

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

CONTRACT DOCUMENTS

**CONTRACT 2018.01**

PAVEMENT REHABILITATION  
CLEAR ZONE IMPROVEMENTS  
MM 98.0 TO MM 102.17

NOTICE TO CONTRACTORS

PROPOSAL

CONTRACT AGREEMENT

CONTRACT BOND

FINAL LIEN AND CLAIM WAIVER AND AFFIDAVIT

SPECIFICATIONS

MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

The Specifications are divided into two parts:  
Part I, Supplemental Specifications and Part II Special  
Provisions.

The Maine Turnpike Supplemental Specifications are additions  
and alterations to the 2014 Maine Department of  
Transportation Standard Specifications. See Subsection 100.1.

## TABLE OF CONTENTS

|   | <u>PAGE</u> |
|---|-------------|
| NOTICE TO CONTRACTORS                     | N-1         |
| PROPOSAL                                  | P-1         |
| CONTRACT AGREEMENT                        | C-1         |
| CONTRACT BOND                             | CB-1        |
| FINAL LIEN AND CLAIM WAIVER AND AFFIDAVIT | F-1         |

### ARRANGEMENT OF SPECIFICATIONS

#### PART I – SUPPLEMENTAL SPECIFICATIONS

Available at: <http://www.maineturnpike.com/Projects-Planning/Construction-Contracts.aspx>

PART II - SPECIAL PROVISIONS SP-1

PART III – APPENDICES (Part of Special Provisions) AP-1

MAINE TURNPIKE AUTHORITY

NOTICE TO CONTRACTORS

Sealed Proposals will be received by the Maine Turnpike Authority for:

CONTRACT 2018.01

PAVEMENT REHABILITATION  
CLEAR ZONE IMPROVEMENTS  
MM 98.0 TO MM 102.17

at the office of the Maine Turnpike Authority, 2360 Congress Street, Portland, Maine, until 11:00 a.m., prevailing time as determined by the Authority on March 20, 2018 at which time and place the Proposals will be publicly opened and read. Bids will be accepted from Contractors prequalified by the Maine Department of Transportation for Paving Construction Projects. All other bids may be rejected. This Project includes a wage determination developed by the State of Maine Department of Labor.

The pavement rehabilitation work consists of milling and filling two 12-foot wide lanes and the four foot shoulder in Locations 1 thru 4 and the Exit 102 ramps from mile 98.0 to mile 102.17 excluding areas around Cobbeessecontee Bridge and the West Gardiner ORT. The work also involves earthwork, drainage, guardrail, pavement markings, maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications in Locations 1 through 4.

The General Limits of work are as follows:

Location 1: Northbound travel lanes from Mile 98.0 (Sta. 5002+00) in the Town of Litchfield and extending northerly to Mile 100.37 (Sta. 5125+00) in the Town of West Gardiner;

Location 2: Northbound travel lanes from Mile 100.37 (Sta. 5125+00) in the Town of West Gardiner and extending northerly to Mile 102.17 (Sta. 5216+00) in the Town of West Gardiner.

Location 3: Southbound travel lanes from Mile 100.37 (Sta. 5125+00) in the Town of West Gardiner;and extending southerly to Mile 98.0 (Sta. 5002+00) in the Town of Litchfield;

Location 4: Southbound travel lanes from Mile 102.17 (Sta. 5216+00) in the Town of West Gardiner and extending southerly to Mile 100.37 (Sta. 5125+00) in the Town of West Gardiner;

Plans and Contract Documents may be examined by prospective Bidders weekdays between 8:00 a.m. and 4:30 p.m. at the office of the Maine Turnpike Authority, 2360 Congress Street, Portland, Maine. The Plans and Contract Documents may be obtained from the Authority

upon payment of One Hundred Dollars (\$100.00) for each set, which payment will not be returned. Checks shall be made payable to: Maine Turnpike Authority. The plans and contract documents may also be downloaded from a link on our website at [www.maineturnpike.com](http://www.maineturnpike.com) [Projects and Planning/Construction Contracts].

For general information regarding Bidding and Contracting procedures, contact Nathaniel F. Carll, Purchasing Manager, at (207) 871-7771 Ext. 115. For information regarding Schedule of Items, plan holders list, and bid results, visit our website at [www.maineturnpike.com](http://www.maineturnpike.com) [Contract Bids]. For Project specific information, fax or email all questions to Nathaniel F. Carll, Purchasing Manager, at (207) 871-7739 or [ncarll@maineturnpike.com](mailto:ncarll@maineturnpike.com). Responses will not be prepared for questions received by telephone. Bidders shall not contact any other Authority staff or Consultants for clarification of Contract provisions, and the Authority will not be responsible for any interpretations so obtained.

All work shall be governed by the Specifications entitled "State of Maine, Department of Transportation, Standard Specifications, Revision of November 2014", price \$13, (\$16 by mail) "Standard Details, Revision of November 2014" and "Best Management Practices for Erosion and Sediment Control", latest issue. Copies and recent updates to these publications can be downloaded at: [www.maine.gov/mdot/contractor-consultant-information/contractor\\_cons.php](http://www.maine.gov/mdot/contractor-consultant-information/contractor_cons.php).

Proposals must be accompanied by an original bid bond, certified or cashier's check payable to the Maine Turnpike Authority in an amount not less than Five (5%) Percent of the Total Amount in the Proposal, but not less than \$500.00. The Bidder to whom a Contract is awarded will be required to furnish a Surety Corporation Bond, satisfactory to the Authority, on the standard Contract Bond form of the Authority, for a sum not less than the Total Amount of the Proposal.

Proposals must be made upon the Proposal Forms furnished by the Authority separately with the Contract Documents, and must be enclosed in the sealed special addressed envelope provided therefore bearing the name and address of the Bidder, the name of the Contract, and the date and time of Proposal opening on the outside.

A pre-bid conference will be held on March 6, 2018 at 11:00 a.m. at the Maine Turnpike Authority, 2360 Congress Street, Portland, Maine.

The Authority reserves the unqualified right to reject any or all Proposals and to accept that Proposal which in its sole judgment will under all circumstances serves its best interest.

MAINE TURNPIKE AUTHORITY

---

Nathaniel F. Carll  
Purchasing Manager  
Maine Turnpike Authority  
Portland, Maine

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

PROPOSAL

**CONTRACT 2018.01**

PAVEMENT REHABILITATION  
CLEAR ZONE IMPROVEMENTS  
MM 98.0 TO MM 102.17

MAINE TURNPIKE AUTHORITY

PROPOSAL

CONTRACT 2018.01

PAVEMENT REHABILITATION  
CLEAR ZONE IMPROVEMENTS  
MM 98.0 TO MM 102.17

TO MAINE TURNPIKE AUTHORITY:

The pavement rehabilitation work consists of milling and filling two 12-foot wide lanes and the four foot shoulder in Locations 1 thru 4 and the Exit 102 ramps from mile 98.0 to mile 102.17 excluding areas around Cobbeessecontee Bridge and the West Gardiner ORT. The work also involves earthwork, drainage, guardrail, pavement markings, maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications in Locations 1 through 4.

The General Limits of work are as follows:

- Location 1: Northbound travel lanes from Mile 98.0 (Sta. 5002+00) in the Town of Litchfield and extending northerly to Mile 100.37 (Sta. 5125+00) in the Town of West Gardiner;
- Location 2: Northbound travel lanes from Mile 100.37 (Sta. 5125+00) in the Town of West Gardiner and extending northerly to Mile 102.17 (Sta. 5216+00) in the Town of West Gardiner.
- Location 3: Southbound travel lanes from Mile 100.37 (Sta. 5125+00) in the Town of West Gardiner;and extending southerly to Mile 98.0 (Sta. 5002+00) in the Town of Litchfield;
- Location 4: Southbound travel lanes from Mile 102.17 (Sta. 5216+00) in the Town of West Gardiner and extending southerly to Mile 100.37 (Sta. 5125+00) in the Town of West Gardiner;

This Work will be done under a Contract known as Contract 2018.01 according to the Plans and Specifications which are on file in the office of the Maine Turnpike Authority, 2360 Congress Street, Portland, Maine.

On the acceptance of this Proposal for said Work, the undersigned will give the required bond with good security conditioned for the faithful performance of said Work, according to said Plans and Specifications, and the doing of all other work required by said Specifications for the consideration herein named and with the further condition that the Maine Turnpike Authority shall be saved harmless from any and all damages that might accrue to any person, persons or property by reason of the carrying out of said Work, or any part thereof, or by reason of negligence of the undersigned, or any person or persons under his employment and engaged in said Work.

The undersigned hereby declares that he/she has carefully examined the Plans, Specifications and other Contract Documents, and that he/she will contract to carry out and complete the said Work as specified and delineated at the price per unit of measure for each scheduled item of Work stated in the Schedule of Prices as follows:

It is understood that the TOTAL AMOUNT stated by the undersigned in the following Schedule of Prices is based on approximate quantities and will be used solely for the comparison of bids, and that the quantities stated in the Schedule of Prices for the various items are estimates only and may be increased or decreased all as provided in the Specifications.



