

MAINE TURNPIKE AUTHORITY

ADDENDUM NO. 1

CONTRACT 2016.01

PAVEMENT REHABILITATION

MM 54.5 TO MM 64.4

CLEAR ZONE IMPROVEMENTS

MM 54.5 TO MM 64.4

EAGLES NEST BRIDGE REPAIRS

MM60.8

HUNTS HILL BRIDGE REPAIRS

MM61.6

The following changes are made to the Specifications and Plans:

SPECIFICATIONS:

- Remove Location 5 Description on N-2, P-2 and SP-2 and Replace with:
Location 5: Clear zone and drainage work of northbound travel lanes from Mile 53.90 (Sta. 2694+00) in the Town of Falmouth and extending northerly to Mile 64.4 (Sta. 3240+50) in the Town of Gray;
- Remove Location 6 Description on N-2, P-2 and SP-2 and Replace with:
Location 6: Clear zone and drainage work of southbound travel lanes from Mile 64.4 (Sta. 3240+50) in the Town of Gray and extending southerly to Mile 53.90 (Sta. 2694+00) in the Town of Falmouth.
- Remove P-3 thru P-13 and Replace with attached P-3 thru P-13 Revised 2/10/16:
- Remove first sentence of second paragraph under Subsection 202.061 Removing Pavement Surface on SP-12:

The contractor shall operate the milling machine such that the forward operating speed of the machine in feet per minute (fpm) does not exceed 65% of the mill head in revolutions per minute (rpm). i.e. 100 rpm head speed equals maximum forward operating speed of 65 fpm.

- Delete first paragraph on SP-23 401.02 Materials and replace with:

Aggregates for Surface HMA pavement(Pay Item 403.2081) reference to Subsection 703.07 is deleted and replaced with the following:

- Add to Table on SP-51 under Mainline Mill and Fill and Shim and Overlay:

12.5mm 403.2084 Varies Varies B,C,E,J,L,N

- Remove subsection on SP-61 429.02 General and Replace with following 429.02 General:

The bituminous concrete pavement shall be milled two inches deep by fourteen feet wide in Lane 2 southbound from approximate station 2770+35 to approximate station 2726+50. The marking of the layout shall be as approved by the Resident.

After the two inch mill, the pavement shall receive a ½” shim.

The GlasGrid8502 interlayer shall be placed on the shim 9’-9” wide centered in Lane 2 followed by the 1 ½” HMA on the same day that this proposed work occurs in this location.

- Add on SP-77 under subsection 506.60 Method of Measurement: No separate measurement will be made for the containment, proper management and disposal of all lead-contaminated hazardous waste generated by this work.
- Add on SP-77 under subsection 506.61 Basis of Payment: Clean and Paint Existing Bearings will be paid for at the Contract unit price per each which price shall be full compensation for all labor, materials, equipment and incidentals required to complete this work in accordance with these Specifications or as approved by the Resident. Such payment will include, but not be limited to, the containment, proper management and disposal of all lead-contaminated hazardous waste.
- Remove SP-86 thru SP-91 and Replace with attached SP-86 thru SP-91 Revised:
- Add on SP-161 an * to **NB(MM54.5-MM63.0)** 6 am to 2:30pm Mon. thru Fri.:
- Remove on SP-161 May 13 and Replace with April 22.
- Remove on SP-174

c. Be equipped with a pager (message - number) to be worn by the patrol vehicle(s) operator to allow for continuous communication throughout the duration of all lane closures.

PLANS:

Remove and Replace with Attached: Title Sheet, Sheets 2, 3, 5, 9 and 12.

Plan Sheet 19: Add two extra signs CS-45 and two extra signs CS-52 to be placed on US RTE 202/WASHINGTON ST. to be field located by the Resident.

Plan Sheet 23: Add NOTE 7: Item 627.94 shall not be installed SB from STA. 2922+83 to Sta. 2910+83.

Plan Sheet 25: Remove text from **PLAN** view "AND ROUTE 26 SLIP RAMP", Remove Note 2. ADD 4' PAVED SHOULDER NORTH OF ROUTE 26 SLIP RAMP.

Plan Sheet 27: In SECTION B-B the cross slope shall be 1%.

The following are questions asked at the pre-bid meeting held on February 4, 2016 or submitted to the Maine Turnpike Authority in writing. Answers to the questions are noted. Bidders shall utilize this information in preparing their bid.

- Question 1: Can the Exit 63 limits of milling and paving be clarified?
Answer: NB off ramp is a 2" M&F with 1,683. SY of milling, NB on ramp is 3,820 SY of an 1 ½" overlay, SB off ramp is a 2" M&F with 1,442. SY of milling, SB on ramp is 1,227 SY of an 1 ½" overlay.
- Question 2: Will there be additional testing to the HMA with the lime additive, (ie: Hamburg)?
Answer: No.
- Question 3: Will there be a control strip?
Answer: No.
- Question 4: Can the lime be placed in the mineral filler silo?
Answer: The lime needs to be added to the aggregate as per the Special Provision on SP-47 and SP-48.
- Question 5: Item 403.2084 is not listed on SP-51?
Answer: See this Addendum under **SPECIFICATIONS:**
- Question 6: Is RS-1 allowed?
Answer: No, SP-53 requires RS-1h.
- Question 7: If the weekend special lane closures go over the time will the \$500. fee language apply?
Answer: Yes.
- Question 8: Will the shoulder break in the Paver be required at 12'?
Answer: Yes.
- Question 9: Is the Authorities intention to utilize a transfer machine for the item 403.2081?
Answer: Yes.

Question 10: Is it the Authorities intention to overlay the small mill and fill areas located on Plan Sheet C-3, if not can the Authority provide a detail on how the two treatments will be transitioned?

Answer: No, See MaineDOT Standard Details November 2014 Edition 202(01).

Question 11: Can the Authority clarify on which pay item that will be utilized for the paving of the median cross overs and also the mix required for such as stone size, gyration and PGAB?

Answer: See this addendum and 50 Gyration.

Question 12: Will the crack sealing occur right behind the milling machine and sweeper?

Answer: The specifications require a dry surface for crack sealing.

Question 13: Can we use rubber that doesn't have fiber in it?

Answer: No.

Question 14: Does the coarse aggregate for the HMA mix designs have to meet the 1% on the 200 sieve for the coarse aggregates?

Answer: See SP-23 and this addendum.

Question 15: When milling the mill and fill sections that do not receive an overlay it states the milling will be completed with a variable cross slope. What is the Authorities intention if after the milling is complete and either the depth of the lane is either too thin when measuring off the existing 8' shoulder that is not being removed? Has this area been surveyed to ensure that the depth will be there prior to paving?

Answer: These cross slopes have been adjusted under previous projects. There still could be some minor adjustments that will allow us to stay within the depths needed.

Notes: The above items and attached specifications and plans shall be considered as part of the bid submittal.

The total number of pages included with this addendum is 29

All bidders are requested to acknowledge the receipt of the Addendum No. 1 by signing below and faxing this sheet to J. Ryan Leavitt , P.E., Senior Resident Engineer, MTA at 207-878-8613. Bidders are also required to acknowledge receipt of this Addendum No. 1 on Page P-14 of the bid package.

Business Name

Print Name and Title

Signature

Date

February 10, 2016

Very truly yours,
MAINE TURNPIKE AUTHORITY

Nathaniel Carll
Purchasing Manager
Maine Turnpike Authority

SCHEDULE OF BID PRICES
CONTRACT NO. 2016.01
Pavement Rehabilitation Clear Zone Improvements
MM 54.5 to MM 64.4
Eagles Nest MM 60.8 and Hunts Hill 61.6 Bridge Repairs

| Item No | Item Description | Units | Approx. Quantities | Unit Prices in Numbers | | Bid Amount in Numbers | |
|----------|--|-------------|--------------------|------------------------|-------|-----------------------|-------|
| | | | | Dollars | Cents | Dollars | Cents |
| 202.12 | Removing Existing Structural Concrete | Cubic Yard | 34 | | | | |
| 202.127 | Removing of Existing Bituminous Pavement (660SY) | Lump Sum | 1 | | | | |
| 202.202 | Removing Pavement Surface - Mainline | Square Yard | 121,164 | | | | |
| 202.2026 | Removing Pavement Surface - Drainage Paths | Square Foot | 4,200 | | | | |
| 202.205 | Rumble Strips | Each | 155,510 | | | | |
| 203.20 | Common Excavation | Cubic Yard | 775 | | | | |
| 203.21 | Rock Excavation | Cubic Yard | 50 | | | | |
| 203.241 | Common Borrow, Truck Measure | Cubic Yard | 450 | | | | |
| 203.25 | Granular Borrow | Cubic Yard | 136 | | | | |
| 205.51 | Widening of Existing Shoulder | Linear Foot | 265 | | | | |
| 205.53 | Widening of Existing Shoulder Pavement | Linear Foot | 350 | | | | |

CARRIED FORWARD:

| Item No | Item Description | Units | Approx. Quantities | Unit Prices in Numbers | | Bid Amount in Numbers | |
|-------------------------|---|-------------|--------------------|------------------------|-------|-----------------------|-------|
| | | | | Dollars | Cents | Dollars | Cents |
| BROUGHT FORWARD: | | | | | | | |
| 304.10 | Aggregate Subbase Coarse - Gravel | Cubic Yard | 150 | | | | |
| 403.208 | Hot Mix Asphalt, 12.5mm-RAP | Ton | 7,150 | | | | |
| 403.2081 | Hot Mix Asphalt, 12.5mm (Polymer Modified)- RAP | Ton | 30,190 | | | | |
| 403.2084 | Hot Mix Asphalt, 12.5mm Nominal Maximum Size(sidewalks,drives,islands & incidentals | Ton | 261 | | | | |
| 403.212 | Hot Mix Asphalt, 4.75mm Nominal Maximum Size | Ton | 7,227 | | | | |
| 403.213 | Hot Mix Asphalt, 12.5mm | Ton | 88 | | | | |
| 407.08 | Berm Dropoff Correction-Grindings | Ton | 3,100 | | | | |
| 407.081 | Berm Correction | Linear Foot | 35,195 | | | | |
| 409.15 | Bituminous Tack Coat - Applied | Gallon | 26,119 | | | | |
| 409.151 | Bituminous Tack Coat - Applied, Bridge | Gallon | 59 | | | | |
| 419.30 | Sawing Bituminous Pavement | Linear Foot | 2,415 | | | | |
| 419.301 | Sawing and Sealing Bituminous Pavement | Linear Foot | 320 | | | | |

