MAINE TURNPIKE AUTHORITY

ADDENDUM NO. 1

CONTRACT 2019.11

NORTHERN BRIDGE REPAIRS, 6 LOCATIONS AND
EMERGENCY VEHICLE RAMPS AND
NEW GLOUCESTER TOLL PLAZA REHABILITATION
MILE 62.3 TO 95.6

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

PROPOSAL

The 8 Proposal Sheets P-3 through P-10 are deleted and replaced with 10 Proposal Sheets P-3 (Revised 3/7/19) through P-10B (Revised 3/7/19). Changes made include correcting formatting, adding Items 503.17 and 526.301, and modifying quantities for 626 Items.

PLANS

Plan Sheets 2 and 3 of 105, "Estimated Quantities" are deleted and replaced in their entirety with the attached revised sheets 2 and 3.

Plan Sheets 4 and 5 of 105, "General Notes" and "Bridge General Notes" are deleted and replaced in their entirety with the attached revised sheets 4 and 5.

Plan Sheets 10 and 11 of 105, "Bennett Road EVR (Mile 68.6) Typical Sections" are deleted and replaced in their entirety with the attached revised sheets 10 and 11.

Plan Sheet 12 of 105, "Bennett Road EVR (Mile 68.6) Northbound EVR Plan & Profile" is deleted and replaced in its entirety with the attached revised sheet 12.

Plan Sheets 13 and 14 of 105, "Bennett Road EVR (Mile 68.6) SB EVR Plan & Profile" are deleted and replaced in their entirety with the attached revised sheets 13 and 14.

Plan Sheet 97 of 105, "Chain Link Fence Details" is deleted and replaced in its entirety with the attached revised sheet 97.

SPECIFICATIONS

New Special Provision 526 Temporary Concrete Barrier Type I: sheets SP-65A – SP-65B (Revised 3/7/19) are added.

Special Provision 526 Temporary Concrete Barrier Type I - Supplied by Authority: sheets SP-66 – SP-68 are deleted and replaced with revised sheets SP-66 – SP-68 (Revised 3/7/19).

Special Provision 607 Automatic Entry Gate System: sheets SP-84 – SP-87 are deleted and replaced with revised sheets SP-84 – SP-87 (Revised 3/7/19).

Special Provision 626 Horizontal Directional Drilled Conduit: sheets SP-97 – SP-99 are deleted and replaced with revised sheets SP-97 – SP-99 (Revised 3/7/19).

QUESTIONS

The following are questions asked and comments made at the pre-bid meeting held on March 5, 2019, or were submitted to the Maine Turnpike Authority in writing. The answers to the questions are noted. Bidders shall utilize this information in preparing their bid.

Question 1: Plan Sheet 36 shows 9' guardrail posts. How can we determine how many 9' posts are needed?

Answer: At Route 26, all guardrail shall be 9' except posts that are part of terminal systems.

Question 2: Note No. 8 on Plan Sheet 97 calls for PVC Privacy Slats to be installed as noted on the plans. I don't see any notes on the plans for PVC Privacy Slats.

Answer: This note has been deleted. No PVC privacy slats are required for this project.

Question 3: Bar Marks: A507, AW601, B507, BW601, S601 appear to be uncoated. If correct will a bid item for uncoated bars be added?

Answer: A note has been added stating that uncoated bars will be paid under the epoxy-coated bar pay items.

Question 4: Are the Mechanical Couplers Bar Marks: S507E & S508E to be included in BI#503.14?

Answer: Item 503.17, "Mechanical/Welded Splice" has been added to pay for the mechanical couplers shown on the plans. No welded splices will be permitted.

Question 5: SP 403: Note I, about Joint Density. Is this note applicable?

Answer: No. This note will be removed from the special provision.

Question 6: SP 202: This says that milling is not allowed on the bridge. Is this correct?

Answer: Yes. Pavement shall not be removed through milling.

Question 7: SP 652 requires no work within 6 feet of traffic. In previous projects, this was interpreted to mean that lane closures were required for median pier work. Is this the intent?

Answer: The requirements of SP 652 are as intended.

Question 8: Is hydrodemolition mandatory for this project?

Answer: Yes. Hydrodemolition is less likely to damage the concrete to remain.

Question 9: Can the existing plans be provided for Route 26 underpass?

Answer: Yes. Existing plans have been posted to the website.

Question 10: Are there time limitations for the Bennett Road EVRs or the Toll Plaza work?

Answer: No.

Question 11: How will the trees called out to be removed at the intersection of Bennett Road and the Northbound EVR be paid?

Answer: These trees will be paid for under Item 201.11, “Clearing”.

ATTACHMENTS

- Proposal Sheets (10 pages)
- Plan Sheets (10 pages)
- Specifications (12 pages)
- 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-three (43).

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-11 of the bid package.

_____
Business Name

_____
Print Name and Title

_____
Signature

_____
Date

March 8, 2019

Very truly yours,

MAINE TURNPIKE AUTHORITY

_____
Nathaniel Carll
Purchasing Department
Maine Turnpike Authority

SCHEDULE OF BID PRICES
CONTRACT NO. 2019.11

Northern Bridge Repairs, 6 Locations (Mile 64.3 to Mile 72.9)
Emergency Vehicle Ramps, Bennett Road (Mile 68.6)
New Gloucester Toll Plaza (Mile 67)

Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
201.11	CLEARING	Acre	0.7				
202.12	REMOVING EXISTING STRUCTURAL CONCRETE	Cubic Yard	55				
202.127	REMOVING EXISTING BITUMINOUS PAVEMENT	Lump Sum	1				
202.1295	HYDRO-DEMOLITION	Square Yard	60				
202.191	REMOVING EXISTING DRAIN TROUGHS	Lump Sum	1				
202.202	REMOVING PAVEMENT SURFACE	Square Yard	287				
202.203	PAVEMENT BUTT JOINT	Square Yard	580				
203.20	COMMON EXCAVATION	Cubic Yard	770				
203.25	GRANULAR BORROW	Cubic Yard	102				
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	Cubic Yard	1,050				

CARRIED FORWARD:		

Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
304.14	AGGREGATE BASE COURSE - TYPE A	Cubic Yard	360				
403.208	HOT MIX ASPHALT - 12.5MM NOMINAL MAXIMUM SIZE	Ton	705				
403.211	HOT MIX ASPHALT - SHIM	Ton	15				
403.213	HOT MIX ASPHALT, 12.5MM NOMINAL MAXIMUM SIZE (BASE AND INTERMEDIATE COURSE)	Ton	830				
409.15	BITUMINOUS TACK COAT RS-1 OR RS-Ah - APPLIED	Gallon	417				
419.30	SAWING BITUMINOUS PAVEMENT	Linear Foot	530				
470.08	BERM DROP OFF CORRECTION - GRINDINGS	Ton	110				
502.21	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	Cubic Yard	50				
502.262	STRUCTURAL CONCRETE ROADWAY SLAB WEARING SURFACE	Cubic Yard	5				
502.42	STRUCTURAL CONCRETE, ROADWAY AND SIDEWALK SLAB ON STEEL BRIDGE	Cubic Yard	13				
502.701	BRIDGE DRAIN GRATE MODIFCATIONS	Each	8				
503.14	EPOXY-COATED REINFORCING STEEL, FABRICATED AND DELIVERED	Pound	17,215				
			CARRIED FORWARD:				

Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
503.15	EPOXY-COATED REINFORCING STEEL, PLACING	Pound	17,215				
503.17	MECHANICAL/WELDED SPLICE	Each	42				
503.90	SYNTHETIC FIBER REINFORCEMENT	Pound	25				
507.0928	ALUMINUM BRIDGE RAILING - RAIL SECTION REPLACE	Linear Foot	20				
507.095	ALUMINUM BRIDGE RAILING - SPLICE MODIFICATION	Each	88				
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE	Lump Sum	1				
511.07	COFFERDAM	Each	4				
515.201	PIGMENTED PROTECTIVE COATING FOR CONCRETE SURFACES	Square Yard	1,355				
515.202	CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES	Square Yard	2,265				
515.23	EPOXY OVERLAY	Square Yard	12				
518.10	ABUTMENT REPAIRS	Square Foot	815				
518.20	PIER REPAIRS	Square Foot	2,105				
			CARRIED FORWARD:				

Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
518.40	EPOXY INJECTION CRACK REPAIR	Linear Foot	445				
518.43	PARAPET JOINT REPAIRS	Linear Foot	1,450				
518.71	REPAIR OF OVERHEAD SURFACES < 8 INCHES	Square Foot	75				
518.75	FASCIA AND OVERHANG REPAIRS	Square Foot	500				
518.80	PARTIAL DEPTH CONCRETE DECK REPAIRS	Square Foot	270				
518.81	FULL DEPTH CONCRETE DECK REPAIRS	Square Foot	15				
520.21	EXPANSION DEVICE - GLAND SEAL	Each	2				
520.2211	EXPANSION DEVICE MODIFICATIONS (WEBSTER ROAD)	Each	2				
520.2211	EXPANSION DEVICE MODIFICATIONS (PLAINS ROAD)	Each	2				
523.522	BEARING BOLSTERS & SPACER PLATES, FABRICATED AND DELIVERED	Lump Sum	1				
523.524	BEARING BOLSTERS & SPACER PLATES, INSTALLED	Lump Sum	1				
524.7211	JACKING EXISTING SUPERSTRUCTURE	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 1	Lump Sum	1				
526.306	TEMPORARY CONCRETE BARRIER, TYPE 1 - SUPPLIED BY THE AUTHORITY	Lump Sum	1				
527.341	WORK ZONE CRASH CUSHIONS - TL-3	Unit	14				
527.342	WORK ZONE CRASH CUSHIONS - TL-2	Unit	2				
603.169	15 INCH CULVERT PIPE OPTION III	Linear Foot	150				
603.55	CONCRETE PIPE TIES	Group	18				
603.91	PRESSURE TREATED WOOD DRAIN TROUGH	Linear Foot	80				
606.1301	31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, SINGLE FACED)	Linear Foot	532				
606.1303	31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, 15' RADIUS AND LESS)	Linear Foot	19				
606.1304	31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, OVER 15' RADIUS)	Linear Foot	71				
606.1305	31" W-BEAM GUARDRAIL - MID-WAY SPLICE FLARED TERMINAL (31" HEIGHT)	Each	1				

CARRIED FORWARD:		

Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
606.1351	TERMINAL END - ANCHORED END - 31" W-BEAM GUARDRAIL	Each	4				
606.1723	BRIDGE TRANSITION - TYPE III	Each	4				
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	Each	9				
606.3631	GUARDRAIL - REMOVE AND STACK OR DISPOSE	Linear Foot	769				
607.09	WOVEN WIRE FENCE - METAL POSTS	Linear Foot	130				
607.17	CHAIN LINK FENCE - 6 FOOT	Linear Foot	895				
607.23	CHAIN LINK FENCE GATE	Each	6				
607.2326	AUTOMATIC ENTRY GATE SYSTEM	Lump Sum	1				
607.32	BRACING ASSEMBLY TYPE I - METAL POSTS	Each	8				
607.33	BRACING ASSEMBLY TYPE II - METAL POSTS	Each	2				
607.34	BRACING ASSEMBLY CHAIN LINK FENCE	Each	48				
609.191	CONCRETE CURB TYPE 2	Linear Foot	60				
			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	26				
613.319	EROSION CONTROL BLANKET	Square Yard	1,390				
615.07	LOAM	Cubic Yard	400				
618.14	SEEDING METHOD NUMBER 2	Unit	33				
619.1201	MULCH - PLAN QUANTITY	Unit	28				
619.1301	BARK MULCH	Cubic Yard	105				
620.58	EROSION CONTROL GEOTEXTILE	Square Yard	34				
620.625	CELLULAR CONFINEMENT SYSTEM	Square Yard	350				
621.037	EVERGREEN TREE (5'-6') GROUP GP A	Each	10				
626.12	QUAZITE JUNCTION BOX	Each	3				
626.22	NON-METALLIC CONDUIT	Linear Foot	360				
626.223	HORIZONTAL DIRECTIONAL DRILLED CONDUIT	Linear Foot	720				
			CARRIED FORWARD:				

Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
				BROUGHT FORWARD:			
627.712	WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	Linear Foot	4,510				
627.752	TEMPORARY WHITE OR YELLOW PAVEMENT AND CURB MARKING	Square Foot	36				
627.77	REMOVING PAVEMENT MARKINGS	Square Foot	720				
627.78	TEMPORARY PAVEMENT MARKING LINE, WHITE OR YELLOW	Linear Foot	10,550				
629.05	HAND LABOR - STRAIGHT TIME	Hour	60				
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	Hour	30				
631.172	TRUCK-LARGE (INCLUDING OPERATOR)	Hour	60				
631.32	CULVERT CLEANER (INCLUDING OPERATOR)	Hour	5				
631.36	FOREMAN	Hour	30				
639.19	FIELD OFFICE, TYPE B	Each	1				
643.72	TEMPORARY TRAFFIC SIGNAL	Lump Sum	1				
645.106	DEMOUNT REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN	Each	10				
				CARRIED FORWARD:			

Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
				BROUGHT FORWARD:			
645.116	REINSTALL REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN	Each	10				
645.271	REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN, TYPE I	Square Foot	45				
652.30	FLASHING ARROW BOARD	Each	14				
652.312	TYPE III BARRICADE	Each	13				
652.331	DRUM	Lump Sum	1.0				
652.34	CONE	Each	15				
652.35	CONSTRUCTION SIGNS	Square Foot	9,614				
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	Lump Sum	1				
652.38	FLAGGERS	Hour	1,010				
652.41	PORTABLE-CHANGEABLE MESSAGE SIGN	Each	8				
652.45	TRUCK MOUNTED ATTENUATOR	Cal. Day	50				
652.451	AUTOMATED TRAILER MOUNTED SPEED LIMIT SIGN	Cal. Day	46				
				CARRIED FORWARD:			

Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
652.46	TEMPORARY PORTABLE RUMBLE STRIPS	Unit	150	$150	00	$22,500	00
655.04	INSTALLATION OF SENSOR LOOPS	Lump Sum	1				
656.50	BALED HAY, IN PLACE	Each	240				
656.60	TEMPORARY BERMS	Linear Foot	230				
656.62	TEMPORARY SLOPE DRAINS	Linear Foot	230				
656.632	30 INCH TEMPORARY SILT FENCE	Linear Foot	3,330				
659.10	MOBILIZATION	Lump Sum	1				
			TOTAL:				

SPECIAL PROVISION

SECTION 526

CONCRETE BARRIER

(Temporary Concrete Barrier Type I)

526.01 Description

The following paragraphs are added:

The work also includes supplying connecting pins and furnishing and mounting retro-reflective delineators, per Subsection 526.02 and 526.03.

526.02 Materials

The following paragraphs are added:

f. Delineators shall be bi-directional with a minimum effective reflective area of eight square inches as approved by the Resident. The reflectors shall be methyl methacrylate and the housing of acrylonitrile butadiene styrene. Color shall be in accordance with the MUTCD.

526.03 Construction Requirements

The following paragraphs are added:

Concrete barrier placed at roadway low points shall be shimmed on 1" by 2" by 2' long wood planks to allow drainage to pass under the barrier. In addition, the Resident may direct the Contractor to shim the concrete barrier at other locations to provide for proper roadway drainage. All labor, material, and equipment necessary to shim the barrier will not be measured separately for payment, but shall be incidental to the Concrete Barrier.

The removal of concrete barrier from adjacent to the travel lane may be conducted without a lane closure if it is accomplished in accordance with the following requirements:

- Barrier is removed from the trailing end and the workmen and equipment involved in the operation are always behind the barrier. No workmen or equipment shall enter the travel lane.
- Barrier shall be dragged away from the travel lane to at least a 30-degree angle by the use of a cable.
- Barrier shall be lifted no more than six inches while within 10 feet of the travel lane.

Retro-Reflective Delineators shall be mounted as follows:

- One on top of each barrier.

