HR	20		20
631.32	Culvert Cleaner (Including Operator)		HR	20		20
631.36	Foreman		HR	20		20
645.272	Regulatory, Warning And Bridge Number Signs, Type 1 - Supplied By Authority		EA	2		2
645.509	Remove and Reset Mainline Sign No. 9		LS	1		1
645.510	Remove and Reset Mainline Sign No. 10		LS	1		1
645.511	Remove and Reset Mainline Sign No. 11		LS	1		1
645.512	Remove and Reset Mainline Sign No. 12		LS	1		1
645.513	Remove and Reset Mainline Sign No. 13		LS	1		1
645.514	Remove and Reset Mainline Sign No. 14		LS	1		1
645.515	Remove and Reset Mainline Sign No. 15		LS	1		1
652.30	Flashing Arrow		EA	2		2
652.33	Drum		EA	260		260
652.34	Cone		EA	260		260
652.35	Construction Signs		SF	1100		1100
652.361	Maintenance of Traffic Control Devices		LS	0.5	0.5	1
652.41	Portable Changeable Message Sign		EA	2		2
652.45	Truck Mounted Attenuator		CD	65		65
652.451	Automated Trailer Mounted Speed Limit Sign		CD	65		65
656.50	Baled Hay, In Place		EA	20		20
656.60	Temporary Berms		LF	500		500
656.62	Temporary Slope Drains		LF	100		100
656.632	30 Inch Temporary Silt Fence		LF	3950		3950
659.10	Mobilization		LS	0.50	0.50	1
673.01	Stormwater Filter Bed		CY	170		170

Date:10/31/2018

Filename: 002_Quantities.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date
1	Quantity Updates	JKB	10/18

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	BRG	10\18	Checked	KEB	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

ESTIMATED QUANTITIES

SHEET NUMBER: EQ-01

CONTRACT:2019.09

Date:10/31/2018

GENERAL NOTES:

1. ALL DETAILS SHALL BE IN CONFORMANCE WITH MAINE DEPARTMENT OF TRANSPORTATION (MaineDOT) STANDARD DETAILS HIGHWAYS AND BRIDGES LATEST REVISION AND MDOT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL LATEST REVISION UNLESS OTHERWISE INCLUDED IN THESE PLANS.

2. ALL EXISTING DELINEATOR AND MILE MARKER POSTS SHALL BE REMOVED AND RESET UPON COMPLETION OF THE CONTRACT. PAYMENT FOR RESETTING GUARDRAIL DELINEATOR POSTS WILL BE MADE UNDER ITEM 606.354. DELINEATOR POSTS SUPPLIED BY THE CONTRACTOR SHALL BE PAID FOR UNDER ITEM 606.353.

3. THE CONTRACTOR SHALL SUBMIT THE PROPOSED STAGING AREA(S) AND FIELD TRAILER LOCATION TO THE RESIDENT FOR APPROVAL PRIOR TO STARTING WORK.

4. GEOTECHNICAL INFORMATION FURNISHED OR REFERRED TO IN THIS PLAN SET IS FOR THE BIDDER'S AND CONTRACTOR'S USE. NO ASSURANCE IS GIVEN THAT THE INFORMATION OR INTERPRETATIONS WILL BE REPRESENTATIVE OF ACTUAL SUBSURFACE CONDITIONS AT THE TIME OF CONSTRUCTION. THE AUTHORITY SHALL NOT BE RESPONSIBLE FOR THE BIDDER'S AND 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 BORING LOCATIONS.

5. CLEARING LIMITS SHOWN ON THE PLANS ARE APPROXIMATE. CLEARING IS ESTIMATED TO BE LESS THAN 0.5 ACRES IS INCIDENTAL TO THE CONTRACT. FINAL CLEARING LIMITS WILL BE APPROVED BY THE RESIDENT.

6. RIGHT OF WAY AND PROPERTY LINES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

EARTHWORK NOTES:

1. THE NORMAL GRUBBING WIDTH IN THE FILLS WHEN SUBGRADE IS LESS THAN 5 FEET ABOVE EXISTING GROUND SHALL BE VARIABLE LEFT OR RIGHT. THE GRUBBING DEPTH HAS BEEN ESTIMATED AS 6 INCHES AND 12 INCHES IN WOODED AREAS.

2. WASTE MATERIALS SHALL BE DISPOSED OF OFF THE PROJECT SITE AND IN ACCORDANCE WITH ALL ENVIRONMENTAL REGULATIONS.

3. EXCAVATIONS ACCOMPLISHED AS PART OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA SUBPART P OF 29 CFR PART f92.6.65D-652 (CONSTRUCTION STANDARDS FOR EXCAVATION).

4. REMOVAL OF EXISTING PAVEMENT, WITHIN THE AREAS OF FULL DEPTH PAVEMENT AND FULL DEPTH RECONSTRUCTION, SHALL BE PAID FOR AS COMMON EXCAVATION. EXISTING PAVEMENT THICKNESS HAS BEEN ESTIMATED TO BE 10 INCHES.

5. FILL/BORROW SHALL BE COMPACTED TO 90% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR, EXCEPT AS AMENDED BY SPECIAL PROVISION 203. GRANULAR BORROW, AGGREGATE BASE, AND AGGREGATE SUBBASE SHALL BE COMPACTED TO 98% OF THEIR MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR FOR AREAS OF BACKFILL MATERIAL BEHIND ABUTMENTS AND RETAINING WALLS, EXCEPT AS AMENDED BY SPECIAL PROVISION 203. GRANULAR BORROW, AGGREGATE BASE, AND AGGREGATE SUBBASE SHALL BE COMPACTED TO 95% IN ALL OTHER LOCATIONS.

LIST OF ABBREVIATIONS

ABUT. - ABUTMENT
ADDL. - ADDITIONAL
ALT. - ALTERNATE
APPROX. - APPROXIMATELY
BOT. - BOTTOM
BRG. - BEARING
CL. - CLEAR
℄ - CENTERLINE
CONC. - CONCRETE
CONSTR. - CONSTRUCTION
C.Y. - CUBIC YARD
DEMO. - DEMOLITION
DIA. - DIAMETER
EA. - EACH
EB - EASTBOUND
E.F. - EACH FACE
EL. - ELEVATION
EQ. - EQUAL
EXIST. - EXISTING
EXP. - EXPANSION
F.F. - FAR FACE
JT. - JOINT
MAX. - MAXIMUM
MEDOT - MAINE DEPARTMENT OF TRANSPORTATION
MIN. - MINIMUM
MTA - MAINE TURNPIKE AUTHORITY
NB - NORTHBOUND
N.F. - NEAR FACE
N.T.S. - NOT TO SCALE
PED. - PEDESTAL
PGL - PROFILE GRADE LINE
℗ - PLATE
PROP. - PROPOSED
P.S.I. - POUNDS per SQUARE INCH
RDWY. - ROADWAY
SHLDR. - SHOULDER
SB - SOUTHBOUND
SF - SQUARE FEET
SP. - SPACES
STA. - STATION
T.&B. - TOP & BOTTOM
TPKE. - TURNPIKE
TYP. - TYPICAL
U.O.N. - UNLESS OTHERWISE NOTED
VERT. - VERTICAL
WB - WESTBOUND
W.P. - WORKING POINT
WW - WINGWALL

DRAINAGE NOTES:

1. NO EXISTING DRAINAGE SHALL BE ABANDONED, REMOVED OR PLUGGED WITHOUT PRIOR APPROVAL OF THE RESIDENT. ABANDONED STRUCTURES TO REMAIN SHALL BE PLUGGED WITH BRICK AND MORTAR. THIS WORK SHALL BE INCIDENTAL TO SECTION 604 ITEMS.

2. INLETS AND OUTLETS OF ALL CULVERTS SHALL BE RIPRAPPED UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE RESIDENT.

3. ALL DITCH ELEVATIONS AND OFFSETS SHOWN ON THE CROSS SECTIONS ARE FOR THE FINISHED DITCH FLOW LINE.

UTILITY NOTES:

1. EXISTING UTILITIES ON THESE PLANS WERE COMPILED FROM FIELD SURVEY AND VARIOUS OTHER SOURCES. LOCATIONS ARE NOT GUARANTEED TO BE ACCURATE NOR IS IT GUARANTEED THAT ALL UTILITIES ARE SHOWN. NO SEPARATE OR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR DUE TO ANY VARIANCE BETWEEN THE DATA SHOWN ON THE PLANS AND THE ACTUAL FIELD CONDITIONS ENCOUNTERED. NO WORK SHALL BE STARTED UNTIL THE OWNERS OF THE VARIOUS UTILITIES ARE NOTIFIED BY THE CONTRACTOR OF THE PROPOSED CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 1-888-344-7233 PRIOR TO THE START OF THE WORK. THE CONTRACTOR SHALL NOTIFY THE RESIDENT 10 DAYS PRIOR TO CONSTRUCTION SO THE RESIDENT MAY COORDINATE WITH DIG SMART.

2. SEE SPECIFICATIONS FOR REQUIRED UTILITY COORDINATION.

GUARDRAIL NOTES:

1. AT THE END OF EACH DAY, THE CONTRACTOR IS REQUIRED TO HAVE AN APPROVED CRASHWORTHY END TREATMENT ON ALL GUARDRAIL WITHIN ALL WORK AREAS THAT ARE ACCESSIBLE TO TRAFFIC.

2. CONNECTIONS FOR PROPOSED GUARDRAIL TO EXISTING GUARDRAIL SHALL BE INCIDENTAL TO THE PROPOSED GUARDRAIL ITEMS, UNLESS NOTED OTHERWISE.

3. ALL GUARDRAIL SHALL BE INSTALLED IN A MANNER TO AVOID DRAINAGE STRUCTURES.

4. SEE DOWNSPOUT DETAILS, SHEET CD-02 FOR THE SHOULDER PAVEMENT LIMITS FROM THE BRIDGE JOINT TO THE STONE DOWNSPOUT.

5. GUARDRAIL REMOVED AND NOT RESET OR STACKED SHALL BE INCIDENTAL TO CONTRACT ITEMS AND INCLUDE ALL REMOVAL, DISPOSAL, EQUIPMENT, AND LABOR NECESARY TO SATISFACTORILY COMPLETE THE WORK.

6. HOLES CREATED BY GUARDRAIL REMOVAL WILL BE FILLED AND COMPACTED WITH APPROVED MATERIALS AS DIRECTED BY THE RESIDENT. PAYMENT TO BE INCIDENTAL TO THE GUARDRAIL ITEMS.

SIGN NOTES:

1. BRIDGE NO. SIGNS SHALL BE SUPPLIED BY THE MAINE TURNPIKE AUTHORITY. THE CONTRACTOR SHALL SUPPLY THE U-CHANNEL POST AND SHALL INSTALL THE SIGNS. PAYMENT SHALL BE UNDER ITEM 645.272.

MAINTENANCE OF TRAFFIC NOTES:

1. EXISTING SIGNS THAT CONFLICT WITH CONSTRUCTION WORK ZONE SIGNS SHALL BE COVERED UP.

2. IF THE WORK ZONE FOR STROUDWATER BRIDGE IS NOT IN PLACE AT THE SAME TIME AS THE MAINE CENTRAIL RAILROAD BRIDGE WORKZONE, APPROPRIATE APPROACH SIGNING SHALL BE TEMPORARILY INSTALLED AS DIRECTED BY THE RESIDENT.

3. CONTRACTOR MAY USE TEMPORARY PAVEMENT MARKING TAPE IN PLACE OF TEMPORARY PAVEMENT MARKINGS DURING ALL PHASES OF CONSTRUCTION.

4. PRIOR TO PHASE 1A, ANY DROPOFF FROM THE EXISTING MEDIAN SHOULDER GREATER THAN OR EQUAL TO 1½" SHALL BE CORRECTED USING ITEM 470.08 - BERM DROP OFF CORRECION - GRINDINGS OR ITEM 403.212 HOT - MIX ASPHALT, 4.75 mm NOMINAL MAXIMUM SIZE WHEN ADJACENT TO A PAVED MEDIAN CROSSOVER.