CARRIED FORWARD:

| Item No | Item Description | Units | Approx. Quantities | Unit Prices in Numbers | | Bid Amount in Numbers | |
|-------------------------|---|-------------|--------------------|------------------------|-------|-----------------------|-------|
| | | | | Dollars | Cents | Dollars | Cents |
| BROUGHT FORWARD: | | | | | | | |
| 424.323 | Asphalt Rubber Fiber Crack Filler-Applied | Pound | 22,000 | | | | |
| 427.09 | Pavement Crack Repair | Linear Foot | 30,460 | | | | |
| 429.341 | Grid/Fabric Composite Pavement Interlayer | Square Foot | 43,000 | | | | |
| 459.06 | Bituminous Concrete Waterway - Type I | Each | 3 | | | | |
| 459.061 | Bituminous Concrete Waterway - Type II | Each | 9 | | | | |
| 502.21 | Structural Concrete, Abutments & Retaining Walls | Cubic Yard | 38 | | | | |
| 502.26 | Structural Concrete Super. Slab on St Br (2CY) | Lump Sum | 1 | | | | |
| 503.14 | Epoxy -coated Reinforcing Steel, Fab & Delivered | Pound | 6,400 | | | | |
| 503.15 | Epoxy -coated Reinforcing Steel, Placing | Pound | 6,400 | | | | |
| 506.99 | Clean and Paint Existing Bearings | Each | 20 | | | | |
| 507.095 | Aluminum Bridge Railing - Splice Modification | Each | 56 | | | | |
| 508.141 | High Performance Waterproofing Membrane (Hunts Hill Rd)(660 SY) | 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: | | | | | | | |
| 515.201 | Pigmented Protective Coating for Concrete Surfaces | Square Yard | 710 | | | | |
| 515.202 | Clear Protective Coating for Concrete Surfaces | Square Yard | 620 | | | | |
| 518.39 | Granite Curb Joint Mortar and Bedding Mortar Repair | Linear Foot | 615 | | | | |
| 518.40 | Epoxy Injected Crack Repairs | Linear Foot | 205 | | | | |
| 518.43 | Parapet Joint Repair | Linear Foot | 260 | | | | |
| 518.51 | Repair of Upward Facing Concrete Surfaces - Below Reinforcing Steel <8 Inches | Square Foot | 360 | | | | |
| 518.511 | Full Depth Concrete Repair | Square Foot | 60 | | | | |
| 518.60 | Repair of Vertical Surfaces < 8 inches | Square Foot | 245 | | | | |
| 518.70 | Repair of Overhead Surfaces < 8 Inches | Square Foot | 95 | | | | |
| 520.2211 | Expansion Device Modifications(47.5 FT) | Each | 2 | | | | |
| 520.231 | Expansion Device - Asphaltic Plug for Crack Control | Linear Foot | 95 | | | | |
| 520.232 | Expansion Device - Asphaltic Plug Joint | Linear Foot | 145 | | | | |

CARRIED FORWARD:

| Item No | Item Description | Units | Approx. Quantities | Unit Prices in Numbers | | Bid Amount in Numbers | |
|-------------------------|--|-------------|--------------------|------------------------|-------|-----------------------|-------|
| | | | | Dollars | Cents | Dollars | Cents |
| BROUGHT FORWARD: | | | | | | | |
| 523.5211 | Bearing Rehabilitation, Rocker Bearings | Each | 20 | | | | |
| 526.306 | Temporary Concrete Barrier, Type I - Supplied by Authority(660 LF) | Lump Sum | 1 | | | | |
| 527.303 | Energy Absorbing System (CAT) – Remove and Reset | Each | 1 | | | | |
| 527.341 | Work Zone Crash Cushions - TL-3 | Unit | 2 | | | | |
| 603.155 | 12 inch Reinforced Concrete Pipe - Class III | Linear Foot | 78 | | | | |
| 603.159 | 12 inch Culvert Pipe Option III | Linear Foot | 105 | | | | |
| 603.179 | 18 inch Culvert Pipe Option III | Linear Foot | 105 | | | | |
| 603.209 | 30 inch Culvert Pipe Option III | Linear Foot | 65 | | | | |
| 603.229 | 42 inch Culvert Pipe Option III | Linear Foot | 20 | | | | |
| 603.28 | Concrete Collar | Each | 19 | | | | |
| 604.184 | Rebuild Catch Basin to Grade - Type II | Each | 32 | | | | |
| 604.186 | Rebuild Catch Basin to Grade - Type IV | Each | 8 | | | | |

CARRIED FORWARD:

| Item No | Item Description | Units | Approx. Quantities | Unit Prices in Numbers | | Bid Amount in Numbers | |
|-------------------------|---|-------------|--------------------|------------------------|-------|-----------------------|-------|
| | | | | Dollars | Cents | Dollars | Cents |
| BROUGHT FORWARD: | | | | | | | |
| 606.1723 | Bridge Transition - Type III | Each | 6 | | | | |
| 606.1724 | Bridge Transition - Type III Modified | Each | 1 | | | | |
| 606.178 | Guardrail Beam | Linear Foot | 650 | | | | |
| 606.24 | Guardrail Type 3d Single Rail | Linear Foot | 200 | | | | |
| 606.2401 | Guardrail Type 3d Double Rail | Linear Foot | 450 | | | | |
| 606.2652 | Terminal End - Remove and Stack | Each | 31 | | | | |
| 606.278 | Terminal End - Anchored End | Each | 31 | | | | |
| 606.279 | Terminal End - Anchored End, Thrie Beam | Each | 1 | | | | |
| 606.352 | Reflectorized Beam Guardrail Delineator | Each | 1,500 | | | | |
| 606.353 | Delineator Post | Each | 120 | | | | |
| 606.355 | Delineator Post - Remove and Stack | Each | 120 | | | | |
| 606.3605 | Guardrail - Remove, Modify and Reset Type 3d Single Guardrail | Linear Foot | 25 | | | | |

CARRIED FORWARD:

| Item No | Item Description | Units | Approx. Quantities | Unit Prices in Numbers | | Bid Amount in Numbers | |
|-------------------------|---|-------------|--------------------|------------------------|-------|-----------------------|-------|
| | | | | Dollars | Cents | Dollars | Cents |
| BROUGHT FORWARD: | | | | | | | |
| 606.3606 | Guardrail - Remove, Modify and Reset Type 3d Double Guardrail | Linear Foot | 545 | | | | |
| 606.3621 | Guardrail Adjust - Single Rail | Linear Foot | 29,850 | | | | |
| 606.3622 | Guardrail Adjust - Double Rail | Linear Foot | 37,915 | | | | |
| 606.3631 | Guardrail - Remove and Dispose | Linear Foot | 130 | | | | |
| 606.47 | Single Wooden Post | Each | 10 | | | | |
| 606.471 | Single Offset Block - W Beam | Each | 90 | | | | |
| 606.472 | Single Offset Block - Thrie Beam | Each | 10 | | | | |
| 606.48 | Single Galvanized Steel Post | Each | 100 | | | | |
| 606.63 | Thrie Beam Rail Beam | Linear Foot | 50 | | | | |
| 606.65 | Guardrail Thrie Beam - Single Rail | Linear Foot | 25 | | | | |
| 606.701 | Asymmetrcial Thrie Beam Transition | Each | 5 | | | | |
| 606.754 | Widen Shoulder for Guardrail 350 Flared Terminal | Each | 2 | | | | |

CARRIED FORWARD:

| Item No | Item Description | Units | Approx. Quantities | Unit Prices in Numbers | | Bid Amount in Numbers | |
|-------------------------|---|-------------|--------------------|------------------------|-------|-----------------------|-------|
| | | | | Dollars | Cents | Dollars | Cents |
| BROUGHT FORWARD: | | | | | | | |
| 606.755 | Modify Widen Shoulder for Guardrail 350 Flared Terminal | Each | 19 | | | | |
| 606.80 | Guardrail - 350 Flared Terminal | Each | 4 | | | | |
| 606.82 | Guardrail - Remove and Stack Existing Crash End | Each | 4 | | | | |
| 606.83 | Remove and Reset Existing Crash End | Each | 1 | | | | |
| 607.431 | Snow Fence | Linear Foot | 676 | | | | |
| 609.13 | Vertical Bridge Curb, Type 1 | Linear Foot | 130 | | | | |
| 609.191 | Concrete Curb, Type 2 | Linear Foot | 84 | | | | |
| 610.08 | Plain RipRap | Cubic Yard | 75 | | | | |
| 610.18 | Stone Ditch Protection | Cubic Yard | 160 | | | | |
| 613.319 | Erosion Control Blanket | Square Yard | 975 | | | | |
| 615.07 | Loam | Cubic Yard | 73 | | | | |
| 618.1401 | Seeding Method Number 2, Plan Quantity | Unit | 146 | | | | |

CARRIED FORWARD:

| Item No | Item Description | Units | Approx. Quantities | Unit Prices in Numbers | | Bid Amount in Numbers | |
|-------------------------|---|-------------|--------------------|------------------------|-------|-----------------------|-------|
| | | | | Dollars | Cents | Dollars | Cents |
| BROUGHT FORWARD: | | | | | | | |
| 619.1201 | Mulch, Plan Quantity | Unit | 176 | | | | |
| 619.1202 | Temporary Mulch | Lump Sum | 1 | | | | |
| 620.58 | Erosion Control Geotextile | Square Yard | 460 | | | | |
| 627.712 | White or Yellow Pavement Marking Line | Linear Foot | 179,100 | | | | |
| 627.713 | Broken White Pavement Marking Line | Linear Foot | 89,550 | | | | |
| 627.77 | Removing Existing Pavement Markings | Square Foot | 1,150 | | | | |
| 627.78 | Temporary Pavement Marking Line, Yellow or White | Linear Foot | 320,550 | | | | |
| 627.812 | Temporary Raised Pavement Markers | Each | 24,663 | | | | |
| 627.94 | Pavement Marking Tape | Linear Foot | 3,318 | | | | |
| 627.941 | Pavement Marking Tape, Dotted White Lane Line, 6-inch Width | Linear Foot | 906 | | | | |
| 629.05 | Hand Labor, Straight Time | Hour | 240 | | | | |
| 631.10 | Air Compressor (including operator) | Hour | 50 | | | | |

CARRIED FORWARD:

| Item No | Item Description | Units | Approx. Quantities | Unit Prices in Numbers | | Bid Amount in Numbers | |
|-------------------------|--|-------------|--------------------|------------------------|-------|-----------------------|-------|
| | | | | Dollars | Cents | Dollars | Cents |
| BROUGHT FORWARD: | | | | | | | |
| 631.11 | Air Tool (including operator) | Hour | 20 | | | | |
| 631.12 | All Purpose Excavator (including operator) | Hour | 60 | | | | |
| 631.172 | Truck - Large (including operator) | Hour | 60 | | | | |
| 631.36 | Foreman | Hour | 40 | | | | |
| 645.109 | Remove and Stack Sign | Each | 2 | | | | |
| 652.30 | Flashing Arrow | Each | 6 | | | | |
| 652.331 | Drums | Lump Sum | 1 | | | | |
| 652.34 | Cone | Each | 60 | | | | |
| 652.35 | Construction Signs | Square Foot | 6,988 | | | | |
| 652.351 | Construction Signs - Supplied by Authority | Square Foot | 250 | | | | |
| 652.3611 | Maintenance of Traffic Control Devices | Lump Sum | 1 | | | | |
| 652.38 | Flagger | Hour | 2,110 | | | | |

CARRIED FORWARD:

| Item No | Item Description | Units | Approx. Quantities | Unit Prices in Numbers | | Bid Amount in Numbers | |
|-------------------------|--|-------------|--------------------|------------------------|-------|-----------------------|-------|
| | | | | Dollars | Cents | Dollars | Cents |
| BROUGHT FORWARD: | | | | | | | |
| 652.3911 | Maintenance of Traffic Control Devices (Eagles Nest) | Lump Sum | 1 | | | | |
| 652.3912 | Maintenance of Traffic Control Devices (Hunts Hill) | Lump Sum | 1 | | | | |
| 652.3913 | Maintenance of Traffic Control Devices (Bennett & Kittyhawk) | Lump Sum | 1 | | | | |
| 652.411 | Portable - Changeable Message Sign with Radar Unit | Each | 4 | | | | |
| 652.45 | Truck Mounted Attenuator | Cal. Day | 217 | \$150 | 00 | \$32550 | 00 |
| 656.50 | Baled Hay, in place | Each | 220 | | | | |
| 656.60 | Temporary Berms | Linear Foot | 225 | | | | |
| 656.62 | Temporary Slope Drains | Linear Foot | 225 | | | | |
| 656.632 | 30 inch Temporary Silt Fence | Linear Foot | 3,150 | | | | |
| 659.10 | Mobilization | Lump Sum | 1 | | | | |
| TOTAL: | | | | | | | |

SPECIAL PROVISION

SECTION 518

STRUCTURAL CONCRETE REPAIR

(Patching Materials)
(Epoxy Injection Crack Repair)
(Full Depth Concrete Repair)

518.01 Description

The following paragraphs are added:

The work includes epoxy injection crack repair as described below.