- One on the traffic side of every barrier used in a taper.
- One on the traffic side of every other barrier at regularly spaced intervals and locations.
- Delineators shall be installed on both sides of the barrier if barrier is used to separate opposing traffic.
- Delineators shall be physically adhered so as to withstand the force of throw from a snow plow.
- If more than 25% of delineators in any 50 foot section of barrier fall off for any reason, the Contractor will be responsible for reinstalling all the delineators in that run at that their own cost.
- Contractor is required to submit the installation method for review and approval to the Resident.

526.04 Method of Measurement

The following paragraphs are added:

Payment for furnishing, installing and maintaining retro-reflective delineators will not be measured for payment separately but shall be incidental to the Temporary Concrete Barrier Pay Item.

Payment will be made under:

Pay Item		Pay Unit
526.301	Temporary Concrete Barrier, Type I	Lump Sum

SPECIAL PROVISION

SECTION 526

CONCRETE BARRIER

(Temporary Concrete Barrier Type I - Supplied by Authority)

526.01 Description

The following paragraphs are added:

This work shall consist of loading, transporting, setting, resetting, removing, transporting and stacking Temporary Concrete Barrier Type I – Supplied by Authority. The barrier shall have attachments allowing individual sections to be connected into a continuous barrier.

The work also includes supplying connecting pins and furnishing and mounting retro-reflective delineators, per Subsection 526.02 and 526.03.

Concrete barriers supplied by Authority shall be available at the following location(s):

Maintenance Area	Linear Feet of Barrier
Crosby Maintenance Yard Mile 45.7 Southbound	1100 LF

Upon substantial completion of work, the Contractor shall remove and transport the barrier back to its maintenance area of origin. All barrier shall be returned, sorted and stacked according to type in locations directed by the project Resident or maintenance area foreman.

526.02 Materials

The following paragraphs are added:

e. Delineators shall be bi-directional with a minimum effective reflective area of eight square inches as approved by the Resident. The reflectors shall be methyl methacrylate and the housing of acrylonitrile butadiene styrene. Color shall be in accordance with the MUTCD.

526.021 Acceptance

The Resident shall have the authority to accept or reject all Temporary Concrete Barrier Type I – Supplied by Authority used on the Project that does not meet the requirements of this specification

526.03 Construction Requirements

The following paragraphs are added:

The Contractor shall notify the Resident prior to the scheduled pick-up and delivery of concrete barrier. No barrier shall be removed from or stacked at the Turnpike Maintenance Area without approval of the Resident.

The Contractor shall move and place barrier-utilizing methods that will not damage the barrier. Barrier that is damaged by the Contractor by failing to use proper methods shall be replaced by the Contractor at no additional cost to the Maine Turnpike Authority.

Concrete barrier supplied by the Authority consists of several different styles. Not all barriers may be compatible. The Contractor shall utilize caution when setting barrier to use identical barrier types as adjacent barrier. Non-compatible barrier that cannot be attached together shall be overlapped by a minimum of 10 feet with the blunt end on the non-traffic side of the barrier. This work will not be measured separately for payment, but shall be incidental to the concrete barrier.

Concrete barrier placed at roadway low points shall be shimmed on 1" by 2" by 2' long wood planks to allow drainage to pass under the barrier. In addition, the Resident may direct the Contractor to shim the concrete barrier at other locations to provide for proper roadway drainage. All labor, material, and equipment necessary to shim the barrier will not be measured separately for payment, but shall be incidental to the Concrete Barrier.

The removal of concrete barrier from adjacent to the travel lane may be conducted without a lane closure if it is accomplished in accordance with the following requirements:

1. Barrier is removed from the trailing end and the workmen and equipment involved in the operation are always behind the barrier. No workmen or equipment shall enter the travel lane.
2. Barrier shall be dragged away from the travel lane to at least a 30-degree angle by the use of a cable.
3. Barrier shall be lifted no more than six inches while within 10 feet of the travel lane.

Retro-Reflective Delineators shall be mounted as follows:

4. One on top of each barrier.
5. One on the traffic side of every barrier used in a taper.
6. One on the traffic side of every other barrier at regularly spaced intervals and locations.
7. Delineators shall be installed on both sides of the barrier if barrier is used to separate opposing traffic.
8. Delineators shall be physically adhered so as to withstand the force of throw from a snow plow.
9. If more than 25% of delineators in any 50 foot section of barrier fall off for any reason, the Contractor will be responsible for reinstalling all the delineators in that run at that their own cost.
10. Contractor is required to submit the installation method for review and approval to the Resident.

526.04 Method of Measurement

The following paragraphs are added:

Temporary Concrete Barrier Type I – Supplied by Authority shall be measured for payment by the lump sum.

The loading, transporting, setting, resetting, removing, transporting, sorting and stacking of the barrier, the furnishing, installation and maintenance of the barrier delineators, and furnishing and installing connector pins will not be measured separately for payment, but shall be incidental to the cost of the Barrier. Temporary storage of Concrete Barrier between construction phases, if required, will not be measured separately for payment, but shall be incidental to the cost of the Barrier. All equipment required to load, unload, transport and stack Concrete Barrier shall be supplied by the Contractor.

Any Barrier lost or damaged by the Contractor shall be replaced by the Contractor at no additional cost to the Authority.

526.05 Basis of Payment

The fifth paragraph is deleted and not replaced.

The following paragraphs are added:

Temporary Concrete Barrier Type I – Supplied by Authority will be paid for at the Contract lump sum price, complete in place. Such payment shall be full compensation for loading, transporting, setting, resetting, temporary storage, removing, transporting and stacking at the area designated, furnishing all materials, and all other incidentals necessary to complete the work. Temporary Concrete Barrier Type I – Supplied by Authority and all connecting pins shall remain the property of the Authority, and shall be returned to the Turnpike Maintenance Area as designated in Subsection 526.01.

Payment of Concrete Barrier shall be based on a percentage of the work accomplished during that pay period.

Payment will be made under:

Pay Item		Pay Unit
526.306	Temporary Concrete Barrier, Type I – Supplied by Authority	Lump Sum

SPECIAL PROVISION

SECTION 607

FENCES

(Automatic Entry Gate System)

607.01 Description

The following paragraphs are added:

This work shall consist of furnishing and constructing a bi-directional traffic, Automatic Upswing Rigid Cantilever Arm Barrier Gate (Gate System) in accordance with the following specifications.

The installation shall include the assembly and erection of all parts and materials complete at the locations shown on the Plans and as recommended by the Manufacturer or as approved by the Resident.

607.02 Materials

The following paragraph is added:

The automatic entry gate shall be the StrongArm14F UPS Premium Industrial Barrier System manufactured by Nice/HySecurity, 6705 S 209th St, Suite 101, Kent, WA 98032, (800) 321-9947. It shall have the following features:

Arm Length Max.	14 Feet
Open/Close Time	6 - 10 seconds
Arm Design	Aluminum, Side Mount, Breakaway
Temperature Rating	-40 degrees F to 158 degrees F
Duty Cycle	200 cycles/hr
Warranty	5 years
Relays	Three Standard with 8 Additional using Hy8 Relay
Communications	RS-232m RS-485, Ethernet/Fiber using Hynet Gateway, any necessary software shall be provided to the MTA.
Back Up Power	Integrated UPS shall be provided

Foundations necessary for the automatic entry gates, cabinets and any ancillary equipment shall meet the requirements of Section 626 of the Standard Specifications and the Manufacturer's recommendations.

607.03 General

The following paragraphs are added:

A plan for the Gate System and conduit system shall be designed and submitted to the Resident Engineer for approval. The system shall be designed for bi-directional traffic and provide vehicles sensors to determine when vehicles have passed through the gate and it is safe for the gate to close.

Operational control of the automatic entry gate shall be as follows:

The gate operation shall be via the existing Mighty Mule gate remote transmitters that the MTA currently utilizes and in addition shall be controlled by the MTA Lenel electronic card system. The MTA will be responsible for providing the Lenel card system. Contractor shall be responsible for the integration of the Lenel system with the Gate System. Contractor shall provide and install conduit, mounting posts, & foundations for card readers located 20 feet on either side of gate. Readers shall be mounted 4 feet (for cars/light duty trucks) and 6 feet (for large vehicles) above the road surface and protected with a bollard. Gate system shall also include a manual push button within a knox box located on the local road side of the gate attached to the same post as the Lenel card reader.

A UPS battery backup system that is capable of operating the automatic entry gate through a power outage shall be included in the installation.

Gate Beam shall be replaceable and come with three (3) additional replacement beams. Gate beams and gate support (control cabinet) shall be retroreflectorized with Rail Gate Arm Type V alternating red and white prismatic reflective tape both sides, for full width of beam and height of cabinet.

Obstruction Detection Devices: Provide Gate System with automatic safety sensor(s). Activation of sensor(s) causes operator to immediately function as follows:

- Action: Reverse gate in both opening and closing cycles and hold until clear of obstruction.
- Action: Stop gate in opening cycle and gate in closing cycle and hold until clear of obstruction.
- Internal Sensor: Built-in torque or current monitor senses gate is obstructed.
- Photoelectric/Infrared Sensor System: Designed to detect an obstruction in gate's path when infrared beam in the zone pattern is interrupted

Contractor will be responsible for the meter, meter pedestal, separate 334 NEMA cabinet to house the necessary circuit breakers for the gate system and the Lenel Card System.

Gate System shall include 10 Bollards – Bollards will be provided by the MTA for installation by the Contractor. Bollards shall be picked up by the Contractor at the West Gardiner Maintenance Yard. Bollards shall be installed on either side of the gate mechanism and at the end approximately two feet from the end of the gate when it is in the closed position. A clear distance of no less than 16 feet and no more than 16’6” should be provided for vehicles to drive through the gate opening. Additionally, bollards will be placed with each card reader and placed such that the bollard does not obstruct the intended use of the card reader or hinder normal vehicular movement and plowing operations.

The Contractor shall install wires for communications and wires for electrical power in separate conduits.

All materials and workmanship shall conform to the requirements of the National Electric Code.

The Contractor shall provide a qualified technician to thoroughly review and confirm that the gate system is satisfactory and operational as designed. Prior to the gate system becoming operational, both Contractor and Resident shall review and comment upon the Gate System.

607.06 Method of Measurement

Automatic Entry Gate System will be measured as one lump sum which shall include fully operational systems at both the northbound and southbound emergency vehicle ramps.

607.07 Basis of Payment

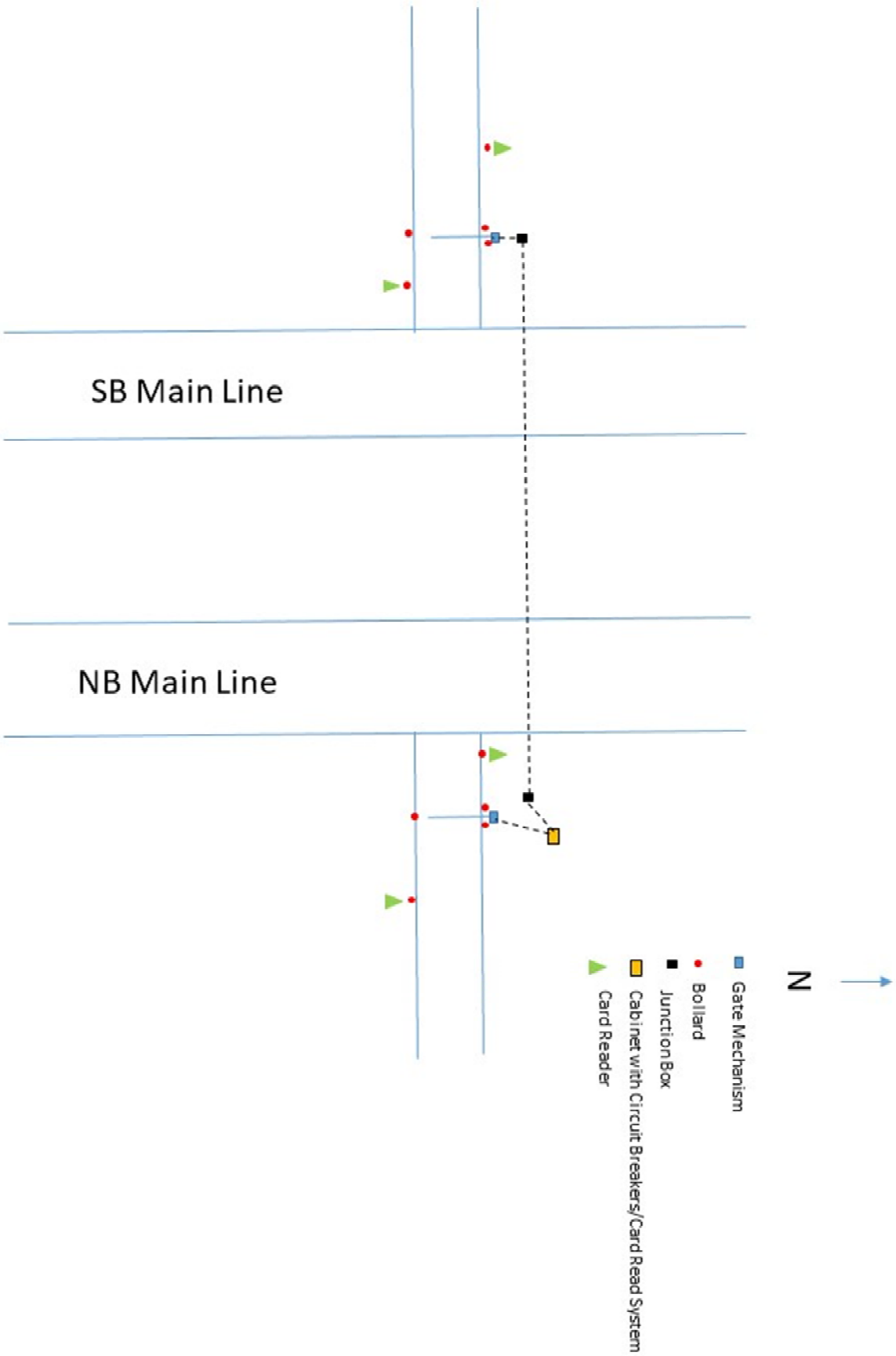
Automatic Entry Gate System will be paid for the complete in place system, which payment shall be full compensation for furnishing and installing all materials, necessary hardware, cabinets, foundations, meter, wire, bollard installation, excavation and concrete, and all incidentals required for a complete functioning installation at both the northbound and southbound emergency vehicle ramps. Materials and work required to connect to the existing utility pole and removal and proper disposal of existing gate will be considered incidental to this work.

Gate connection to existing or proposed fence will not be measured separately for payment, but shall be incidental to the gate work.

Conduit shall be paid under respective items in Section 626 of the Standard Specifications.

Payment will be made under:

Pay Item		Pay Unit
607.2326	Automatic Entry Gate System	Lump Sum


SB Main Line
NB Main Line
Gate Mechanism
Bollard
Junction Box
Cabinet with Circuit Breakers/Card Read System
Card Reader
N

SPECIAL PROVISION

SECTION 626

FOUNDATIONS, CONDUIT, AND JUNCTION BOXES FOR HIGHWAY SIGNING, LIGHTING AND SIGNALS

(Horizontal Directional Drilled Conduit)

626.01 Description

The following paragraph is added:

Horizontal Directional Drilling (HDD) method shall be used for installation of non-metallic conduit for highway lighting, toll systems and traffic signals when specified on the project plans or approved by the Resident. It shall include furnishing of all materials, site preparation, equipment setup, pilot bore, conduit pulling through the drilled bore, installation of pull wire and fittings, site restoration, and incidental work necessary to satisfactorily install conduit at the required locations and depths.

626.02 General

The following sections are added:

Materials

Conduit for Horizontal Directional Drilling shall meet requirements of Section 715.03 for non- metallic conduit. Non-metallic conduit to be installed under roadways shall be Schedule 80 or greater. Non-metallic conduit to be installed in other locations shall be Schedule 40 or greater. Conduit sections shall be joined by methods suitable for installation by HDD. Joined conduit sections must have adequate strength and flexibility to withstand the installation stresses and overburden pressures without compromising the structural stability of the conduit wall. Conduit must be able to meet the bend radius required for the proposed installation. Conduit sections shall be joined in a manner resulting in the inner surfaces being flush and even.