**SCHEDULE OF BID PRICES**  
**CONTRACT NO. 2018.01**  
**Pavement Rehabilitation Clear Zone Improvements**  
**MM 98.0 to MM 102.17**

| Item No  | Item Description   | Units       | Approx. Quantities | Unit Prices in Numbers |       | Bid Amount in Numbers |       |
|----------|--|-------------|--------------------|------------------------|-------|-----------------------|-------|
|          |  |             |                    | Dollars                | Cents | Dollars               | Cents |
| 202.202  | Removing Pavement Surface - Mainline                                 | Square Yard | 119,250            |                        |       |                       |       |
| 202.206  | Removing Pavement Surface - Drainage Paths                           | Square Foot | 3,552              |                        |       |                       |       |
| 202.205  | Rumble Strips  | Each        | 35,750             |                        |       |                       |       |
| 202.206  | Removing Rumble Strips   | Linear Foot | 950                |                        |       |                       |       |
| 203.20   | Common Excavation  | Cubic Yard  | 2,398              |                        |       |                       |       |
| 203.25   | Granular Borrow  | Cubic Yard  | 1,184              |                        |       |                       |       |
| 304.10   | Aggregate Subbase Course - Gravel                                    | Cubic Yard  | 498                |                        |       |                       |       |
| 304.14   | Aggregate Base Course - Type A                                       | Cubic Yard  | 233                |                        |       |                       |       |
| 403.207  | Hot Mix Asphalt, 19.0mm Nominal Maximum Size RAP                     | Ton         | 547                |                        |       |                       |       |
| 403.208  | Hot Mix Asphalt, 12.5mm Nominal Maximum Size RAP                     | Ton         | 345                |                        |       |                       |       |
| 403.2081 | Hot Mix Asphalt, 12.5mm Nominal Maximum Size, (Polymer Modified) RAP | Ton         | 9,100              |                        |       |                       |       |

**CARRIED FORWARD:**

| Item No                 | Item Description   | Units       | Approx. Quantities | Unit Prices in Numbers |       | Bid Amount in Numbers |       |
|-------------------------|--|-------------|--------------------|------------------------|-------|-----------------------|-------|
|                         |  |             |                    | Dollars                | Cents | Dollars               | Cents |
| <b>BROUGHT FORWARD:</b> |  |             |                    |                        |       |                       |       |
| 403.20811               | Hot Mix Asphalt, 12.5mm Nominal Maximum Size, (Polymer Modified) RAP (70E-34)              | Ton         | 500                |                        |       |                       |       |
| 403.2084                | Hot Mix Asphalt, 12.5mm Nominal Maximum Size (sidewalks, drives, islands, and incidentals) | Ton         | 50                 |                        |       |                       |       |
| 403.212                 | Hot Mix Asphalt, 4.75mm Nominal Maximum Size   | Ton         | 4,000              |                        |       |                       |       |
| 407.08                  | Berm Dropoff Correction - Grindings  | Ton         | 802                |                        |       |                       |       |
| 407.081                 | Berm Correction  | Linear Foot | 3,200              |                        |       |                       |       |
| 409.15                  | Bituminous Tack Coat, Applied  | Gallon      | 9,397              |                        |       |                       |       |
| 419.30                  | Saw Cutting Bituminous Pavement  | Linear Foot | 571                |                        |       |                       |       |
| 424.323                 | Asphalt Rubber Mastic Crack Filler-Applied   | Pound       | 11,500             |                        |       |                       |       |
| 429.341                 | Grid/Fabric Composite Pavement Interlayer  | Square Foot | 7,200              |                        |       |                       |       |
| 526.306                 | Temporary Concrete Barrier Type I - Supplied by Authority ( 590 LF)                        | Lump Sum    | 1                  |                        |       |                       |       |
| 527.301                 | Energy Absorbing System (CAT) - New  | Each        | 2                  |                        |       |                       |       |
| 527.341                 | Work Zone Crash Cushions - TL-3  | Each        | 1                  |                        |       |                       |       |

**CARRIED FORWARD:**

| Item No                 | Item Description                                      | Units       | Approx. Quantities | Unit Prices in Numbers |       | Bid Amount in Numbers |       |
|-------------------------|---|-------------|--------------------|------------------------|-------|-----------------------|-------|
|                         |   |             |                    | Dollars                | Cents | Dollars               | Cents |
| <b>BROUGHT FORWARD:</b> |   |             |                    |                        |       |                       |       |
| 603.155                 | 12 Inch Reinforced Concrete Pipe - Class III          | Linear Foot | 36                 |                        |       |                       |       |
| 603.199                 | 24 Inch Culvert Pipe Option III                       | Linear Foot | 60                 |                        |       |                       |       |
| 603.28                  | Concrete Collar                                       | Each        | 3                  |                        |       |                       |       |
| 604.184                 | Rebuild Catch Basin to Grade - Type II                | Each        | 15                 |                        |       |                       |       |
| 605.105                 | 6 inch Underdrain Type C                              | Each        | 65                 |                        |       |                       |       |
| 606.353                 | Delineator Post - New                                 | Each        | 5                  |                        |       |                       |       |
| 606.354                 | Delineator Post - Remove and Reset                    | Each        | 8                  |                        |       |                       |       |
| 606.3605                | Guardrail - Remove, Modify, and Replace - Single Rail | Linear Foot | 200                |                        |       |                       |       |
| 606.3606                | Guardrail - Remove, Modify, and Replace - Double Rail | Linear Foot | 475                |                        |       |                       |       |
| 606.3621                | Guardrail Adjust - Single Rail                        | Linear Foot | 500                |                        |       |                       |       |
| 606.3622                | Guardrail Adjust - Double Rail                        | Linear Foot | 200                |                        |       |                       |       |
| 606.3631                | Guardrail - Remove and Dispose                        | Linear Foot | 175                |                        |       |                       |       |

|                         |  |  |  |  |  |  |  |
|-------------------------|--|--|--|--|--|--|--|
| <b>CARRIED FORWARD:</b> |  |  |  |  |  |  |  |
|-------------------------|--|--|--|--|--|--|--|

| Item No                 | Item Description                                 | Units       | Approx. Quantities | Unit Prices in Numbers |       | Bid Amount in Numbers |       |
|-------------------------|--|-------------|--------------------|------------------------|-------|-----------------------|-------|
|                         |  |             |                    | Dollars                | Cents | Dollars               | Cents |
| <b>BROUGHT FORWARD:</b> |  |             |                    |                        |       |                       |       |
| 606.471                 | Single Offset Block - W- Beam                    | Each        | 10                 |                        |       |                       |       |
| 606.48                  | Single Galvanized Steel Post                     | Each        | 5                  |                        |       |                       |       |
| 606.791                 | Guardrail 350 Flared Terminal - Remove and Reset | Each        | 1                  |                        |       |                       |       |
| 610.08                  | Plain Riprap                                     | Cubic Yard  | 82                 |                        |       |                       |       |
| 613.319                 | Erosion Control Blanket                          | Square Yard | 543                |                        |       |                       |       |
| 615.07                  | Loam   | Cubic Yard  | 38                 |                        |       |                       |       |
| 618.1401                | Seeding Method #2, Plan Quantity                 | Unit        | 3                  |                        |       |                       |       |
| 619.12                  | Mulch  | Unit        | 3                  |                        |       |                       |       |
| 619.1202                | Temporary Mulch                                  | Lump Sum    | 1                  |                        |       |                       |       |
| 620.58                  | Erosion Control Geotextile                       | Square Yard | 400                |                        |       |                       |       |
| 627.712                 | White or Yellow Pavement Marking Line            | Linear Foot | 74,540             |                        |       |                       |       |
| 627.713                 | Broken White Pavement Marking Line               | Linear Foot | 35,750             |                        |       |                       |       |

**CARRIED FORWARD:**

| Item No                 | Item Description                                      | Units       | Approx. Quantities | Unit Prices in Numbers |       | Bid Amount in Numbers |       |
|-------------------------|---|-------------|--------------------|------------------------|-------|-----------------------|-------|
|                         |   |             |                    | Dollars                | Cents | Dollars               | Cents |
| <b>BROUGHT FORWARD:</b> |   |             |                    |                        |       |                       |       |
| 627.77                  | Removing Existing Pavement Marking                    | Square Foot | 4,750              |                        |       |                       |       |
| 627.78                  | Temporay Pavement Marking Line, White or Yellow       | Linear Foot | 228,780            |                        |       |                       |       |
| 627.812                 | Temporary Raised Pavement Markers                     | Each        | 9,990              |                        |       |                       |       |
| 627.94                  | Pavement Marking Tape 6 inch                          | Linear Foot | 1,344              |                        |       |                       |       |
| 627.941                 | Pavement Marking Tape - Dotted White Lane Line 6 inch | Linear Foot | 111                |                        |       |                       |       |
| 629.05                  | Hand Labor, Straight Time                             | Hour        | 50                 |                        |       |                       |       |
| 631.10                  | Air Compressor (Including Operator)                   | Hour        | 40                 |                        |       |                       |       |
| 631.11                  | Air Tool (Including Operator)                         | Hour        | 40                 |                        |       |                       |       |
| 631.12                  | All Purpose Excavator (including Operator)            | Hour        | 50                 |                        |       |                       |       |
| 631.172                 | Truck - Large (including Operator)                    | Hour        | 50                 |                        |       |                       |       |
| 631.36                  | Foreman   | Hour        | 50                 |                        |       |                       |       |
| 645.109                 | Remove and Reset Sign                                 | Each        | 1                  |                        |       |                       |       |