- Epoxy Injection Crack Repair includes all concrete crack widths equal to or greater than 0.06 inches as shown on the Plans or identified by the Resident.

The work shall also include the removal of all tectyl (bituminous) coating on the backwalls, bridge seats and breastwalls of the existing bridge structures. This work shall occur prior to the start of the abutment concrete repairs so the Resident may identify additional areas requiring repair.

518.02 Repair Materials

Paragraphs 1-3 and the Coarse Aggregate Gradation Designation/ Thickness of Placement Table of Section 518.03 Repair Materials are deleted and replaced with the following:

A patching material from the appropriate list provided below may be used instead of concrete for concrete patching at the Contractor's option, provided the manufacturer's published recommendations are met (Note: Not all products are suitable for all depth of placements.). All materials used for repair of concrete or reinforcing steel shall meet the applicable requirements of Division 700 as specified in the Standard Specification Sections 502 and 503 respectively. When concrete is used as the repair material, it shall conform to the requirements of Table 1 of Subsection 502.05 for Class AAA Concrete except that the minimum cement factor shall be 750 pounds per cubic yard. Concrete mix shall be selected at 1,200 psi above design strength of 4,500 psi. The coarse aggregate size shall conform to ASTM C33 Grading 7.

Materials for non-emergency deck patching, and formed vertical and overhead deck repairs, shall be one of the following:

MTA - AAA modified concrete – transit mixed or mixed on site,
Sikacrete 211, as manufactured by Sika Corporation, 201 Polito Avenue, Lakehurst,
NJ 07011
SikaRepair 222 extended with aggregate, as manufactured by Sika Corporation, 201
Polito Avenue, Lakehurst, NJ 07011

BASF LA40 Repair Mortar, as manufactured by BASF Corporation, 889 Valley Park Drive, Shakopee, MN 55379
Civil Structural FPX, as manufactured by Dayton Superior Corporation, 1125 Byers Road, Miamisburg, OH 45342

or an approved proprietary, non-fast setting, shrinkage compensated patching material, manufactured or extended with stone, with the following published properties:

Compressive strength @ 24 hours – less than 3500 psi
Compressive strength @ 28 days – less than 7500 psi
Minimum bond strength @ 28 days – 1500 psi

Note: Rapid-setting high early strength materials are not permitted.

Materials for non-emergency, un-formed vertical repairs shall be one of the following:

SikaTop 123 Plus as manufactured by Sika Corporation, 201 Polito Avenue, Lakehurst, NJ 07011.
SikaRepair 223, as manufactured by Sika Corporation, 201 Polito Avenue, Lakehurst, NJ 07011
Zero-C Vertical Overhead Mortar, as manufactured by BASF Corporation Systems, 889 Valley Park Drive, Shakopee, MN, 55379.
Verticoat Supreme as manufactured by The Euclid Chemical Company, 19218 Redwood Rd., Cleveland, OH, 44110

Materials for the partial depth concrete deck repairs and the full depth concrete deck repairs to be completed at Hunts Hill Road bridge shall use a fast setting material from the MaineDOT's Qualified Product's List (QPL) of concrete patching materials to allow bridge to reopen to traffic at the end of each work period. All requirements of the manufacturer's published recommendations are met. All materials used for repair of concrete or reinforcing steel shall meet the applicable requirements of Division 700 as specified in Standard Specification Sections 502 and 503, respectively.

Materials for emergency deck patching (non-overhead only) may be selected from the Maine Department of Transportation's Qualified Products List for concrete patching materials.

The second sentence in the 4th paragraph of subsection 518.02 is revised to read:

“The bonding material shall consist of the following, except that, in the case where an approved proprietary material is used in the repair areas, the manufacturer's published recommendations regarding application and use of bonding materials shall take precedence.”

Epoxy injection crack repairs shall be completed using a high strength, low viscosity moisture tolerant epoxy resin as recommended by the manufacturer and approved by the Resident. The proposed repair materials shall be submitted to the Resident for approval.

The structural properties of all crack repair materials shall meet or exceed the following requirements:

| | | |
|--|-----------|-----------|
| Tensile Strength (@ 7 days) | 5,000 psi | ASTM D638 |
| Bond Strength (@ 14 days) | 1,000 psi | ASTM C882 |
| Compressive Strength (@ 3 days, 73 °F) | 5,000 psi | ASTM D695 |
| Compressive Modulus (@ 7 days) | 250 ksi | ASTM D695 |
| Flexural Strength (@14 days) | 8,000 psi | ASTM D790 |

Wide cracks (1/2" +/- and greater) may be repaired with a non-shrink cementitious grout as recommended by the manufacturer. The following product shall be used:

- CONSPEC UW300 as manufactured by Dayton Superior, 7777 Washington Village Drive, Suite 130, Dayton OH, 45459

518.03 Removal of Unsound Concrete

Paragraph 4 item b) is revised to read:

“b) To the minimum depth required per the manufacturer’s recommendation, but not less than 1 inch behind the top mat of reinforcing steel, when an approved proprietary material is used.”

Paragraph 4 item c) is deleted and not replaced.

Paragraph 4 item d) is revised to read:

“d) To a minimum depth of 1 inch behind the top mat of reinforcing steel.”

The following paragraphs are added:

The Contractor shall use great care to avoid damaging the existing reinforcing steel during the demolition process. Existing reinforcing steel damaged during the demolition process shall be repaired or replaced by a method approved by the Resident, at no additional cost to the Authority.

All unsound concrete and other material removed shall be disposed of outside the limits of the turnpike right-of-way. The Contractor shall provide the Resident with an affidavit stating the final location of all disposed material and that the material was disposed of in accordance with Chapter 404 of the Maine Department of Environmental Protection Solid Waste Regulations.

The following Subsection is added:

518.031 Bearing Areas for Superstructure Metal

The Contractor's attention is directed to the fact that the removal of unsound concrete may be immediately adjacent to the structural bearing parts of the steel stringers and may involve removal of unsound concrete under the existing masonry plate.

The Contractor shall submit, a minimum of two (2) weeks prior to the start of work, his proposed method of temporary support which will list the type and size of the proposed members,

details of construction, load capacity calculations, and a sequence of operations, all to be made and stamped by a Professional Engineer registered in the State of Maine. Temporary structural supports may bear on the adjacent bridge seat area, backwall or ground.

518.04 Reinforcing Steel

The first paragraph is deleted in its entirety and replaced with the following:

All existing reinforcing steel exposed by concrete removal which is to remain in the structure, shall be thoroughly cleaned by sandblasting to an SSPC-SP-6, supplemented by chipping hammers or other means as necessary so that the surfaces are free of rust, scale, mortar and other foreign material, and reasonably free of shadows. The sandblast shall be applied at an angle to the bars so that the embedded steel shall be free of rust and other foreign material to 100 percent of its circumferences. Once the existing reinforcement is cleaned, and prior to casting the repair, all new and existing reinforcing steel shall be coated with an approved epoxy bonding agent. The elapsed time between sandblasting application of the approved epoxy bonding agent shall be a reasonable minimum. When reinforcing steel is to remain in the structure, care shall be taken to prevent damage to the reinforcing steel or its bond to surrounding concrete.

The following paragraph is added to the end of this Subsection:

Where approved by the Resident, exposed reinforcement shall be depressed to provide 1-1/2 inch clear cover of concrete over the top bars. Minimum clear distance under the bottom of reinforcement bars for horizontal repairs, behind reinforcement bars on vertical repairs, and over the top of reinforcement bars on overhead surfaces shall meet the requirements of Subsection 518.03. Epoxy coated reinforcing support chairs shall be provided by the Contractor to support the bars in their specified location. Bars protruding from sound concrete adjacent to a repair area shall be bent up or down within the repair area to obtain the required minimum clear cover.

518.07 Placing Repair Materials

The following paragraphs are added to the end of this Subsection:

All vertical and overhead repair areas shall be formed over the entire surface with quick erecting forms approved by the Resident. The forms shall be held securely in place and be able to withstand the hydrostatic pressure of the fluid concrete of the height to which it is to be placed. Forms shall be built such that the resulting repair will duplicate the original lines of the concrete removed. Form faces shall be of new finished plywood or steel, or other smooth surface as approved by the Resident prior to use. Forms will be provided with a top chute, at a maximum spacing of four feet, for providing a compression head of concrete in the form. The overfilled area shall be struck-off flush when forms are removed. Forms shall be placed snugly against the surface of the old concrete at the edges of the patch and shall extend beyond the edges at least three inches. They shall not deflect under the placement of the fresh concrete. Vertical surface repair forms shall remain in place a minimum of 48-hours.

All proposed bearing pads and bearing pad repairs shall be cast monolithically with the abutment repair and pier repair concrete.

Modified Class AAA Concrete may be transit mixed or mixed on-site. The concrete shall be placed in accordance with the provisions of Section 502 except that the pre-plasticized slump shall not exceed three inches. Materials shall be batched by weight. The concrete shall be pumped or hand shoveled into the forms. Internal mechanical vibrators shall be of an approved design and of a size suitable to the work at hand. External vibrators attached to the forms will be permitted if requested, subject to the results obtained. The amount of vibration shall be guided by results obtained from previous placements.

If the concrete cannot be placed satisfactorily, as determined by the Resident, superplasticizers shall be added to the mix as approved by the Resident and at no additional cost to the Authority. After removal of the forms, the concrete shall be smooth rubbed and wet cured and given a smooth rubbed finish.

The following Subsection is added:

518.071 Placing Epoxy Injection Materials

- a) Mix epoxy components per manufacturer's instructions. Review pot life characteristics of combined materials and prepare quantities accordingly;
- b) Open all injection ports along the crack and ensure that all injection ports are securely fastened to the concrete substrate;
- c) Attach injection device to the lowest port on vertical cracks, or the first port in the series on horizontal cracks;
- d) Slowly and under constant pressure, inject the epoxy material into the first port until the epoxy flows out of the next port in the series. While maintaining constant pressure and flow at the first port, close the adjacent port and continue injection process until epoxy flows from the subsequent port in the series, or until no additional epoxy can be injected into the first port.
- e) Repeat the above procedure until all ports have been injected.

518.10 Method of Measurement

The fourth paragraph is deleted and replaced with the following:

Fabrication and placement of reinforcing steel for concrete repairs will not be measured for payment separately, but shall be considered incidental to the related contract items.

The sixth paragraph is deleted and replaced with the following:

Temporary supports for supporting steel girders for concrete repairs will not be paid separately, but shall be incidental to the Repair item.

The following paragraphs are added:

The quantity of Epoxy Injection Crack Repair will be measured by the linear foot.

Removal of all tectyl (bituminous) coating from existing abutments will not be measured separately for payment, but shall be incidental to the Repair items.

Providing safe access for the Resident to sound existing pier shaft and hammerhead concrete will not be measured separately for payment, but shall be incidental to the Repair items.