Construction

Prior to commencing HDD work, the Contractor shall submit a drilling work plan to the Resident for approval addressing the following, at minimum:

- Profile of the proposed bore plotted at a scale appropriate for the crossing and acceptable to the Resident;
- HDD site layout including entry and exit points;
- Drilling fluid management plan, including drilling fluid types and specifications, cleaning and recycling equipment to be used, estimated flow rates, procedures for minimizing drilling fluid escape, and the method and location for final disposal of waste drilling fluids. Material safety data sheets shall be provided for all drilling fluid additives that will be used;
- Conduit storage and handling details;
- Summary of assembly and installation procedures to be used;
- Material safety data sheets of any other potentially hazardous substances to be used;

- Maintenance of Traffic plan showing appropriate lane closures to track the boring beneath active roadways;
- Response plans for possible problems that may be encountered;
- Documentation and certification of the ability of the proposed conduit to withstand installation stresses and pressures.

The HDD drill rig and auxiliary pieces of equipment shall be appropriate for the diameter and length of conduit being installed. The power system shall provide sufficient pressure to power the drilling operations with a hydraulic system free from leakage. The directional drilling machine shall be anchored as necessary to stabilize it against excessive dislocation.

In order to minimize friction and prevent collapse of the bore hole, a soil stabilizing agent (drilling fluid) may be introduced into the annular bore space from the front end of the drill head to create a slurry. The drilling fluids shall be selected or designed for the site's specific soil and ground water conditions. The drilling fluid mixing system shall be self-contained and closed with sufficient size to mix and deliver drilling fluid to the drill head. The mixing system shall continually agitate the drilling fluid during drilling operations. The fluids delivery system shall be capable of pumping drilling fluid with sufficient volume and pressure from the mixing tank through the drill rods to the drill head.

Alignment of the bore shall be accomplished by proper orientation of the drill head as it is pushed through the ground by the drill rig. Orientation and tracking of the drill head shall be determined by using an acceptable tracking system from a transmitter located within the drill head. The HDD guidance system shall be capable of locating and tracking the drill head continuously and accurately both horizontally and vertically during the pilot bore. All equipment shall be properly calibrated before commencing the directional drilling operation.

The Contractor shall use lane closures on the Mainline Maine Turnpike to permit accurate locating and tracking of the drill head as it passes beneath the Turnpike.

Borehole diameter relative to the conduit diameter shall be minimized to limit potential damage from soil displacement, settlement, and heaving. When necessary, the pilot borehole may be enlarged by back reaming to accommodate conduit larger than the pilot borehole size. Back reaming may be accomplished ahead of or at the same time as pulling the conduit through the pilot borehole. The back-reamer shall be sized to create a large enough borehole to allow cuttings to transfer from the face of excavation to the surface with minimum soil displacement.

Escaping slurry or drilling fluids shall be confined at the ground surface during pull back or drilling. All drilling fluids shall be disposed of or recycled in a manner acceptable to the Maine Department of Environmental Protection. Upon completion of the HDD operation, the work site shall be cleaned of all excess slurry or spoils. Any damage caused by heaving, settlement, separation of pavement, escaping drilling fluid, or other damage from the directional drilling operation shall be repaired by the Contractor to the satisfaction of the Resident.

At the completion of the HDD conduit installation, the Contractor shall provide to the Resident marked up plans noting location, depth, and material type of all conduit installed by the Horizontal Directional Drilling method.

626.04 Method of Measurement

The following sentence is added:

Horizontal Directional Drilled Conduit will be measured by the number of linear feet of conduit in place and accepted by the Resident.

626.05 Basis of Payment

Payment will be made for the total number of linear feet of Horizontal Directional Drilled Conduit and accepted at the contract price per linear foot. Payment shall include the cost of furnishing and installing the conduit; site preparation and restoration of drilling entry and exit points; removal of excavated material and drilling spoils; removal and disposal of drilling fluids and excess slurry; pull wire, fittings, grounding and bonding; test cleaning of conduit interior; As-built drawings/logs; and all other materials, labor, equipment, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item		Pay Unit
626.223	Horizontal Directional Drilled Conduit	Linear Foot

Date:3/7/2019

ESTIMATED QUANTITIES

Item No.	Item Description	Unit	Quantities								
			Mile 62.3 Pleasant River Culvert	Mile 64.3 Route 26 Underpass	Mile 65.25 Cole Brook Culvert	Mile 68.6 Bennett Road EVR	Mile 72.9 Foster Brook Culvert	Mile 82.7 Webster Road Underpass	Mile 95.6 Plains Road Underpass	Mile 67.0 New Gloucester Toll Plaza	Total Quantity
201.11	CLEARING	AC		0.10		0.60					0.70
202.12	REMOVING EXISTING STRUCTURAL CONCRETE	CY		55							55
202.127	REMOVING EXISTING BITUMINOUS PAVEMENT (2765 SY)	LS		0.47				0.20	0.33		1
202.1295	HYDRO-DEMOLITION	SY								60	60
202.191	REMOVING EXISTING DRAIN TROUGHS	LS		1							1
202.202	REMOVING PAVEMENT SURFACE	SY		240		47					287
202.203	PAVEMENT BUTT JOINT	SY						250	330		580
203.20	COMMON EXCAVATION	CY		350		420					770
203.25	GRANULAR BORROW	CY		102							102
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	CY		390		660					1,050
304.14	AGGREGATE BASE COURSE - TYPE A	CY				360					360
403.208	HOT MIX ASPHALT - 12.5MM NOMINAL MAXIMUM SIZE	TON		218		310		65	112		705
403.211	HOT MIX ASPHALT - SHIM	TON		15							15
403.213	HOT MIX ASPHALT, 12.5MM NOMINAL MAXIMUM SIZE (BASE AND INTERMEDIATE COURSE)	TON		378		330		45	77		830
409.15	BITUMINOUS TACK COAT RS-1 OR RS-Ah - APPLIED	GAL		188		120		40	69		417
419.30	SAWING BITUMINOUS PAVEMENT	LF		140		390					530
470.08	BERM DROP OFF CORRECTION - GRINDINGS	TON				110					110
502.21	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	CY		50							50
502.262	STRUCTURAL CONCRETE ROADWAY SLAB WEARING SURFACE	CY								5	5
502.42	STRUCTURAL CONCRETE, ROADWAY AND SIDEWALK SLAB ON STEEL BRIDGE	CY		13							13
502.701	BRIDGE DRAIN GRATE MODIFCATIONS	EA		2				2	4		8
503.14	EPOXY COATED REINFORCING STEEL, FABRICATED AND DELIVERED	LB		17,215							17,215
503.15	EPOXY-COATED REINFORCING STEEL, PLACING	LB		17,215							17,215
503.17	MECHANICAL/WELDED SPLICE	EA		42							42
503.90	SYNTHETIC FIBER REINFORCEMENT	LB								25	25
507.0928	ALUMINUM BRIDGE RAILING - RAIL SECTION REPLACE	LF		20							20
507.095	ALUMINUM BRIDGE RAILING - SPLICE MODIFICATION	EA		32				20	36		88
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE (2765 SY)	LS		0.47				0.20	0.33		1
511.07	COFFERDAM	EA	2		2						4
515.201	PIGMENTED PROTECTIVE COATING FOR CONCRETE SURFACES	SY		675				275	405		1,355
515.202	CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES	SY		890				470	755	150	2,265
515.23	EPOXY OVERLAY	SY								12	12
518.10	ABUTMENT REPAIRS	SF	125	520	125			35	10		815
518.20	PIER REPAIRS	SF		1,155				220	730		2,105
518.40	EPOXY INJECTION CRACK REPAIR	LF	125	40	275				5		445
518.43	PARAPET JOINT REPAIRS	LF		580				325	545		1,450
518.71	REPAIR OF OVERHEAD SURFACES < 8 INCHES	SF						75			75
518.75	FASCIA AND OVERHANG REPAIRS	SF							500		500
518.80	PARTIAL DEPTH CONCRETE DECK REPAIRS	SF		85				75	110		270
518.81	FULL DEPTH CONCRETE DECK REPAIRS	SF		5				5	5		15
520.21	EXPANSION DEVICE - GLAND SEAL	EA		2							2
520.2211	EXPANSION DEVICE MODIFICATIONS (WEBSTER ROAD)	EA						2			2
520.2211	EXPANSION DEVICE MODIFICATIONS (PLAINS ROAD)	EA							2		2
523.522	BEARING BOLSTERS & SPACER PLATES, FABRICATED AND DELIVERED	LS		1							1
523.524	BEARING BOLSTERS & SPACER PLATES, INSTALLED	LS		1							1
524.7211	JACKING EXISTING SUPERSTRUCTURE	LS		1							1
526.306	TEMPORARY CONCRETE BARRIER, TYPE 1 - SUPPLIED BY THE AUTHORITY	LS	0.12	0.31	0.12	0.18	0.12	0.08	0.08		1
527.341	WORK ZONE CRASH CUSHIONS - TL-3	UNIT	2	2	2	2	2	2	2		14
527.342	WORK ZONE CRASH CUSHIONS - TL-2	UNIT		2							2
603.169	15 INCH CULVERT PIPE OPTION III	LF				150					150
603.55	CONCRETE PIPE TIES	GP					18				18
603.91	PRESSURE TREATED WOOD DRAIN TROUGH	LF		80							80
606.1301	31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, SINGLE FACED)	LF		450		82					532
606.1303	31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, 15' RADIUS AND LESS)	LF				19					19
606.1304	31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, OVER 15' RADIUS)	LF		25		46					71
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		3					4
606.1723	BRIDGE TRANSITION - TYPE III	EA		4							4

ROUTE 26 EARTHWORK SUMMARY

COMMON EXCAVATION FOR ESTIMATE

COMMON EXCAVATION (FROM CROSS SECTIONS)	220	
COMMON EXCAVATION (FROM BRIDGE)	93	
GRUBBING IN FILL	21	
PAVEMENT SALVAGE IN FILL	36	
TOTAL COMMON EXCAVATION (for estimate)		370

FILL FOR BORROW CALCULATIONS

COMMON FILL (FROM CROSS SECTIONS)	74	
GRUBBING IN FILL	21	
PAVEMENT SALVAGE IN FILL	36	
TOTAL FILL		131

AVAILABLE COMMON EXCAVATION FOR BORROW CALCULATIONS

(1) TOTAL COMMON EXCAVATION		370
DEDUCTIONS:		
GRUBBING IN CUT	33	
GRUBBING IN FILL	21	
PAVEMENT SALVAGE (CUT & FILL)	151	
(2) TOTAL DEDUCTIONS		206
TOTAL AVAILABLE COMMON EXCAVATION (1) MINUS (2)		164
RIPRAP EXCAVATION (1/2 USABLE)		10
TOTAL AVAILABLE NON-ROCK EXCAVATION		174

COMPUTATION OF WASTE STORAGE & WASTE MATERIAL

TOTAL AVAIL. WASTE STORAGE AREA (FROM CROSS SECTIONS)		0
GRUBBING IN CUT	33	
GRUBBING IN FILL	21	
RIPRAP EXCAVATION (1/2 WASTE)	10	
TOTAL WASTE MATERIAL TO BE UTILIZED (LOWER OF TOTAL AVAILABLE WASTE STORAGE AREA OR TOTAL WASTE MATERIAL)		0
TOTAL WASTE MATERIAL TO BE WASTED (TOTAL WASTE MATERIAL MINUS TOTAL WASTE MATERIAL TO BE UTILIZED)		64

COMPUTATION OF GRANULAR BORROW FOR ESTIMATE

GRANULAR BORROW FOR BRIDGE			108	
GRANULAR BORROW =	108	x 1.00 =		108

COMPUTATION FOR COMMON BORROW FOR ESTIMATE

(3)TOTAL FILL				131
TOTAL AVAIL. NON-ROCK EXCAV.	174 x 0.90	=	156	
TOTAL AVAIL. ROCK EXCAV.	0 x 1.30	=	0	
TOTAL AVAIL. STR. ROCK EXCAV.	0 x 1.30	=	0	
TOTAL WASTE MATERIAL TO BE UTILIZED	0 x 1.10	=	0	
(4)TOTAL AVAILABLE EXCAVATION				156
BORROW NEEDED = TOTAL FILL MINUS TOTAL AVAILABLE EXCAVATION				-25

IF NO BORROW IS NEEDED, SURPLUS MATERIAL = AVAILABLE EXCAVATION MINUS TOTAL FILL, PLUS TOTAL WASTE MATERIAL TO BE WASTED: 90

Filename: ...\MSTA\002A_Quantities.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date
1	Add 503.17	DSM	3/19

Designed by: T-Y LIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Daniel S. Myers

	By	Date		By	Date
Designed	DSM	1/2019	Checked	KSD	1/2019
Drawn	DSM	1/2019	In Charge of	DSM	1/2019

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV

NORTHERN BRIDGE REPAIRS & BENNETT ROAD EMERGENCY VEHICLE RAMPS

ESTIMATED QUANTITIES
SHEET 1 OF 2

SHEET NUMBER: QT-01

CONTRACT:2019.11

Date:3/7/2019

ESTIMATED QUANTITIES

Item No.	Item Description	Unit	Quantities								
			Mile 62.3 Pleasant River Culvert	Mile 64.3 Route 26 Underpass	Mile 65.25 Cole Brook Culvert	Mile 68.6 Bennett Road EVR	Mile 72.9 Foster Brook Culvert	Mile 82.7 Webster Road Underpass	Mile 95.6 Plains Road Underpass	Mile 67.0 New Gloucester Toll Plaza	Total Quantity
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	EA		6		3					9
606.3631	GUARDRAIL - REMOVE AND STACK OR DISPOSE	LF		590		179					769
607.09	WOVEN WIRE FENCE - METAL POSTS	LF				130					130
607.17	CHAIN LINK FENCE - 6 FOOT	LF		350				285	260		895
607.23	CHAIN LINK FENCE GATE	EA		2				2	2		6
607.2326	AUTOMATIC ENTRY GATE SYSTEM	LS				1					1
607.32	BRACING ASSEMBLY TYPE I - METAL POSTS	EA				8					8
607.33	BRACING ASSEMBLY TYPE II - METAL POSTS	EA				2					2
607.34	BRACING ASSEMBLY CHAIN LINK FENCE	EA		16				16	16		48
609.191	CONCRETE CURB TYPE 2	LF		60							60
610.08	PLAIN RIPRAP	CY		20		6					26
613.319	EROSION CONTROL BLANKET	SY		550		840					1,390
615.07	LOAM	CY		70		330					400
618.14	SEEDING METHOD NUMBER 2	UNIT		6		27					33
619.1201	MULCH - PLAN QUANTITY	UNIT		1		27					28
619.1301	BARK MULCH	CY		40				30	35		105
620.58	EROSION CONTROL GEOTEXTILE	SY		15		19					34
620.625	CELLULAR CONFINEMENT SYSTEM	SY		350							350
621.037	EVERGREEN TREE (5'-6') GROUP GP A	EA				10					10
626.12	QUAZITE JUNCTION BOX	EA				3					3
626.22	NON-METALLIC CONDUIT	LF				360					360
626.223	HORIZONTAL DIRECTIONAL DRILLED CONDUIT	LF				720					720
627.712	WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	LF		2,150				860	1,500		4,510
627.752	TEMPORARY WHITE OR YELLOW PAVEMENT AND CURB MARKING	SF		36							36
627.77	REMOVING PAVEMENT MARKINGS	SF		720							720
627.78	TEMPORARY PAVEMENT MARKING LINE, WHITE OR YELLOW	LF		5,850				1,750	2,950		10,550
629.05	HAND LABOR - STRAIGHT TIME	HR		40		20					60
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	HR		20		10					30
631.172	TRUCK-LARGE (INCLUDING OPERATOR)	HR		40		20					60
631.32	CULVERT CLEANER (INCLUDING OPERATOR)	HR		5							5
631.36	FOREMAN	HR		20		10					30
639.19	FIELD OFFICE, TYPE B	EA	0.03	0.43	0.04	0.18	0.02	0.10	0.18	0.02	1
643.72	TEMPORARY TRAFFIC SIGNAL	LS		1							1
645.106	DEMOUNT REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN	EA		3		7					10
645.116	REINSTALL REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN	EA		3		7					10
645.271	REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN, TYPE I	SF		18		27					45
652.30	FLASHING ARROW BOARD	EA	2	2	2	2	2	2	2		14
652.312	TYPE III BARRICADE	EA		2		2		3	4	2	13
652.331	DRUM	LS	0.14	0.12	0.14	0.12	0.14	0.14	0.14	0.07	1
652.34	CONE	EA								15	15
652.35	CONSTRUCTION SIGNS	SF	1,200	1,850	1,200	1,200	1,200	1,350	1,550	64	9,614
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	LS	0.06	0.38	0.06	0.13	0.06	0.13	0.13	0.05	1
652.38	FLAGGERS	HR		430		580					1,010
652.41	PORTABLE-CHANGEABLE MESSAGE SIGN	EA		2		2		2	2		8
652.45	TRUCK MOUNTED ATTENUATOR	CD	4	4	4	6	4	14	14		50
652.451	AUTOMATED TRAILER MOUNTED SPEED LIMIT SIGN	CD	4	4	4	2	4	14	14		46
652.46	TEMPORARY PORTABLE RUMBLE STRIPS	UNIT	12	12	12	18	12	42	42		150
655.04	INSTALLATION OF SENSOR LOOPS	LS								1	1
656.50	BALED HAY, IN PLACE	EA	10	50	20	100	10	20	30		240
656.60	TEMPORARY BERMS	LF	10	40	10	80	10	40	40		230
656.62	TEMPORARY SLOPE DRAINS	LF	10	40	10	80	10	40	40		230
656.632	30 INCH TEMPORARY SILT FENCE	LF	100	630	160	1,950	150	100	240		3,330
659.10	MOBILIZATION	LS	0.03	0.43	0.04	0.18	0.02	0.10	0.18	0.02	1