EROSION CONTROL NOTES:

1. THE ANTICIPATED EROSION CONTROL DEVICES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL PROPOSE ACTUAL TYPE AND LOCATION OF DEVICES FOR APPROVAL BY THE RESIDENT. ADDITIONAL MEASURES MAY BE PROPOSED BY THE CONTRACTOR DUE TO SITE OR WEATHER CONDITIONS. THE RESIDENT MAY DIRECT THE CONTRACTOR TO IMPLEMENT ADDITIONAL MEASURES. ANY ADDITIONAL MEASURES APPROVED BY THE RESIDENT WILL BE MEASURED FOR PAYMENT UNDER THE APPROPRIATE BID ITEMS.

2. 4" LOAM HAS BEEN ESTIMATED FOR 100% OF THE DISTURBED SLOPE AREA UNLESS OTHERWISE SPECIFIED ON THE PLANS. ACTUAL PLACEMENT OF THE LOAM SHALL BE AS DESIGNATED BY THE RESIDENT.

3. ALL SLOPES SHALL BE SEEDED WITH SEEDING METHOD NO. 2.

4. MULCH SHALL BE APPLIED IN SEEDED AREAS, EXCEPT WHERE EROSION CONTROL BLANKET IS SPECIFIED.

5. ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MAINE DEPARTMENT OF TRANSPORTATION BEST MANAGEMENT PRACTICES.

6. TEMPORARY BERMS AND TEMPORARY SLOPE DRAINS ARE ANTICIPATED AT ALL STONE DOWNSPOUT LOCATIONS WHILE GROWTH IS BEING ESTABLISHED ON SIDE SLOPES AND PRIOR TO RIPRAP INSTALLATION.

7. TEMPORARY EROSION CONTROL BLANKET. ITEM 613.319 SHALL BE INSTALLED IN ALL DITCHES AND 2:1 SLOPES FROM TOP TO TOE OF SLOPE. LOAM AND SEED SHALL BE PLACED PRIOR TO THE INSTALLATION OF THE EROSION CONTROL BLANKET. LIMITS OF THE EROSION CONTROL BLANKET IN DITCHES SHALL BE 6' WIDE OR AS DESIGNATED BY THE RESIDENT.

8. PLACE A TWO FOOT WIDE STRIP OF TEMPORARY EROSION CONTROL BLANKET ON THE SIDE SLOPES ALONG THE TOP OF THE RIPRAP AND BEHIND THE WINGWALLS.

COMMON EXCAVATION FOR ESTIMATE	Northbound	Southbound	Total
COMMON EXCAVATION (FROM CROSS SECTIONS)	2,718	3,264	
EXCAVATION IN PHASE II	184	194	
GRUBBING IN FILL	473	555	
TOTAL COMMON EXCAVATION (for estimate)	3,375	4,013	**7,388**

FILL FOR BORROW CALCULATIONS

COMMON FILL (FROM CROSS SECTIONS)	8,867	11,141	
GRUBBING IN FILL	473	555	
TOTAL FILL	9,340	11,696	**21,036**

AVAILABLE COMMON EXCAVATION FOR BORROW CALCULATIONS

(1) TOTAL COMMON EXCAVATION	3,375	4,013	**7388**
DEDUCTIONS:			
GRUBBING IN CUT	631	713	
GRUBBING IN FILL	488	555	
EXCAVATION IN PHASE II	184	194	
PAVEMENT SALVAGE (CUT & FILL)	400	415	
(2) TOTAL DEDUCTIONS	1,703	1,877	**3,580**
TOTAL AVAILABLE COMMON EXCAVATION (1) MINUS (2)	1,672	2,136	
TOTAL AVAILABLE STRUCT. EXCAVATIONS	43	0	
RIPRAP EXCAVATION	0	0	
TOTAL AVAILABLE NON-ROCK EXCAVATION	1,715	2,136	**3,851**

COMPUTATION FOR COMMON BORROW FOR ESTIMATE

(3)TOTAL FILL	9,340	11,696	**21,036**
TOTAL AVAIL. NON-ROCK EXCAV. 1,715 x 0.90 = 1,544			
(4)TOTAL AVAILABLE EXCAVATION x 1.00=	1,544	1,922	**3,466**
BORROW NEEDED = TOTAL FILL MINUS TOTAL AVAILABLE EXCAVATION	7,797	9,774	**17,570**
IF NO BORROW IS NEEDED, SURPLUS MATERIAL = AVAILABLE EXCAVATION MINUS TOTAL FILL, PLUS TOTAL WASTE MATERIAL TO BE WASTED	-7,797	-9,774	**-17,570**
BORROW NEEDED MINUS REQUIRED GRAN. BORR. WITHIN FILL	7,797	9,774	**17,570**
COMMON BORROW (for estimate) = x 1.00 =	7,797	9,774	**17,570**

Filename: 003_GeneralNotes.dgn

Scale: NOT TO SCALE

Designed by: HNTB

No.	Revision	By	Date
⚠	EARTHWORK SUMMARY	CDH	10/18

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	BRG	10\18	Checked	KEB	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

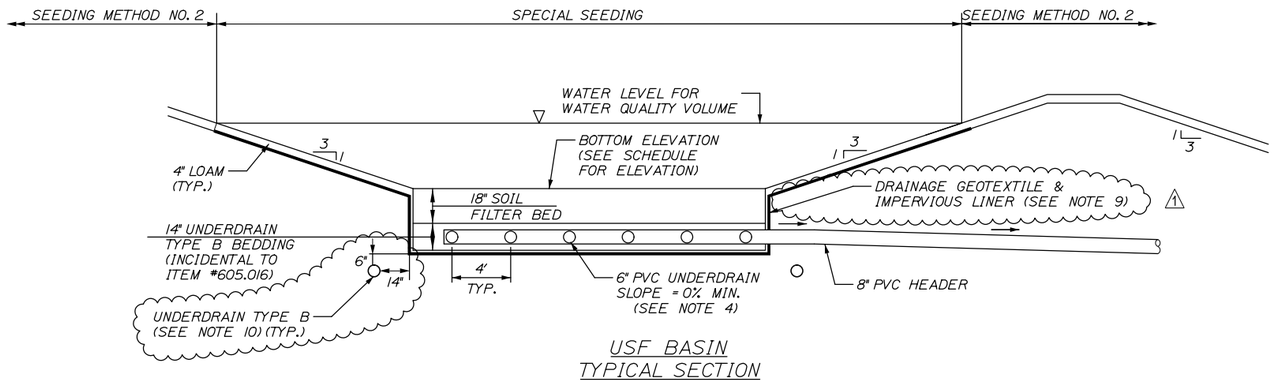
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

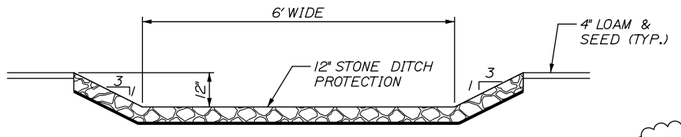
BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
GENERAL NOTES AND EARTHWORK SUMMARY

SHEET NUMBER: GN-01

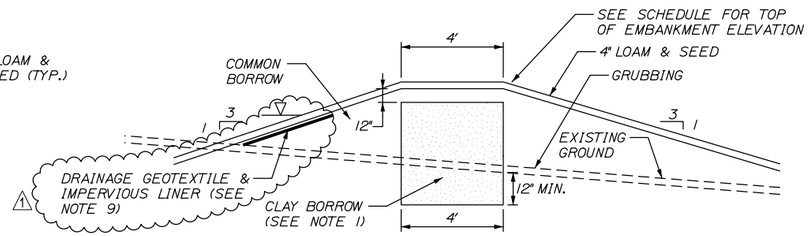
CONTRACT:2019.09



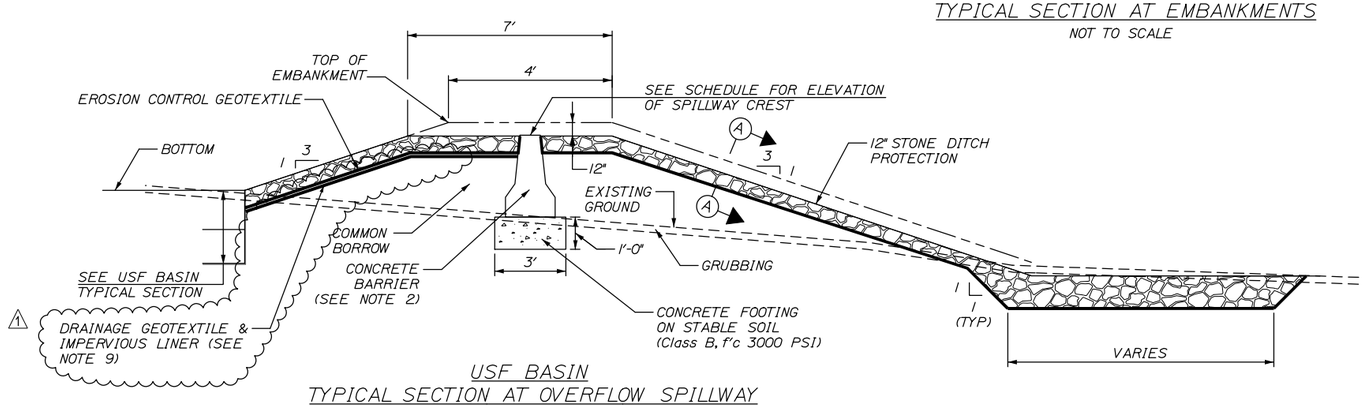
USF BASIN
TYPICAL SECTION
NOT TO SCALE



USF BASIN-EMERGENCY SPILLWAY
SECTION A-A
NOT TO SCALE



USF BASIN
TYPICAL SECTION AT EMBANKMENTS
NOT TO SCALE



USF BASIN
TYPICAL SECTION AT OVERFLOW SPILLWAY
NOT TO SCALE

NOTES:

1. AT EMERGENCY SPILLWAY, IMPERMEABLE SOIL (EMBANKMENT CORE) SHALL TIE INTO CONCRETE BARRIER AND EXTEND 3 FEET ALONG EACH END OF CONCRETE BARRIER.

2. SET TOP OF CONCRETE BARRIER LEVEL AT THE DESIGNATED ELEVATION OF SPILLWAY CREST. PAYMENT WILL BE MADE UNDER ITEM 526.307 CONCRETE BARRIER TYPE 1 - STORMWATER FILTER.

3. FOR LAYOUT OF UNDERDRAIN SOIL FILTER (USF BASINS) AND PIPE, SEE BMP GRADING PLAN.

4. 8" PVC UNDERDRAIN HEADER/OUTLET SHALL NOT BE SLOTTED.

5. SURFACE OF SOIL FILTER SHALL BE SEEDED WITH WETLAND SEED "NEW ENGLAND EROSION CONTROL/RESTORATION MIX" AS SPECIFIED IN THE 618 SPEC. PAYMENT WILL BE MADE UNDER ITEM 618.143 - SPECIAL SEEDING.

6. THE UNDERDRAINED SOIL FILTER SHALL BE CONSTRUCTED TO THE LIMITS AND DETAILS SHOWN ON THE PLANS AND SPECIFICATIONS UNLESS OTHERWISED APPROVED BY THE RESIDENT.

7. THE FILTER BED MATERIAL SHALL NOT BE PLACED IN USF BASINS UNTIL THE TRIBUTARY DRAINAGE AREA IS PERMANENTLY STABILIZED AGAINST EROSION.

8. EROSION CONTROL BLANKETS SHALL BE PROVIDED ON ALL USF BASIN EMBANKMENT SLOPES, BOTH INTERIOR AND EXTERIOR AND THE SURFACE OF THE SOIL FILTER.

1 9. AN IMPERVIOUS LAYER SHALL BE CONSTRUCTED BY INSTALLING AN IMPERVIOUS LINER BETWEEN TWO LAYERS OF DRAINAGE GEOTEXTILE PER SPECIAL PROVISION 620.

10. UNDERDRAIN TYPE B SHALL BE INSTALLED AROUND THE PERIMETER OF THE UNDERDRAIN SOIL FILTER PRIOR TO THE PLACEMENT OF THE IMPERVIOUS LINER. THE UNDERDRAIN SHALL OUTLET TO A STABILIZED RIPRAP APRON.