Earth excavation and backfill required to expose repair areas will not be measured separately for payment, but shall be incidental to the Repair items.

Full Depth Concrete Repairs on the concrete bridge decks will be measured for payment by the square foot of deck surface repaired, regardless of whether the average depth of repair is less than or greater than 8 inches. Such full depth concrete deck repair shall be paid for under Item 518.511 Full Depth Concrete Repair.

518.11 Basis of Payment

The following paragraphs are added:

Epoxy Injection Crack Repair will be paid at the Contract unit bid price per linear foot for each repair; which price shall include, but not necessarily be limited to, removal and disposal of materials, cleaning existing concrete, placing, curing and finishing epoxy and all materials, labor, equipment, tools and incidentals necessary to complete the work.

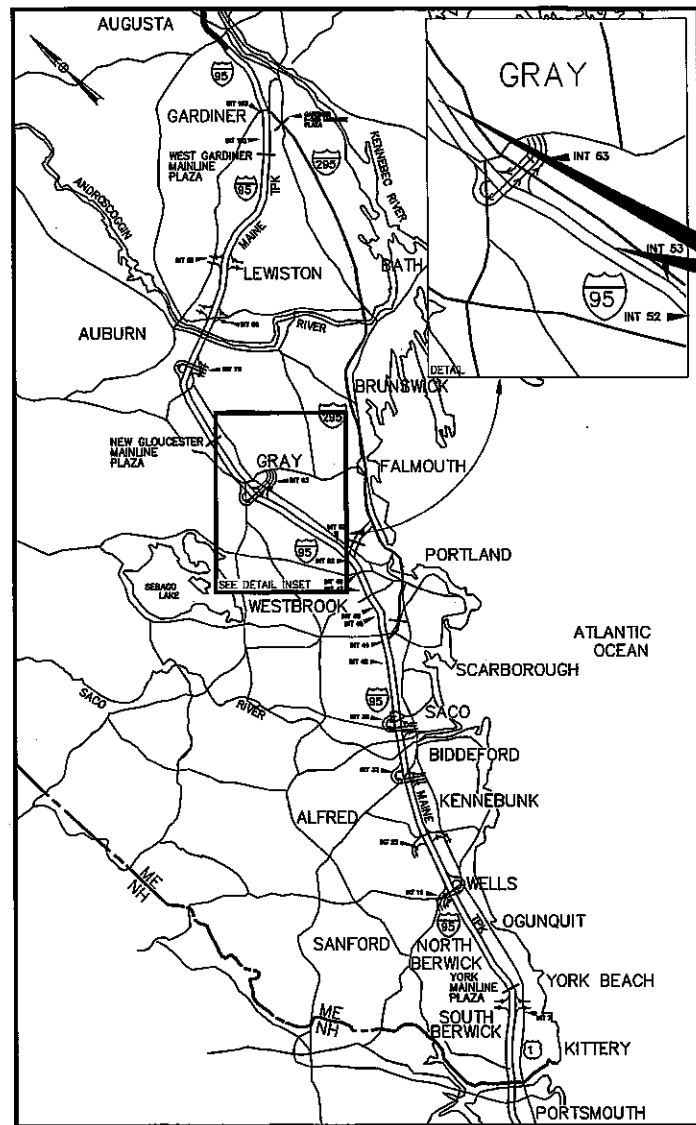
Payment will be made under:

| <u>Pay Item</u> | | <u>Pay Unit</u> |
|-----------------|------------------------------|-----------------|
| 518.40 | Epoxy Injection Crack Repair | Linear Foot |
| 518.511 | Full Depth Concrete Repair | Square Foot |



THE GOLD STAR
MEMORIAL HIGHWAY

MAINE TURNPIKE AUTHORITY



LOCATION MAP

CONTRACT 2016.01
PAVEMENT REHABILITATION
CLEAR ZONE IMPROVEMENTS
MM 54.5 TO MM 64.4
EAGLES NEST BRIDGE REPAIRS
MM 60.8
HUNTS HILL BRIDGE REPAIRS
MM 61.6

DANIEL E. WATHEN, CHAIR
MICHAEL CIANCHETTE, MEMBER
GERARD P. CONLEY, SR., MEMBER
JOHN E. DORITY, MEMBER
ROBERT D. STONE, MEMBER
FREEMAN R. GOODRICH, MEMBER
KAREN S. DOYLE, MEMBER EX-OFFICIO

S. PETER MILLS, EXECUTIVE DIRECTOR

CONTRACT 2016.01 PAVEMENT REHABILITATION CLEAR ZONE IMPROVEMENTS MM 54.5 TO MM 64.4

EAGLES NEST BRIDGE REPAIRS MM 60.8 HUNTS HILL BRIDGE REPAIRS MM 61.6

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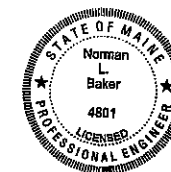
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| 3 | C-2 | DRAINAGE SUMMARY |
| 4 | C-3 | WORK SUMMARY (ONE-LINE DIAGRAM) |
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| 8 | P-4 | BERM DETAILS |
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| 41 | EN-05 | SUBSTRUCTURE MODIFICATIONS |
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| 55 | HH-03 | JOINT REPAIR DETAILS |
| 56 | HH-04 | SUBSTRUCTURE REPAIR |
| 57 | HH-05 | SUBSTRUCTURE REPAIR |
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CONTRACT 2016.01