BENNETT ROAD EARTHWORK SUMMARY

COMMON EXCAVATION FOR ESTIMATE

COMMON EXCAVATION (FROM CROSS SECTIONS)	413	
EARTH FROM DRIVES, OLD ROAD, ETC.	1	
CULVERT INLET AND OUTLET DITCHES	15	
PAVEMENT SALVAGE IN FILL	61	
TOTAL COMMON EXCAVATION (for estimate)		489

FILL FOR BORROW CALCULATIONS

COMMON FILL (FROM CROSS SECTIONS)	200	
PAVEMENT SALVAGE IN FILL (OFF ROAD ONLY)	5	
TOTAL FILL		205

AVAILABLE COMMON EXCAVATION FOR BORROW CALCULATIONS

(1) TOTAL COMMON EXCAVATION		489
DEDUCTIONS:		
GRUBBING IN CUT	87	
GRUBBING IN FILL	0	
PAVEMENT SALVAGE (CUT & FILL)	70	
(2) TOTAL DEDUCTIONS		157
TOTAL AVAILABLE COMMON EXCAVATION (1) MINUS (2)		332
RIPRAP EXCAVATION (1/2 USABLE)		3
TOTAL AVAILABLE NON-ROCK EXCAVATION		334

COMPUTATION OF WASTE STORAGE & WASTE MATERIAL

TOTAL AVAIL. WASTE STORAGE AREA (FROM CROSS SECTIONS)		0
GRUBBING IN CUT	87	
GRUBBING IN FILL	0	
RIPRAP EXCAVATION (1/2 WASTE)	3	
TOTAL WASTE MATERIAL TO BE UTILIZED (LOWER OF TOTAL AVAILABLE WASTE STORAGE AREA OR TOTAL WASTE MATERIAL)		0
TOTAL WASTE MATERIAL TO BE WASTED (TOTAL WASTE MATERIAL MINUS TOTAL WASTE MATERIAL TO BE UTILIZED)		90

COMPUTATION FOR COMMON BORROW FOR ESTIMATE

(3)TOTAL FILL				205
TOTAL AVAIL. NON-ROCK EXCAV.	334	x 0.90	=	301
TOTAL AVAIL. ROCK EXCAV.	0	x 1.30	=	0
TOTAL AVAIL. STR. ROCK EXCAV.	0	x 1.30	=	0
TOTAL WASTE MATERIAL TO BE UTILIZED	0	x 1.10	=	0
(4)TOTAL AVAILABLE EXCAVATION				301
BORROW NEEDED = TOTAL FILL MINUS TOTAL AVAILABLE EXCAVATION				-96

IF NO BORROW IS NEEDED, SURPLUS MATERIAL = AVAILABLE EXCAVATION MINUS TOTAL FILL, PLUS TOTAL WASTE MATERIAL TO BE WASTED: 186

Filename: ...\MSTA\002A_Quantities.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date
1	Revise 623 items and 652.312	DSM	3/19

Designed by: T-Y LIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Daniel S. Myers

	By	Date		By	Date
Designed	DSM	1/2019	Checked	KSD	1/2019
Drawn	DSM	1/2019	In Charge of	DSM	1/2019

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV

NORTHERN BRIDGE REPAIRS & BENNETT ROAD EMERGENCY VEHICLE RAMPS

ESTIMATED QUANTITIES
SHEET 2 OF 2

SHEET NUMBER: QT-02

CONTRACT:2019.11

Date:3/7/2019

GENERAL CONSTRUCTION NOTES

1. ALL DETAILS SHALL BE IN CONFORMANCE WITH MAINE DEPARTMENT OF TRANSPORTATION (MDOT) 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, WITHIN LIMITS OF DISTURBANCE, SHALL BE REMOVED AND RESET UPON COMPLETION OF THE CONTRACT. PAYMENT WILL BE INCIDENTAL TO CONTRACT.

3. IN AREAS OF PROPOSED PIPE ENTRY GATES AND NEW FENCE, EXISTING CHAIN LINK OR WIRE FENCE SHALL BE REMOVED. REMOVING AND DISPOSING OF EXISTING FENCE SHALL BE INCIDENTAL TO PIPE ENTRY AND PROPOSED FENCE BID ITEMS. PROPOSED FENCE AND PIPE ENTRY GATE SHALL BE INSTALLED CONTINUOUSLY WITH NO GAPS. TO ACCOMMODATE THE REVISED GRADING OF THE EMERGENCY VEHICLE RAMP, WOVEN WIRE FENCE MAY NEED TO BE CUT OR ADDITIONAL POSTS, BRACING ASSEMBLIES, OR FABRIC MAY NEED TO BE INSTALLED. ALL WORK SHALL BE DONE IN COFNORMANCE WITH MAINEDOT STANDARD SPECIFICATIONS, REVISION 2014, SECTION 607 AND MAINE DOT STANDARD DETAILS, REVISION 2014, SECTION 607.

4. CONNECTION FOR PROPOSED FENCE TO EXISTING FENCE SHALL BE INCIDENTAL TO THE CONTRACT INCLUDING ANY REQUIRED ADDITIONAL BRACING FOR THE EXISTING FENCE.

5. NO SEPARATE PAYMENT FOR SUPERINTENDENT OR FOREMAN WILL BE MADE FOR THE SUPERVISION OF EQUIPMENT BEING PAID FOR UNDER THE EQUIPMENT RENTAL ITEMS.

6. THE CONTRACTOR SHALL NOTE THAT THE ACTUAL EXISTING PAVEMENT THICKNESS MAY VARY FROM THE DEPTHS SHOWN ON THE PLANS. REMOVAL OF EXISTING PAVEMENT SHALL BE PAID AS COMMON EXCAVATION.

7. ⚠1 ALL NEW UNDERGROUND UTILITY SERVICE LINES FOR THE NEW BENNETT ROAD NORTHBOUND AND SOUTHBOUND EVR ACCESS GATES WILL INCLUDE 3-3" DIA. CONDUITS. THE HORIZONTAL DIRECTIONAL DRILLING LOCATION NOTED ON THE PLANS UNDER THE MAINE TURNPIKE WILL INCLUDE 3-3" DIA. CONDUITS.

8. TEN (10) EVERGREEN TREES SHALL BE PLANTED ALONG THE BENNETT ROAD NORTHBOUND EMERGENCY VEHICLE RAMP FOR THE GENERAL PURPOSE OF REPLACING TREES REMOVED IN FRONT OF THE ABUTTING GUAY PROPERTY DURING CONSTRUCTION. THE LOCATION OF THE NEW TREES TO BE PLANTED SHALL BE AT THE DIRECTION OF THE RESIDENT AND WILL BE PAID FOR UNDER ITEM 621.037 - EVERGREEN TREE (5'-6') GP A.

EARTHWORK

1. CLEARING LIMITS SHALL BE 10' BEYOND AND PARALLEL TO THE CONSTRUCTION SLOPE LINES OR AS SHOWN ON THE PLANS UNLESS OTHERWISE AUTHORIZED BY THE RESIDENT. THE ACTUAL CLEARING LINES SHALL BE ESTABLISHED IN THE FIELD BY THE CONTRACTOR AND SHALL BE APPROVED BY THE RESIDENT PRIOR TO AND CLEARING TAKING PLACE. ALL CLEARING SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

2. ALL STUMPS WITHIN THE EVR CLEARING LIMITS SHALL BE REMOVED. THE AREA RE-GRADED, LOAMED, AND SEEDED. STUMP REMOVAL SHALL BE INCIDENTAL TO CLEARING. STUMPS ON BENNETT ROAD EMBANKMENT SHALL BE CUT FLUSH WITH THE EMBANKMENT LEAVING THE ROOT STRUCTURE INTACT. GRUBBING FROM EVR CONSTRUCTION SHOULD BE USED ON THE EMBANKMENT TO CREATE A SMOOTH SURFACE. THE EMBANKMENT AREA SHOULD THEN BE SEEDED AND COVERED WITH EROSION CONTROL BLANKET. THE REMAINING GRUBBINGS SHALL BE USED AS LOAM BETWEEN THE EVR AND BENNETT ROAD TOES OF SLOPE.

3. MUCK EXCAVATION HAS BEEN ESTIMATED FOR ALL WETLAND AREAS AT A 1' DEPTH BELOW NORMAL GRUBBING. THE CONTRACTOR SHALL CONFIRM WITH THE RESIDENT THE ACTUAL LIMITS AND DEPTH BEFORE PLACING ANY AGGREGATE.

4. THE GRUBBING DEPTH HAS BEEN ESTIMATED AS 6" (12" IN WOODED AND WETLAND AREAS).

5. WASTE MATERIALS SHALL BE DISPOSED OF OFF THE PROJECT SITE, IN ACCORDANCE WITH CHAPTER 404, DEPARTMENT OF ENVIRONMENTAL PROTECTION SOLID WASTE MANAGEMENT RULES.

6. EXCAVATIONS ACCOMPLISHED AS PART OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA SUBPART P OF 29 CFR PAR 1926.650-652 (CONSTRUCTION STANDARDS FOR EXCAVATION).

7. EXISTING INSLOPES STEEPER THAN 2:1 IN PROPOSED FILL AREAS SHALL BE BENCHED AS DIRECTED BY THE RESIDENT.

8. 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 AREAS.

EROSION CONTROL

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.

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. GRUBBINGS FROM THE EVR CONSTRUCTION SHALL BE USED ON THE BENNETT ROAD EMBANKMENT; SEE EARTHWORK NOTE 2.

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

4. MULCH SHALL BE APPLIED IN AREAS SEEDED 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. EROSION CONTROL BLANKET 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.

7. CELLULAR CONFINEMENT SYSTEM SHALL BE USED ON ALL SLOPES STEEPER THAN 2:1 AND SHALL BE INSTALLED PER THE SPECIAL PROVISIONS.

DRAINAGE

1. NO EXISTING DRAINAGE SHALL BE ABANDONED, REMOVED, OR PLUGGED WITHOUT PRIOR APPROVAL OF THE RESIDENT.

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.

4. IF FOUNDATION MATERIAL IS REQUIRED UNDER CULVERTS, IT SHALL MEET THE REQUIREMENTS FOR GRANULAR BORROW - UNDERWATER BACKFILL.

LOCAL ROAD

1. ALL JOINTS BETWEEN EXISTING AND PROPOSED BITUMINOUS PAVEMENT SHALL BE BUTTED. PAYMENT SHALL BE MADE UNDER THE APPROPRIATE CONTRACT PAY ITEMS.

GUARDRAIL

1. GUARDRAIL END TREATMENTS SHALL BE INSTALLED CONCURRENTLY WITH THE PLACEMENT OF EACH SECTION OF BEAM GUARDRAIL. AT THE END OF THE WORK DAY, EVERY DAY, THE CONTRACTOR IS REQUIRED TO HAVE AN APPROVED CRASHWORTHY END TREATMENT ON ALL GUARDRAIL WITHIN ALL WORK AREAS.

2. CONNECTIONS FOR PROPOSED GUARDRAIL TO EXISTING GUARDRAIL SHALL BE INCIDENTAL TO THE GUARDRAIL ITEM.

3. ALL EXISTING GUARDRAIL TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR. REMOVAL AND DISPOSAL SHALL BE CONSIDERED INCIDENTAL TO THE GUARDRAIL ITEMS.

4. POST HOLES FROM GUARDRAIL REMOVED SHALL BE FILLED AND COMPACTED WITH TYPE D GRAVEL. PAYMENT FOR FILLING HOLES SHALL BE CONSIDERED INCIDENTAL TO THE GUARDRAIL ITEMS.

5. TWO REFLECTORIZED FLEXIBLE GUARDRAIL MARKERS (ITEM 606.353) WILL BE INSTALLED AT EACH GUARDRAIL END TREATMENT.

6. FOR ALL NEW GUARDRAIL TYPES "31" W-BEAM GUARDRAIL MID-WAY SPLICE" AND THRIE-BEAM SINGLE RAIL, OFFSET BLOCKS SHALL BE NON-WOOD CONFORMING TO NCHRP 350 TEST LEVEL 3.

UTILITY

1. ALL UTILITY FACILITIES SHALL BE ADJUSTED BY THE RESPECTIVE UTILITIES UNLESS OTHERWISE NOTED.

2. 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 ALSO REQUIRED TO CALL DIG SAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO THE START OF THE WORK.

3. THE CONTRACTOR SHALL NOTIFY THE RESIDENT 10 DAYS PRIOR TO CONSTRUCTION SO THE RESIDENT CAN ARRANGE FOR MAINE TURNPIKE UNDERGROUND UTILITY LOCATION. ALL PROPOSED SIGN LOCATIONS AND EXCAVATION LOCATIONS SHALL BE MARKED AT THE NOTIFICATION TIME. EXCAVATING WILL NOT BE PERMITTED UNTIL THE AUTHORITY HAS LOCATED AND MARKED ITS UNDERGROUND UTILITIES, OR NOTIFIED THE RESIDENT THAT THERE ARE NO UNDERGROUND UTILITIES IN THE MARKED AREAS.

4. THE AUTHORITY HAS PROGRAMMED TWO FIELD VISITS FOR MAINE TURNPIKE UTILITY COORDINATION ON THIS PROJECT. SHOULD THE CONTRACTOR NEED ADDITIONAL SIGN LOCATIONS AND/OR ADDITIONAL EXCAVATION LOCATIONS MARKED, OR SHOULD THE CONTRACTOR FAIL TO MAINTAIN THE AUTHORITY'S PREVIOUSLY ESTABLISHED DIG SAFE MARKS, THE AUTHORITY SHALL DEDUCT THE ADDED MARKING COSTS FROM THE CONTRACTOR'S PAYMENTS.