USF BASIN SCHEDULE

USF Basin	Basin Elevations			Peak Water Surface Elevation		
	Bottom	Top of Embankment	Spillway Crest	2-year	10-year	25-year
	(feet)	(feet)	(feet)	(feet)	(feet)	(feet)
#1	80.75	83.50	82.50	82.06	82.64	82.93
#2	92.75	95.25	94.25	93.58	94.29	94.44

Date:10/31/2018

Filename: 023_SoilFilter Details.dgn

Scale: AS NOTED

No.	Revision	By	Date
1	IMPERVIOUS LINER	JRH	10/18

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	PEM	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

UNDERDRAIN SOIL FILTER DETAIL

SHEET NUMBER: BMP-1

CONTRACT:2019.09

ITEM 605.09 6" UNDERDRAIN TYPE B OUTLET	LF
USF #1	76
USF #2	75

ITEM 605.09 6" UNDERDRAIN TYPE B	LF
USF #1	216
USF #2	188

ITEM 605.018 8" PVC UNDERDRAIN	LF
STA. 2378+69, 155.5' RT. TO STA. 2378+97, 124.5' RT.	43
STA. 2378+97, 124.5' RT. TO STA. 2379+25, 123.0' RT.	27
STA. 2379+25, 123.0' RT. TO STA. 2379+66, 136.8' RT.	44
STA. 2381+39, 108.0' LT. TO STA. 2381+45, 106.0' LT.	6
STA. 2381+45, 106.0' LT. TO STA. 2382+55, 107.5' LT.	110

ITEM 605.016 6" PVC UNDERDRAIN	LF
USF #1	469
USF #2	157

UNDERDRAIN SOIL FILTER #2				
CONTROL POINT	STATION	OFFSET	NORTHING	EASTING
10	2381+76.09	115.05' LT.	305843.49	2909695.59
11	2381+75.86	103.05' LT.	3058539.50	2909706.91
12	2382+52.90	112.00' LT.	305915.48	2909722.56
13	2382+52.74	103.21' LT.	305912.56	2909730.86

NOTE: PROPOSED CONTOURS ARE SHOWN AT 1.0 FOOT INTERVALS

UNDERDRAIN SOIL FILTER #1				
CONTROL POINT	STATION	OFFSET	NORTHING	EASTING
1	2379+12.99	105.26' RT.	305524.59	2909822.31
2	2379+19.97	105.23' RT.	305531.23	2909824.48
3	2379+51.15	119.23' RT.	305556.24	2909847.46
4	2379+61.62	120.05' RT.	305566.30	2909851.67
5	2379+70.19	133.52' RT.	305570.04	2909867.12
6	2379+64.43	148.76' RT.	305559.80	2909879.75
7	2379+58.26	151.76' RT.	305553.11	2909880.74
8	2378+96.04	132.19' RT.	305500.05	2909842.57
9	2378+93.87	124.02' RT.	305550.76	2909834.03

Date:10/31/2018

Filename: 024_BMP Grading.dgn

Scale: 25 0 25 50 Scale of Feet

No.	Revision	By	Date
1	TYPE B UNDERDRAIN	CDH	10/18

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	RWH	10\18
Drawn	PEM	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS MAINE CENTRAL RAILROAD OVERPASS

BMP GRADING PLAN

SHEET NUMBER: BMP-2

CONTRACT:2019.09

Date:10/31/2018

ITEM 526.306 TEMPORARY CONCRETE BARRIER, TYPE 1 - SUPPLIED BY AUTHORITY: TO REMAIN	LS
STA. 22370+00, 29.45' RT. TO STA. 22371+00, 26.47' RT.	

ITEM 606.130 3I" W-BEAM GUARDRAIL - MID-WAY SPLICE (7' STEEL POSTS, 8" OFFSET BLOCKS, SINGLE FACED)	LF
STA. 12368+61, 38.35' LT. TO 12376+92, 38.33' LT.	825
STA. 22370+48, 38.00' RT. TO 22376+67, 38.33' RT.	612.5

ITEM 606.135 TERMINAL END - ANCHORED END 3I" W-BEAM GUARDRAIL	EA
STA. 12368+51, 38.59' LT. TO STA. 12368+61, 38.35' LT.	1

ITEM 607.09 WOVEN WIRE FENCE - METAL POSTS	LF
STA. 2363+03, 197.75' RT. TO STA. 2371+42, 45.00' RT.	929
STA. 2364+08, 124.88' LT. TO STA. 2369+50, 124.46' LT.	544

ITEM 610.08 PLAIN RIPRAP	CY
STA. 2371+23 RT.	77.6
STA. 2371+23 LT.	74.8
STA. 2372+23 RT.	2.7

ITEM 656.632 30 INCH TEMPORARY SILT FENCE	LF
STA. 2368+00 LT. TO STA. 2370+83 LT.	311
STA. 2370+00 RT. TO STA. 2370+71 RT.	91
STA. 2371+55 LT. TO STA. 2377+68 LT.	634
STA. 2371+74 RT. TO STA. 2377+47 RT.	594

LEGEND

VARIABLE DEPTH MILL AND OVERLAY

FORE RIVER

FORE RIVER CULVERT EXTENSION (3) 66" X 28' RCP CLASS III WITH CONCRETE PIPE TIES (SEE NOTE)

SEE STRUCTURAL PLANS FOR DETAIL OF CONNECTION OF EXISTING PIPES TO PROPOSED

STA 12368+00, SB
LIMIT OF WORK

WOVEN WIRE FENCE

STA 12368+50, SB
BEGIN FULL DEPTH CONSTRUCTION
(OUTSIDE SHOULDER)

TERMINAL END - ANCHORED END
3I" W-BEAM GUARDRAIL

REMOVE & RESET
SIGN NO. 9

STA 12372+50, SB
MATCH EXISTING GRADE
BEGIN VARIABLE DEPTH
MILL & OVERLAY

TEMPORARY STONE
CHECK DAM (TYP.)

3I" W-BEAM GUARDRAIL - MID-WAY SPLICE
(7' STEEL POSTS, 8" OFFSET BLOCKS,
SINGLE FACED)

REMOVE AND
DISPOSE EXISTING
GUARDRAIL

11.25'
14.01'
13.09'
17.00'
12.00'
25.00'

12368+00 12369+00 12370+00 12371+00 12372+00

SB ℄ 12373+00 12374+00 12375+00
N 18°16'10.27" E

2368+00 2369+00 2370+00 2371+00 2372+00

MAINE TURNPIKE ℄ 2373+00 2374+00 2375+00
N 18°16'10.27" E

17.00'
29.00'
12.00'
4.00'

22368+00 22369+00 22370+00 22371+00 22372+00

NB ℄ 22373+00 22374+00 22375+00
N 18°16'10.27" E

10.41'
17.00'

STA 22370+00, NB
LIMIT OF WORK
BEGIN GRAVEL SHOULDER

REMOVE & RESET
SIGN NO. 10

12" RCP
CB TYPE BI

REMOVE EXISTING
CMP END

12" X 40' RCP CLASS III

3I" W-BEAM GUARDRAIL - MID-WAY SPLICE
(7' STEEL POSTS, 8" OFFSET BLOCKS,
SINGLE FACED) (TYP.)

SAWCUT (TYP.)

REMOVE AND
DISPOSE EXISTING
GUARDRAIL

GUARDRAIL ADJUST.
DOUBLE RAIL

100' TEMP. CONCRETE
BARRIER TO REMAIN
AFTER CONTRACT

STA 22370+50, NB
END GRAVEL SHOULDER
BEGIN FULL DEPTH CONSTRUCTION
(OUTSIDE SHOULDER)

WOVEN WIRE FENCE

SEE STRUCTURAL PLANS FOR
DETAIL OF CONNECTION OF
EXISTING PIPES TO PROPOSED

FORE RIVER CULVERT EXTENSION
(3) 66" X 28' RCP CLASS III WITH
CONCRETE PIPE TIES (SEE NOTE)

STA 22374+00, NB
MATCH EXISTING GRADE
BEGIN VARIABLE DEPTH
MILL & OVERLAY

NOTE: COFFERDAMS ARE TO BE PLACED AT BOTH ENDS OF THE CULVERTS TO ALLOW WATER TO BE PUMPED AND REMOVED DURING CONSTRUCTION OF THE CULVERTS.

Filename: 025_BDPlan_01.dgn

Scale: 25 0 25 50
Scale of Feet

No.	Revision	By	Date
1	FORE RIVER CULVERTS	JRH	10/18

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

GENERAL PLAN 1

SHEET NUMBER: GP-01

CONTRACT:2019.09

ITEM 526.3061 TEMPORARY CONCRETE BARRIER, TYPE 1 - SUPPLIED BY AUTHORITY: TO REMAIN	LS
STA. 2375+90 2.56' RT. TO STA. 2377+36, 10.00' RT.	
STA. 2379+35, 10.00' LT. TO STA. 2380+75, 2.56' LT.	

ITEM 606.1301 3'' W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, SINGLE FACED)	LF
STA. 12380+04, 38.33' LT. TO 12384+80, 38.00' LT.	475
STA. 22379+79, 38.33' RT. TO 22383+05, 38.00' RT.	325

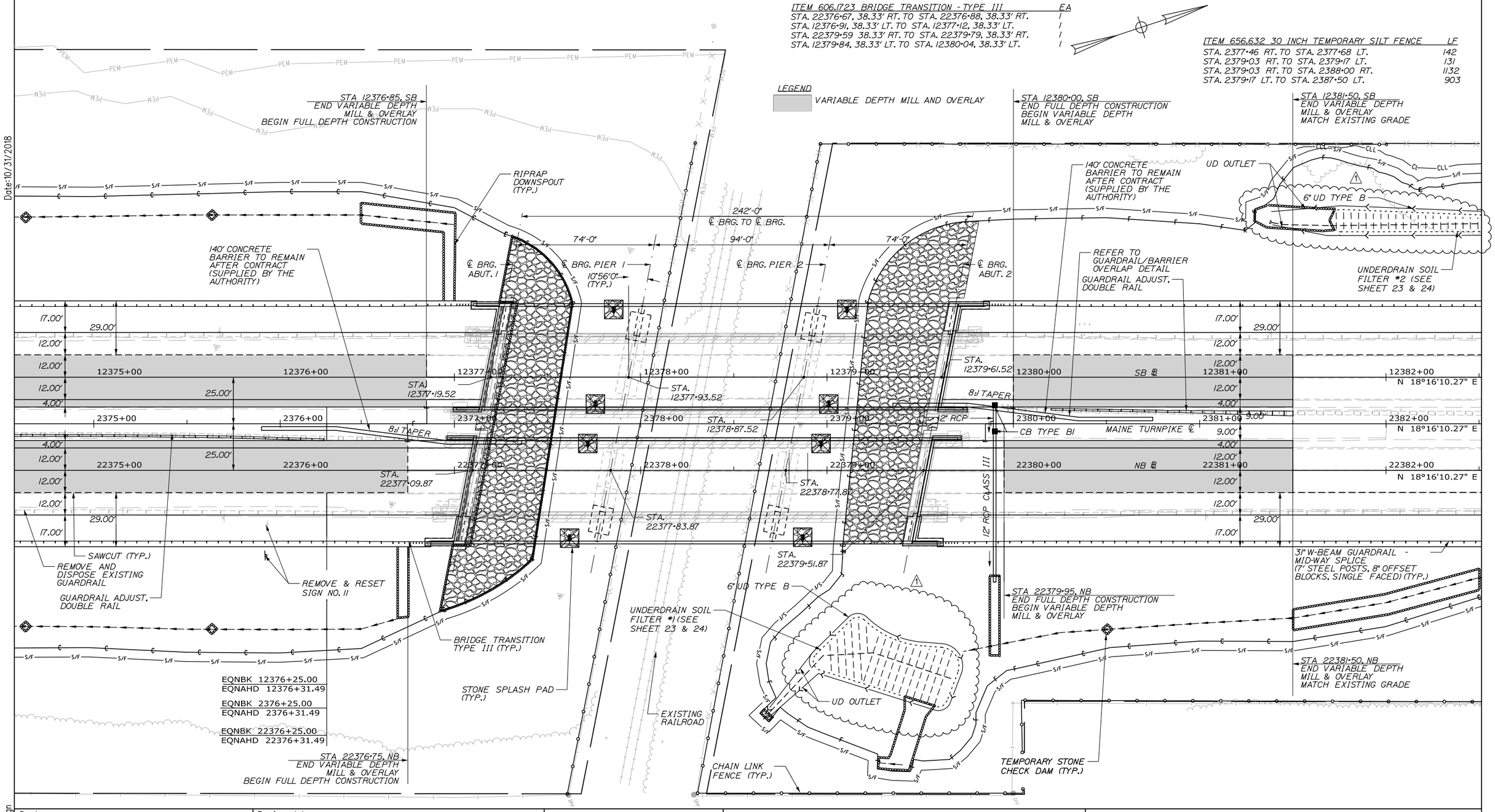
ITEM 610.08 PLAIN RIPRAP	CY
STA. 2376+72 RT.	12.7
STA. 2376+97 LT.	12.6
STA. 2378+65 RT.	1.0
STA. 2379+90 RT.	12.9