|                         |  |  |  |  |  |  |  |
|-------------------------|--|--|--|--|--|--|--|
| <b>CARRIED FORWARD:</b> |  |  |  |  |  |  |  |
|-------------------------|--|--|--|--|--|--|--|

| Item No                 | Item Description                                      | Units       | Approx. Quantities | Unit Prices in Numbers |        | Bid Amount in Numbers |       |
|-------------------------|---|-------------|--------------------|------------------------|--------|-----------------------|-------|
|                         |   |             |                    | Dollars                | Cents  | Dollars               | Cents |
| <b>BROUGHT FORWARD:</b> |   |             |                    |                        |        |                       |       |
| 652.30                  | Flashing Arrow Board                                  | Each        | 4                  |                        |        |                       |       |
| 652.312                 | Type III Baracades                                    | Each        | 2                  |                        |        |                       |       |
| 652.331                 | Drum  | Lump Sum    | 1                  |                        |        |                       |       |
| 652.35                  | Construction Signs                                    | Square Foot | 4,205              |                        |        |                       |       |
| 652.361                 | Maintenance of Traffic Control Devices                | Lump Sum    | 1                  |                        |        |                       |       |
| 652.41                  | Portable-Changeable Message Sign                      | Each        | 2                  |                        |        |                       |       |
| 652.45                  | Truck Mounted Attenuator                              | Cal. Day    | 60                 |                        |        |                       |       |
| 652.451                 | Automated Trailer Mounted Speed Limit Sign            | Each        | 2                  |                        |        |                       |       |
| 652.46                  | Temporary Portable Rumble Strips ( 1 Unit = 3 strips) | Unit        | 60                 |                        | 150.00 | 9,000.00              |       |
| 656.632                 | 30 inch Temporary Silt Fence                          | Linear Foot | 700                |                        |        |                       |       |
| 659.103                 | Mobilization (Paving)                                 | Lump Sum    | 1                  |                        |        |                       |       |
| <b>TOTAL:</b>           |   |             |                    |                        |        |                       |       |

Acknowledgment is hereby made of the following Addenda received since issuance of the Plans and Specifications: \_

\_\_\_\_\_

Accompanying this Proposal is an original bid bond, cashier's or certified check on \_\_\_\_\_ Bank, for \_\_\_\_\_, payable to the Maine Turnpike Authority. In case this Proposal shall be accepted by the Maine Turnpike Authority and the undersigned should fail to execute a Contract with, and furnish the security required by the Maine Turnpike Authority as set forth in the Specifications, within the time fixed therein, an amount of money equal to Five (5%) Percent of the Total Amount of the Proposal for the Contract awarded to the undersigned, but not less than \$500.00, obtained out of the original bid bond, cashier's or certified check, shall become the property of the Maine Turnpike Authority; otherwise the check will be returned to the undersigned.

The performance of said Work under this Contract will be completed during the time specified in Subsection 107.1.

It is agreed that time is of the essence of this Contract and that I (we) will, in the event of my (our) failure to complete the Work within the time limit named above, pay to Maine Turnpike Authority liquidated damages in the amount or amounts stated in the Specifications.

The undersigned is an Individual/Partnership/Corporation under the laws of the State of \_\_\_\_\_, having principal office at \_\_\_\_\_, thereunto duly authorized.

\_\_\_\_\_ (SEAL)

\_\_\_\_\_ (SEAL)

*Affix Corporate Seal  
or Power of Attorney  
Where Applicable*

\_\_\_\_\_ (SEAL)

By: \_\_\_\_\_

Its: \_\_\_\_\_

Information below to be typed or printed where applicable:

INDIVIDUAL:

\_\_\_\_\_  
(Name) (Address)

PARTNERSHIP - Name and Address of General Partners:

\_\_\_\_\_  
(Name) (Address)

\_\_\_\_\_  
(Name) (Address)

\_\_\_\_\_  
(Name) (Address)

\_\_\_\_\_  
(Name) (Address)

INCORPORATED COMPANY:

\_\_\_\_\_  
(President) (Address)

\_\_\_\_\_  
(Vice-President) (Address)

\_\_\_\_\_  
(Secretary) (Address)

\_\_\_\_\_  
(Treasurer) (Address)



MAINE TURNPIKE AUTHORITY  
MAINE TURNPIKE  
YORK TO AUGUSTA  
CONTRACT AGREEMENT

This Agreement made and entered into between the Maine Turnpike Authority, and sometimes termed the "Authority", and \_\_\_\_\_  
\_\_\_\_\_ herein termed the "Contractor":

WITNESSETH: That the Authority and the Contractor, in consideration of the premises and of the mutual covenants, considerations and agreements herein contained, agree as follows:

FIRST: The parties hereto mutually agree that the documents attached hereto and herein incorporated and made a part hereof collectively evidencing and constituting the entire Contract to the same extent as if herein written in full, are the Notice to Contractors, the Accepted Proposal, the Specifications, the Plans, this Agreement, the Contract Bond and all Addenda to the Contract Documents duly issued and herewith enumerated:  
\_\_\_\_\_  
\_\_\_\_\_

SECOND: The Contractor for and in consideration of certain payments to be made as hereafter specified, hereby covenants and agrees to perform and execute all of the provisions of this Contract and of all documents and parts attached hereto and made a part thereof, and at his own cost and expense to furnish and perform everything necessary and required to construct and complete, ready for its intended purpose, in accordance with the Contract and such instructions as the Engineer may give, acceptable to the Authority, in the times provided, all of the Work covered and included under Contract No. \_\_\_\_\_ covering \_\_\_\_\_ as herein described.

THIRD: In consideration of the performance by the Contractor of his covenants and agreements as herein set forth, the Authority hereby covenants and agrees to pay the Contractor according to the Schedule of Prices set forth in the Proposal with additions and deductions as elsewhere herein provided in the times and in the manner stated in the Specifications. This Agreement shall insure to the benefit of, and shall be binding upon the parties hereto, and upon their respective successors and assigns; but neither party hereto shall assign or transfer his interest herein in whole or in part without the consent of the other, except as herein provided.

IN WITNESS WHEREOF the parties to this Agreement have executed the same in quintuplicate.

AUTHORITY -

MAINE TURNPIKE AUTHORITY

\_\_\_\_\_  
S. Peter Mills  
Executive Director

Date of Signature: \_\_\_\_\_

ATTEST:

\_\_\_\_\_  
Jonathan A. Arey, Esq., Secretary

CONTRACTOR –

\_\_\_\_\_  
CONTRACTOR

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date of Signature: \_\_\_\_\_

WITNESS:

\_\_\_\_\_

CONTRACT BOND

KNOW ALL MEN BY THESE PRESENTS that \_\_\_\_\_  
of \_\_\_\_\_ in the County of \_\_\_\_\_ and State of \_\_\_\_\_  
as Principal, and \_\_\_\_\_ a Corporation duly organized under  
the laws of the State of \_\_\_\_\_ and having a usual place of business in \_\_\_\_\_

As Surety, are held and firmly bound unto the Maine Turnpike Authority in the sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_),  
to be paid to said Maine Turnpike Authority, or its successors, for which payment, well and truly  
to be made, we bind ourselves, our heirs, executors, successors and assigns, jointly and severally  
by these presents.

The condition of this obligation is such that the Principal, designated as Contractor in the  
foregoing Contract No. \_\_\_\_\_ shall faithfully perform the Contract on his part and  
satisfy all claims and demands incurred for the same and shall pay all bills for labor, material,  
equipment and all other items contracted for, or used by him, in connection with the Work  
contemplated by said Contract, and shall fully reimburse the Obligee for all outlay and expense  
which the Obligee may incur in making good any default of said Principal, then this Obligation  
shall be null and void; otherwise it shall remain in full force and effect.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, A.D., 201\_\_\_\_

Witnesses:

CONTRACTOR

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (SEAL)

SURETY

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (SEAL)

*(Surety must attach copy of Power of Attorney showing authority of Office or Agent to execute bonds)*

FINAL LIEN AND CLAIM WAIVER AND AFFIDAVIT

Upon receipt of the sum of \_\_\_\_\_, which sum represents the total amount paid, including the current payment for work done and materials supplied for Project No. \_\_\_\_\_, in \_\_\_\_\_, Maine, under the undersigned's Contract with the Maine Turnpike Authority.

The undersigned, on oath, states that the Final Payment of \_\_\_\_\_ is the final payment for all work, labor, materials, services and miscellaneous (all of which are hereinafter referred to as "Work Items") supplied to the said Project through \_\_\_\_\_ and that no additional sum is claimed by the undersigned respecting said Project.

The undersigned, on oath, states that all persons and firms who supplied Work Items to the undersigned in connection with said Project have been fully paid by the undersigned for such Work Items or that such payment will be fully effected immediately upon receipt of this payment.

In consideration of the payment herewith made, the undersigned does fully and finally release and hold harmless the Maine Turnpike Authority, and its Surety, if any, from any and all claims, liens or right to claim or lien, arising out of this Project under any applicable bond, law or statute.

It is understood that this Affidavit is submitted to assure the Owner and others that all liens and claims relating to the Work Items furnished by the undersigned are paid.