Filename: ...\MSTA\004A_Gen Hwy NOTES.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date
⚠1	Revised General Construction Note 7	TSK	3/19

Designed by: T.Y.LIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Daniel S. Myers

	By	Date		By	Date
Designed	BLT	6/2018	Checked	TSK	1/2019
Drawn	BLT	6/2018	In Charge of	DSM	1/2019

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV

NORTHERN BRIDGE REPAIRS & BENNETT ROAD EMERGENCY VEHICLE RAMPS

GENERAL NOTES

SHEET NUMBER: GN-01

CONTRACT:2019.11

SPECIFICATIONS:

DESIGN
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS
8TH EDITION WITH INTERIMS THROUGH 2018.

CONSTRUCTION
STATE OF MAINE, DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS NOVEMBER, 2014

STATE OF MAINE DEPARTMENT OF TRANSPORTATION
STANDARD DETAILS, NOVEMBER 2014, WITH LATEST
REVISIONS

AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS,
THIRD EDITION WITH 2016 INTERIMS

DESIGN LOADING:

LIVE LOAD
HL-93

MATERIALS:

CONCRETE
CONCRETE END POSTS, WINGWALLS AND ABUTMENT
BACKWALLS SHALL BE CLASS AAA.

ALL OTHER BRIDGE PATCHING AND REPAIR AREAS
SHALL BE CLASS AAA-MODIFIED.

1 TOLL PLAZA REPAIR SHALL BE CLASS AAA-DECK

REINFORCING STEEL
AASHTO M31, GRADE 60 EPOXY-COATED.

BASIC DESIGN STRESSES:

CONCRETE
1 CLASS AAA, f'_c = 4,500 P.S.I.
CLASS AAA - MODIFIED, f'_c = 4,500 P.S.I.
CLASS AAA - DECK, f'_c = 4,500 P.S.I.

REINFORCING STEEL
f_y = 60,000 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 AND ARE AVAILABLE ON THE MAINE TURNPIKE AUTHORITY WEBSITE. THE COMPLETENESS AND ACCURACY OF THESE PLANS IS NOT GUARANTEED.
4. REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2" MIN., UNLESS OTHERWISE NOTED.
5. CHAMFER ALL EXPOSED CONCRETE EDGES ¾" UNLESS OTHERWISE NOTED.
6. ALL PROPOSED CONCRETE CURB FACES AND INSIDE AND TOP FACES OF THE ENDPOSTS SHALL RECEIVE A RUBBED FINISH PRIOR TO THE APPLICATION OF THE CLEAR PROTECTIVE COATING FOR CONCRETE SURFACE.
7. SHIELDING REQUIRED DURING CONSTRUCTION SHALL NOT PROJECT BELOW THE BOTTOM FLANGES OF GIRDERS.
8. ALL PAINT ON EXISTING STEEL, DAMAGED BY CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED TO THE SATISFACTION OF THE RESIDENT AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL NOTE THAT THE EXISTING BRIDGE STRUCTURES CONTAIN LEAD BASED PAINT. THE CONTRACTOR SHALL INSTITUTE EVERY PRECAUTION WHEN WORKING WITH MATERIALS COATED WITH LEAD PAINT.
9. 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. WHERE MINIMUM EMBEDMENT DEPTH HAVE NOT BEEN SPECIFIED, BAR LENGTHS HAVE BEEN DEVELOPED BASED ON AN ASSUMED EMBEDMENT DEPTH OF 9" FOR #5 BARS AND 11" FOR #6 BARS. THE CONTRACTOR SHALL VERIFY THE REQUIRED DEPTH OF EMBEDMENT AND ADJUST THE REQUIRED BAR LENGTHS AS REQUIRED.
10. PAYMENT FOR DRILLING AND ANCHORING OF REINFORCING STEEL IS INCIDENTAL TO ITEM 503.15, EPOXY-COATED REINFORCING STEEL, PLACING.
11. ALL PLAIN (BLACK) REINFORCING STEEL SHALL BE PAID FOR AS EPOXY-COATED REINFORCING STEEL UNDER ITEMS 503.14 AND 503.15.

CONCRETE REPAIR PROCEDURAL NOTES:

1. CONCRETE REPAIRS, INCLUDING THE ASSOCIATED REMOVALS, WILL BE PAID UNDER 518 ITEMS.
2. ANY REINFORCING STEEL REQUIRED TO REPLACE DETERIORATED EXISTING REINFORCEMENT SHALL BE EPOXY COATED AND WILL BE INCIDENTAL TO 518 ITEMS.

REMOVAL PROCEDURE:

1. CONTRACTOR SHALL REMOVE TECTYL COATING WHERE PRESENT PRIOR TO WORK. PAYMENT SHALL BE INCIDENTAL TO THE SPECIFIED 518 ITEMS.
2. PRIOR TO THE START OF THE CONCRETE REMOVAL, THE RESIDENT AND THE CONTRACTOR SHALL SOUND ALL EXPOSED SURFACES OF CONCRETE AND AGREE ON THE REMOVAL LIMITS. SHOULD THE REMOVAL AREA LIMITS APPEAR TO CHANGE DURING THE DEMOLITION PROCESS, THE CONTRACTOR SHALL NOTIFY THE RESIDENT. THE RESIDENT AND CONTRACTOR SHALL AGREE ON THE REVISED PAY LIMITS PRIOR TO THE CONTRACTOR CONTINUING THE REMOVAL.
3. PERFORM 1 INCH DEEP SAWCUTS ALONG LIMITS OF REMOVAL.
4. CHIP CONCRETE TO DEPTH REQUIRED PER SPECIFICATIONS.

CONCRETE SURFACE PATCH/REPAIR PROCEDURE:

1. PREPARE AND PATCH REPAIR AREAS WITH CLASS AAA - MODIFIED CONCRETE. SEE SPECIFICATIONS FOR MATERIAL, PREPARATION, PLACEMENT, AND CURING REQUIREMENTS.

GENERAL FINISHING:

1. ALL EXPOSED CONCRETE SURFACES SHALL BE COATED WITH A PROTECTIVE COATING SUITABLE FOR CONCRETE SURFACES AFTER PATCHING IS COMPLETE AND PATCH MATERIALS HAVE CURED. PIGMENTED PROTECTIVE COATING SHALL BE APPLIED TO ALL ABUTMENT FACES, ALL WINGWALL FACES, AND ALL BARRIER OUTSIDE FACES. CLEAR PROTECTIVE COATING SHALL BE APPLIED TO ALL CONCRETE CURB FACES, ALL FASCIAS AND FASCIA OVERHANGS, AND ALL BARRIER INSIDE AND TOP FACES.

LIST OF ABBREVIATIONS

ABUT.	ABUTMENT
ADDL.	ADDITIONAL
ASCG.	AGGREGATE SUBBASE COURSE GRAVEL
ALT.	ALTERNATE
APPROX.	APPROXIMATE
BOT.	BOTTOM
BRG.	BEARING
CL.	CLEAR
℄	CENTERLINE
CONC.	CONCRETE
CONSTR.	CONSTRUCTION
DEMO.	DEMOLITION
DIA.	DIAMETER
DIAPH.	DIAPHRAGM
EA.	EACH
EB	EASTBOUND
E.F.	EACH FACE
EL.	ELEVATION
EQ.	EQUAL
EXIST.	EXISTING
EXP.	EXPANSION
F.F.	FAR FACE
JT.	JOINT
MAX.	MAXIMUM
MIN.	MINIMUM
MTA	MAINE TURNPIKE AUTHORITY
NB	NORTHBOUND
N.F.	NEAR FACE
N.T.S.	NOT TO SCALE
O.H.W.	ORDINARY HIGH WATER
PED.	PEDESTAL
PGL	PROFILE GRADE LINE
ℙ	PLATE
PROP.	PROPOSED
RDWY.	ROADWAY
SHLD.	SHOULDER
SB	SOUTHBOUND
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

Date:3/7/2019

Filename: ...\BRIDGE\MSTA\005A_Gen_Notes.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date
1	Revise concrete class and steel note.	DSM	3/19

Designed by: T.Y. LIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Daniel S. Myers

	By	Date		By	Date
Designed	DSM	12/2018	Checked	DSM	12/2018
Drawn	JJB	12/2018	In Charge of	DSM	1/2019

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

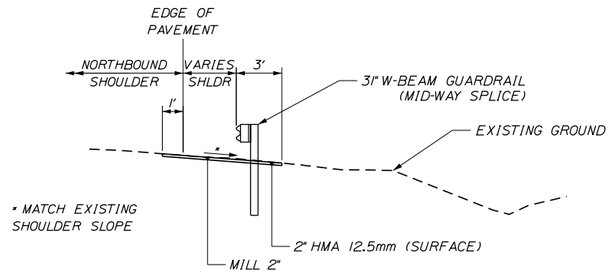
MTA PROJECT MANAGER: Ralph C. Norwood, IV

NORTHERN BRIDGE REPAIRS & BENNETT ROAD EMERGENCY VEHICLE RAMPS

BRIDGE GENERAL NOTES

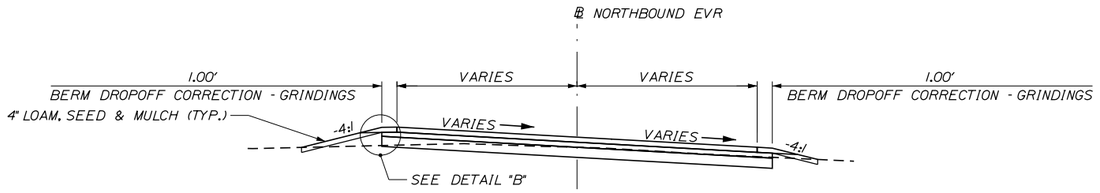
SHEET NUMBER: GN-02

CONTRACT:2019.11



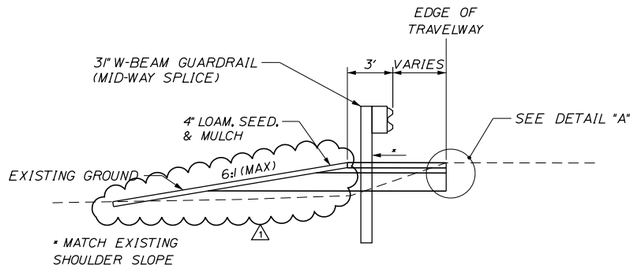
NORTHBOUND EVR GUARDRAIL SECTION

AT TURNPIKE (NORTHBOUND) LOOKING NORTH
(NTS)



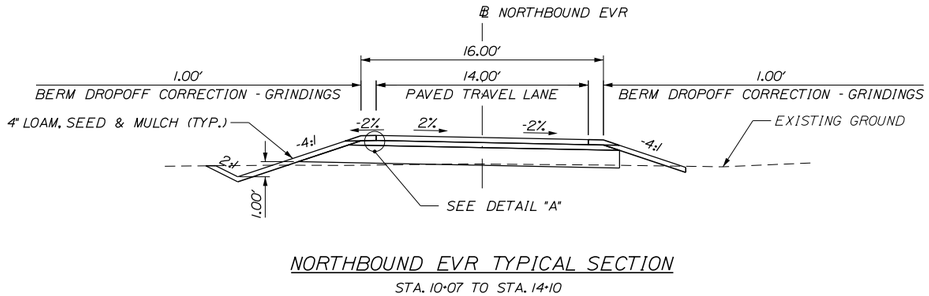
NORTHBOUND EVR TYPICAL SECTION

STA. 14+10 TO STA. 15+12
(NTS)



NORTHBOUND EVR GUARDRAIL SECTION

AT BENNETT ROAD LOOKING WEST
(NTS)



NORTHBOUND EVR TYPICAL SECTION

STA. 10+07 TO STA. 14+10
(NTS)

NOTES:

1. THE PAVEMENT, BASE, AND SUBBASE DEPTHS AS SHOWN ON THE PLANS ARE INTENDED TO BE NOMINAL.
2. ALL NECESSARY PAVEMENT CUTTING SHALL BE SAWCUT AND DONE IN SUCH A MANNER TO LEAVE A CLEAN, VERTICAL FACE.
3. BITUMINOUS TACK COAT IS REQUIRED BETWEEN ALL LIFTS OF PAVEMENT, OR AS DIRECTED BY RESIDENT. BITUMINOUS TACK COAT IS REQUIRED ON ALL EXISTING PAVED OR MILLED SURFACES PRIOR TO PLACING PROPOSED PAVEMENT.
4. A COATING OF HOT RUBBERIZED ASPHALT SHALL BE APPLIED TO SURFACE LAYER OF ALL SAW CUT AND PAVEMENT JOINTS PRIOR TO PAVING.
6. SEE BENNETT ROAD EVR (MILE 68.6) TYPICAL SECTIONS SHEET 2 OF 2 FOR "DETAIL A" AND "DETAIL B".

Date:3/7/2019

Filename: ...\HIGHWAY\MSTA\010A_Typicals.dgn

Scale: AS NOTED

No.	Revision	By	Date
1	Slope Revision	TSK	3/19

Designed by: T.Y.LIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Daniel S. Myers

	By	Date		By	Date
Designed	TSK	1/2019	Checked	TSK	1/2019
Drawn	MJD	1/2019	In Charge of	DSM	1/2019

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MAINE TURNPIKE

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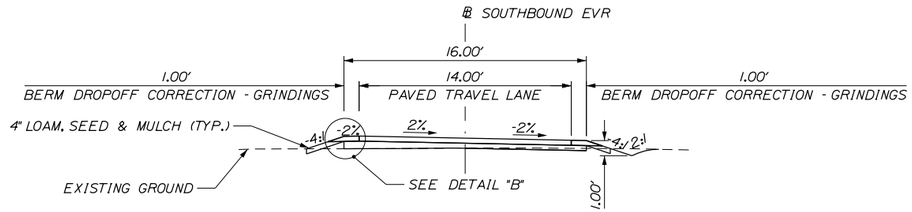
MTA PROJECT MANAGER: Ralph C. Norwood, IV

NORTHERN BRIDGE REPAIRS & BENNETT ROAD EMERGENCY VEHICLE RAMPS

BENNETT ROAD EVR (MILE 68.6) TYPICAL SECTIONS SHEET 1 OF 2

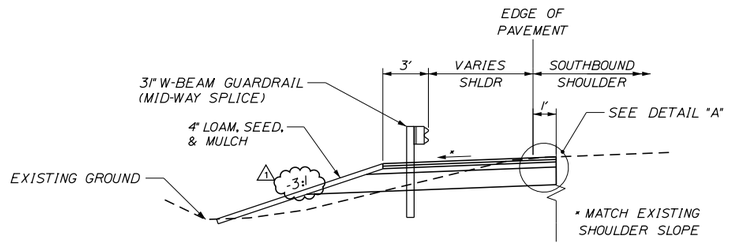
SHEET NUMBER: EVR-03

CONTRACT:2019.11



SOUTHBOUND EVR TYPICAL SECTION

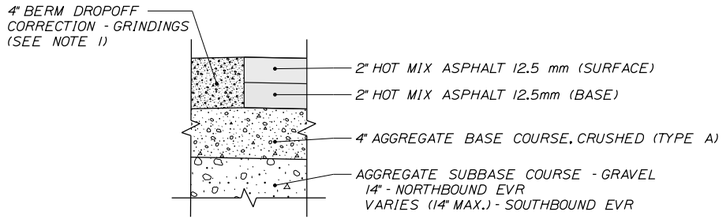
(NTS)



SOUTHBOUND EVR GUARDRAIL SECTION

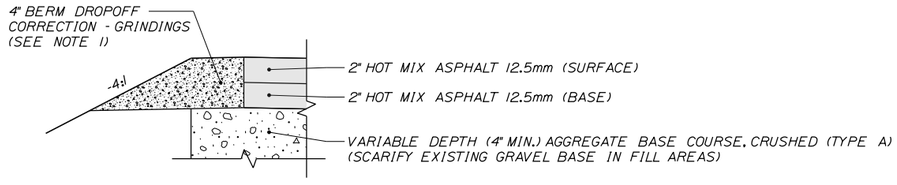
AT TURNPIKE (SOUTHBOUND) LOOKING NORTH

(NTS)



DETAIL "A"

(NTS)



DETAIL "B"

(NTS)

NOTES:

1. WILL BE MEASURED AND PAID FOR UNDER ITEM 470.08 BERM DROP OFF CORRECTION - GRINDING.
2. SEE BENNETT ROAD EVR (MILE 68.6) TYPICAL SECTIONS SHEET 1 OF 2 FOR NOTES.