ITEM 607.17 CHAIN LINK FENCE - 6 FOOT	LF
STA. 2377+61, 198.69' RT. TO STA. 2378+29, 150.77' LT.	356
STA. 2378+31, 198.36' RT. TO STA. 2378+96, 150.26' LT.	355
STA. 2378+31, 198.36' RT. TO STA. 2383+00, 149.40' RT.	520
STA. 2378+96, 150.26' LT. TO STA. 2382+00 150.02' LT.	304

ITEM 606.1723 BRIDGE TRANSITION - TYPE III	EA
STA. 22376+67, 38.33' RT. TO STA. 22376+88, 38.33' RT.	1
STA. 12376+91, 38.33' LT. TO STA. 12377+12, 38.33' LT.	1
STA. 22379+59 38.33' RT. TO STA. 22379+79, 38.33' RT.	1
STA. 12379+84, 38.33' LT. TO STA. 12380+04, 38.33' LT.	1

ITEM 610.18 STONE DITCH PROTECTION	CY
STA. 2376+50 LT. TO STA. 2377+00 LT.	31.1
STA. 2379+45 RT. (USF #1)	22.7
STA. 2381+50 RT. TO STA. 2382+50 RT.	62.6
STA. 2381+30 LT. TO STA. 2381+69 LT. (USF #2)	17.7

ITEM 656.632 30 INCH TEMPORARY SILT FENCE	LF
STA. 2377+46 RT. TO STA. 2377+68 LT.	142
STA. 2379+03 RT. TO STA. 2379+17 LT.	131
STA. 2379+03 RT. TO STA. 2388+00 RT.	1132
STA. 2379+17 LT. TO STA. 2387+50 LT.	903



Date:10/31/2018

Filename: 026_BDPlan_02.dgn

Scale: 25 0 25 50
Scale of Feet

No.	Revision	By	Date
1	TYPE B UNDERDRAIN	CDH	10/18

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

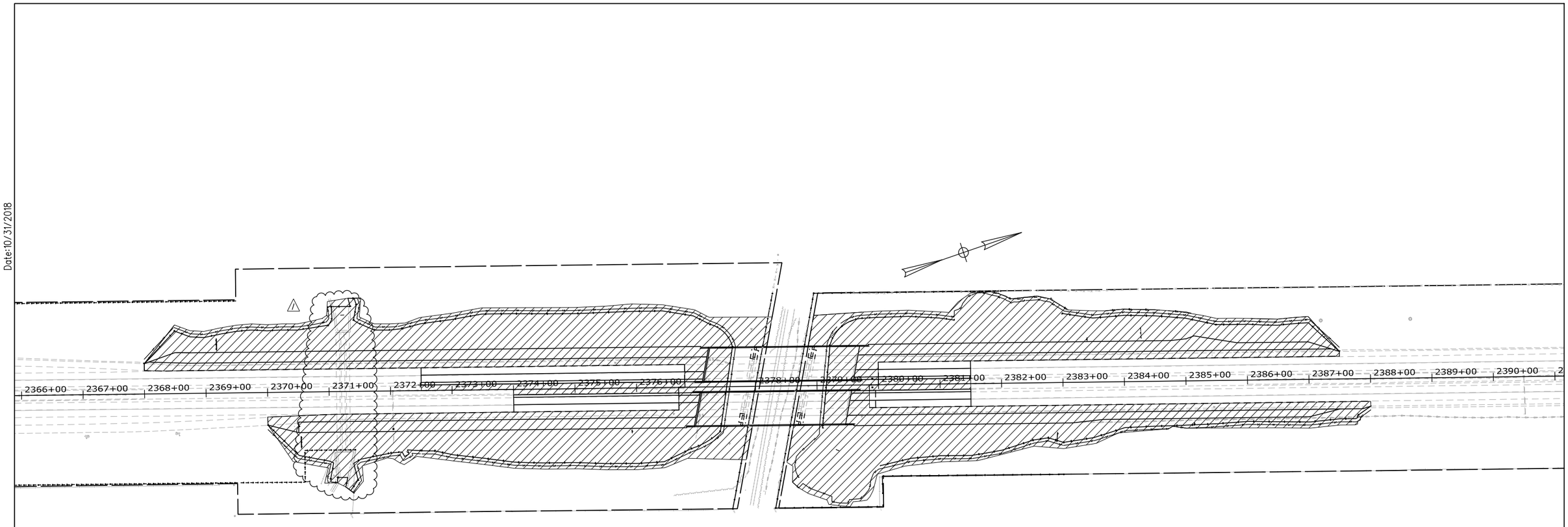
BRIDGE IMPROVEMENTS MAINE CENTRAL RAILROAD OVERPASS

GENERAL PLAN 2

SHEET NUMBER: GP-02

CONTRACT:2019.09

Date:10/31/2018



⚠ LIMIT OF DISTURBANCE
322963 SF (7.41 ACRES)

NOTES

1. EROSION AND SEDIMENTATION CONTROL DEVICES REQUIRED FOR THE CONTRACTOR'S ACCESS LOCATIONS AND STORAGE AREAS WILL NOT BE MEASURED FOR PAYMENT.

2. SEE SPECIFICATIONS FOR CONTRACTOR'S SUBMITTAL REQUIREMENTS IF ADDING ADDITIONAL LIMITS OF DISTURBANCE TO THE PROJECT ESTIMATED QUANTITIES.

3. AN ADDITIONAL 0.5 ACRE HAS BEEN ESTIMATED FOR THE CONTRACTORS ACCESS LOCATIONS AND STORAGE AREAS

Filename: 032_Limits of Disturbance.dgn

Scale: 80 0 80 160
Scale of Feet

No.	Revision	By	Date
⚠	FORE RIVER CULVERT	CDH	10/18

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	10\18	Checked	JRH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

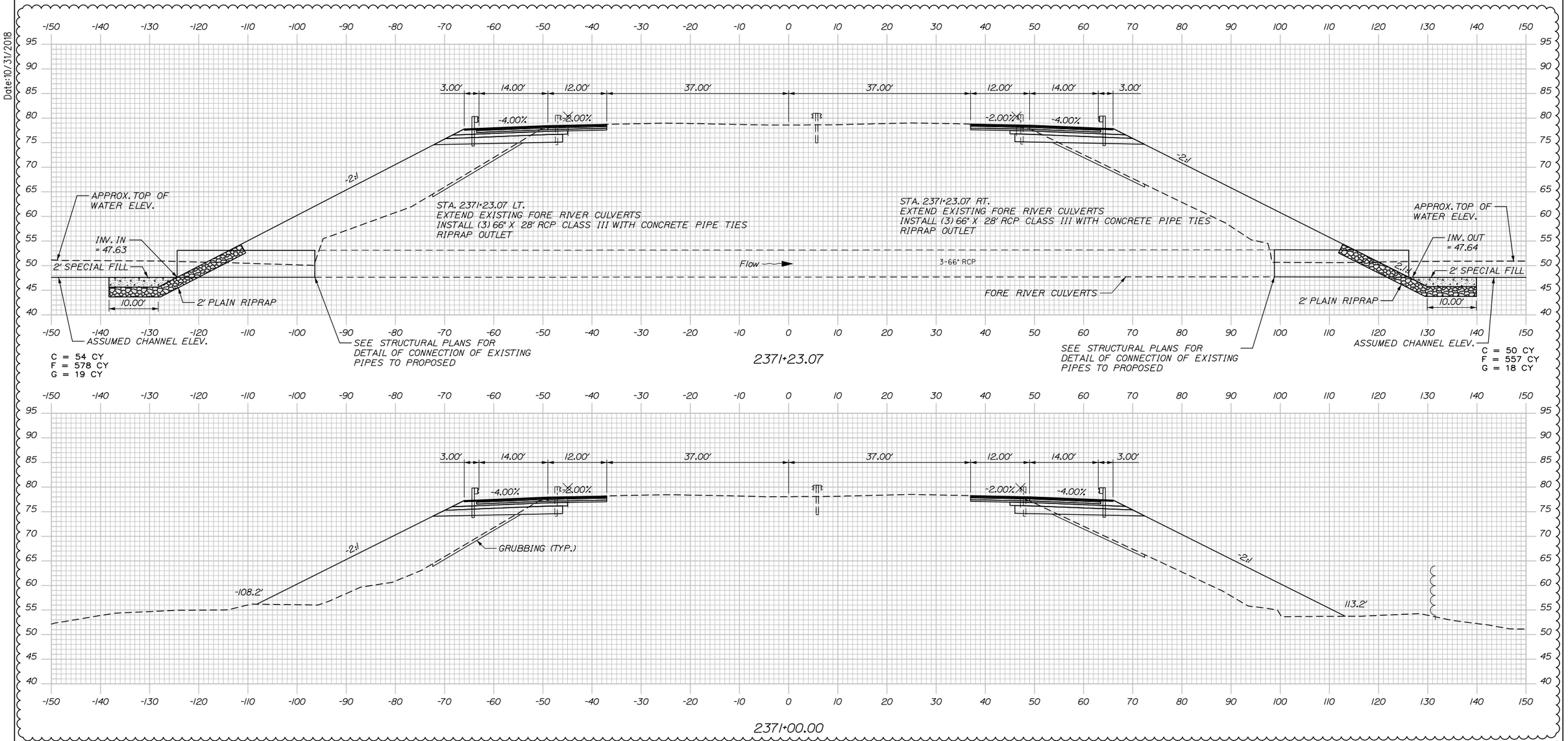
BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