\_\_\_\_\_  
(Contractor)

By: \_\_\_\_\_

Title: \_\_\_\_\_

State of MAINE

County of \_\_\_\_\_

I, \_\_\_\_\_, hereby certify on behalf of \_\_\_\_\_  
*(Company Officer)* *(Company Name)*

its \_\_\_\_\_, being first duly sworn and stated that the foregoing representations are  
*(Title)*

are true and correct upon his own knowledge and that the foregoing is his free act and deed in said capacity and the free act and deed of the above-named \_\_\_\_\_.  
*(Company Name)*

The above-named, \_\_\_\_\_, personally appeared before me this \_\_\_\_ day of \_\_\_\_\_ and swears that this is his free act and deed.

(SEAL)

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_

MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

PART II – SPECIAL PROVISIONS

|         |   |       |
|---------|---|-------|
| ----    | GENERAL DESCRIPTION OF WORK   | SP-1  |
| ----    | PLANS   | SP-2  |
| 101.2   | DEFINITION  | SP-2  |
| 103.4   | NOTICE OF AWARD   | SP-2  |
| 104.3.8 | WAGE RATES AND LABOR LAWS   | SP-2  |
| 104.4.7 | COOPERATION WITH OTHER CONTRACTORS  | SP-4  |
| 105.8.2 | PERMIT REQUIREMENTS   | SP-4  |
| 107.1   | CONTRACT TIME AND CONTRACT COMPLETION DATE  | SP-5  |
| 107.1.1 | SUBSTANTIAL COMPLETION  | SP-5  |
| 107.4.2 | SCHEDULE OF WORK REQUIRED   | SP-5  |
| 107.4.6 | PROSECUTION OF WORK   | SP-6  |
| 107.4.7 | LIMITATIONS OF OPERATIONS   | SP-6  |
| 107.4.8 | FAILURE TO COMPLETE DAILY WORK ON TIME<br>(LANE RENTAL)   | SP-9  |
| 202.    | REMOVING STRUCTURES AND OBSTRUCTIONS<br>(Removing Existing Structural Concrete)<br>(Removing Pavement Surface-Mainline) | SP-9  |
| 202.    | REMOVING STRUCTURES AND OBSTRUCTIONS<br>(Removing Pavement Surface – Drainage Paths)                                    | SP-12 |
| 202.    | REMOVING STRUCTURES AND OBSTRUCTIONS<br>(Rumble Strips)<br>(Removing Rumble Strips)                                     | SP-14 |
| 401.    | HOT MIX ASPHALT PAVEMENT  | SP-18 |
| 401.    | HOT MIX ASPHALT PAVEMENT<br>(HMA using Hydrated Lime)   | SP-24 |
| 403.    | HOT BITUMINOUS PAVEMENT   | SP-27 |
| 409.    | BITUMINOUS TACK COAT  | SP-32 |
| 419.    | SAWING AND SEALING JOINTS IN BITUMINOUS<br>PAVEMENT   | SP-34 |

|      |   |       |
|------|---|-------|
| 424. | ASPHALT RUBBER MASTIC CRACK SEALER  | SP-35 |
| 429. | PAVEMENT REINFORCING SYSTEM   | SP-38 |
| 470. | BERM DROPOFF CORRECTION   | SP-39 |
| 526  | CONCRETE BARRIER  | SP-41 |
| 527. | ENERGY ABSORBING UNIT<br>(CAT-NEW)  | SP-44 |
| 527. | ENERGY ABSORBING UNIT<br>(Work Zone Crash Cushion)  | SP-46 |
| 603. | PIPE CULVERTS AND STORM DRAINS  | SP-47 |
| 604. | MANHOLES, INLETS AND CATCH BASINS<br>(Rebuild Catch Basin to Grade Type II)<br>(Rebuild Catch Basin to Grade Type IV) | SP-48 |
| 606. | GUARDRAIL<br>(Delineator Post- New)<br>(Delineator Post, Remove and Stack)  | SP-51 |
| 606. | GUARDRAIL<br>(Guardrail – Remove, Modify and Reset, Single Rail)  | SP-54 |
| 606. | GUARDRAIL<br>(Guardrail Adjust)   | SP-54 |
| 606. | GUARDRAIL<br>(Single Offset Block)  | SP-57 |
| 613. | EROSION CONTROL BLANKET   | SP-59 |
| 619. | MULCH   | SP-60 |
| 627. | PAVEMENT MARKINGS<br>(Pavement Marking Paint)<br>(Temporary Pavement Marking Paint)                                   | SP-62 |
| 627. | PAVEMENT MARKINGS<br>(Temporary Raised Pavement Markers)  | SP-64 |
| 627. | PAVEMENT MARKINGS<br>(Pavement Marking Tape)  | SP-66 |

|      |  |       |
|------|--|-------|
| 652. | MAINTENANCE OF TRAFFIC<br>(Specific Project Traffic Control) | SP-70 |
| 652. | MAINTENANCE OF TRAFFIC<br>(Truck Mounted Attenuator          | SP-73 |
| 652. | MAINTENANCE OF TRAFFIC<br>(Automated Speed Limit Sign        | SP-75 |
| 652. | MAINTENANCE OF TRAFFIC<br>(Temporary Portable Rumble Strips) | SP-80 |



MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

PART II - SPECIAL PROVISIONS

All work shall be governed by the Maine Department of Transportation Standard Specifications, November 2014 Edition except for that work which applies to sections of the Maine Department of Transportation Standard Specifications which are amended by the Maine Turnpike Supplemental Specifications and the following modifications, additions and deletions.

General Description of Work

The pavement rehabilitation work consists of milling and filling two 12-foot wide lanes and the four foot shoulder in Locations 1 thru 4 and the Exit 102 ramps from mile 98.0 to mile 102.17 excluding areas around Cobbeessecontee Bridge and the West Gardiner ORT. The work also involves earthwork, drainage, guardrail, pavement markings, maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications in Locations 1 through 4.

The General Limits of work are as follows:

- Location 1: Northbound travel lanes from Mile 98.0 (Sta. 5002+00) in the Town of Litchfield and extending northerly to Mile 100.37 (Sta. 5125+00) in the Town of West Gardiner;
- Location 2: Northbound travel lanes from Mile 100.37 (Sta. 5125+00) in the Town of West Gardiner and extending northerly to Mile 102.17 (Sta. 5216+00) in the Town of West Gardiner.
- Location 3: Southbound travel lanes from Mile 100.37 (Sta. 5125+00) in the Town of West Gardiner;and extending southerly to Mile 98.0 (Sta. 5002+00) in the Town of Litchfield;
- Location 4: Southbound travel lanes from Mile 102.17 (Sta. 5216+00) in the Town of West Gardiner and extending southerly to Mile 100.37 (Sta. 5125+00) in the Town of West Gardiner;

Plans

The drawings included in the Contract Documents, and referred to as the Plans show the general character of the work to be done under this Contract. They bear the general title "Maine Turnpike Contract 2018.01, Pavement Rehabilitation and Clear Zone Improvements. The right is reserved by the Resident to make such minor corrections or alterations in the Plans as he deems necessary without change in the unit prices on the Schedule of Prices of the Proposal.

## 101.2 Definition

### Holidays

The following is added after Memorial Day in the MTA Supplemental Specifications:

|   |   |
|---|---|
| Independence Day 2018<br>(Fourth of July) | 12:00 p.m. preceding Tuesday to 12:00 p.m. the<br>following Thursday. |
|---|---|

## 103.4 Notice of Award

The following sentence is added:

The Maine Turnpike Authority Board is scheduled to consider the Contract Award on March 22, 2018.

## 104.3.8 Wage Rates and Labor Laws

The fair minimum hourly rates determined by the State of Maine Department of Labor for this Contract are as follows:

**THIS DOCUMENT MUST BE CLEARLY POSTED AT THE PERTAINING STATE FUNDED PREVAILING WAGE CONSTRUCTION SITE**

State of Maine  
 Department of Labor  
 Bureau of Labor Standards  
 Augusta, Maine 04333-0045  
 Telephone (207) 623-7906

**Wage Determination - In accordance with 26 MRSA §1301 et. seq., this is a determination by the Bureau of Labor Standards, of the fair minimum wage rate to be paid to laborers and workers employed on the below titled project.**