Date:3/7/2019

Filename: ...\HIGHWAY\MSTA\010A_Typicals.dgn

Scale: AS NOTED

No.	Revision	By	Date
1	Slope Revision	TSK	3/19

Designed by: T.Y.LIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Daniel S. Myers

	By	Date		By	Date
Designed	TSK	1/2019	Checked	TSK	1/2019
Drawn	MJD	1/2019	In Charge of	DSM	1/2019

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

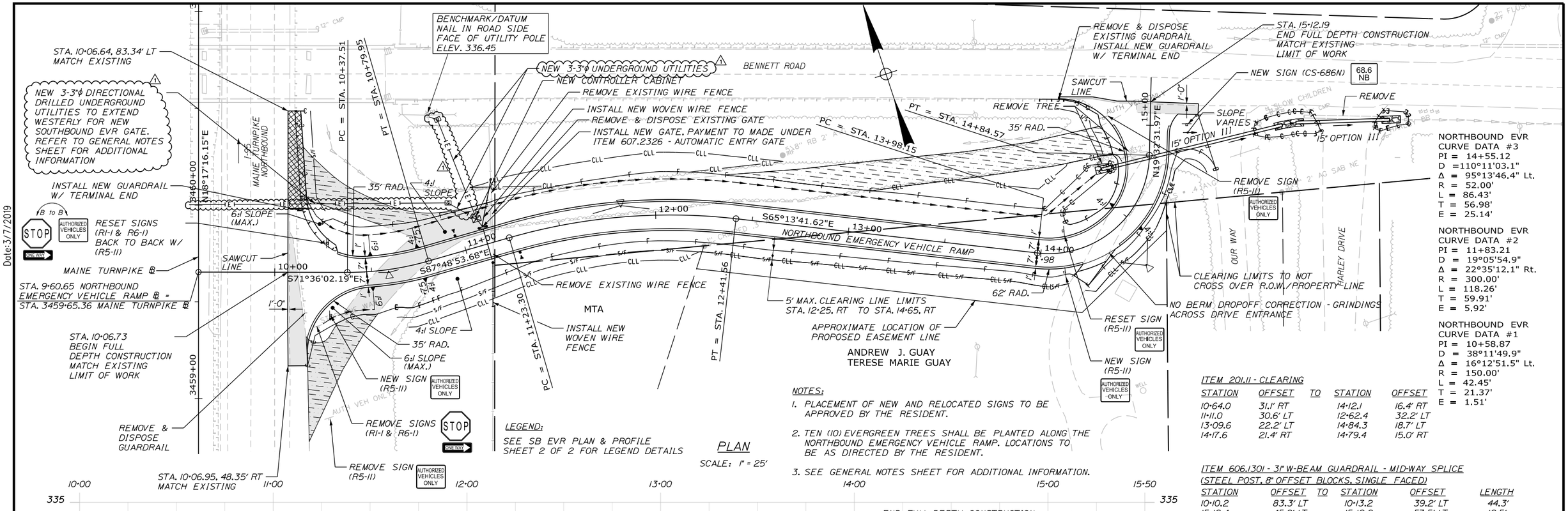
MTA PROJECT MANAGER: Ralph C. Norwood, IV

NORTHERN BRIDGE REPAIRS & BENNETT ROAD EMERGENCY VEHICLE RAMPS

BENNETT ROAD EVR (MILE 68.6) TYPICAL SECTIONS SHEET 2 OF 2

SHEET NUMBER: EVR-04

CONTRACT:2019.11



NORTHBOUND EVR CURVE DATA #3
PI = 14+55.12
D =110°11'03.1"
Δ = 95°13'46.4" Lt.
R = 52.00'
L = 86.43'
T = 56.98'
E = 25.14'

NORTHBOUND EVR CURVE DATA #2
PI = 11+83.21
D = 19°05'54.9"
Δ = 22°35'12.1" Rt.
R = 300.00'
L = 118.26'
T = 59.91'
E = 5.92'

NORTHBOUND EVR CURVE DATA #1
PI = 10+58.87
D = 38°11'49.9"
Δ = 16°12'51.5" Lt.
R = 150.00'
L = 42.45'
T = 21.37'
E = 1.51'

ITEM 201.11 - CLEARING

STATION	OFFSET	TO	STATION	OFFSET
10+64.0	31.1' RT		14+12.1	16.4' RT
11+11.0	30.6' LT		12+62.4	32.2' LT
13+09.6	22.2' LT		14+84.3	18.7' LT
14+17.6	21.4' RT		14+79.4	15.0' RT

ITEM 606.1301 - 31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, SINGLE FACED)

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
10+10.2	83.3' LT		10+13.2	39.2' LT	44.3'
15+12.4	45.0' LT		15+12.2	57.5' LT	12.5'

ITEM 606.1304 - 31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, OVER 15' RADIUS)

STATION	OFFSET	TO	STATION	OFFSET	LENGTH	RADIUS
10+13.2	39.2' LT		10+29.9	11.7' LT	33.4'	35.0'
15+09.5	33.0' LT		15+12.4	45.0' LT	12.5'	25.0'

ITEM 606.1351 - TERMINAL END - ANCHORED END - 31" W-BEAM GUARDRAIL

STATION	OFFSET
10+29.9	11.7' LT
15+09.5	33.0' LT

ITEM 606.3631 - GUARDRAIL - REMOVE AND DISPOSE

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
10+10.2	83.3' LT		10+15.2	25.1' LT	109.0'
15+09.1	30.1' LT		15+12.2	57.5' LT	28.0'

ITEM 607.09 - WOVEN WIRE FENCE - METAL POSTS

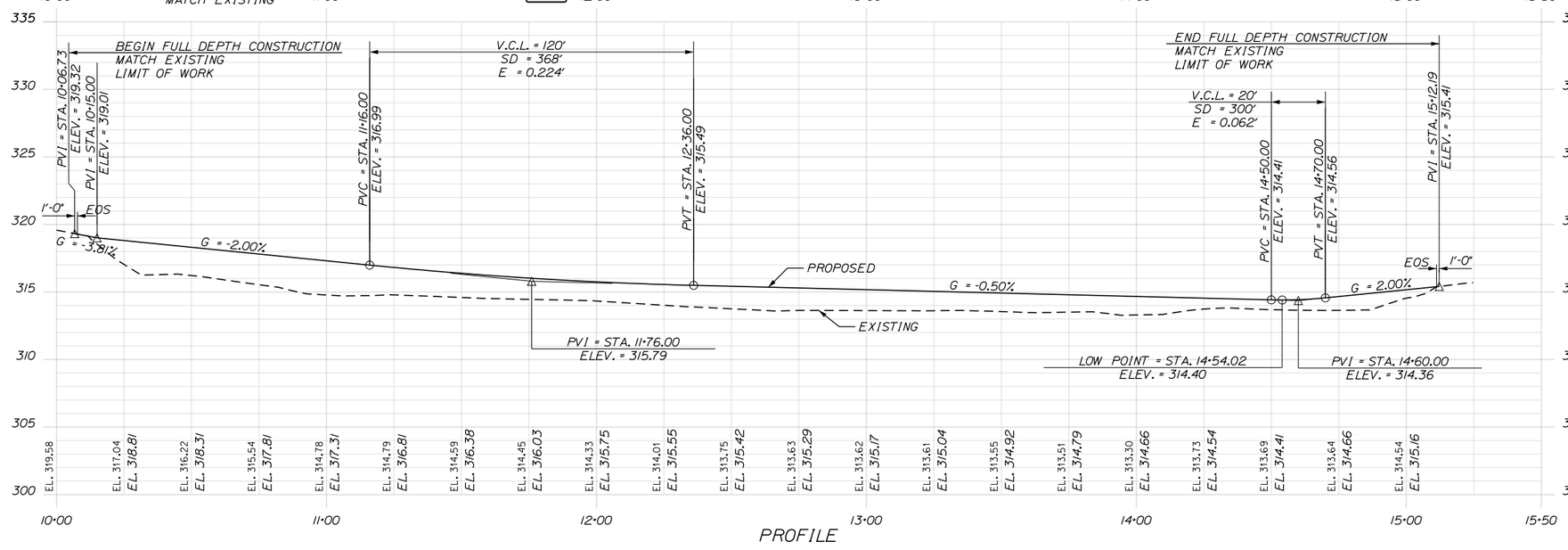
STATION	OFFSET	TO	STATION	OFFSET	LENGTH
11+11.6	10' LT		11+22.4	31.4' LT	24.0'
11+11.6	10' RT		11+05.4	31.8' RT	23.0'

ITEM 610.08 - PLAIN RIPRAP

STATION	OFFSET	TO	STATION	OFFSET
14+63.8	24.9' LT		14+76.1	20.8' LT
14+98.8	64.8' RT		15+05.1	79.1' RT
15+03.6	119.7' RT		15+07.9	129.1' RT

ITEM 656.632 - 30 INCH TEMPORARY SILT FENCE

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
10+18.2	84.7' LT		10+26.1	31.7' LT	54.6'
10+59.5	25.0' RT		14+11.8	16.3' RT	353.7'
14+17.6	21.4' RT		14+79.4	30.2' RT	100.8'
14+84.5	24.1' LT		15+07.8	48.6' LT	37.2'



PROFILE

Scale: 25 0 25 50

No.	Revision	By	Date
1	Revised UG Utilities / bar scale	TSK	3/19

Designed by: T.Y.LIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Daniel S. Myers

	By	Date		By	Date
Designed	TSK	1/2019	Checked	TSK	1/2019
Drawn	MJD	1/2019	In Charge of	DSM	1/2019

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV

NORTHERN BRIDGE REPAIRS & BENNETT ROAD EMERGENCY VEHICLE RAMPS

BENNETT ROAD EVR (MILE 68.6) NORTHBOUND EVR PLAN & PROFILE

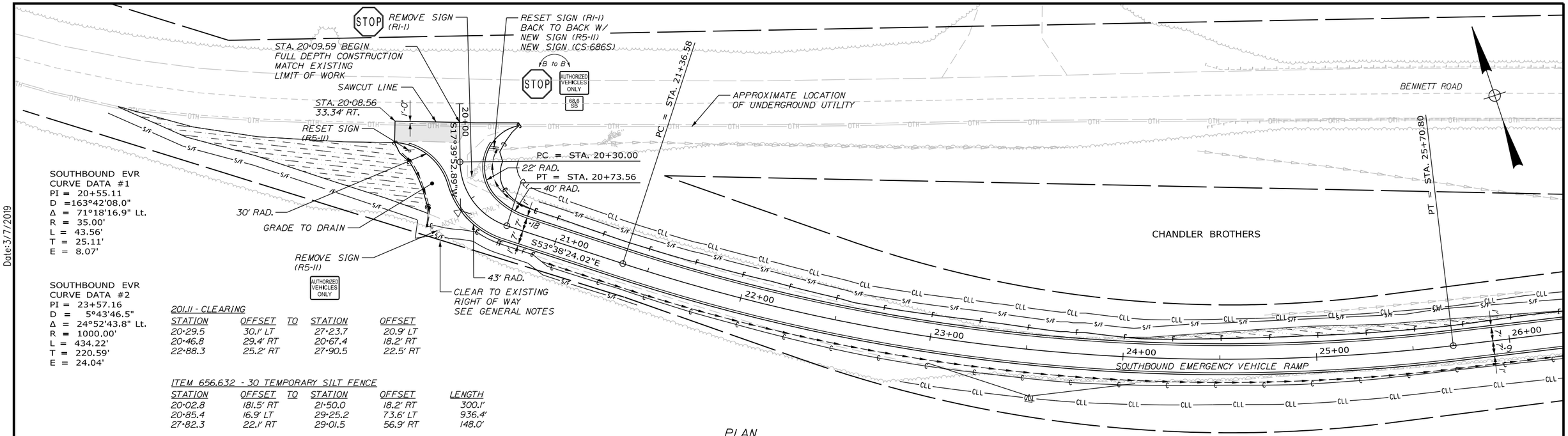
SHEET NUMBER: EVR-05

CONTRACT:2019.11

Filename: ...\HIGHWAY\MSTA\012A_HPlan_01.dgn

Date:3/7/2019

Date:3/7/2019



SOUTHBOUND EVR
CURVE DATA #1
PI = 20+55.11
D =163°42'08.0"
Δ = 71°18'16.9" Lt.
R = 35.00'
L = 43.56'
T = 25.11'
E = 8.07'

SOUTHBOUND EVR
CURVE DATA #2
PI = 23+57.16
D = 5°43'46.5"
Δ = 24°52'43.8" Lt.
R = 1000.00'
L = 434.22'
T = 220.59'
E = 24.04'

201.11 - CLEARING

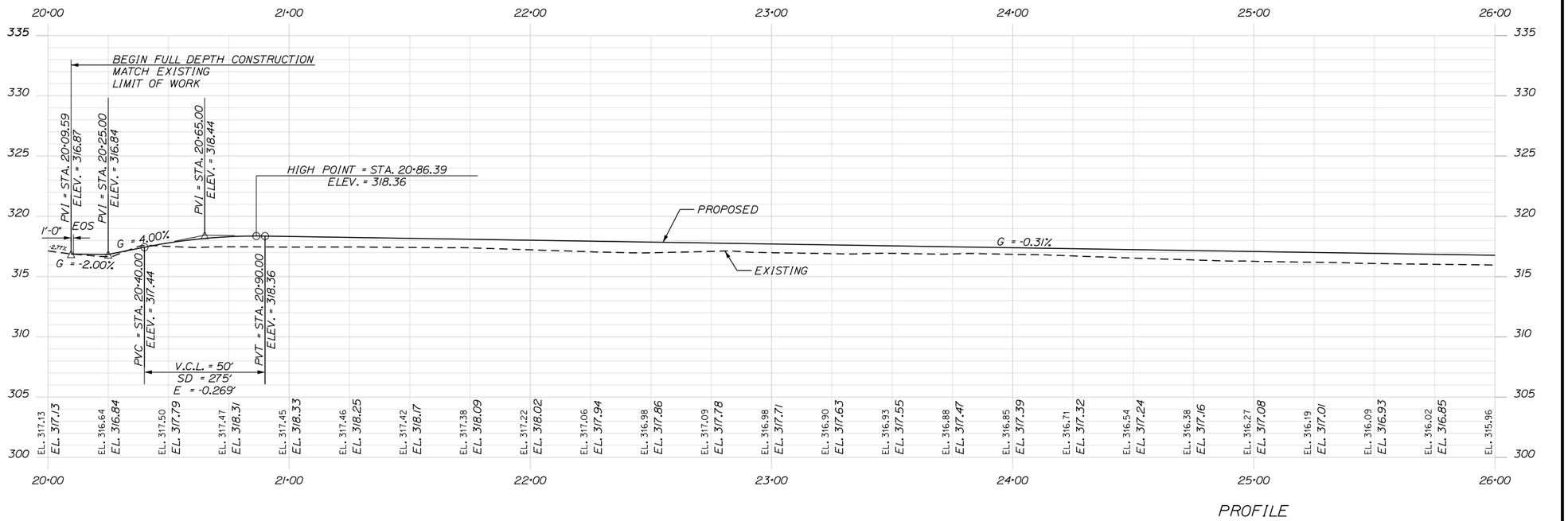
STATION	OFFSET	TO	STATION	OFFSET
20+29.5	30.1' LT		27+23.7	20.9' LT
20+46.8	29.4' RT		20+67.4	18.2' RT
22+88.3	25.2' RT		27+90.5	22.5' RT

ITEM 656.632 - 30 TEMPORARY SILT FENCE

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
20+02.8	181.5' RT		21+50.0	18.2' RT	300.1'
20+85.4	16.9' LT		29+25.2	73.6' LT	936.4'
27+82.3	22.1' RT		29+01.5	56.9' RT	148.0'

PLAN

SCALE: 1" = 25'



PROFILE

LEGEND:

- REMOVE EXISTING PAVEMENT
- LOAM, SEED & MULCH

NOTES:

1. PLACEMENT OF NEW AND RELOCATED SIGNS TO BE APPROVED BY THE RESIDENT.
2. FOR BENCHMARK/DATUM INFORMATION SEE BENNETT ROAD EVR (MILE 68.6) NB EVR PLAN & PROFILE SHEET.
3. CONTRACTOR TO FIELD VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.