LIMIT OF DISTURBANCE

SHEET NUMBER: LOD-01

CONTRACT:2019.09

Date:10/31/2018



Filename: Xsect.dgn

Scale:
10 0 10 20
Scale of Feet

No.	Revision	By	Date
1	FORE RIVER CULVERTS	JRH	10/18

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Timothy Cote, PE

	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

STA. 2371+00 TO STA. 2371+23

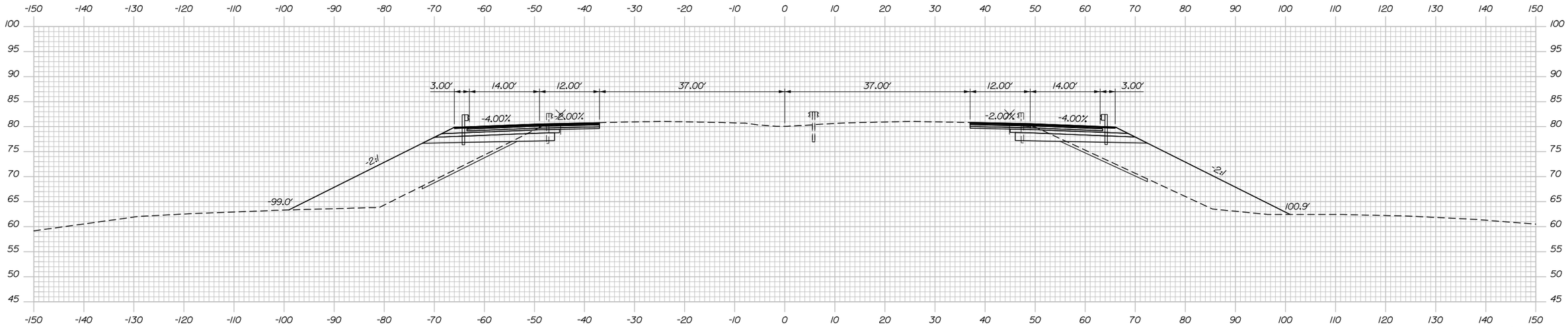
SHEET NUMBER: XS-04

CONTRACT:2019.09

Date:10/31/2018

C = 52 CY
F = 410 CY
G = 19 CY

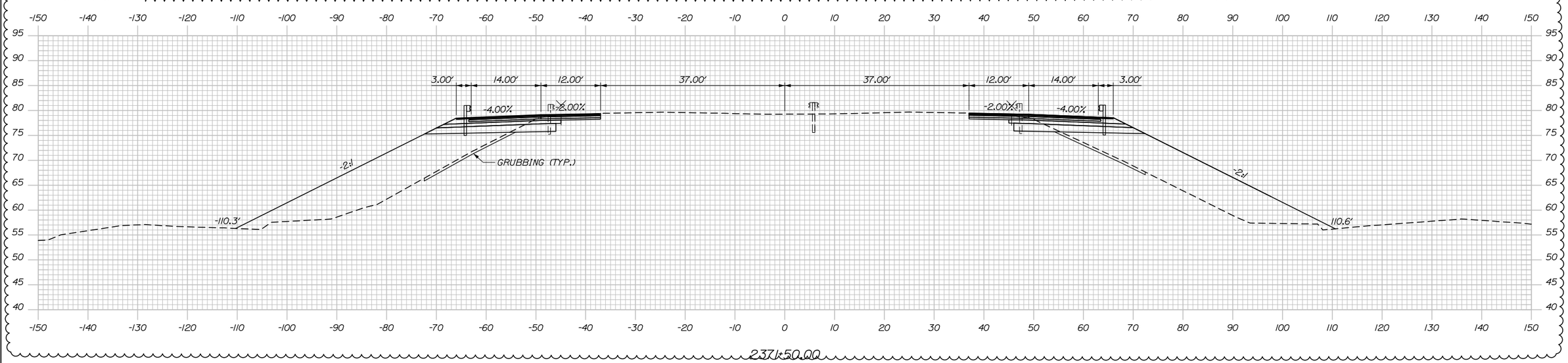
C = 56 CY
F = 350 CY
G = 17 CY



C = 51 CY
F = 498 CY
G = 19 CY

2372+00.00

C = 53 CY
F = 450 CY
G = 18 CY



2371+50.00

Scale:
10 0 10 20
Scale of Feet

No.	Revision	By	Date
1	FORE RIVER CULVERTS	JRH	10/18

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Timothy Cote, PE

	By	Date		By	Date
Designed	EDD	10\18	Checked	RWH	10\18
Drawn	SLS	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

STA. 2371+50 TO STA. 2372+00

SHEET NUMBER: XS-05

CONTRACT:2019.09

Filename: Xsect.dgn

SPECIFICATIONS

DESIGN

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 8TH EDITION.

CONSTRUCTION

STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, HIGHWAYS AND BRIDGES, REVISION OF NOVEMBER 2014.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD DETAILS FOR HIGHWAYS AND BRIDGES, NOVEMBER 2014 WITH LATEST REVISIONS.

AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, 4TH EDITION.

DESIGN LOADING

LIVE LOAD - HL-93

MATERIALS

CONCRETE

DECK CONCRETE - CLASS AAA - DECK
ALL OTHER CONCRETE SHALL BE CLASS AAA.

REINFORCING STEEL

AASHTO M31, GRADE 60 EPOXY COATED

ANCHOR RODS SHALL MEET THE REQUIREMENTS OF ASTM F1554, GRADE 55 AND SHALL BE SWEDGED OR THREADED ON THE EMBEDDED PORTION OF THE ROD.

STRUCTURAL STEEL

GIRDERS: FLANGES, WEBS, SPLICE PLATES, FILLER PLATES, DIAPHRAGMS, CONNECTION PLATES, AND BEARING STIFFENERS SHALL BE AASHTO M270, GRADE 50.

STEEL H-PILES SHALL BE ASTM A572, GRADE 50.

ALL OTHER STRUCTURAL STEEL SHALL BE AASHTO M270, GRADE 36, OR APPROVED EQUAL.

HIGH STRENGTH BOLTS SHALL BE AASHTO M164 (ASTM F3125, GRADE A325, TYPE 1). BOLTS SHALL BE HOT DIPPED GALVANIZED TYPE 1.

PROTECTIVE COATING

ALL NEW STRUCTURAL STEEL EXCEPT DIAPHRAGMS SHALL BE SHOP COATED WITH NEPCOAT QUALIFIED PRODUCT FROM LIST A. PAINT COLOR SHALL BE SELECTED TO MATCH EXISTING GIRDERS.

DIAPHRAGMS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123.

BASIC DESIGN STRESSES

CONCRETE - CLASS AAA, f'c = 4,500 P.S.I.
- CLASS AAA - DECK f'c = 4,500 P.S.I.

REINFORCING STEEL - fy = 60,000 P.S.I.

STRUCTURAL STEEL AASHTO M270 (ASTM A709) GRADE 36, Fy = 36,000 P.S.I.
AASHTO M270 (ASTM A709) GRADE 50, Fy = 50,000 P.S.I.
AASHTO M270 (ASTM A572) GRADE 50, Fy = 50,000 P.S.I.

GENERAL NOTES:

1. THE PROPOSED ELEVATIONS ARE BASED ON THE NAVD 88 DATUM. THE AS-BUILT PLANS ARE BASED ON NGVD 29 DATUM.

2. FOR ADDITIONAL DETAILS REFERENCED OR NOT SHOWN IN THESE DRAWINGS, SEE THE STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD DETAILS, HIGHWAYS AND BRIDGES, NOVEMBER 2014 WITH UPDATES.

3. COPIES OF THE AS-BUILT PLANS ARE ON FILE AT THE MAINE TURNPIKE AUTHORITY AND ACCURACY OF THESE PLANS IS NOT GUARANTEED.

4. REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2", UNLESS OTHERWISE NOTED.

5. CHAMFER ALL EXPOSED CONCRETE EDGES ¾" UNLESS OTHERWISE NOTED.

6. ALL BRIDGE PARAPET, BARRIER, WINGWALL AND ENDPOST CONCRETE, INSIDE FACE AND TOP FACE, SHALL HAVE A RUBBED FINISH PRIOR TO THE APPLICATION OF THE PROTECTIVE COATING FOR CONCRETE SURFACE.

7. THE STEEL PORTIONS OF THE EXISTING BRIDGE ARE COATED WITH A LEAD-BASED PAINT SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR THE CONTAINMENT, PROPER MANAGEMENT, AND DISPOSAL OF ALL LEAD-CONTAMINATED HAZARDOUS WASTE GENERATED BY THE PROCESS OF THE BRIDGE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING APPROPRIATE OSHA MANDATED PERSONAL PROTECTION STANDARDS RELATED TO THIS PROCESS.

8. CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO THE FOLLOWING AREAS:
   - EXPOSED SURFACES OF THE PARAPETS, AND ENDPOSTS;
   - VERTICAL FACES OF THE DECK FASCIA EXTENDING BENEATH THE DECK TO THE GIRDER TOP FLANGE;

9. PIGMENTED PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO EXPOSED SURFACES OF THE ABUTMENTS, WINGWALLS, AND PIERS.

10. WHERE DRILLING AND ANCHORING OF REINFORCING STEEL IS SPECIFIED THE CONTRACTOR SHALL USE A MATERIAL LISTED ON THE MAINEDOT PREQUALIFIED LIST OF CHEMICAL ANCHORING MATERIALS. THE DEPTH OF EMBEDMENT SHALL BE SUFFICIENT TO DEVELOP 125% OF THE YIELD STRENGTH OF THE BAR, BUT SHALL BE NO LESS THAN THE MINIMUM DEPTH OF EMBEDMENT WHEN SPECIFIED.

11. DIMENSIONS WITH RESPECT TO THE EXISTING BRIDGE ARE APPROXIMATE AND PROVIDED FOR REFERENCE. IF FIELD CONDITIONS VARY BY MORE THAN 1" FROM DIMENSIONS SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED.

ITEM NO.	ITEM DESCRIPTION	REFERENCE QUANTITY	UNIT	BRIDGE QUANTITY
202.10	Removing Existing Superstructure Property of Contractor - MCRR	550 CY	LS	1
202.12	Removing Existing Structural Concrete		CY	135
202.13	Removing Existing Railings Retained by Authority		LF	968
206.082	Structural Earth Excavation - Major Structures, Plan Quantity		CY	680
206.10	Structural Earth Excavation - Piers		CY	240
403.2081	Hot Mix Asphalt, 12.5 mm (Polymer Modified) - RAP		Ton	230
403.213	Hot Mix Asphalt, 12.5 mm (base and intermediate course)		Ton	460
409.15	Bituminous Tack Coat, Applied		GAL	180
501.231	Dynamic Loading Test		EA	8
501.42	Steel H-beam Piles 57 lb/ft, delivered		LF	1744
501.421	Steel H-beam Piles 57 lb/ft, in place		LF	1744
501.44	Steel H-beam Piles 63 lb/ft, delivered		LF	1168
501.441	Steel H-beam Piles 63 lb/ft, in place		LF	1168
501.90	Pile Tips		EA	64
501.91	Pile Splices		EA	5
501.92	Pile Driving Equipment Mobilization - MCRR		LS	1
502.219	Structural Concrete, Abutments and Retaining Walls - MCRR	253 CY	LS	1
502.239	Structural Concrete Piers - MCRR	227 CY	LS	1
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges - MCRR	700 CY	LS	1
502.264	Structural Concrete Parapets - MCRR	110 CY	LS	1
503.14	Epoxy-Coated Reinforcing Steel, Fabricated and Delivered		LB	336000
503.15	Epoxy-Coated Reinforcing Steel, Placing		LB	336000
503.17	Mechanical/Welded Splice		EA	2040
504.702	Structural steel, fabricated and delivered, welded - MCRR	334000 LB	LS	1
504.71	Structural steel erection - MCRR	334000 LB	LS	1
504.7111	Peening Cover Plate Welds		EA	64
505.08	Shear Connectors - MCRR - MCRR	15036 EA	LS	1
506.9102	Zinc Rich Coating System (Shop Applied) - MCRR	285000 LB	LS	1
506.9105	Field Touch-Up of Existing Steel - MCRR	56528 LB	LS	1
507.091	Aluminum Bridge Railing, 1 Bar - MCRR	968 LF	LS	1
508.14	High Performance Waterproofing Membrane - MCRR	2960 SY	LS	1
511.075	Cofferdam Fore River Culvert - West End		LS	1
511.076	Cofferdam Fore River Culvert - East End		LS	1
511.091	Temporary Earth Support Systems - MCRR		LS	1
514.06	Curing Box for Concrete Cylinders		EA	1
515.202	Clear Protective Coating for Concrete Surfaces		SY	1130
515.23	Anti-Graffiti Coating		SY	1180
518.30	Abutment Seat Refacing		CY	7
518.40	Epoxy Injection Crack Repair		LF	34
518.51	Repair of Upward Facing Surfaces - below Reinforcing Steel < 8 inches		SF	56
518.60	Repair of Vertical Surfaces < 8 inches		SF	104
520.221	Expansion Device - Locking Compression Seal with Steel Edge Beams		EA	2
520.23	Asphaltic Plug Joint		LF	116
523.52	Bearing Installation		EA	16
523.5303	Steel Bearings, Fixed, Rocker		EA	4
523.5304	Steel Bearings, Expansion, Rocker		EA	12
523.56	Clean and Paint Bearing		EA	38
523.561	Clean, Paint, and Reset Bearing		EA	10
524.301	Temporary Structural Support - Jacking		LS	1
524.303	Temporary Structural Support - Braces		LS	1
524.40	Protective Shielding - Steel Girders		SY	3140
526.304	Temporary Concrete Barrier, Anchored - MCRR	484 LF	LS	1
606.1723	Bridge Transition - Type III		EA	4
609.15	Sloped Curb Type I		LF	250
610.08	Plain Riprap		CY	224
610.18	Stone Ditch Protection		CY	45
620.58	Erosion Control Geotextile		SY	143
652.361	Maintenance of Traffic Control Devices		LS	0.5
659.10	Mobilization		LS	0.5