**Title of Project -----**2018.01-Pavement Rehab., Clear Zone Improvements, MM98.0 to MM102.17

**Location of Project --**Litchfield, West Gardiner, Kennebec County

**2018 Fair Minimum Wage Rates  
 Highway & Earth Kennebec County**

| Occupation Title                           | Minimum | Minimum |         | Occupation Title                 | Minimum | Minimum |         |
|--|---------|---------|---------|----------------------------------|---------|---------|---------|
|  | Wage    | Benefit | Total   |                                  | Wage    | Benefit | Total   |
| Asphalt Raker                              | \$17.63 | \$0.56  | \$18.19 | Ironworker – Ornamental          | \$23.13 | \$4.80  | \$27.93 |
| Backhoe Loader Operator                    | \$20.00 | \$2.23  | \$22.23 | Ironworker - Reinforcing         | \$24.79 | \$10.60 | \$35.39 |
| Boom Truck (Truck Crane) Operator          | \$21.66 | \$6.86  | \$28.52 | Ironworker - Structural          | \$21.80 | \$4.88  | \$26.68 |
| Bulldozer Operator                         | \$21.50 | \$4.38  | \$25.88 | Laborer (Includes Helper-Tender) | \$14.50 | \$0.95  | \$15.45 |
| Carpenter                                  | \$21.00 | \$2.36  | \$23.36 | Laborer - Skilled                | \$17.00 | \$2.48  | \$19.48 |
| Cement Mason/Finisher                      | \$17.00 | \$0.56  | \$17.56 | Line Erector-Power/Cable Splicer | \$26.00 | \$7.59  | \$33.59 |
| Crane Operator => 15 Tons)                 | \$26.00 | \$5.97  | \$31.97 | Loader Operator - Front-End      | \$19.00 | \$2.88  | \$21.88 |
| Crusher Plant Operator                     | \$18.00 | \$3.46  | \$21.46 | Mechanic- Maintenance            | \$20.85 | \$3.02  | \$23.87 |
| Diver                                      | \$28.50 | \$1.48  | \$29.98 | Painter                          | \$17.00 | \$0.00  | \$17.00 |
| Driller -Rock                              | \$18.38 | \$2.60  | \$20.98 | Paver Operator                   | \$19.13 | \$4.42  | \$23.55 |
| Earth Auger Operator                       | \$22.97 | \$6.17  | \$29.14 | Pipelayer                        | \$18.00 | \$3.16  | \$21.16 |
| Electrician - Licensed                     | \$26.00 | \$4.67  | \$30.67 | Pump Installer                   | \$21.00 | \$3.73  | \$24.73 |
| Electrician Helper/Cable Puller (Licensed) | \$17.00 | \$2.84  | \$19.84 | Reclaimer Operator               | \$19.13 | \$2.98  | \$22.11 |
| Elevator Constructor/Installer             | \$19.25 | \$1.62  | \$20.87 | Roller Operator - Earth          | \$16.00 | \$1.89  | \$17.89 |
| Excavator Operator                         | \$21.05 | \$2.94  | \$23.99 | Roller Operator - Pavement       | \$18.15 | \$2.19  | \$20.34 |
| Fence Setter                               | \$17.25 | \$1.72  | \$18.97 | Screed/Wheelman                  | \$18.60 | \$3.68  | \$22.28 |
| Flagger                                    | \$12.00 | \$0.00  | \$12.00 | Truck Driver - Light             | \$16.75 | \$1.71  | \$18.46 |
| Grader/Scraper Operator                    | \$21.33 | \$5.65  | \$26.98 | Truck Driver - Medium            | \$17.75 | \$1.99  | \$19.74 |
| Highway Worker/Guardrail Installer         | \$16.50 | \$0.79  | \$17.29 | Truck Driver - Heavy             | \$16.00 | \$1.71  | \$17.71 |
| Hot Top Plant Operator                     | \$23.88 | \$5.62  | \$29.50 | Truck Driver - Tractor Trailer   | \$18.50 | \$2.60  | \$21.10 |

The Laborer classifications include a wide range of work duties. Therefore, if any specific occupation to be employed on this project is not listed in this determination, call the Bureau of Labor Standards at the above number for further clarification.

Welders are classified in the trade to which the welding is incidental.

Apprentices - The minimum wage rate for registered apprentices are those set forth in the standards and policies of the Maine State Apprenticeship and Training Council for approved apprenticeship programs.

Posting of Schedule - Posting of this schedule is required in accordance with 26 MRSA §1301 et. seq., by any contractor holding a State contract for construction valued at \$50,000 or more and any subcontractors to such a contractor.

Appeal - Any person affected by the determination of these rates may appeal to the Commissioner of Labor by filing a written notice with the Commissioner stating the specific grounds of the objection within ten (10) days from the filing of these rates.

Determination No: HI-063-2018

A true copy

Filing Date: February 14, 2018

Attest: *Scott R. Cotnoir*

Expiration Date: 12-31-2018

Scott A. Cotnoir  
 Wage & Hour Director

BLS(Highway & Earth Kennebec)

#### 104.4.7 Cooperation With Other Contractors

This subsection is amended by the addition of the following:

2018.05 West Gardiner I-295 SB Underpass MM 103  
2018.04 Bridge Painting Route 126 Underpass MM 101.7, High Street Underpass  
MM 103.6

The above construction contracts shall be considered adjacent projects.

#### 105.8.2 Permit Requirements

This Subsection is amended by the addition of the following:

The Project is subject to the requirements of the Maine Pollutant Discharge Elimination System (MPDES) General Permit for Stormwater Discharge from Construction Activity, as promulgated by the US Environmental Protection Agency (US EPA) and administered by the Maine Department of Environmental Protection (DEP). A Notice of Intent (NOI) was not submitted by the Authority to the DEP for coverage under the Maine Construction General Permit (MCGP) due to the Limit of Disturbance (LOD) being less than one acre.

The Limit of Disturbance (LOD) for catch basins, bituminous concrete waterways and drainage pipes is 0.20 acres of disturbed area.

The Contractor shall prepare a LOD plan illustrating the Contractor's proposed limit of earthwork disturbance. The LOD plan shall show all construction access locations, field office locations, material and temporary waste storage locations, as well as include the Contract limits of earthwork disturbance. All applicable erosion and sedimentation control devices needed shall be detailed on the Contractor's LOD plan and are not limited to those devices shown on the Contract LOD plan. **This Plan shall be submitted for review and approval, to the Resident within 14 days of Contract award.** Payment for creating, revising, and completing this plan shall be incidental to Item 659.10, Mobilization.

At any time during the Contract, if the Limit of Disturbance needs to be adjusted to accommodate construction activities, the Contractor shall resubmit the LOD plan (including any additional erosion and sedimentation control measures needed) to the Resident for review and approval prior to any additional disturbance taking place:

- If the cumulative area of disturbance exceeds the estimated LOD noted above, but less than one acre, the Resident shall have a minimum of five (5) working days to approve the revised LOD plan.
- If the cumulative area of disturbance exceeds the estimated LOD noted above, by over one acre, the Resident shall first approve of the plan and then submit a NOI for MaineDEP approval. The approval may take a minimum of 21 working days.

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

The Contractor shall comply with the conditions outlined in the Maine Pollutant Discharge Elimination System (MPDES) General Permit for Stormwater Discharge associated with construction activity. The Contractor shall indemnify and hold harmless the Maine Turnpike Authority or its agents, representatives and employees against any and all claims, liabilities or fines arising from or based on the violation of the above noted permit.

#### 107.1 Contract Time and Contract Completion Date

This Subsection is amended by the addition of the following:

The work shall be substantially complete on or before July 27, 2018 and all work shall be complete on or before August 15, 2018.

##### 107.1.1 Substantial Completion

This Subsection is amended by the addition of the following:

Substantially Complete is defined by the Authority as the following:

- All paving and line work has been completed.
- No lane closures, except for demobilization (removal of construction signs and drums, and general clean-up) with the exception of those that might be needed for tree planting.
- All disturbed slopes have been loamed, seeded, mulched and temporary erosion control blanket has been placed except for the establishment period.
- Median crossover and guardrail work has been completed.
- All drainage work has been completed.

Supplemental Liquidated damages on a calendar day basis in accordance with MTA Supplemental Specifications Subsection 107.7.2 shall be assessed for each calendar day that substantial completion is not achieved. Supplemental Liquidated damages for substantial completion will end when substantial completion is accepted by the Resident. If the work remains incomplete at the Contract Completion Date, liquidated damages on a calendar day basis in accordance with MTA Supplemental Specifications Subsection 107.7.2 shall be assessed for each calendar day that Contract completion is not achieved. If substantial completion is not completed by the Contract Completion date both supplemental liquidated damages and liquidated damages will be incurred.

##### 107.4.2 Schedule of Work Required

This Subsection is amended by the addition of the following:

The work shall be completed in logical timely increments. The Contractor shall submit a schedule for approval that shows large segments of work scheduled for continuous blocks of time. Work in a segment shall be completed over a period of continuous work days. Work shall not be started in an area until the Contractor has scheduled the labor and equipment necessary to

complete all work in the segment. The Contractor will not be permitted to “stretch” the Project over the entire Contract period, doing a day or two per week.

A schedule that shows sporadic work activities through the duration of the Contract will not be approved. Actual work activities that are sporadic will not be allowed.

The Contractor shall also submit a two-week look ahead schedule as the project progresses. The first week shall be a detailed schedule submitted by the Contractor showing all lane closures that are anticipated for the following week. Lane closures that are not shown on this schedule will only be allowed if they are deemed emergency lane closures by the Resident.

The following Subsection is added:

#### 107.4.6 Prosecution of Work

The following Subsection is added:

#### 107.4.7 Limitations of Operations

##### Maine Turnpike Traffic Control Requirements (West Gardiner ORT)

The high speed ORT lane(Lane 1) can be closed between 9am – 3:30 pm when the work matches into the existing paving joint for Lane 1 for a maximum of twelve working days. Six days can be used for northbound and six days can be used for southbound. A maximum of four hours can be used in this 9am – 3:30pm window. When paving Lane 2 the high speed ORT lane and cash lanes must remain open at all times.