Scale: 25 0 25 50

No.	Revision	By	Date
1	Bar Scale	TSK	3/19

Designed by: T-Y LIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Daniel S. Myers

	By	Date		By	Date
Designed	TSK	1/2019	Checked	TSK	1/2019
Drawn	MJD	1/2019	In Charge of	DSM	1/2019

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV

NORTHERN BRIDGE REPAIRS & BENNETT ROAD EMERGENCY VEHICLE RAMPS

BENNETT ROAD EVR (MILE 68.6) SB EVR PLAN & PROFILE SHEET 1 OF 2

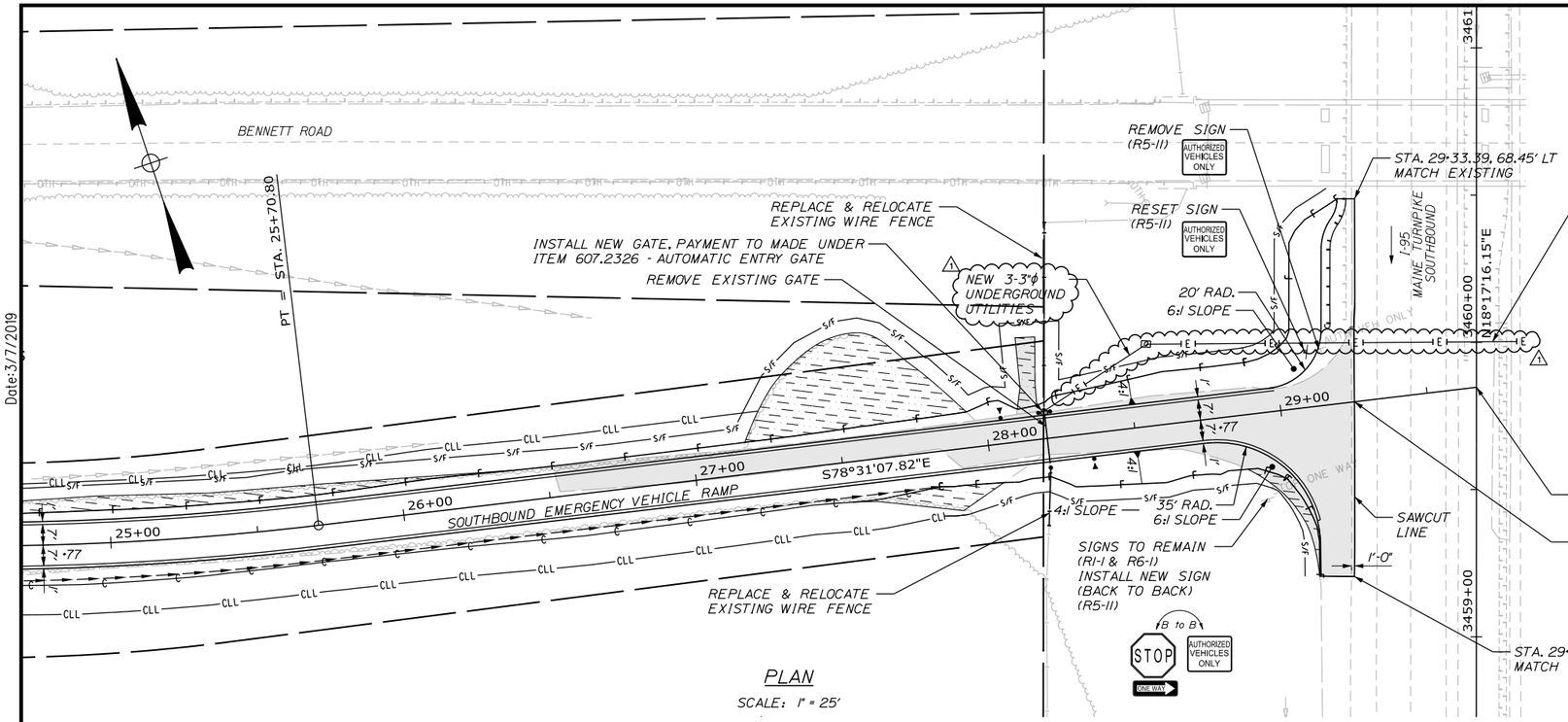
SHEET NUMBER: EVR-06

CONTRACT:2019.11

13 OF 105

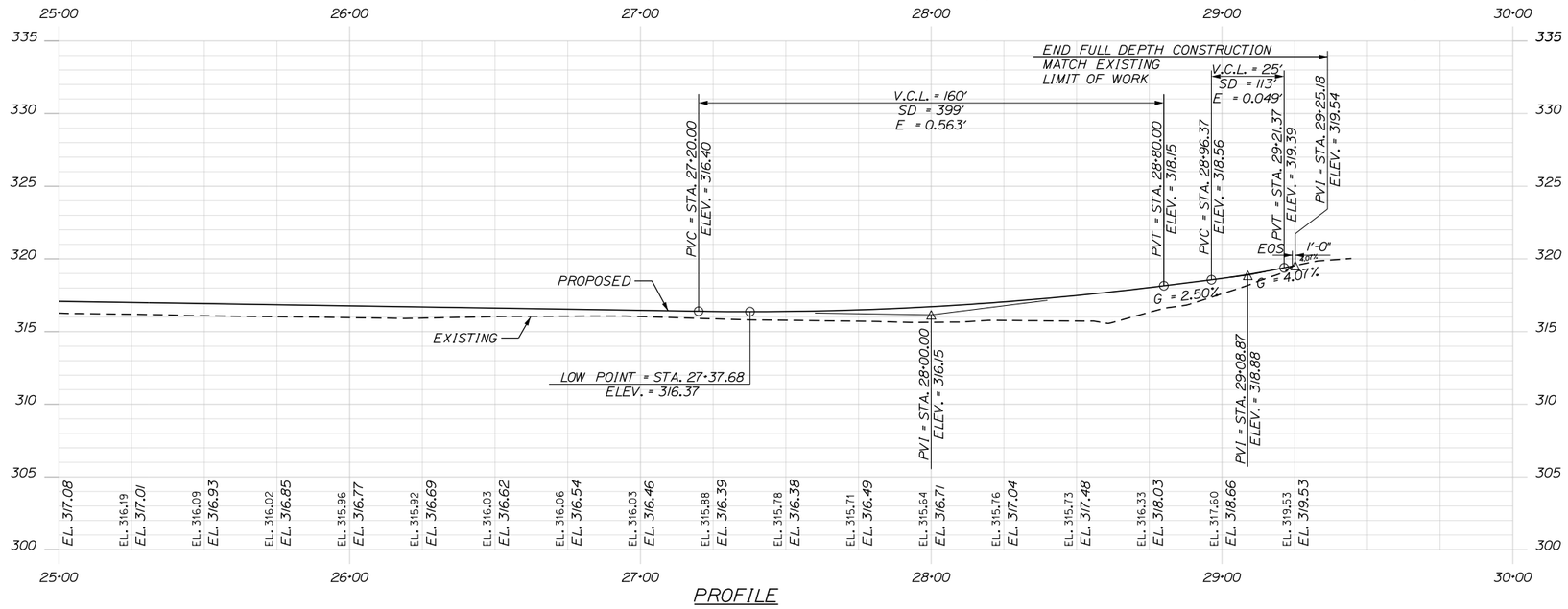
Filename: ...\HIGHWAY\MSTA\013A_HPlan_02.dgn

Date:3/7/2019



PLAN

SCALE: 1" = 25'



PROFILE

LEGEND:

- REMOVE EXISTING PAVEMENT
- LOAM, SEED & MULCH
- 2" MILL AND FILL
- AUTOMATIC ENTRY GATE
- BOLLARD
- CARD READER
- JUNCTION BOX
- CONTROLLER CABINET

NOTES:

1. PLACEMENT OF NEW AND RELOCATED SIGNS TO BE APPROVED BY THE RESIDENT.
2. FOR BENCHMARK/DATUM INFORMATION SEE BENNETT ROAD EVR (MILE 68.6) NB EVR PLAN & PROFILE SHEET.
3. SEE GENERAL NOTES SHEET FOR ADDITIONAL INFORMATION.

201.11 - CLEARING

STATION	OFFSET	TO	STATION	OFFSET
20+29.5	30.1' LT		27+23.7	20.9' LT
22+88.3	25.2' RT		27+90.5	22.5' RT

ITEM 656.632 - 30 TEMPORARY SILT FENCE

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
20+85.4	16.9' LT		29+25.2	73.6' LT	936.4'
27+82.3	22.1' RT		29+01.5	56.9' RT	148.0'

ITEM 606.1301 - 31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, SINGLE FACED)

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
29+20.07	27.6' LT		29+23.04	52.4' LT	25'

ITEM 606.1303 - 31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, 15' RADIUS OR LESS)

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
29+23.04	52.4' LT		29+26.74	60.6' LT	9'
29+26.74	60.6' LT		29+30.45	68.9' LT	9'

ITEM 606.1351 - TERMINAL END - ANCHORED END -31" W-BEAM GUARDRAIL

STATION	OFFSET
29+20.07	27.6' LT

ITEM 606.3631 - GUARDRAIL - REMOVE AND DISPOSE

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
29+25.69	28.1' LT		29+30.45	68.9' LT	41'

ITEM 607.09 - WOVEN WIRE FENCE - METAL POSTS

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
28+20.00	10' LT		28+27.80	72.9' LT	63'
28+20.00	10' RT		28+17.20	29.4' RT	20'

Scale: 25 0 25 50

No.	Revision	By	Date
1	Revised UG Utilities / bar scale	TSK	3/19

Designed by: T.Y. LIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Daniel S. Myers

	By	Date		By	Date
Designed	TSK	1/2019	Checked	TSK	1/2019
Drawn	MJD	1/2019	In Charge of	DSM	1/2019

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV

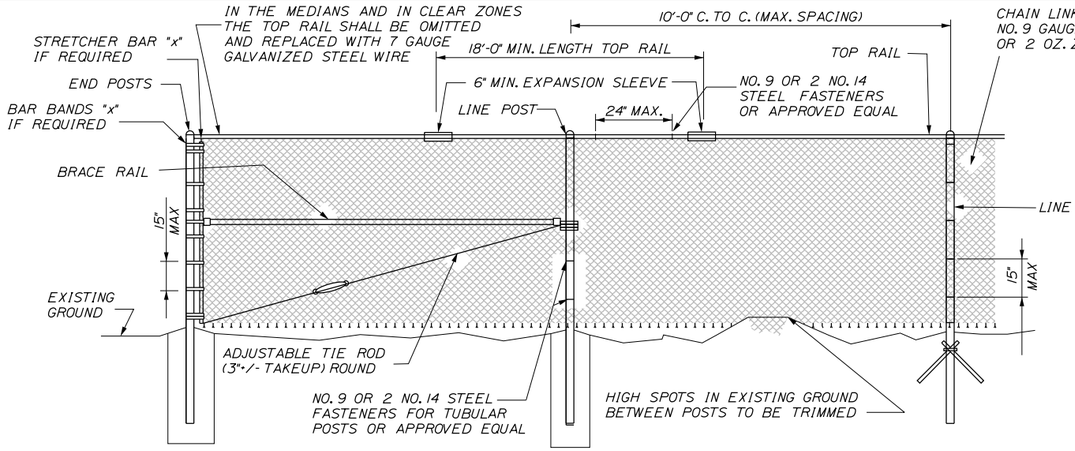
NORTHERN BRIDGE REPAIRS & BENNETT ROAD EMERGENCY VEHICLE RAMPS

BENNETT ROAD EVR (MILE 68.6) SB EVR PLAN & PROFILE SHEET 2 OF 2

SHEET NUMBER: EVR-07

CONTRACT:2019.11

Filename: ...\HIGHWAY\MSTA\014A_HPlan_03.dgn

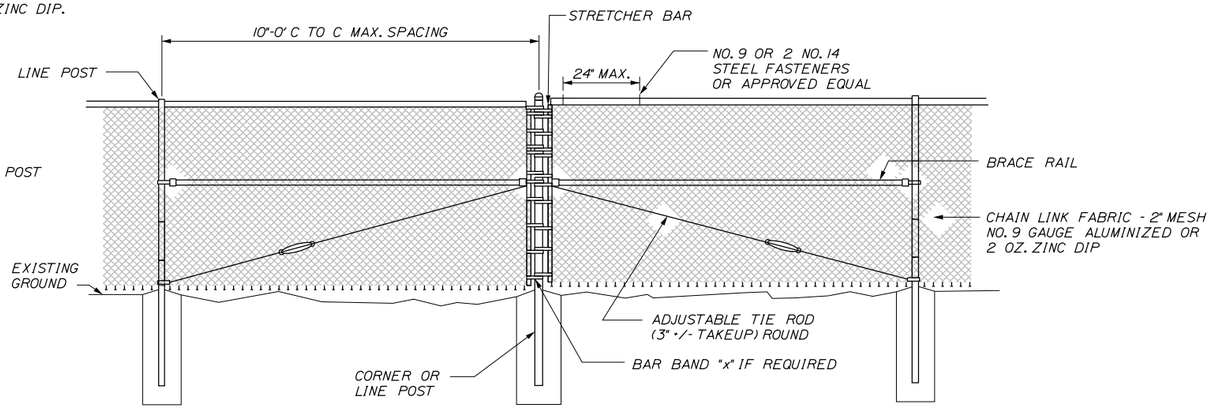


TYPICAL TYPE I END PANEL

N.T.S

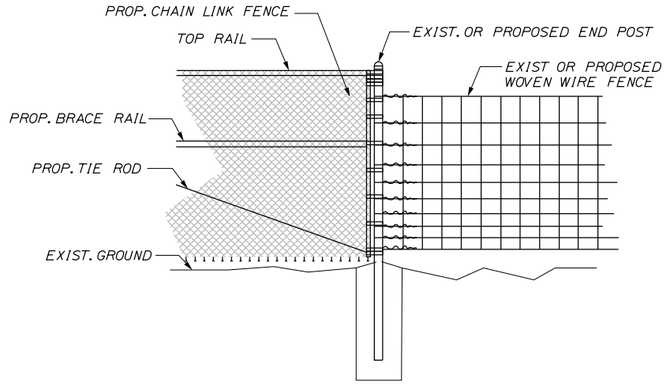
TYPICAL INTERMEDIATE PANEL

N.T.S



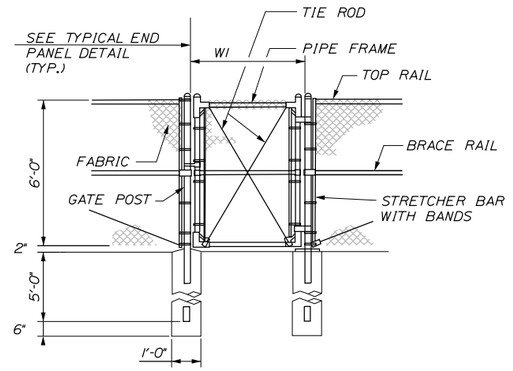
TYPICAL TYPE II BRACE PANEL

N.T.S.