INDEX OF DRAWINGS

Date:10/31/2018

Filename: 052_Index and Quantities.dgn

Scale: AS NOTED

No.	Revision	By	Date
1	Quantity Updates	JKB	10/18

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

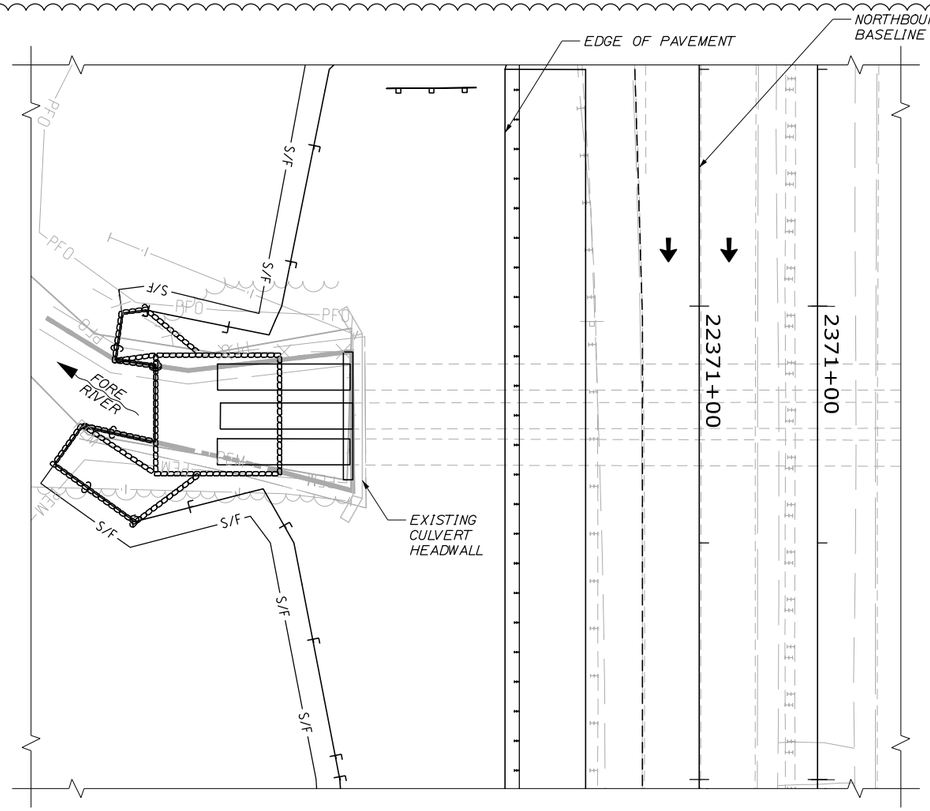
BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

GENERAL NOTES, INDEX, AND QUANTITIES

SHEET NUMBER: S-01

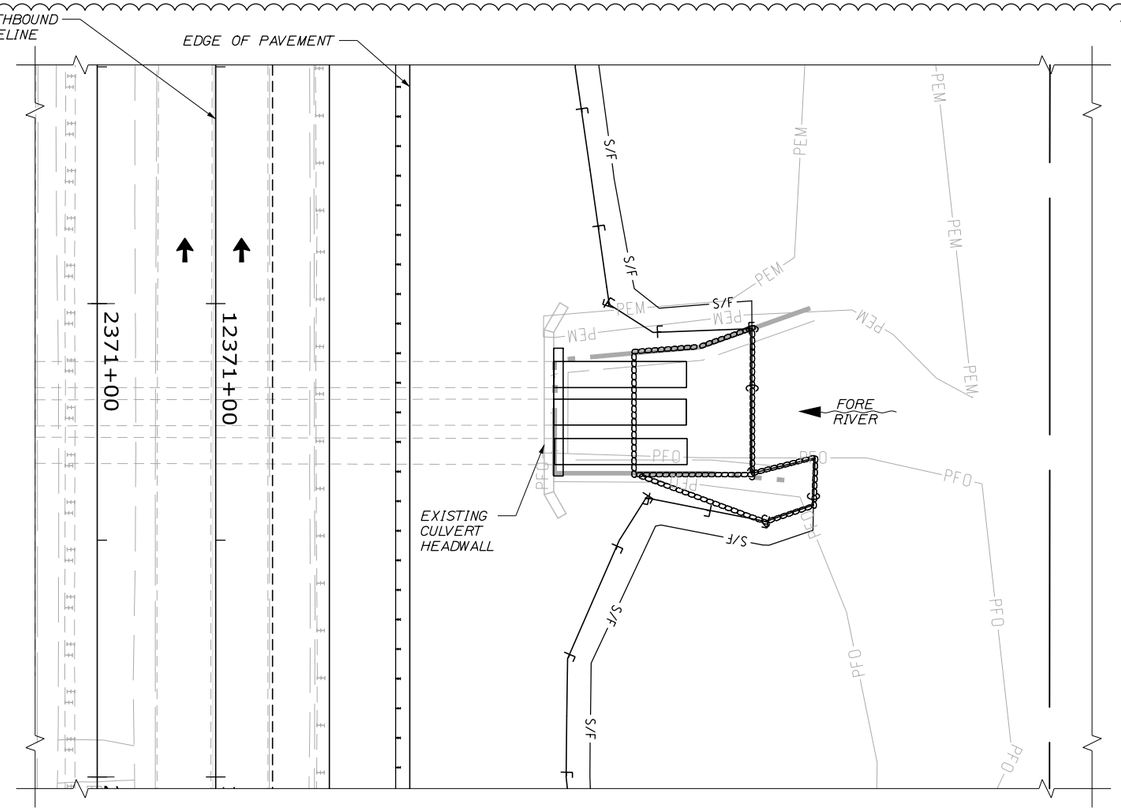
CONTRACT:2019.09

Date:10/31/2018



PLAN - EAST CULVERT END

1/16" = 1'-0"

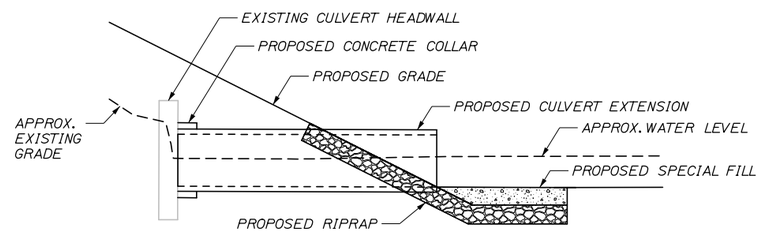


PLAN - WEST CULVERT END

1/16" = 1'-0"

NOTES:

1. SEE SPECIAL PROVISION, SECTION 603 FORE RIVER CONCRETE COLLAR, FOR ADDITIONAL INFORMATION.
2. CONCRETE SHALL BE CLASS A AND REINFORCING SHALL BE EPOXY COATED GRADE 60.
3. REFER TO GENERAL PLAN AND CROSS SECTIONS FOR ADDITIONAL INFORMATION ON GRADING AND RIPRAP LIMITS.
4. CONSTRUCTION JOINTS HAVE BEEN PROVIDED TO ALLOW PHASED CONSTRUCTION. COFFERDAMS MAY BE USED AND ARE TO BE PAID FOR UNDER ITEM 511.075 AND 511.076.
5. ALL WORK ASSOCIATED WITH THE CONCRETE COLLAR SHALL BE PAID FOR UNDER ITEM 603.281.
6. CONTRACTOR SHALL NOTE THAT RESERVE LIMITS HAVE BEEN PLACED ON THE WORK THAT IMPACTS FORE RIVER AND WETLANDS SURROUNDING THE FORE RIVER CULVERT. NO WORK IMPACTING FORE RIVER AND THE SURROUNDING WETLANDS SHALL OCCUR BEFORE JULY 15, 2019 OR UNTIL A FINAL AUTHORIZED ENVIRONMENTAL PERMIT HAS BEEN RECEIVED, AS APPROVED BY THE RESIDENT.
7. REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 3".
8. FOR CULVERT EXTENSION DETAILS SEE SHEET S-41.



ELEVATION AT CULVERT END

(EASTBOUND SHOWN, WESTBOUND SIM.)

1/8" = 1'-0"

1

Filename: 091_Fore River Culvert 1.dgn

Scale: AS NOTED				Designed by: HNTB						
No.	Revision	By	Date	CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.						
1	CULVERT EXTENSION	JSM	10/18		By	Date		By	Date	
				Designed	EMC	10\18	Checked	HCH	10\18	
				Drawn	PEB	10\18	In Charge of	RAL	10\18	

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

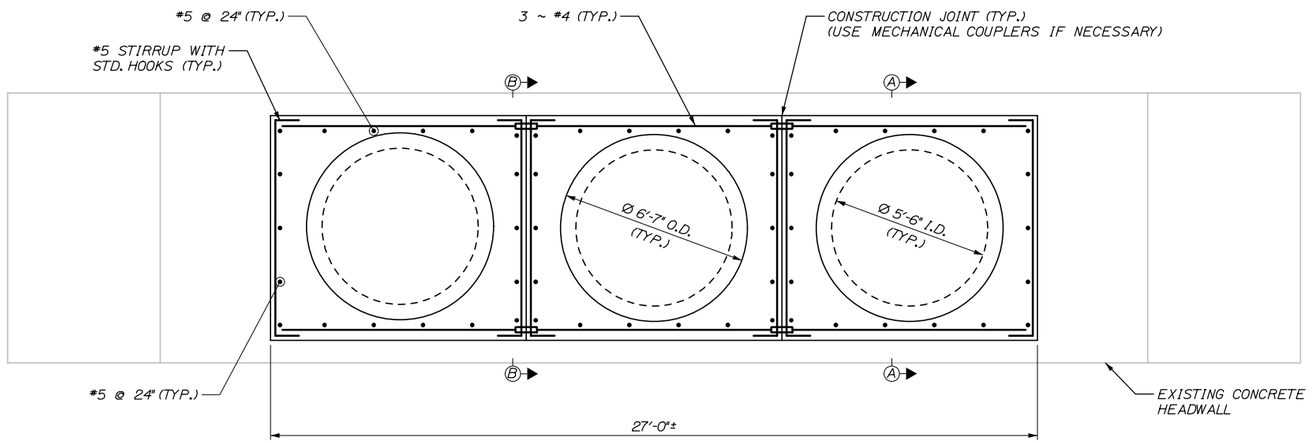
BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

FORE RIVER CULVERT 1

SHEET NUMBER: S-40

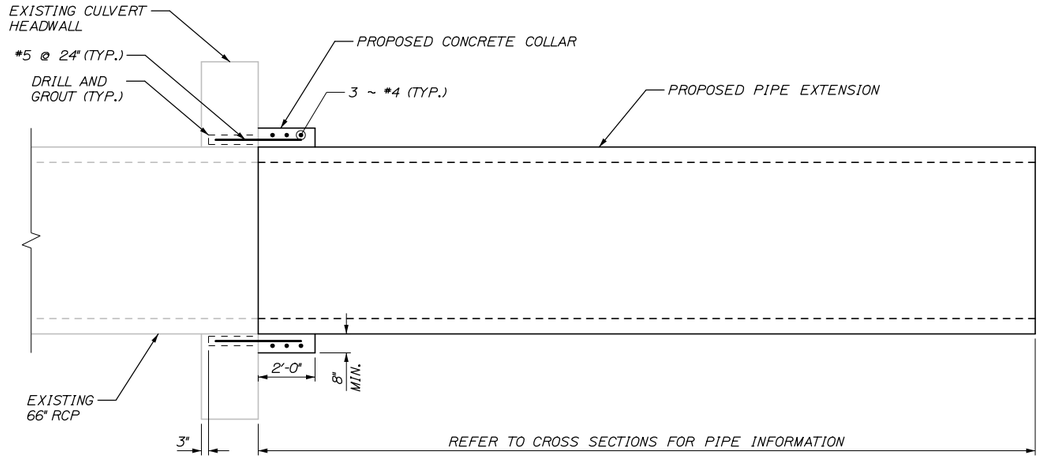
CONTRACT:2019.09

Date:10/31/2018



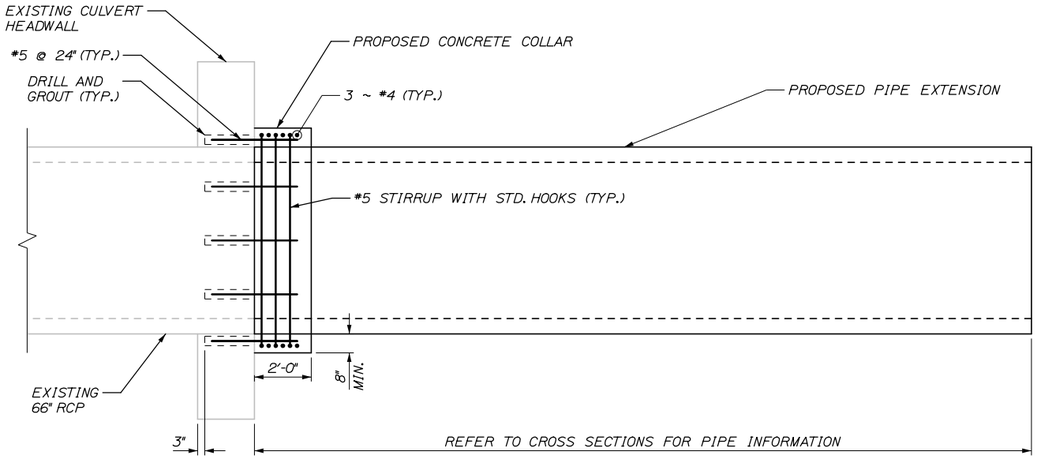
ELEVATION VIEW

3/8" = 1'-0"