##### Maine Turnpike (Main Line)

The paving at the MM 102 ramps shall be done between 9pm and 5am with the ramps closed. Contract 2018.04 Bridge Painting Route 126 Underpass MM101.7 will begin on August 1, 2018 and this contract will have priority in relation to traffic control. Contract 2018.01 shall be substantially complete by this date.

##### Roadway and Clear Zone--Traffic Control Requirements

The construction in each location shall proceed expeditiously. Once milling and/or paving operations commence for every day/night not worked (milling or paving) when work is allowed by Contract and weather, the Contractor will be charged a fee in the amount of \$1,000 (excluding inclement weather days).

The milled surface shall have live traffic for one shift prior to any asphalt rubber mastic crack sealer work beginning.

The Contractor will be allowed to work on both roadways at the same time. The Contractor shall complete his milling operation in one location prior to beginning his milling operation in the other location unless otherwise approved by the Resident. The paving operation shall begin within seven calendar days of all milling being complete per location. The Contractor shall complete the paving operation in one location prior to beginning his paving

operation in other location. The Contractor will be allowed to work in two separate work areas on each roadway providing that there is a two mile gap between work areas. The work areas are not required to be in the same lane.

The Contractor will be allowed to mill the entire work area (location) prior to beginning the paving operation in the other location. The Contractor shall begin the milling operation in Lane 2 (travel lane), followed by Lane 1 (passing lane).

The Contractor shall begin the paving operation in Lane 1 (passing lane), followed by Lane 2 (travel lane).

The Contractor shall secure all catch basin grates with Sikaflex 1a before being allowed to shift traffic onto the outside shoulder. This work will be incidental to Item 652.361.

The Contractor shall limit the milling operations such that temporary pavement markings or pavement markers are applied daily prior to the roadway being open to traffic.

Lane closures shall be as shown on the Traffic Phasing plans or as otherwise approved by the Resident. Lane closure(s) will not be allowed over a weekend or Holidays unless approved otherwise by the Resident.

The Contractor shall keep a 12 foot wide lane open for traffic during his milling and paving operations unless approved otherwise by the Resident.

Temporary bituminous ramps will be required at all butt joints.

Traffic will be allowed to traverse the longitudinal joint where the pavement is lower in one lane than the adjacent lane.

#### Drainage and Permanent Pavement Markings

The Contractor shall schedule all drainage paths, catch basins and bituminous concrete waterways work to coincide with his work operations in the adjacent lane.

The Contractor shall place the permanent pavement markings; solid white lane edge (SWEL), solid yellow edge line (SYEL), broken white lane line(s) (BWLL), solid white lane line (SWLL) and dotted white line (DWL), on new pavement at the end of each week prior to opening the work area to traffic unless approved otherwise by the Resident.

Care shall be taken when working near catch basins to ensure foreign material and contaminants do not enter the basin. If foreign material and/or contaminants enter the basin, it shall be removed prior to the material exiting the basin into a waterway. Removal shall be completed to the satisfaction of the Resident and payment shall be incidental to the Contract.

Silt fence and/or haybales shall be used to protect the pipe outlets from all catch basins that are scheduled to be rebuilt. The quantity of silt fence and/or haybales at the outlets will be determined in the field by the Resident. The silt fence and/or hay bales will be paid for under Item 656.50, Baled Hay and Item 656.632, Temporary Silt Fence.

## Equipment Storage

The Contractor shall submit his proposed construction staging and storage areas for approval by the Resident.

The following Subsection is added:

### 107.4.8 Failure to Complete Daily Work on Time (Lane Rental)

Both roadways shall have two lanes and acceleration/deceleration lanes, fully open to traffic for all times outside the allowed lane closure times. The Contractor shall pay a \$500.00 lane rental fee for each five (5) minute block of time or portion thereof that each lane closure remains in place outside the allowed times on each roadway.

The travel lanes shall not be opened to traffic until the pavement internal temperature has cooled to 120°F, pavement markers (temporary and/or permanent) have been installed, and all traffic control devices have been removed from the travel lanes to the satisfaction of the Resident.



SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Existing Structural Concrete)  
(Removing Pavement Surface-Mainline)

202.01 Description

The following paragraphs are added:

The Contractor may not dispose of demolition concrete within the Project Limits. All materials shall become the property of the Contractor and shall be removed from the site at the completion of the project. 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 the Maine Department of Environmental Protection Solid Waste Regulations.

The following sentences are added:

This work shall also consist of removing the surface of the bituminous concrete pavement in all locations to the depth, width, grade, and cross section on the mainline as shown on the Plans or as directed by the Resident.

Removal of the pavement and membrane surface from the bridge decks shall be completed by scraping or other methods that will not damage the existing concrete deck surface. Milling of bridge deck pavement shall not be allowed.

Removal of approach pavement shall be completed through the use of a milling machine. The milling machine(s) shall be capable of accurately establishing profile grades by referencing from a floating straight edge, a minimum of 30 feet.

Areas requiring shim pavement to reach final pavement grade shall not be milled.

This work shall also consist of construction of temporary ramps at all butt joints as shown in the MaineDOT Standard Details, November 2014 Edition – Pavement Overlay Butt Joint Detail (Roadways), Page 202(01) or as approved by the Resident. The length of the temporary ramp shall be at least 1/2 L.

The following subsection is added:

202.061 Removing Pavement Surface

This Subsection is deleted and replaced with the following:

The equipment for removing the bituminous surface, excluding bridge decks, shall be a power-operated milling machine or planer capable of removing the bituminous concrete pavement to the required depth, transverse cross slope, and profile grade by use of an automated grade and slope control system. The controls shall automatically increase or decrease the pavement removal depth as required, and readily maintain desired cross slope to compensate for surface irregularities in the existing pavement course. The mill head on the machine shall have a maximum 8mm tooth spacing pattern and a minimum triple wrap configuration. The milling machine shall be capable of accurately establishing profile grades by referencing from a floating straight edge, minimum of 30± feet. The equipment shall also have an effective means for removing excess material from the surface and preventing flying material in compliance with Subsections 105.2.5 Compliance with Health and Safety Laws and 105.2.6 Convenience of the Public, of the Specification.

The forty-five degree pavement safety edge needed between lanes 1 and 2 and between lane 2 and the eight foot shoulder shall be incidental to the 202 pay items.

The Contractor shall locate, identify and remove all objects in the pavement through the work area that would be detrimental to the milling machine.

The Contractor shall be responsible for the layout of the longitudinal centerline between the travel lane and passing lane.

The finished milled surface will be inspected before being accepted, and any deviations in the profile exceeding 3/8 inch under a 16 foot string line or straightedge placed parallel to the centerline will be corrected. Any deviations in the cross slope that exceed 3/8 inch under a 10 foot string line or straightedge placed transversely to the centerline will be corrected. In no case shall the cross slope in a single lane width be inverted resulting in a depression as measured transverse to the direction of travel. Any cross slope inversions or depressions shall be corrected by spot shimming the area with HMA as directed by the resident prior to installing any leveling or wearing course. These corrections shall be done with no additional expense to the Authority.

All surplus pavement grindings, except for the amount specified above, shall be disposed of by the Contractor off the turnpike right-of-way. All grindings shall be disposed of in accordance with the Maine Department of Environmental Protection Solid Waste Management Requirements.

202.07 Method of Measurement

The removal of existing bituminous concrete pavement – mainline will be measured by the square yard of material removed to the required depth.

The following sentences are added:

Transporting and stockpiling of the pavement grindings at the maintenance facilities will not be measured separately for payment, but shall be incidental to the Removing Pavement Surface items.

Installation of temporary bituminous ramps will not be measured separately for payment, but shall be incidental to the Contract.

Removal of temporary bituminous ramps will not be measured separately for payment, but shall be incidental to the Contract.

202.08 Basis of Payment

Removing Pavement Surface – Mainline will be paid for at unit price per square yard which price shall be full compensation for removing and disposing of the bituminous and gravel materials.

Payment will be made under:

| <u>Pay Item</u>                                   | <u>Pay Unit</u> |
|---|-----------------|
| 202.202      Removing Pavement Surface – Mainline | Square Yard     |

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Pavement Surface – Drainage Paths)

202.01 Description

The following paragraphs are added:

This work shall consist of grinding drainage paths in the existing inside and outside bituminous shoulders on the mainline and interchange ramps. The depth shall match the elevation of the adjacent milled travel lane. Locations and lengths of removal shall be as shown on the Plans or as directed by the Resident.

This work shall also consist of repaving the shoulder drainage paths with bituminous pavement to match the existing grades on each side of the drainage path to coincide with the paving operation of the adjacent travel lane as shown on the Plans or as directed by the Resident.

The following Subsection is added:

202.011 Materials

Grinding shall be done in accordance with Section 202.

Bituminous pavement shall conform to Section 401, Hot Mix Asphalt, 12.5 mm.

Bituminous tack coat shall conform to Section 409.

Joint sealant shall conform to ASTM D6690 Type IV.

202.06 Removing Bituminous Concrete Pavement

This Subsection is deleted and replaced with the following:

The drainage paths shall be milled concurrently with the adjacent travel lane milling. The drainage paths shall be located such that they include all of any milled section of an impacted rumble strip.

The drainage paths shall be installed at the roadway low points of the sag vertical curves and at 500 foot intervals in both the outside and inside shoulders. Drainage paths shall not be installed within 500 feet of the crest of a vertical curve. The drainage paths shall extend from the edge of the milled travel lane (Lane 2) and daylight six feet into the outside shoulder and from the edge of the milled passing lane (Lane 1) and the edge of pavement (4'-0") without guardrail.