APPROVED: MAINE TURNPIKE AUTHORITY

Peter S. Merfeld
PETER S. MERFELD, P.E. - CHIEF OPERATIONS OFFICER
1/29/16
DATE

Stephen R. Tartre
STEPHEN R. TARTRE, P.E. - DIRECTOR OF ENGINEERING & BUILDING MAINTENANCE
1/29/16
DATE



SHEETS 35-77

Norman L. Baker
NORMAN L. BAKER, P.E.
PROJECT MANAGER

2/4/16
DATE



SHEETS 2-24

Joseph Ryan Leavitt
JOSEPH RYAN LEAVITT, P.E.
SENIOR RESIDENT ENGINEER

2/1/16
DATE

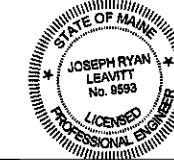


SHEETS 25-34

Brian A. Taddeo
BRIAN A. TADDEO, P.E.
PROJECT ENGINEER

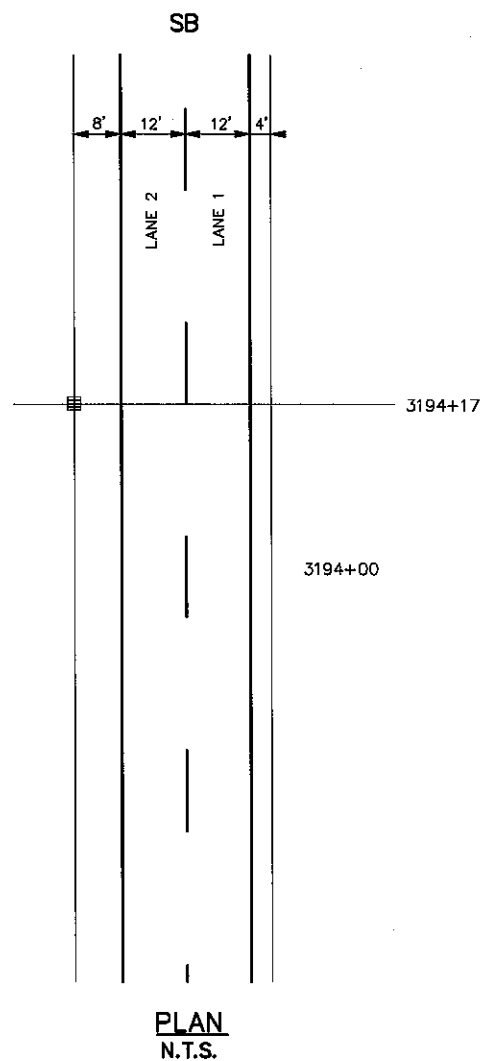
2/1/16
DATE

TYLIN INTERNATIONAL



| ESTIMATED QUANTITIES | | | | | | | | | | | | | | | |
|----------------------|---|-------|----------|-----------|-----------|----------------|-----------|------------|------------|--------------|--------------|----------------|---------------|--------------|-----|
| ITEM | DESCRIPTION | UNIT | QUANTITY | M/I & FII | | S/Im & Overlay | | Clear Zone | Clear Zone | Bridge | Bridge | Snow Fence | Snow Fence | Ramps Ext 63 | |
| NO. | | | TOTAL | Loc. 1 NB | Loc. 2 SB | Loc. 3 NB | Loc. 4 SB | Loc. 5 NB | Loc. 6 SB | Loc. 7 EAGLE | Loc. 8 HUNTS | Loc. 9 BENNETT | Loc. 10 KITTY | Loc. 11 | |
| 202.12 | Removing Existing Structural Concrete | CY | 34 | | | | | | | 34 | | | | | |
| 202.127 | Removing of Existing Bituminous Pavement (608SY) | LS | 1 | | | | | | | | 1 | | | | |
| 202.202 | Removing Pavement Surface - Machine | SY | 121,164 | 41,167 | 41,167 | 16,327 | 22,503 | | | | | | | | |
| 202.2026 | Removing Pavement Surface - Drainage Pits | SF | 4,200 | 1,432 | 1,432 | 668 | | | | | | | | | |
| 202.205 | Removable Strips | EA | 155,310 | 22,230 | 22,230 | 43,600 | 67,450 | | | | | | | | |
| 203.20 | Common Excavation | CY | 775 | | | | | 369 | 369 | 37 | | | | | |
| 203.21 | Rock Excavation | CY | 50 | | | | | | 50 | | | | | | |
| 203.241 | Common Borrow, Truck Measure | CY | 450 | | | | | 225 | 225 | | | | | | |
| 203.25 | Granular Borrow | CY | 136 | | | | | 68 | 68 | | | | | | |
| 205.51 | Widening of Existing Shoulder | LF | 265 | | | | | 130 | 135 | | | | | | |
| 205.53 | Widening of Existing Shoulder Pavement | LF | 525 | | | | | 263 | 262 | | | | | | |
| 304.10 | Aggregate Subbase Course - Gravel | CY | 150 | | | | | 70 | 80 | 27 | | | | | |
| 403.208 | Hot Mix Asphalt, 12.5mm - RAP | Ton | 7,130 | 3,575 | 3,575 | | | | | | | | | | |
| 403.2081 | Hot Mix Asphalt, 12.5mm (Polymer Modified)- RAP | Ton | 30,190 | 4,150 | 4,150 | 8,354 | 12,897 | | | 50 | 74 | | | 515 | |
| 403.2084 | Hot Mix Asphalt, 12.5mm Nominal Maximum Size (Joints, Drives, Islands & Interlocks) | Ton | 261 | | | 130 | 131 | | | | | | | | |
| 403.212 | Hot Mix Asphalt 4.75mm Nominal Maximum Size | Ton | 2,227 | | | 2,877 | 4,350 | | | | | | | | |
| 403.213 | Hot Mix Asphalt, 12.5mm | Ton | 88 | | | | | | | 14 | 74 | | | | |
| 407.08 | Beam Depoll/Correction-Grindings | Ton | 5,100 | | | 1,550 | 1,550 | | | | | | | | |
| 407.081 | Beam Correction | LF | 35,195 | | | 17,597 | 17,598 | | | | | | | | |
| 409.15 | Bituminous Tack Coat - Applied | GAL | 26,119 | 3,623 | 3,623 | 7,783 | 11,091 | | | | | | | | 491 |
| 409.151 | Bituminous Tack Coat - Applied, Bridge | GAL | 59 | | | | | | | 26 | 33 | | | | |
| 419.30 | Sealing Bituminous Pavement | LF | 2,415 | | | | | | | | | | | | |
| 419.301 | Sealing and Sealing Bituminous Pavement | LF | 320 | | | | | | | | | | | | |
| 424.523 | Asphalt Rubber Fiber Crack Filler-Applied | Pound | 22,000 | | | 11,000 | 11,000 | | | | | | | | |
| 427.09 | Pavement Crack Repair | LF | 30,460 | 12,333 | 18,125 | | | | | | | | | | |
| 429.341 | Grid/Fabric Composite Pavement Interlayer | SF | 43,000 | | 43,000 | | | | | | | | | | |
| 459.06 | Bituminous Concrete Waterway - Type I | EA | 3 | | | | | | | | | | | | |
| 459.061 | Bituminous Concrete Waterway - Type II | EA | 9 | | | | | | | | | | | | |
| 502.21 | Structural Concrete, Abutments & Retaining Walls | CY | 38 | | | | | | | 38 | | | | | |
| 502.26 | Structural Concrete Super. Slab on St Br (2CY) | LS | 1 | | | | | | | | | | | | |
| 503.14 | Epoxy-Coated Reinforcing Steel, Fab & Delivered | LB | 6,400 | | | | | | | 6,300 | 100 | | | | |
| 503.15 | Epoxy-Coated Reinforcing Steel, Placing | LB | 6,400 | | | | | | | 6,300 | 100 | | | | |
| 506.99 | Clem and Paint Existing Bearings | EA | 20 | | | | | | | | | | | | |
| 507.095 | Aluminum Bridge Railing - Splice Modification | EA | 56 | | | | | | | | | | | 24 | 32 |
| 508.141 | High Performance Waterproofing Membrane (Hot's HIR4) (660 SY) | LS | 1 | | | | | | | | | | | | |
| 515.201 | Pigmented Protective Coating for Concrete Surfaces | SY | 710 | | | | | | | 390 | 320 | | | | |
| 515.202 | Clear Protective Coating for Concrete Surfaces | SY | 620 | | | | | | | 340 | 280 | | | | |
| 518.39 | Granite Curb Joint Mortar and Bedding Mortar Repair | LF | 615 | | | | | | | 310 | 305 | | | | |
| 518.40 | Epoxy Injected Crack Repairs | LF | 205 | | | | | | | 10 | 195 | | | | |
| 518.43 | Parapet Joint Repair | LF | 260 | | | | | | | | 260 | | | | |
| 518.51 | Repair of Upward Facing Concrete Surfaces - Below Reinforcing Steel -8 Inches | SF | 360 | | | | | | | 40 | 320 | | | | |
| 518.511 | Full Depth Concrete Repair | SF | 60 | | | | | | | | 60 | | | | |
| 518.60 | Repair of Vertical Surfaces < 8 Inches | SF | 245 | | | | | | | 80 | 165 | | | | |
| 518.70 | Repair of Overhead Surfaces < 8 Inches | SF | 95 | | | | | | | 5 | 90 | | | | |
| 520.2211 | Expansion Device Modifications (47.5FT) | EA | 2 | | | | | | | | 2 | | | | |
| 520.231 | Expansion Device - Asphaltic Plug for Crack Control | LF | 95 | | | | | | | | 95 | | | | |
| 520.232 | Expansion Device - Asphaltic Plug Joint | LF | 145 | | | | | | | | 145 | | | | |
| 523.521 | Bearing Rehabilitation, Rocker Bearings | EA | 20 | | | | | | | | 20 | | | | |
| 526.506 | Temporary Concrete Barrier, Type I - Supplied by Authority(660 LF) | LS | 1 | | | | | | | | 1 | | | | |
| 527.503 | Energy Absorbing System (CAT) - Remove and Reset | EA | 1 | | | | | | | 1 | | | | | |
| 527.541 | Work Zone Crash Cushions - TL-3 | UNIT | 2 | | | | | | | | 2 | | | | |
| 603.155 | 12 inch Reinforced Concrete Pipe - Class III | LF | 78 | | | 78 | | | | | | | | | |
| 603.159 | 12 inch Culvert Pipe Option III | LF | 103 | | | | 90 | 15 | | | | | | | |
| 603.179 | 18 inch Culvert Pipe Option III | LF | 103 | | | | 60 | 45 | | | | | | | |
| 603.209 | 30 inch Culvert Pipe Option III | LF | 63 | | | | 63 | | | | | | | | |
| 603.229 | 42 inch Culvert Pipe Option III | LF | 20 | | | | 20 | | | | | | | | |
| 603.28 | Concrete Collar | EA | 19 | | | | | 4 | | | | | | | |
| 604.184 | Retaind Catch Basin to Grade - Type II | EA | 32 | | | 32 | | | | | | | | | |
| 604.186 | Retaind Catch Basin to Grade - Type IV | EA | 8 | | | 8 | | | | | | | | | |
| 606.1723 | Bridge Transition - Type III | EA | 6 | | | | | | | 6 | | | | | |
| 606.1724 | Bridge Transition - Type III Modified | EA | 1 | | | | | | | 1 | | | | | |
| 606.178 | Guardrail Beam | LF | 650 | | | | 650 | | | | | | | | |
| 606.24 | Guardrail Type 3d Single Rail | LF | 200 | | | | 200 | | | | | | | | |
| 606.2401 | Guardrail Type 3d Double Rail | LF | 450 | | | | 500 | | | | | | | | |
| 606.2652 | Terminal End - Remove and Stack | EA | 31 | | | | 30 | | | 1 | | | | | |
| 606.278 | Terminal End - Anchored End | EA | 31 | | | | 30 | | | 1 | | | | | |
| 606.279 | Terminal End - Anchored End, Thrie Beam | EA | 1 | | | | | | | 1 | | | | | |
| 606.352 | Reflectored Beam Guardrail Delineator | EA | 1,500 | | | | 1,315 | 185 | | | | | | | |
| 606.353 | Delineator Post | EA | 120 | | | | 118 | 2 | | | | | | | |
| 606.355 | Delineator Post - Remove and Stack | EA | 120 | | | | 120 | | | | | | | | |
| 606.3605 | Guardrail - Remove, Modify and Reset Type 3d Single Guardrail | LF | 25 | | | | | 25 | | | | | | | |
| 606.3606 | Guardrail - Remove, Modify and Reset Type 3d Double Guardrail | LF | 545 | | | | 272 | 273 | | | | | | | |
| 606.3621 | Guardrail Adjust - Single Rail | LF | 29,830 | | | | 29,825 | 5 | | | | | | | |
| 606.3622 | Guardrail Adjust - Double Rail | LF | 37,915 | | | | 37,915 | | | | | | | | |
| 606.3631 | Guardrail - Remove and Dispose | LF | 130 | | | | 130 | | | | | | | | |
| 606.47 | Single Wooden Post | EA | 10 | | | | 10 | | | | | | | | |
| 606.471 | Single Offset Block - W Beam | EA | 90 | | | | 90 | | | | | | | | |
| 606.472 | Single Offset Block - Thrie Beam | EA | 10 | | | | 10 | | | | | | | | |
| 606.48 | Single Galvanized Steel Post | EA | 100 | | | | 100 | | | | | | | | |
| 606.63 | Thrie Beam Rail Beam | LF | 50 | | | | 50 | | | | | | | | |
| 606.65 | Guardrail Thrie Beam - Single Rail | LF | 25 | | | | | 25 | | | | | | | |
| 606.701 | Asymmetrical Thrie Beam Transition | EA | 5 | | | | | 5 | | | | | | | |
| 606.754 | Widen Shoulder for Guardrail 350 Flared Terminal | EA | 2 | | | | | 2 | | | | | | | |
| 606.755 | Modify Widen Shoulder for Guardrail 350 Flared Terminal | EA | 19 | | | | 19 | | | | | | | | |
| 606.80 | Guardrail - 350 Flared Terminal | EA | 4 | | | | 4 | | | | | | | | |
| 606.82 | Guardrail - Remove and Stack Existing Crash End | EA | 4 | | | | 4 | | | | | | | | |
| 606.83 | Remove, Modify, and Reset Existing Crash End | EA | 1 | | | | 1 | | | | | | | | |
| 607.431 | Snow Fence | LF | 676 | | | | | | | 180 | 232 | | | 264 | |

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY | M/I & FII | | S/Im & Overlay | | Clear Zone | Clear Zone | Bridge | Bridge | Snow Fence | Snow Fence | Ramps Ext 63 | |
|----------|---|------|----------|-----------|-----------|----------------|-----------|------------|------------|--------------|--------------|----------------|---------------|--------------|-------|
| | | | | Loc. 1 NB | Loc. 2 SB | Loc. 3 NB | Loc. 4 SB | Loc. 5 NB | Loc. 6 SB | Loc. 7 EAGLE | Loc. 8 HUNTS | Loc. 9 BENNETT | Loc. 10 KITTY | Loc. 11 | |
| 609.13 | Vertical Bridge Curb, Type 1 | LF | 130 | | | | | | | | | | | | |
| 609.191 | Concrete Curb, Type 2 | LF | 84 | | | | | | | | | | | | |
| 610.08 | Phin Riprap | CY | 75 | | | | | | | | | | | | |
| 610.18 | Stone Ditch Protection | CY | 160 | | | | | | | | | | | | |
| 613.319 | Erosion Control Blanket | SY | 973 | | | | | | | | | | | | |
| 615.07 | Loom | CY | 73 | | | | | | | | | | | | |
| 618.1401 | Seeding Method Number 2, 1/4" Quantity | UNIT | 146 | | | | | | | | | | | | |
| 619.1201 | 1/4" Quantity | UNIT | 176 | | | | | | | | | | | | |
| 619.1202 | Temporary Mulch | LS | 1 | | | | | | | | | | | | |
| 620.58 | Erosion Control Geotextile | SY | 460 | | | | | | | | | | | | |
| 627.712 | White or Yellow Pavement Marking Line | LF | 179,100 | 24,700 | 24,700 | 51,600 | 78,100 | | | | | | | | |
| 627.713 | Broken White Pavement Marking Line | LF | 89,550 | 12,350 | 12,350 | 25,800 | 39,050 | | | | | | | | |
| 627.717 | Removing Existing Pavement Markings | SF | 1,150 | | | | | | | | | | | 1,150 | |
| 627.78 | Temporary Pavement Marking Line, Yellow or White | LF | 320,550 | 49,400 | 49,400 | 88,050 | 127,800 | | | | | | | 2,950 | 2,950 |
| 627.812 | Temporary Raised Pavement Markers | EA | 24,663 | 3,397 | 3,397 | 7,095 | 10,738 | | | | | | | | |
| 627.94 | Pavement Marking Tape | LF | 3,318 | 465 | 465 | 969 | 1,419 | | | | | | | | |
| 627.941 | Pavement Marking Tape, Dotted White Lane Line, 6-inch Width | LF | 906 | | | | | | | | | | | | |
| 629.05 | Hand Labor, Straight Time | HR | 240 | | | | 240 | | | | | | | 20 | 20 |
| 631.10 | Air Compressor (including operator) | HR | 50 | | | | 50 | | | | | | | | |
| 631.11 | Air Tool (including operator) | HR | 20 | | | | 20 | | | | | | | | |
| 631.12 | All Purpose Excavator (including operator) | HR | 60 | | | | 60 | | | | | | | | |
| 631.172 | Truck - Large (including operator) | HR | 60 | | | | 60 | | | | | | | | |
| 631.56 | Foreman | HR | 40 | | | | 40 | | | | | | | | |
| 645.11 | Remove and Stack Sign | EA | 2 | | | | | | | | | | | | |
| 652.50 | Flashing Arrow | EA | 6 | | | | | | | | | | | 6 | |
| 652.331 | Drums | LS | 1 | | | | | | | | | | | 1 | |
| 652.34 | Cone | EA | 60 | | | | | | | | | | | 15 | 15 |
| 652.35 | Construction Signs | SF | 6,988 | | | | | | | | | | | 6,988 | |
| 652.351 | Construction Signs - Supplied by Authority | SF | 250 | | | | | | | | | | | | |
| 652.3611 | Maintenance of Traffic Control Devices | LS | 1 | | | | | | | | | | | | |
| 652.38 | Flagger | HR | 2,110 | | | | | | | | | | | 1,200 | 650 |
| 652.3911 | Maintenance of Traffic Control Devices (Egals Nest) | LS | 1 | | | | | | | | | | | | |