SECTION A-A

3/8" = 1'-0"



SECTION B-B

3/8" = 1'-0"

NOTES:

1. CONTRACTOR TO VERIFY EXISTING PIPE AND HEADWALL DIMENSIONS PRIOR TO CONSTRUCTION.

1

Filename: 092_Fore River Culvert 2.dgn

Scale: AS NOTED

No.	Revision	By	Date
1	CULVERT EXTENSION	JSM	10/18

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS MAINE CENTRAL RAILROAD OVERPASS

FORE RIVER CULVERT II

SHEET NUMBER: S-41

CONTRACT:2019.09

Date:10/31/2018

SHEET INTENTIONALLY LEFT BLANK

No.	Revision	By	Date
1	*CULVERT EXTENSION*	*JSM*	*10/18*

Scale: *AS NOTED*

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

FORE RIVER CULVERT III

SHEET NUMBER: S-42

CONTRACT:2019.09

Filename: 093_Fore River Culvert 3.dgn

SPECIAL PROVISION

SECTION 203

EXCAVATION AND EMBANKMENT

(Special Fill – Streambed Materials)

203.01 Description

This work consists of furnishing and placing stone and granular material upstream and/or downstream, of a culvert to form a nature-like streambed.

203.02 Materials

Special Fill shall consist of a mixture of stone and aggregate similar in size and shape to those found in natural channels and may be obtained as bank run or screening materials from earth borrow pits. Special Fill shall conform to the following requirements:

- Approximately 50% by volume shall be stones between 4 and 12 inches average dimension, well graded.
- Approximately 50% by volume shall be aggregate meeting the grading requirements of the following table:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
4 inch	100
2 ½ inch	70 – 85
1 inch	45 – 60
1/2 inch	20 – 40
No. 4	10 – 25
No. 200	0 – 6.0

Clean, granular material excavated on-site in accordance with Special Provision Section 203, Excavation and Embankment, and approved by the Resident, may be used in the mix at the Contractor's option.

Material from blasting or crushing operations will not be allowed unless approved by the Resident. Quarry materials will be evaluated for suitability by the resident and may be rejected.

203.03 Testing and Inspection

The Contractor shall identify the source and proposed mix for inspection at least ten (10) working days prior to the start of stream channel construction. The Contractor shall submit

documentation demonstrating that the 4-inch minus fraction conforms to the requirements. The grading of stone larger than 4 inches will be inspected for conformance with these requirements in accordance with the Standard Specifications, Section 601.032.d Inspection.

203.04 Construction Requirements

A. Mix and place Special Fill along the length of the relocated stream bed in a manner that minimizes segregation and as follows:

- Place Special Fill in lifts no thicker than approximately 12 inches. Prior to placement of the next lift, mechanically compact or thoroughly wet the Special Fill by washing-in with water until the surface is sealed.

- Thoroughly wet the Special Fill prior to exposure to normal flow conditions. Fill any remaining voids by washing-in granular borrow until the surface is sealed. After washing-in, the depth shall meet the required thickness.

203.05 Method of Measurement

Except as otherwise provided, Special Fill will be measured in place by the cubic yard.

Special Fill used in locations difficult to measure accurately in place, may be measured in vehicles at 80% of the number of cubic yards accepted and used, at the point of delivery as shown on delivery slips in accordance with Section 108.1.3 (F) Delivery Slips.

203.06 Basis of Payment

The accepted quantity of Special Fill will be paid for at the contract price per cubic yard complete in place and shall be full compensation for furnishing all materials, equipment and labor.

Water and granular borrow added to the Special Fill to fill voids shall be considered incidental to the work.

Pay Item	Pay Unit
203.33 Special Fill	CY

SPECIAL PROVISION

SECTION 603

PIPE CULVERTS AND STORM DRAINS

(Fore River Concrete Collar)

603.01 Description

The following paragraphs are added:

This work also consists of furnishing and installing a concrete collar to join the existing Fore River Culvert concrete headwall to the proposed pipe extensions in accordance with the details as shown on the Plans. The Contractor shall note that the concrete headwall and existing pipe ends may be of different sizes and may not fit snugly together.

603.02 Materials

All concrete shall be Class A with epoxy coated reinforcing grade 60.

Mechanical couplers shall meet the requirements of Standard Specification 503 for Mechanical/Welded splices.

603.11 Method of Measurement

The following paragraph is added:

The Fore River Concrete Collars shall be measured by each unit installed, complete in place and accepted. This shall be full compensation for furnishing labor and materials to construct a concrete collar to connect the existing and proposed pipe ends in a suitable fashion, including but not limited to reinforcing steel, drilling and grouting, and mechanical couplers.

603.12 Basis of Payment

Fore River Concrete Collars will be paid for at the Contract unit price each regardless of the size of the existing and proposed pipes.

Corrugated HDPE pipe will be paid for under the appropriate sized Culvert Pipe Option III pay items

Payment will be made under:

Pay Item		Pay Unit
603.281	Fore River Concrete Collar	Each

SPECIAL PROVISION

SECTION 620

DRAINAGE GEOTEXTILE

(Impervious Liner)

620.01 Description

The following paragraph is added:

This work shall consist of installing an impervious liner in between two layers of drainage geotextile at each of the two underdrain soil filter locations shown on the plans.

620.02 Materials

The following paragraph is added:

D. Impervious Liner The impervious liner shall consist of linear low polyethylene (LLDP) or PVC with a minimum thickness of 30 millimeters. The liner shall be a continuous sheet or shall have welded seams per the manufacturers recommendation.

620.03 Placement

The following paragraph is added:

The Impervious Liner shall be installed on all sides and the bottom of the underdrain soil filter and extend up the slope to an elevation greater than the top elevation of ponding required for water quality volume. Install drainage geotextile on both sides of the impervious liner to protect the liner from puncture and in accordance with the manufacturer's recommendations as shown on the plans.

620.09 Method of Measurement

The following paragraph is added:

The quantity of impervious liner will be measured by the number of square yards of surface area covered and in direct contact with the drainage geotextile. Measurements will not be made for overlaps or patches and repairs of damaged impervious liner.

620.10 Basis of Payment

Impervious liner will be paid for at the contract unit price per square yard. Such payment shall be full compensation for furnishing and placing the impervious liner; for all labor, tools,

materials, and equipment; for repairing any tears, punctures, or other damage; completion of any necessary seams; and for all other incidentals necessary to complete the work.

Payment will be made under:

Pay Item		Pay Unit
620.561	Impervious Liner	SY

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(Specific Project Maintenance of Traffic Requirements)

This Specification describes the specific project maintenance of traffic requirements for this Project.

The following minimum traffic requirements shall be maintained. These requirements may be adjusted based on the traffic volume when authorized by the Authority.

Maine Turnpike Traffic Control Requirements

A maintenance of traffic control plan has been developed to facilitate construction. This maintenance of traffic control maintains two lanes of travel in each direction, utilizing lane shifts to shift traffic away from the work zone. Winter snow removal within closures should be expected and shall be incidental to the Contract.

Additional traffic control measure restrictions are as follows:

- Temporary lane closures that would restrict travel to one lane in each direction shall be conducted at night between the times presented in the table below. Liquidated damages shall be assessed at $1,000/minute for every minute that a temporary lane closure is in place outside the times presented in the table below.

Night Time Single Lane Closure Allowable Start Time

	June				July			
	NB(M-TH)	**NB(Sunday)**	**SB(M-TH)**	**SB(Sunday)**	**NB(M-TH)**	**NB(Sunday)**	**SB(M-TH)**	**SB(Sunday)**
Exit 46-47	7:30 PM	7:00 PM	7:00 PM	8:00 PM	10:00 PM	10:00 PM	7:00 PM	9:00 PM
Exit 47-48	7:00 PM	6:00 PM	7:00 PM	7:00 PM	10:00 PM	10:00 PM	7:00 PM	9:00 PM
	August				**All Other Months**			
	NB(M-TH)	**NB(Sunday)**	**SB(M-TH)**	**SB(Sunday)**	**NB(M-TH)**	**NB(Sunday)**	**SB(M-TH)**	**SB(Sunday)**
Exit 46-47	10:00 PM	10:00 PM	7:30 PM	8:00 PM	7:00 PM	7:00 PM	7:00 PM	7:00 PM
Exit 47-48	10:00 PM	10:00 PM	7:00 PM	8:00 PM	7:00 PM	6:00 PM	7:00 PM	7:00 PM

Note: All Lane Closures Need to be Removed by 6:00 AM
Note: These Times Are For Non-Holdiay and Non-School Vacation Week Times

- Temporary shoulder closures shall maintain a minimum four-foot lateral buffer from an open travel lane when in place between 6:00 a.m. and 9:00 a.m. and between 3:00 p.m. and 6:00 p.m. During July and August, the four-foot minimum lateral buffer applies from 6:00 a.m. to 8:00 p.m.

Due to high traffic volumes construction vehicles are prohibited from merging with mainline traffic between 7:30 a.m. and 8:30 a.m. on Southbound and between 4:00 p.m. and 6:00 p.m. on Northbound unless the merge occurs at an interchange.

Loading/unloading trucks shall not be closer than six feet from an open travel lane when being loaded or unloaded within the work zone."

MAINE TURNPIKE AUTHORITY

Pre-Bid Conference

CONTRACT 2019.09

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
MILE 46.7

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
MILE 47.9

October 25, 2018, 10:00 A.M.

1) Location:

The general limits of work are as shown on the Contract Plans at Mile 46.7 and Mile 47.9.

2) General Description:

The work consists of improving the Stroudwater River Overpass (NB & SB) bridges and Maine Central Railroad Overpass (NB & SB) bridges in the City of Portland, Maine. The work includes concrete substructure modifications and repairs, installation of steel girders, concrete deck replacement, bridge rails, bearing repairs, approach work and paving, guardrail, maintenance of traffic, and all other work incidental thereto in accordance with the Plans and Specifications.

3) Bid:

a) Opening: November 13, 2018 at 1:00 P.M. at MTA Headquarters 2360 Congress Street, Portland.

b) All bid and contractual questions shall be directed to Mr. Nathaniel Carll. Phone No.: (207) 482-8115. E-Mail: ncarll@maineturnpike.com.

c) All questions on plans and specifications shall be in writing and shall be directed to Nate Carll, Purchasing Manager, of the Maine Turnpike Authority. Fax No.: (207) 871-7739. Email: ncarll@maineturnpike.com.

4) Notification:

a) Contractor shall notify and obtain approval from the Authority prior to visiting the Project sites for field inspection. The contact person is Mr. Steve Tartre at startre@maineturnpike.com.