All grindings shall be disposed of in accordance with the Maine Department of Environmental Protection Solid Waste Management Requirements.

The Contractor may request that the Resident waive the requirement for the installation of drains at 500 foot intervals. The Resident will consider the weather forecast as well as the Contractor's proposed paving schedule when reviewing the request.

The tapered sides of the outside drainage paths shall be milled to form a vertical face prior to paving. The drainage paths shall be joint sealed, tack coated, and paved concurrently with the adjacent lane.

The Contractor shall not be required to replace the shoulder rumble strips removed for the drainage paths.

Vehicles will be permitted to traverse unfilled drainage paths.

202.07 Method of Measurement

The second paragraph is deleted and replaced with the following:

Removing Pavement Surface – Drainage Paths shall be measured by the square foot.

202.08 Basis of Payment

The following is added after the last paragraph:

Removing Pavement Surface – Drainage Paths shall be paid for at the Contract unit price per square foot which includes all grinding, tack coat, sealant, bituminous pavement, equipment, labor, and incidentals necessary to satisfactorily complete the work.

Payment will be made under:

| <u>Pay Item</u> |  | <u>Pay Unit</u> |
|-----------------|--|-----------------|
| 202.2026        | Removing Pavement Surface – Drainage Paths | Square Foot     |

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Rumble Strips)

202.01 Description

The following sentences are added after the first paragraph:

This work shall consist of cutting a pattern of rumble strips from MM 98.0 to MM 102.17 on the northbound and southbound roadways at the locations shown on the Plans. Rumble strips shall not be placed across ramp openings or on bridges.

The following Subsections are added:

202.065 Rumble Strips

The rumble strips shall not be cut until the Contractor has placed the permanent pavement markings at the required locations.

At proposed rumble strip locations, the bituminous concrete paved surface shall be removed by milling in strips as detailed on the Plans and as directed by the Resident. The pattern will be 80 feet of rumble strips followed by a 20 foot space repeated along the entire length on the outside shoulder. The inside shoulder shall be continuous. The rumble strips shall be normal to the baseline of the roadway on tangent sections and radial on curves. The Contractor shall be responsible for the layout of the rumble strips. The milling machines for this type of rumble strip are designed by:

Surface Preparation Technology  
81 Texaco Road  
Mechanicsburg, PA 17055  
Tel. (717) 697-1450

L&C Flashing Barricades  
60 Walpole Street  
Canton, MA 02021  
Tel. (508) 580-6700

Thomas Grinding  
110 Fox Lane Southwest  
Moore Haven, FL 33471  
Tel. (863) 946-1461

The milling machine shall be equipped with a 20 foot pointer to provide longitudinal grade control.

202.07 Method of Measurement

The following paragraph is added:

Rumble Strips will be measured by the actual number cut, completed and accepted.

Layout of rumble strips, disposal of milled bituminous pavement and roadway cleanup will not be measured separately for payment, but shall be incidental to this item.

202.08 Basis of Payment

The following sentences are added:

Rumble Strips will be paid for at the Contract unit price per each, which price shall be full compensation for all labor, materials, equipment and incidental items of work for a complete installation.

Payment will be made under:

| <u>Pay Item</u> |               | <u>Pay Unit</u> |
|-----------------|---------------|-----------------|
| 202.205         | Rumble Strips | Each            |

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Rumble Strips)

202.01 Description

The following paragraph is added:

This work shall consist of grinding Lane 2 shoulder existing rumble strips located at Route 126 southbound to a depth of 1-1/2 inches, coating vertical and horizontal surfaces with bituminous tack coat, and installing 1-1/2 inches of hot mix asphalt, 9.5 mm over the entire milled area. Location and lengths of removal shall be as shown on the Plans or as approved by the Resident.

The following Subsections are added:

202.011 Materials

Grinding shall be done in accordance with Section 202. Bituminous tack coat shall conform to Section 409.

Hot mix asphalt, 9.5 mm shall conform to Section 401.

202.025 General

Existing rumble strips are approximately 16 inches long, seven inches wide, 1/2 inch deep, and spaced approximately every five inches.

202.07 Method of Measurement

The following paragraph is added:

Removing Rumble Strips shall be measured by the linear foot removed and accepted. Measurement shall be parallel to the baseline.

202.08 Basis of Payment

The following sentences are added:

Removing Rumble Strips shall be paid for at the Contract unit price per linear foot which includes all grinding, bituminous tack coat, pavement, equipment and labor necessary to satisfactorily complete the work.



Payment will be made under:

Pay Item

Pay Unit

202.206      Removing Rumble Strips

Linear Foot

SPECIAL PROVISION

SECTION 401

HOT MIX ASPHALT PAVEMENT

Section 401 of the Maine Turnpike Authority 2016 Supplemental Specifications is modified as follows:

401.01 Description

The following paragraph is added:

A Quality Control Plan(QCP) is required.

401.02 Materials

Section 401.02 is deleted in its entirety and replaced with the following:

Aggregates for HMA Pavements Coarse Aggregate and fine aggregate for HMA pavements shall be graded such that when combined in the proper proportions, including filler if required, the resultant blend will meet the composition of mixture for the type of pavement specified. Materials shall meet the requirements specified in Section 700 – Materials:

|                             |        |
|-----------------------------|--------|
| Asphalt Cement              | 702.01 |
| Aggregates for HMA Pavement | 703.07 |
| RAP for HMA Pavement        | 703.08 |
| HMA Mixture Composition     | 703.09 |

Mainline Surface HMA Coarse aggregate: The material retained on the No. 4 sieve, shall consist of angular fragments obtained from crushed quarry stone and be free of dirt or other objectionable materials. Coarse aggregate shall have a Micro-Deval value of 16.0 percent or less as determined by AASHTO T 327. The crushed stone shall have a maximum of 1.5% material finer than the No. 200 mesh when tested in accordance with AASHTO T-11. Flat and elongated particles shall not exceed a maximum of 8% at a 5:1 ratio in accordance with ASTM D-4791. Coarse aggregate angularity shall be a minimum of 95/90 in accordance with AASHTO T-335.

Mainline Surface HMA Fine aggregate: The material passing the No. 4 sieve, shall be crushed manufactured sand free from dirt, clay balls, or other objectionable material. Natural sand may be incorporated into the mix at a rate no greater than 13 percent by weight of total aggregate. The unconfined void content of the fine aggregate blend shall be a 45 minimum value when tested in accordance with AASHTO T-304, method A. AASHTO T-176 sand equivalent value shall be 45 minimum.

Asphalt Low Modulus Joint Sealer: Asphalt Low Modulus Joint Sealer shall be a modified asphalt and rubber compound designed for sealing and improving the strength and performance of the base asphalt cement and shall conform to ASTM D6690 Type IV and the following specifications:

|                                   |  |
|-----------------------------------|--|
| Cone Penetration                  | 90-150   |
| Flow @ 60°C [140°F]               | 3.0mm [1/8 in] max   |
| Bond, non-immersed                | Three 12.7mm [½ in] specimens pass<br>3 cycles @ 200% extension @ -29°C<br>[-20°F] |
| Resilience, %                     | 60 min   |
| Asphalt Compatibility, ASTM D5329 | pass*  |

\* There shall be no failure in adhesion, formation of any oily exudate at the interface between the sealant and asphaltic concrete or other deleterious effects on the asphaltic concrete or sealant when tested at 60°C [140°F].

The contractor shall provide the Resident or authorized representative with a copy of the material manufacturer's recommendations pertaining to heating, application, and reheating prior to the beginning of operations or the changing of materials.

#### Section 401.03 Composition of Mixtures

Section 401.03 is deleted in its entirety and replaced with the following:

HMA pavement mixtures for local road and bridge projects shall be a currently approved MDOT design.

HMA pavement mixtures for Mainline paving projects shall conform to the following requirements:

The Contractor shall compose the Hot Mix Asphalt Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), and mineral filler if required. HMA shall be designed and tested according to AASHTO R35 and the volumetric criteria in Table 1. The Contractor shall size, uniformly grade, and combine the aggregate fractions in proportions that provide a mixture meeting the grading requirements of the Job Mix Formula (JMF). The Contractor may use a maximum of 15 percent reclaimed asphalt pavement (RAP) in any mainline surface course, and a maximum of 20 percent RAP in any base, intermediate, or shim course. Current MaineDOT approved designs with up to 20 percent RAP will be allowed on local roads.

The Contractor shall submit a job mix formula (JMF) developed for each specified mixture at least 30 days prior to placement.

The JMF shall establish a single percentage of aggregate passing each sieve size within the limits shown in Subsection 703.09. The mixture shall be designed and produced, including all production tolerances, to comply with the allowable control points for the particular type of mixture as outlined in Subsection 703.09. The JMF shall state the original source, gradation, and percentage to be used of each portion of the aggregate and mineral filler if required. It shall also state the proposed PGAB content, the name and location of the refiner, the supplier, the source of

PGAB submitted for approval, the type of PGAB modification if applicable, and the location of the terminal if applicable.