NOTES:

1. INSTALL 12' - 12" RCP IN SLOPE.
2. INSTALL 12' - 12" RCP WITH A CONCRETE COLLAR ON THE ROADWAY SIDE OF CB.
3. REPLACE PAVEMENT AND GRAVEL TO MATCH EXISTING TEMPLATE AND IS INCIDENTAL TO ITEM 603.155.
4. A TEMPORARY THREE DAY LANE 2 CLOSURE WILL BE ALLOWED FOR THIS WORK.


DRAINAGE SUMMARY INCLUDES LOCATIONS 1 THROUGH LOCATION 8

| Location | ITEM NAME | RDWY | BIT. CONC. WATERWAY | | 12" REINFORCED CONCRETE PIPE - CLASS III | | 12" REINFORCED CONCRETE PIPE - CLASS III | | REBUILD CATCH BASIN TO GRADE - TYPE II | | | | REBUILD CATCH BASIN TO GRADE - TYPE IV | CATCH BASIN TYPE F3 | EROSION CONTROL BLANKET | BALED HAY IN PLACE | 30 Inch TEMP. SILT FENCE | CATCH BASIN OUTLETS ON RDWY SLOPE | REMARKS |
|----------|-----------|------|---------------------|---------|--|--------|--|--------------|--|--------|--------|---------|--|---------------------|-------------------------|--------------------|--------------------------|-----------------------------------|-------------------------------|
| | | | GL | CIG | LF | LF | Lf | LF | Ea. | Ea. | Ea. | Ea. | Ea. | SY | Ea. | LF | | | |
| | Item No. | | 459.06 | 459.061 | 603.155 | | 603.155 | | 604.184 | | | | 604.186 | 604.242 | 619.319 | 656.50 | 656.632 | | |
| | Unit | | Ea. | Ea. | LF | LF | Lf | LF | Ea. | Ea. | Ea. | Ea. | Ea. | | SY | Ea. | LF | | |
| | Station | | | | 45' Lt | 45' Lt | 9' Lt to 0' | 0' to 9' Rt. | 45' Lt. | 9' Lt. | 9' Rt. | 45' Rt. | 0' | | | | | | |
| | 2694+00 | NB | | | | | | | | | | | | | | | | | 12" HDPE with Concrete Collar |
| | 2694+95 | NB | | | | | | | | | | | | | | | | | 30" HDPE with Concrete Collar |
| | 2697+90 | NB | | | | | | | | | | | | | | | | | 30" HDPE with Concrete Collar |
| | 2701+00 | NB | | | | | | | | | | | | | | | | | 12" HDPE with Concrete Collar |
| | 2704+00 | NB | | | | | | | | | | | | | | | | | 30" HDPE with Concrete Collar |
| | 2706+40 | NB | | | | | | | | | | | | | | | | | 12" HDPE with Concrete Collar |
| | 2740+80 | NB | | | | | | | | | | | | | | | | | 30" HDPE with Concrete Collar |
| | 2744+00 | SB | | 1 | | | | | | | | | 1 | | 56 | 10 | 20 | | |
| | 2750+00 | SB | | 1 | | | | | | | | | 1 | | 56 | 10 | 20 | | |
| | 2758+00 | SB | | 1 | | | | | | | | | 1 | | 56 | 10 | 20 | | |
| | 2761+00 | SB | | 1 | | | | | | | | | 1 | | 56 | 10 | 20 | | |
| | 2764+88 | | | | | | | | 1 | 1 | 1 | 1 | | | | | | | |
| | 2761+50' | NB | | | | | | | | | | | | | | | | | |
| | 2764+50' | NB | | | | | | | | | | | | | | | | | |
| | 2760+24' | NB | | | | | | | | | | | | | | | | | |
| | 2762+64' | NB | | | | | | | | | | | | | | | | | |
| | 2804+80' | NB | | | | | | | | | | | | | | | | | |
| | 2812+00 | NB | | | | | | | | | | | | | | | | | 42" HDPE with Concrete Collar |
| | 2813+00 | SB | | 1 | | | | | | | | | 1 | | 56 | 10 | 20 | | |
| | 2819+90 | SB | | | | | | | | | | | | | | | | | 18" HDPE with Concrete Collar |
| | 2820+20 | SB | | | | | | | | | | | | | | | | | 12" HDPE with Concrete Collar |
| | 2832+50 | | | | | | | | 1 | 1 | 1 | 1 | | | | | | | |
| | 2835+72 | | | | | | | | 1 | 1 | | | | | | | | | |
| | 2880+50 | NB | | | | | | | 1 | 1 | | | | | | | | | NB 12" HDPE w/Concrete Collar |
| | 2886+00 | NB | | | | | | | | | | | | | | | | | 12" HDPE with Concrete Collar |
| | 2891+50 | NB | | | | | | | | | | | | | | | | | 12" HDPE with Concrete Collar |
| | 3017+30 | NB | | | | | | | | | | | | | | | | | 18" HDPE with Concrete Collar |
| | 3017+30 | SB | | | | | | | | | | | | | | | | | 18" HDPE with Concrete Collar |
| | 3037+21 | SB | 1 | | | | 9 | 9 | 1 | 1 | 1 | 1 | 1 | | 56 | 10 | 20 | | |
| | 3041+00 | NB | | | | | | | | | | | | | | | | | 18" HDPE with Concrete Collar |
| | 3041+00 | SB | | | | | | | | | | | | | | | | | 18" HDPE with Concrete Collar |
| | 3056+75 | NB | | | | | | | | | | | | | | | | | 18" HDPE with Concrete Collar |
| | 3059+50 | NB | | | | | | | | | | | | | | | | | 18" HDPE with Concrete Collar |
| | 3077+21 | | | | | | | | 1 | 1 | 1 | 1 | | | | | | | |
| | 3082+00 | SB | | 1 | | | | | | | | | | | 56 | 10 | 20 | | |
| | 3128+34 | | | | | | | | 1 | 1 | 1 | 1 | | | | | | | |
| | 3194+17 | SB | 1 | | 12 | 12 | 9 | 9 | 1 | 1 | 1 | 1 | 1 | | 56 | 10 | 20 | | |
| | 3222+35' | NB | | | | | | | | | | | | | | | | | |
| | 3224+00 | SB | | 1 | | | | | | | | | 1 | | 56 | 10 | 20 | | |
| | 3228+87 | SB | 1 | | | | 9 | 9 | 1 | 1 | 1 | 1 | 1 | | 56 | 10 | 20 | | |
| | TOTALS | | 3 | 7 | 12 | 12 | 27 | 27 | 9 | 9 | 7 | 7 | 9 | 0 | 560 | 100 | 200 | | |


* See Plan Sheet 31 for Details

C:\BMB\Projects\2016.01 print date 2.9.2016

| | | | |
|--------------|-------------|-----|------|
| Scale: | | | |
| NOT TO SCALE | | | |
| No. | Revision | By | Date |
| 1 | Addendum #1 | JRL | 2/10 |

| | | | | | | | |
|--|-----|------------|--------------|-----|------------|----|------|
| Designed by: | | | | | | | |
|  | | | | | | | |
| Designed | JRL | 01/26/2016 | Checked | GJO | 01/26/2016 | By | Date |
| Drawn | BMB | 01/26/2016 | In Charge of | SRT | 01/26/2016 | | |

MAINE TURNPIKE AUTHORITY
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 Portland, ME 04102
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 FAX (207) 879-5567



THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Joseph R. Leavitt, P.E.

PAVEMENT REHABILITATION
CLEAR ZONE IMPROVEMENTS

DRAINAGE SUMMARY

SHEET NUMBER: C-2
CONTRACT: 2016.01
3 of 77

SB 54.5-57.0

1 1/2" M&F

PAVEMENT LEGEND

- (A) = LIMITS OF 1/2" MILL AND 1 1/2" 12.5mm FILL (30')
- (B) = DOUBLE LAYER OF TACK ON NOTCH WEDGE
- (F) = BERM DROPOFF CORRECTION OR BERM CORRECTION

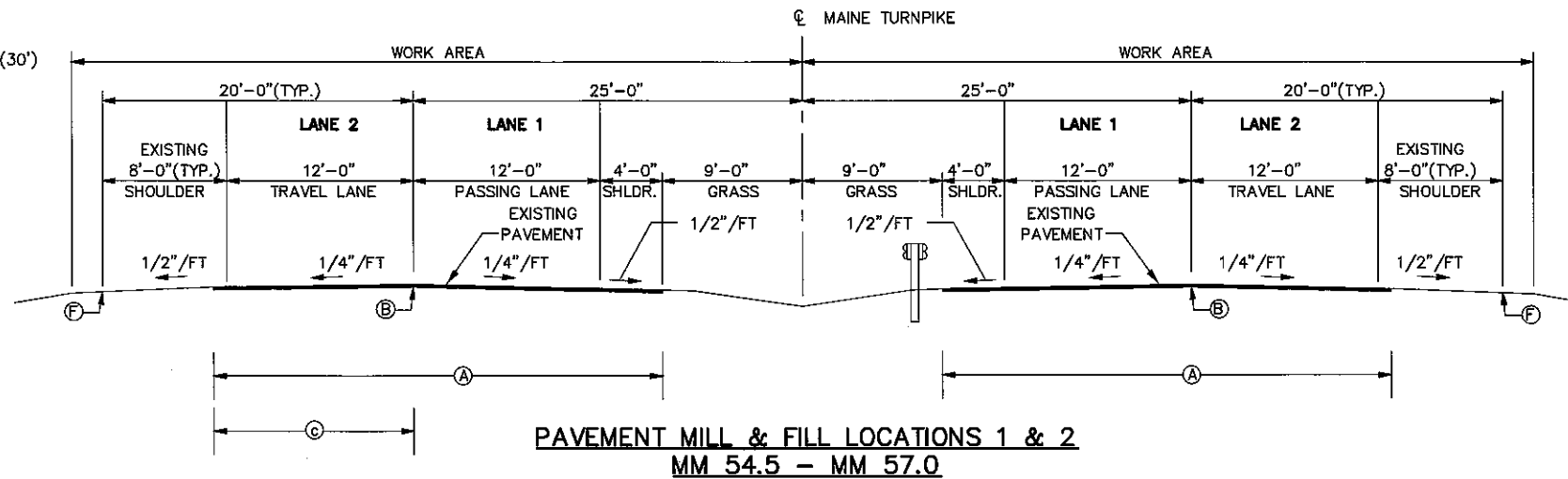
SB (STA 2770+40 TO 54.5)