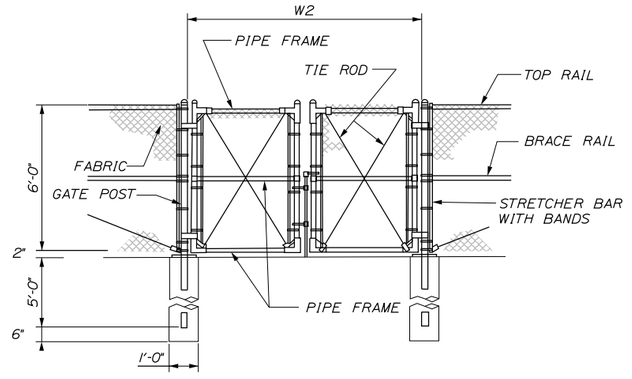


METHOD OF ATTACHING CHAIN LINK FENCE TO WOVEN WIRE FENCE

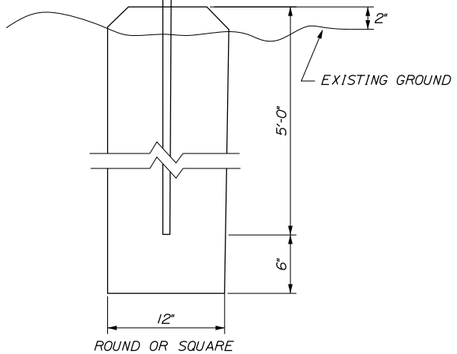
N.T.S.



SINGLE GATE

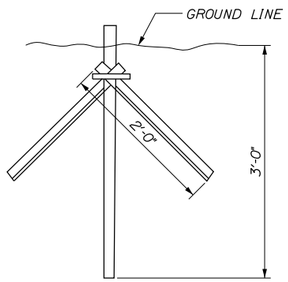


DOUBLE GATE



BRACE GATE AND END POST BASE DETAIL

N.T.S.



LINE POST DRIVE ANCHOR DETAIL

N.T.S.

GATE WIDTH		GATE POST O.D.
W1	W2	
TO 6'	TO 12'	3"
6' TO 12'	12' TO 24'	4"
12' TO 18'	24' TO 36'	6"

BENDING MOMENTS BASED ON GRADE 1 (SCHEDULE 40 STEEL)

CHAIN LINK FENCE	SHAPE	NOMINAL SIZE (INCHES)	BENDING MOMENT* (LBS.-IN.)
END & CORNER POSTS	Ø	2 I.D.	14.025
LINE POSTS	Ø	1-1/2 I.D.	8.150
TOP & BRACE RAILS	Ø	1-1/4 I.D.	5.875

* MATERIAL FOR GRADE 2 END, CORNER & LINE POSTS AND TOP & BRACE RAILS MUST MEET OR EXCEED BENDING MOMENTS FOR GRADE 1 STEEL AS NOTED ABOVE.

NOTES:

1. BRACE PANELS SHALL BE INSTALLED WHERE THE CHANGE IN GRADE BETWEEN ANY THREE POSTS EXCEEDS 15 PERCENT.
2. NO ADDITIONAL PAYMENT WILL BE MADE FOR LONGER POSTS NECESSITATED BY LARGE GRADE DIFFERENTIAL.
3. TYPE I BRACING WILL BE USED AT FENCE ENDS. TYPE II BRACING WILL BE USED AT CORNER POSTS. PAYMENT SHALL BE MADE UNDER ITEM 607.34, "BRACING ASSEMBLY CHAIN LINK FENCE"
4. WHEN LEDGE IS ENCOUNTERED, STEEL POSTS SHALL BE SET AND GROUTED 12" DEEP UNLESS THE POSTS PENETRATE THE GROUND TO THE DEPTH INDICATED ON THE DRAWINGS.
5. CONCRETE FOR POST FOUNDATION SHALL BE CLASS B.
6. BRACE, GATE AND END POSTS SHALL BE SET IN CONCRETE.
7. CHAIN LINK FENCE SHALL BE INSTALLED WITH BARBS DOWN.
8. ALL COMPONENTS OF CHAIN LINK FENCE SHALL BE IN ACCORDANCE WITH AASHTO M181.
9. ~~PVC PRIVACY SLATS SHALL BE INSTALLED AS NOTED ON THE PLANS AND SHALL CONFORM TO THE REQUIREMENTS OF SPECIAL PROVISION SECTION 607 FENCES OF THE PROJECT SPECIFICATIONS.~~ ⚠

Date:3/7/2019

Filename: ...\MSTA\097A_Chain_Link_Fence.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date
1	Delete Note 9	DSM	3/19

Designed by: T.Y.LIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Daniel S. Myers

	By	Date		By	Date
Designed	TSK	1/2019	Checked	TSK	1/2019
Drawn	MJD	1/2019	In Charge of	DSM	1/2019

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV

NORTHERN BRIDGE REPAIRS & BENNETT ROAD EMERGENCY VEHICLE RAMPS

CHAIN LINK FENCE DETAILS

SHEET NUMBER: DET-01

CONTRACT:2019.11

MAINE TURNPIKE AUTHORITY

Pre-Bid Conference

CONTRACT 2019.11

Bridge and Culvert Repairs 6 Locations
Route 26 Underpass (Mile 64.3)
Old Webster Road Underpass (Mile 82.7)
Pleasant River Culvert (Mile 62.3)
Cole Brook Culvert (Mile 65.25)
Foster Brook Culvert (Mile 72.9)

Emergency Vehicle Ramps
Bennett Road Underpass (Mile 68.6)

Cash Lane Rehabilitation
New Gloucester Toll Plaza (Mile 67.0)

March 5, 2019

1. Locations:

   The general limits of work are as shown in the contract plans. The Route 26 Underpass is located at Mile 64.3 of the Maine Turnpike in Gray, about 1.31 miles north of the Exit 63 Gray northbound entrance ramp. The Old Webster Road Underpass is located at Mile 82.7 of the Maine Turnpike in Lewiston, about 2.7 miles north of the Exit 80 Lewiston northbound entrance ramp. The Plains Road Underpass is located at Mile 95.6 of the Maine Turnpike in Litchfield, about 9.83 miles north of the Exit 86 Sabattus northbound entrance ramp. The Pleasant River Culvert located at Mile 62.3 of the Maine Turnpike in Gray, about 0.93 miles south of the of exit 63 southbound entrance ramp. The Cole Brook Culvert located at Mile 65.25 of the Maine Turnpike in Gray, about 2.25 miles north of the Exit 63 Gray northbound entrance ramp. The Foster Brook Culvert located at Mile 72.9 of the Maine Turnpike in New Gloucester, about 5.9 miles north of the New Gloucester Toll Plaza.

   The Emergency Vehicle Ramps are located adjacent to the Bennett Road Underpass at Mile 68.6 to the Maine Turnpike in New Gloucester, about 1.6 miles north of the New Gloucester Toll Plaza.

   The New Gloucester Toll Plaza located at Mile 67.0 of the Maine Turnpike in New Gloucester.

2. General Description:

   Bridge and Culvert Repairs 6 Locations:

- At Route 26 Underpass, the work consists of modifications to the Route 26 Underpass Bridge, including jacking the superstructure to increase the under clearance over the Maine Turnpike. The work also includes pavement and membrane replacement, concrete deck, fascia, fascia overhang, pier, and abutment repairs; concrete end post replacements; bridge joint replacements; protective coatings; installing bearing bolsters & spacers; removing & reinstalling existing bearings; bridge approach reconstruction and paving; guardrail modifications, maintenance of traffic, and all other work incidental thereto in accordance with the Plans and Specifications.
- At Old Webster Road Underpass, and Plains Road Underpass, the work consists of pavement and membrane replacement, concrete deck, parapet, fascia, fascia overhang, pier, and abutment repairs, concrete wing wall repairs, bridge joint repairs, protective coatings, milling and paving, maintenance of traffic and other incidental work.
- At Pleasant River Culvert & Cole Brook Culvert, the work consists of concrete surface and crack repairs to the culvert and erosion repair adjacent to the culverts.
- At Foster Brook Culvert, the work consists of installation of Pipe Ties and filling open joints with grout to stabilize joints in culvert.

Emergency Vehicle Ramps:

- The work consists of constructing Emergency Vehicle Ramps from Bennett Road to the Maine Turnpike in the Town of New Gloucester, Maine. The work includes clearing, excavation, roadway gravels and pavement, guardrail, fence, maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications.

Cash Lane Rehabilitation:

- The work consists of rehabilitation of the New Gloucester Toll Plaza, cash lane 8. The work includes concrete pavement slab removal and replacement and installation of sensors and all other work incidental thereto in accordance with the Plans and Specifications.

3. Bid:

a. Bid opening: March 21, 2019 at 11:00 AM, prevailing time as determined by the Authority at the MTA Administration Building, 2360 Congress Street, Portland.

b. All bid and contractual questions shall be directed to Nate Carll, Purchasing Manager, at Phone No. (207) 482-8115.

c. All questions on plans and specifications shall be in writing and shall be faxed or emailed to Nate Carll, Purchasing Manager, at Fax No. (207) 871-7739 or email ncarll@maineturnpike.com.

4. Notification:

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 (207) 482-8144 or 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. Contractor is to review updated Supplemental Specifications.

   b. The Maine Turnpike Authority 2016 Supplemental Specifications are additions and alterations to the 2014 Maine Department of Transportation Standard Specifications. They are available online at http://www.maineturnpike.com/Projects-Planning/Construction-Contracts.aspx

6. Construction Schedule/Substantial Completion/Prosecution of Work:

   a. March 28, 2019 – MTA Board to consider Contract Award

   b. Route 26 Underpass Bridge closure:

      - Maximum period is 14 calendar days.
      - This closure cannot take place before the end of the 2018-2019 school year in Gray.
      - This closure must be complete before the beginning of the 2019-2020 school year in Gray.
      - Any concrete placed during the closure period must cure for a full 5 days and attain a compressive strength of 3000 psi before opening the bridge.
      - All Phase I work must be complete except for final paving.
      - The Contractor will be assessed an incentive of Two Thousand Dollars ($2,000) per calendar day for every full calendar day the Route 26 Underpass Bridge is open to traffic sooner than the allowable closure period, up to a maximum of four (4) days. The Contractor shall be assessed a disincentive of Two Thousand Dollars ($2,000) per calendar day for every calendar day, or fraction thereof, beyond the allowable closure period. Additionally, the Contractor will be assessed a disincentive of Two Thousand Dollars ($2000.00) per calendar day, or fraction thereof, that the closure period extends into the school years. The disincentive assessment shall continue until the Route 26 Underpass Bridge is open to traffic.

   c. All in-stream work at culverts to be completed between July 15 and October 1, 2019.

   d. The following activities must be completed by the time specified. Supplemental Liquidated damages of $1000 per calendar day per activity shall be accessed for each calendar day, or fraction thereof, that any of the below noted activates remain incomplete. The SLD shall continue until the activities are complete:

      - Maximum closure durations for remaining bridges:
        1. Old Webster Road Underpass Bridge – 21 calendar days
        2. Plains Road Underpass Bridge – 21 calendar days

      - Plains Road Underpass Bridge – All topside work must be completed by July 1, 2019.

e. The construction of Contract 2019.11, Northern Bridge Repairs, 6 Locations, and Bennett Road Emergency Vehicle Ramps shall be substantially complete by November 8, 2019.

f. All work shall be completed on or before June 13, 2020.

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

   Contract will include Highway & Earthwork and Heavy & Bridge wage rates. See Special Provision 104.3.8 for The Wage Rate Determination.

8. Utility Coordination (Special Provision 104.4.6)

   There are adjacent utilities at Route 26 Underpass and at Bennett Road.

   At Route 26 Underpass, the Contractor shall give CMP 10 working days' notice prior to any construction near their poles. CMP will hold their poles for a maximum of 2 days during construction operations near their poles on Route 26.

   At Bennett Road, The Contractor shall give OTELCO 10 working days' notice prior to any construction near their poles. OTELCO will hold their poles for a maximum of 2 days during construction operations near their poles on Bennett Road. OTELCO will require 2 days to reset their existing guy wires as a result of the new embankment construction. The Contractor will coordinate this work with OTELCO.

9. Cooperation with Other Contractors (Special Provision 104.4.7)

   Many adjacent contracts will be ongoing in 2019 that could influence construction operations. See Special Provision 104.4.7 for a list.

10. Permit Requirements (Special Provision 105.8.2)

    a. The Project is being permitted under Section 404 of the Clean Water Act, through the US Army Corps of Engineers Programmatic General Permit, Category 1. The Project is subject to the General Conditions of the Category 1 Authorization dated October 13, 2015 through October 13, 2020.

    b. The Project is subject to the requirements of the Maine Pollutant Discharge Elimination System (MPDES) General Permit for Stormwater Discharge from Construction Activity.

    c. Limit of Disturbance Plan shall be submitted prior to any disturbance.

    d. Compliance with the erosion and sedimentation control requirements outlined in this Contract is required by the Contractor.

    e. The Project shall be performed in accordance with the MaineDOT Best Management Practices (BMP) latest issue.

11. General Requirements:

    a. U-Turns at toll plazas and median openings are not allowed.

b. Contractor access to and from the mainline shall not negatively impact mainline traffic flow. The Contractor may be required to establish lane closures to provide for safe access. Refer to Special Provision 652, Specific Project Maintenance of Traffic Requirements, for lane closure requirements and restrictions.

c. All jobsite personnel shall wear a safety vest labeled as ANSI 107-2004 standard performance for Class 3 risk exposures at all times. This requirement also applies to truck drivers and equipment operators when out of an enclosed cab.

d. All vehicles used on the Project shall be equipped with amber flashing beacons in accordance with the Special Provision 652.3.4.

12. Traffic Control (Supplemental Specification and Special Provision Section 652)

a. The Contractor is responsible for supplying, inspecting and maintaining traffic control devices in accordance with the project specifications. Contractor is subject to Penalty Damages for violation(s) per Supplemental Specification 652 and Special Provision 652.

b. All traffic control devices shall be NCHRP 350 compliant.

c. Lane closures shall be removed if work requiring the lane closure is not ongoing unless included in the Contract as a long-term traffic control requirement or approved by the Resident.

d. All signs that do not apply to current construction activity shall be 100% covered or removed in accordance with the plans. This includes speed limit signs when the work zone speed is in effect.

e. Route 26 Underpass Bridge, Old Webster Road Underpass Bridge, and Plains Road Underpass Bridge will be fully closed to through traffic for a portion of the project duration. The Contractor shall notify the Resident/Authority two weeks prior to the closure. All road closures will require that portable-changeable message signs are installed each side of the closure and actively announcing the closure dates two weeks prior to closing. A temporary detour shall be established and maintained at all times during the closure in accordance with the detour plan shown in the Plans.

f. Bridge work directly over traffic or within six feet of a travel lane as measured from the painted pavement marking line or traffic control device will require a lane closure.

g. Temporary lane closures will be required to track directional drilling progress beneath the Mainline Turnpike at Bennett Road EVR.

13. Specific Contract Items:

a. Temporary Rumble Strips have been included for use with temporary mainline lane closures. Usage of the Temporary Rumble Strips is up to the Contractor. These may be placed in several different configurations. “Bump” signs and “Rumble Strips Ahead” signs shall be adjusted to match the configuration being used. See Sheet 7 of the plans.

b. Automated Trailer Mounted Speed Limit signs are being included for mainline lane closures.

c. Exact locations of chain link fence and gates at Route 26, Old Webster Road, and Plains Road Bridge abutments will be determined by the Resident.

d. Abutment drain troughs will be either removed, replaced, or repaired, depending on the bridge and abutment. See table on Sheet 100 of the plans.

14. Questions?

CONTRACT 2019.11 **PRE-BID CONFERENCE** **MARCH 5, 2019**

Northern Bridge Repairs – 6 Locations
Emergency Vehicle Ramps – Bennett Road Underpass (Mile 68.6)
New Gloucester Toll Plaza – Cash Lane 8 Rehabilitation (Mile 67)

Please Print **SIGN-IN SHEET**

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