5) Contract Specifications:

a) The Specifications are divided into three parts: Part I, Supplemental Specifications, Part II, Special Provisions and Part III Appendices.

b) The Maine Turnpike Supplemental Specifications are additions and alterations to the 2014 Maine Department of Transportation Standard Specifications.

6) Maine Department of Labor – Fair Hourly Wages (Special Provision 104.3.8)

   a) Contract includes "Heavy & Bridge" and "Highway & Earth" wage rates.

7) Utility Coordination (Special Provision 104.4.6)

   a) Portland Pipe Line owns a 24-inch underground high-pressure crude oil transmission pipeline within the project limits. This pipeline crosses the Turnpike near STA 2317+82 and crosses the Stroudwater River at an angle of approximately 53-degrees. The proposed work is not anticipated to impact the existing pipeline. However, construction of the proposed Stroudwater River Piers will be in close proximity to the pipeline. The Contractor shall be responsible for completing the work in a manner that does not disturb or damage the oil line. The work shall also be completed in strict accordance with Portland Pipe Line's construction requirements which are provided in the special provision appendices.

   b) Portland Water District owns an 8-inch underground sewer main within the project limits. This sewer main crosses the Turnpike near STA 2316+10 and runs perpendicular to the Turnpike south of the Stroudwater River Overpass and is approximately 20-ft below the surface of the mainline roadway. The proposed work is not anticipated to impact the existing sewer main and relocation is not planned.

   c) Portland Trails crosses beneath the Stroudwater River Overpass (NB & SB) bridges near STA 2317+00. The proposed work includes reconstructing the existing trail under the overpass within the project limits. Additionally, an existing small timber bridge servicing the trail located east of the northbound bridge shall be removed and stacked to become the property of Portland Trail. The Contractor will also be required to provide a 10 cubic yard stockpile of crushed stone for use by Portland Trail at a time of their choosing. The location of the stockpile shall be coordinated with the Resident and Portland Trails. During construction, the trail shall be closed to pedestrian and bicyclist traffic, appropriate signage as shown in the Plans shall be used for the closure. The Contractor shall coordinate with Portland Trail prior to trail closure.

8) Cooperation With Other Contractors (Special Provision 104.4.7):

   a) MTA Contract 2016.08 – Interchange 44 Barrier Toll Plaza ORT Conversion, MM44.3

   b) MTA Contract 2018.02 – Rand Road Intersection Improvements, MM 47.3

   c) MTA Contract 2018.19 – Cummings Road Bridge Replacement, MM 44.6

   d) MTA Contract 2018.13 – Guide Sign Modifications, Phase III Maine Turnpike Exits 32, 36, 42, 44 and 45. Mile 16.9 to 50.5.

   e) MTA Contract 2019.01 – Scarborough/South Portland/Portland Mainline Pavement Rehabilitation, MM 42 – 44.3

   f) MTA Contract 2019.10 – Warren Avenue Bridge Improvements, MM 49.0

   g) MTA Contract 2019.13 – Exit 45 Interchange Reconstruction Pre-Load, MM 44.9

   h) MTA Contract 2020.XX – Exit 45 Interchange Reconstruction, MM 44.9

   i) MTA Contract 2020.XX – Saco/Scarborough Mainline Pavement Rehabilitation, MM 35.5 – 42.0

j) MTA Contract 2020.XX – Mainline Widening and Median Safety Improvements, MM 43 – 46 and Exit 44 NB Ramp Improvements

9) Coordination With Railroads (Special Provision 104.4.8)

The Maine Central Railroad Overpass bridges cross over the Maine Central Railroad (MCRR), owned and operated by Pan Am Railways. MCRR is an active single track serving approximately three freight trains (round trips) per week. The trains do not operate on a set daily schedule. Any work on or affecting Pan Am property or operations requires the presence of a Pan Am Inspector-Flagman. These operations are explicitly laid out in the Railroad Specifications contained in the special provision appendices.

10) Lead Paint (Special Provision 105.2.4.2)

The Contractor shall presume that the existing Stroudwater River Overpass bridges and Maine Central Railroad Overpass bridges contain lead based paint. Paint samples were not taken on these structures and, therefore, Lead Determination Reports are not available. The Contractor shall institute every precaution when working with materials coated with lead based paints.

11) Permit Requirements (Special Provision 105.8.2)

a) The Stroudwater River Overpass is being constructed under the Maine Department of Environmental Protection (MDEP) Natural Resources Protection Act Permit by Rule Regulations Section 11 – State Transportation Facilities, updated June 8, 2012. A copy of the Section 11 – State Transportation Facilities Permit by Rule regulations are available on the Maine Turnpike Authority website.

b) The Stroudwater River Overpass is also being permitted under Section 404 of the Clean Water Act, through the US Army Corps of Engineers Programmatic General Permit, Category 2. Final permit authorization is anticipated by January 1, 2019. Work in the wetlands and water may not occur until permit approval is received from the US Army Corps of Engineers. Upon receipt of authorization or denial of the permit the Contractor will be provided a copy of the permit providing the actual US Army Corps of Engineer's permit conditions. If required the MTA will provide necessary Plan and Specification changes that adjust the Project design, schedule and/or phasing to meet the permit requirements. A copy of the un-authorized General Permit is available for viewing on the Maine Turnpike Authority's website.

c) The Maine Central Railroad Overpass is also being constructed under the Maine Department of Environmental Protection (MDEP) Natural Resources Protection Act Permit by Rule Regulations Section 11 – State Transportation Facilities, updated June 8, 2012. A forthcoming addendum will be adding the associated information for this permit.

d) The Maine Pollutant Discharge Elimination System (MPDES) General Permit for Stormwater Discharge from Construction Activity shall be followed.

e) A Limit of Disturbance Plan shall be submitted prior to any disturbance.

f) Both project locations are within an MS4 Area and the Contractor will be required to follow and sign the MS4 Awareness plan provided in the special provision appendices.

g) The entirety of the MCRR Bridge and approach work is located within an urban impaired watershed.

12) Construction Schedule/Substantial Completion/Prosecution of Work:

a) November 15, 2018 – Contract Award Date

b) November 13, 2020 – The proposed Stroudwater River Overpass (NB & SB) and Maine Central Railroad Overpass (NB & SB) bridge improvements shall be substantially complete.

c) All Contract work that requires in-water work in the Stroudwater River shall be completed between July 15 and October 1.

d) Phase 1 traffic control has been established to minimize impacts to traffic operations, specifically vehicles merging onto the highway from adjacent interchanges. Phase 1A restricts the limits of work to avoid disruption to the acceleration lanes from the interchanges. Phase 1B allows for an extension of the work area and results in a reduction in the acceleration lane length. The duration of Phase 1B shall not exceed 14 calendar days to minimize disruptions to traffic operations. Earthwork and clearing necessary to construct Phase 1B may occur during Phase 1A provided the work is conducted at least 30' from the existing travel lanes, or is behind barrier. A forthcoming addendum will be adding liquidated damages to this limitation.

e) June 25, 2021 – Contract Completion Date

12) Limits of Operations (Special Provision 107.4.7)

a) Pile driving will not be allowed within 10 feet of traffic. The project specifications will be updated as part of Addendum No. 1 to allow pile driving at night.

b) Temporary access for pier construction must comply with the following:

i) No infilling of the river or side slopes will be allowed below the ordinary high-water elevation;

ii) Existing water flow in the River shall be maintained; and,

iii) Temporary construction impacts must remain within the areas shown on the permit plans and areas must be restored to original condition upon completion.

c) Construction activities at the MCRR Bridge shall not reduce the existing railroad horizontal or vertical clearance during construction. The construction of temporary access roads, filling of ditches, or other alterations within the railroad right-of-way shall not be permitted.

d) Construction of the Fore River sheet pile wall system shall not impact the Fore River in any way.

13) Specific Contract Items

a) Section 403 – HOT MIX ASPHALT PAVEMENT

Recent pavement rehabilitation projects may have resulted in unacceptable pavement drop-offs in shoulder locations. Contingency quantities of shim pavement and grindings have been carried in the contract to perform berm drop-off corrections.

b) Section 501 – FOUNDATION PILES (Sheet Pile Wall)

This work shall consist of furnishing and installing an Sheet Pile Wall System at the existing Fore River Culvert comprised of sheet pile walls, ground anchors, and whalers as shown on the Plans and described in the project Special Provisions. The purpose of this system is to allow the highway improvements to be completed without requiring impacts to the Fore River which have not been permitted as part of the project.

The sheet pile wall system shall remain in place at the completion of the project and become the property of the Maine Turnpike Authority.

c) Section 504 – STRUCTURAL STEEL

This work shall also include providing the Resident, and the inspection team, with access to complete inspection of all welded cover plate ends for cracks at the Stroudwater River Overpass (NB & SB) Bridges and Maine Central Railroad Overpass (NB & SB) Bridges. There will be no additional payment for providing inspection access, this cost shall be incidental to the Structural Steel Erection pay item. If any crack repairs are required, they shall be paid on a time and materials basis.

This work shall also consist of peening welds at the ends of cover plates as designated on the plans and/or as directed by the Resident. This work will be paid at the contract unit price for each located peened.

d) Section 511 – COFFERDAMS AND TEMPORARY EARTH SUPPORT SYSTEMS

Cofferdams will be required at the Stroudwater River Bridge and will be paid as one lump sum for each substructure location. Conceptual cofferdam locations and limits are shown on the plans. Cofferdams shall be paid for under the respective cofferdam pay items.

Temporary Earth Support Systems may be required at both the Stroudwater River and Maine Central Railroad Bridges. The actual locations, limits and design of cofferdams and temporary earth support systems shall be the responsibility of the Contractor. Temporary Earth Support Systems shall be paid for under Pay Item 511.091 Temporary Earth Support Systems.

e) Section 526 – CONCRETE BARRIER

i) Temporary Concrete Barrier, Anchored: Where concrete barrier is located on a new concrete deck, thru-bolting will be prohibited.

ii) Temporary Concrete Barrier, Type I: All required temporary concrete barrier for this project shall be provided by the Contractor. Portions of the temporary concrete barrier specified on the Plans to remain in-place upon project completion shall become the property of the Maine Turnpike Authority.

f) Section 627 – PAVEMENT MARKINGS

i) For the installation of Phase 1 traffic control the Contractor has the option of using either paint or tape for temporary roadway markings. The Phase 1 striping is currently quantified as painted lines. The option to use tape is intended to provide the Contractor with the flexibility to implement the Phase 1 traffic control during the winter months if desired. Payment for the installation of taped roadway markings for Phase 1 traffic control, if used, shall be made under Pay Item 627.73 Temporary 6 Inch Pavement Marking Tape and shall include all labor, materials and equipment necessary to maintain and/or reinstall the lines as required.

g) Section 652 – MAINTENANCE OF TRAFFIC

i) A maintenance of traffic control plan has been developed to facilitate construction. This maintenance of traffic control maintains two lanes of travel in each direction, utilizing lane

shifts to shift traffic away from the work zone. Winter snow removal within closed lanes will be the responsibility of the Contractor and shall be incidental to the Contract.

ii) Temporary lane closures restricting travel to one lane in each direction shall be conducted at night between 10:00 p.m. and 5:00 a.m. A forthcoming addendum will provide an update to these closure windows.

iii) Temporary shoulder closures shall maintain a minimum four-foot lateral buffer from an open travel lane when in place during the following times:

- During the months of July and August
    - Between 6:00 a.m. to 8:00 p.m.
- During all other months of the year
    - Between 6:00 a.m. and 9:00 a.m.
    - Between 3:00 p.m. and 6:00 p.m.
- A forthcoming addendum will provide an update to these closure windows.

h) Section 673 – STORMWATER FILTER SYSTEM

i) This work shall consist of constructing a stormwater soil filter bed (USF Detention Basins) to treat stormwater runoff. All work shall be completed in accordance with the project Specifications and Plans, and as directed by the Resident, to provide a complete and operating system. There are several additional pay items associated with this work that are not outlined in detail as part of this agenda.

14) Questions

Contract 2019.09
Stroudwater River Overpass & Maine Central Railroad Overpass
Bridge Improvements

HNTB

SIGN-IN SHEET **PRE-BID MEETING** **October 25, 2018**
Please Print

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