LANE 2 ONLY

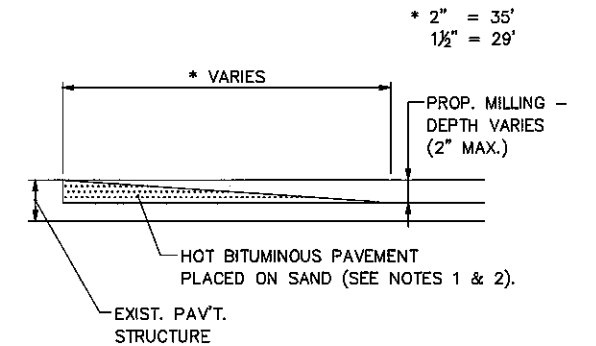
WITH GLASGRID 8502

2" M&F

- (C) = 1/2" SHIM + GLASGRID 8502 + 1 1/2" 12.5mm FILL (14')



- REFERENCE:
- MM 64.4 = STA 3240+50
 - MM 59.5 = STA 2982+70
 - MM 57.0 = STA 2850+00
 - MM 54.5 = STA 2726+50

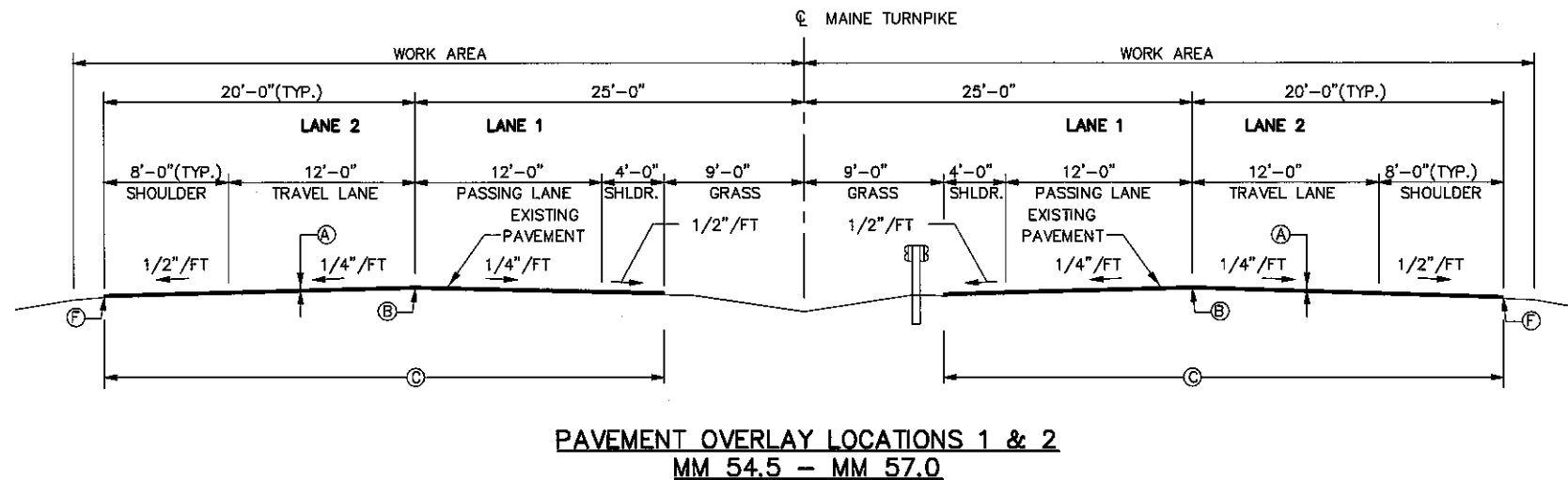


NB & SB 54.5-57.0

1 1/2" OVERLAY

PAVEMENT LEGEND

- (A) = 1 1/2" HOT MIX ASPHALT, 12.5mm NOMINAL MAXIMUM SIZE
- (B) = DOUBLE LAYER OF TACK ON NOTCH WEDGE
- (C) = LIMITS OF OVERLAY (36'-0")
- (F) = BERM DROPOFF CORRECTION OR BERM CORRECTION



TEMPORARY BITUMINOUS RAMP
N.T.S.

NOTES:

1. HOT MIX ASPHALT FOR TEMPORARY RAMPS WILL NOT BE MEASURED FOR PAYMENT, BUT SHALL BE INCIDENTAL TO HOT MIX ASPHALT 12.5mm.
2. REMOVAL OF TEMP. BITUMINOUS RAMPS WILL NOT BE MEASURED FOR PAYMENT, BUT SHALL BE INCIDENTAL TO HOT MIX ASPHALT 12.5mm.


NOTES:

1. A COATING OF HOT RUBBERIZED ASPHALT (SS-S-1401C) SHALL BE APPLIED AT THE TOP SURFACE LIFT TO ALL TRANSVERSE BUTT JOINTS AND LONGITUDINAL JOINTS EXCEPT WHERE THE NOTCHED WEDGE IS USED.
2. BITUMINOUS TACK COAT IS REQUIRED BETWEEN EXISTING PAVEMENT AND HMA, 12.5 MM, 9.5 MM OR SHIM.
3. REFERENCE PLAN SHEET 12 FOR ADDITIONAL CRACK REPAIRS.

Scale: NOT TO SCALE

| No. | Revision | By | Date |
|-----|---------------------------------|-----|------|
| 1 | 2771+70 TO 54.5 Lane 2 addition | JRL | 2/10 |

Designed by:



| Designed | By | Date | Checked | By | Date |
|----------|-----|------------|--------------|-----|------------|
| | JRL | 01/26/2016 | | GJO | 01/26/2016 |
| Drawn | BMB | 01/26/2016 | In Charge of | SRT | 01/26/2016 |

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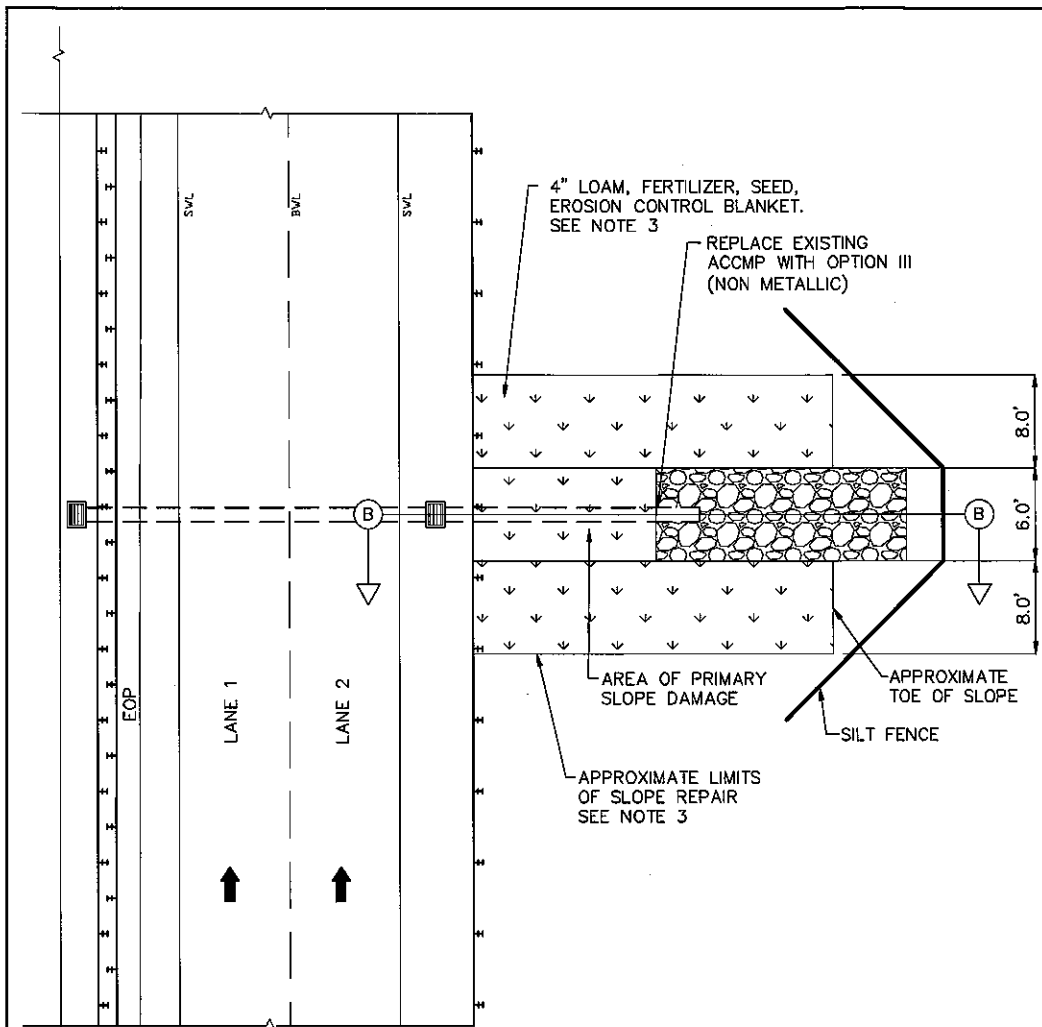
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Joseph R. Leavitt, P.E.

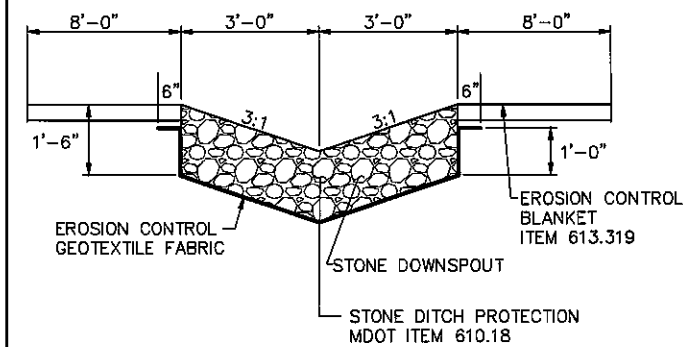
PAVEMENT REHABILITATION
CLEAR ZONE IMPROVEMENTS

TYPICAL SECTIONS
LOCATIONS 1 & 2

SHEET NUMBER: P-1
CONTRACT: 2016.01
5 of 77

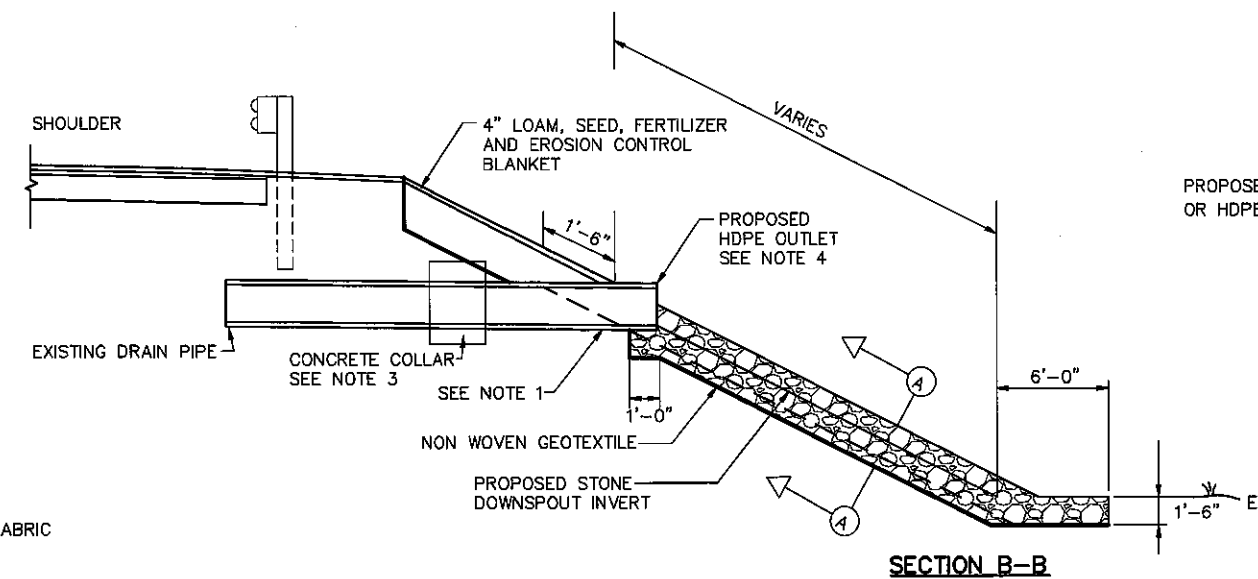


PLAN
NTS



1 LF OF DOWNSPOUT = .33 CY OF STONE DITCH PROTECTION
1 LF OF DOWNSPOUT = 1.04 SY OF EROSION CONTROL GEOTEXTILE FABRIC

SECTION A-A



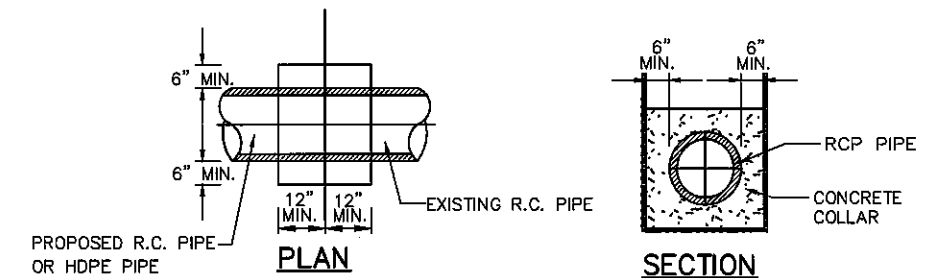
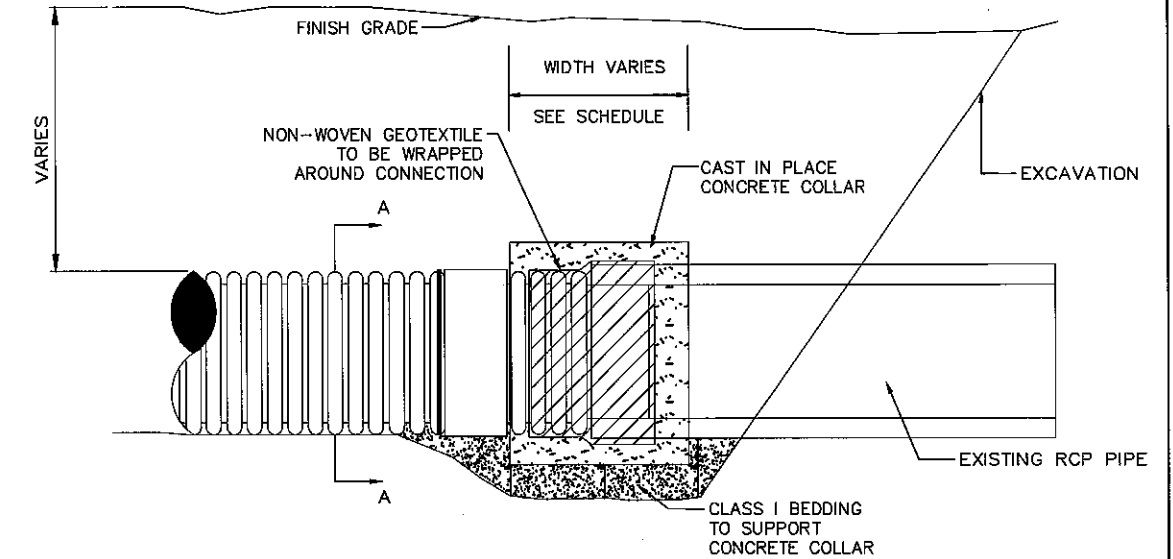
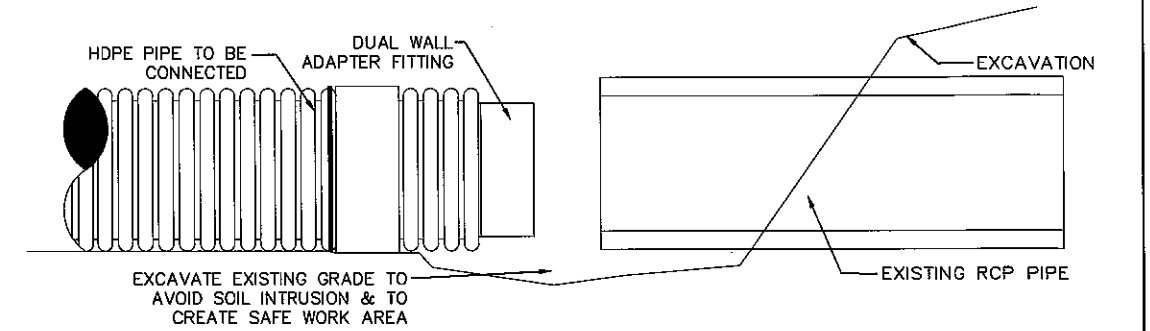
SECTION B-B

NOTES:

- EXCAVATION TO REMOVE EXISTING ACCMP PIPE SHALL BE INCIDENTAL TO THE PROPOSED PIPE INSTALLATION.
- BACKFILL ERODED INSLOPE WITH GRANULAR BORROW TO SUBGRADE OF RIPRAP DOWNSPOUT, OR TO GRADE IN AREAS ADJACENT TO RIPRAP DOWNSPOUT. FINISH AREAS ADJACENT TO RIPRAP DOWNSPOUT WITH 4" LOAM, FERTILIZER, SEED AND COVER WITH EROSION CONTROL MATTING.
- CONNECT PROPOSED OPTION III DRAIN PIPE TO EXISTING RCP PIPE UTILIZING DUAL WALL ADAPTER AND CONCRETE COLLAR.
- INSTALL NEW OPTION III DRAIN PIPE WITH MINIMUM 0.5% SLOPE. TRIM EXCESS PIPE LENGTH OFF TO MATCH PIPE INVERT TO FINISHED GRADE OF RIPRAP DOWNSPOUT.

CONCRETE COLLAR
WIDTH SCHEDULE

| PIPE DIA. (INCHES) | WIDTH OF CONC. (INCHES) |
|-----------------------|----------------------------|
| 12 | 24 |
| 15 | 24 |
| 18 | 24 |
| 24 | 24 |
| 30 | 30 |
| 36 | 36 |
| 42 | 48 |
| 48 | 48 |



CONCRETE COLLAR
N.T.S.

NOTES:

- CONNECTION AND PIPE TO BE BACKFILLED PER ASTM D2321.
- CONCRETE SHALL BE CLASS A FIBER REINFORCED.
- SEE CONCRETE COLLAR WIDTH SCHEDULE FOR DIMENSIONS.

OUTLET PIPE AND CULVERT END REPLACEMENT

Scale: NOT TO SCALE

| No. | Revision | By | Date |
|-----|-------------------------------------|-----|------|
| 1 | Shoulder catchbasin detail addition | BAT | 2/10 |

Designed by:

| By | Date | Checked | By | Date |
|-----|------------|--------------|-----|------------|
| JRL | 01/26/2016 | GJO | GJO | 01/26/2016 |
| BMB | 01/26/2016 | In Charge of | SRT | 01/26/2016 |

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MAINE TURNPIKE

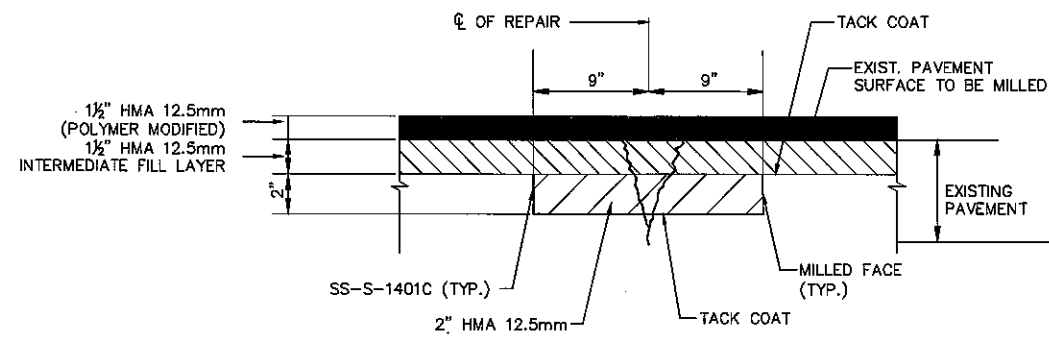
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Joseph R. Leavitt, P.E.

PAVEMENT REHABILITATION
CLEAR ZONE IMPROVEMENTS

MISCELLANEOUS DETAILS 1

SHEET NUMBER: P-5
CONTRACT: 2016.01
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PAVEMENT CRACK REPAIR
N.T.S.

Pavement Crack Repair

| Northbound | | | | | | Southbound | | | | | |
|---|---------|------|-----------------|------------------|-------------|-------------------------------|---------|------|-----------------|------------------|-------------|
| Begin STA | End STA | Lane | Left Wheel Path | Right Wheel Path | Linear Feet | Begin STA | End STA | Lane | Left Wheel Path | Right Wheel Path | Linear Feet |
| 2726+50 | 2753+50 | 2 | x | | 2,650 | 2850+00 | 2771+70 | 2 | x | | 7,830 |
| 2753+50 | 2758+50 | 2 | | x | 500 | 2850+00 | 2771+70 | 2 | | x | 7,830 |
| 2758+50 | 2850+00 | 2 | x | | 9,150 | | | | | | |
| 12,300 | | | | | | 15,660 | | | | | |
| Crack Repair Identified | | | | | | 27,960 LF (5.30 Miles) | | | | | |
| Additional area to be used at Resident's discretion | | | | | | 2,500 LF (0.47 Miles) | | | | | |
| Total Crack Repair | | | | | | 30,460 LF (5.77 Miles) | | | | | |

Scale: NOT TO SCALE

Designed by:



MAINE TURNPIKE AUTHORITY
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**THE GOLD STAR
MEMORIAL HIGHWAY**

PAVEMENT REHABILITATION
CLEAR ZONE IMPROVEMENTS
PAVEMENT CRACK REPAIR

| No. | Revision | By | Date |
|-----|-------------|-----|------|
| 1 | Addendum #1 | JRL | 2/10 |

| | By | Date | Checked | By | Date |
|----------|-----|------------|--------------|-----|------------|
| Designed | JRL | 01/26/2016 | Checked | GJO | 01/26/2016 |
| Drawn | BMB | 01/26/2016 | In Charge of | SRT | 01/26/2016 |

MTA PROJECT MANAGER: Joseph R. Leavitt, P.E.

CONTRACT: 2016.01

SHEET NUMBER: P-8

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