In addition, the Contractor shall provide the following information with the proposed JMF:

- Properly completed JMF indicating all mix properties (Gmm, VMA, VFB, etc.).
- Stockpile Gradation Summary.
- Test reports for individual aggregate consensus properties
- Design Aggregate Structure Consensus Property Summary.
- Design Aggregate Structure Trial Blend Gradation Plots (0.45 power chart).
- Trial Blend Test Results for at least three different aggregate blends.
- Selected design aggregate blend.
- Test results for the selected design aggregate blend at a minimum of three binder contents.
- Test results for final selected blend compacted to  $N_{max}$ .
- Specific Gravity for the PGAB to be used.
- Recommended mixing and compaction temperatures from the PGAB supplier.
- Material Safety Data Sheets (MSDS) For PGAB.
- Asphalt Content vs. Air Voids trial blend curve.
- Test report for Contractor's Verification sample.
- Summary of RAP test results (if used), including count, average and standard deviation of binder content and gradation.

At the time of JMF submittal, the Contractor shall identify and make available the stockpiles of all proposed aggregates at the plant site. There must be a minimum of 150 ton for stone stockpiles, 75 ton for sand stockpiles, and 50 ton of blend sand before the Authority will sample. The Authority shall obtain samples for laboratory testing. The Contractor shall also make available to the Authority the PGAB proposed for use in the mix in sufficient quantity to test the properties of the asphalt and to produce samples for testing of the mixture. Before the start of paving, the Contractor and the Authority shall split a production sample for evaluation. The Contractor shall test its split of the sample and determine if the results meet the requirements. If the results are found to be acceptable, the Contractor will forward their results to the Authority's Lab, which will test the Authority's split of the sample. The results of the two split samples will be compared and shared between the Authority and the Contractor. If the Authority finds the mixture acceptable, an approved JMF will be forwarded to the Contractor.

The Authority will then notify the Contractor that paving may commence. The first day's production shall be monitored, and the approval may be withdrawn if the mixture exhibits undesirable characteristics such as checking, shoving or displacement. The Contractor shall be allowed to submit aim changes within 24 hours of receipt of the first Acceptance test result for an individual JMF. Adjustments will be allowed of up to 2% on the percent passing the 2.36 mm sieve through the 0.075 mm and 3% on the percent passing the 4.75 mm or larger sieves. Adjustments will be allowed on the %PGAB of up to 0.2 percent. Adjustments will be allowed on GMM of up to 0.010.

The Contractor shall submit a new JMF for approval each time a change in material source or materials properties is proposed. The same approval process shall be followed. The cold feed percentage of any aggregate except natural sand may be adjusted up to 10 percentage points from the amount listed on the JMF, however no aggregate listed on the JMF shall be eliminated. Natural sand may be adjusted up to 5 percent from the amount listed on the JMF but shall not exceed 13% by weight of total aggregates. The cold feed percentage for RAP may be reduced up to five percentage points from the amount listed on the JMF and shall not exceed the percentage of RAP approved in the JMF or for the specific application.

**TABLE 1**  
**VOLUMETRIC DESIGN CRITERIA**

| Design<br>ESAL's<br>(Millions) | Required Density<br>(Percent of $G_{mm}$ ) |              |             | Voids in the Mineral<br>Aggregate<br>(VMA)(Minimum Percent) |      |      |      | Voids Filled<br>with Binder<br>(VFB)<br>(Minimum<br>%) | Fines/Eff.<br>Binder<br>Ratio |
|--------------------------------|--|--------------|-------------|---|------|------|------|--|-------------------------------|
|                                |  |              |             | Nominal Maximum Aggregate<br>Size (mm)                      |      |      |      |  |                               |
|                                | $N_{initial}$                              | $N_{design}$ | $N_{max}$   | 19  | 12.5 | 9.5  | 4.75 |  |                               |
| 10 to <30                      | $\leq 89.0$                                | 96.0         | $\leq 98.0$ | 13.5  | 14.5 | 15.5 | 15.5 | 65-80*   | 0.6-1.2                       |

\* For 9.5 mm nominal maximum aggregate size mixtures, the maximum VFB is 82.

\* For 4.75 mm nominal maximum aggregate size mixtures, the maximum VFB is 84.

\* For 4.75mm nominal maximum aggregate size mixtures, the Fines/Effective Binder Ratio is 0.6-1.4

As part of the JMF submittal, there are Hamburg Wheel Tracker requirements, the Contractor shall provide the Authority the test results in accordance with AASHTO T324. The results shall be generated by a third party independent testing laboratory as approved by the Authority. The test results shall meet the requirements of Table 1A

**TABLE 1A**  
**HAMBURG WHEEL TRACKER REQUIREMENTS**

| Specified PG<br>Binder Grade | Test Temperature<br>(°C) | Maximum Rut<br>Depth (mm) | Minimum<br>Number of Passes | Minimum<br>Allowable SIP* |
|------------------------------|--------------------------|---------------------------|-----------------------------|---------------------------|
| 64-28                        | 45                       | 12.5                      | 20,000                      | 15,000                    |
| 64E-28                       | 45                       | 8.0                       | 20,000                      | 15,000                    |
| 70E-34                       | 45                       | 6.3                       | 20,000                      | 15,000                    |

\* As calculated by the most recently published version of the Maine DOT HWT worksheet, which is available online at <http://www.maine.gov/mdot/contractors/publications/>

Section 401.08 Hauling Equipment Trucks for Hauling HMA

Add the following paragraph:

The undercarriage of haul units actively hauling HMA to the site shall be relatively free of dust / mud agglomerations. Haul units found to be contaminating the paving surface shall be removed from the site and cleaned prior to returning.

Section 401.091 Material Transfer Vehicle (MTV)

The fourth paragraph shall be deleted and replaced with:

The MTV shall be designed so that the mix receives additional mixing action.

Section 401.165 Longitudinal Joint Density

The first paragraph shall be deleted and replaced with:

When noted in Special Provision Section 403, the Authority will measure the pavement density of longitudinal joints between adjoining mainline travel lanes in both the unconfined and confined condition as determined by the days paving operation.

The eighth paragraph shall be deleted and replaced with:

The minimum density of the completed pavement shall be 92.0 percent of the theoretical maximum density obtained. Two consecutive failing tests shall result in production shut down. Prior to resuming paving operations, the contractor quality control unit shall satisfy the Authority that the paving operation will produce joint densities in compliance with the Specifications.

The eleventh paragraph and associated table shall be deleted and replaced with:

Payment reduction will be applied to each subplot that has a density lower than 92.0% as outlined below.

| PERCENT COMPACTION | PERCENT PAY |
|--------------------|-------------|
| 92.0 or greater    | 100         |
| 91.9 to 90.0       | 95          |
| 89.9 or less       | 90          |

#### Section 401.17 Joints

The fourth paragraph shall be deleted and replaced with:

When required by Special Provision Section 403, Mainline Longitudinal joints shall be constructed as notched-wedge joint and constructed in a manner that will best ensure joint integrity.

#### Section 401.18 Quality Control

The following shall be added to section c. Quality Control Technician(s) QCT:

The QCT shall be on site during paving operations performing quality control activities. QCT's shall not act as equipment operators or laborers.

#### Section 401.191 Inspection/Testing

In paragraph nine delete and replace Item #8 with:

8. Secure High Speed Internet Access

SPECIAL PROVISION

SECTION 401

HOT MIX ASPHALT PAVEMENTS

(HMA using Hydrated Lime)

The following sections of Section 400 have been revised with following additional requirements.

401.01 Description

The Contractor shall compose Hot Mix Asphalt (HMA) Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), hydrated lime, and mineral filler if required. Hydrated Lime shall be utilized in all mixtures so denoted in Special Provision 403 - Hot Mix Asphalt Pavement.

401.02 Materials

Materials shall meet the requirements specified.

Hydrated Lime

AASHTO 216

401.03 Composition of Mixtures

The Contractor shall compose the Hot Mix Asphalt Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), hydrated lime and mineral filler if required. HMA shall be designed and tested according to AASHTO R35 and the volumetric criteria in Table 1. The Contractor shall size, uniformly grade, and combine the aggregate fractions in proportions that provide a mixture meeting the grading requirements of the Job Mix Formula (JMF).

Hydrated lime shall be used in all HMA at a rate of one percent (1%) by weight of the total dry aggregate including RAP aggregate, if used. The Contractor shall obtain a shipping ticket for each shipment of hydrated lime. The Contractor shall provide the Resident with a copy of each shipping ticket from the supplier, including the date, time and weight of hydrated lime shipped and used in HMA production. The Contractor shall submit a material data sheet for the hydrated lime to the Resident for approval.

The Contractor shall provide the following information with the proposed JMF:

Material Safety Data Sheets (MSDS) for hydrated lime

Supplier and source for Hydrated Lime

401.13 Preparation of Aggregates

The Contractor shall add water to the aggregates as required to maintain a minimum total aggregate moisture content of 3 percent. The Contractor shall mix the lime uniformly with the aggregate before introducing the aggregate into the dryer or dryer drum. Hydrated lime



introduction systems must be controlled by a proportioning device to the amount required on the JMF plus or minus 0.1% of the target.

The Contractor shall add lime to the aggregate by one of the following methods:

- A. The Contractor shall add lime to the combined cold feed aggregate using an enclosed in-line cold feed mechanical pugmill mixer. The Contractor shall use a twin-shaft, continuous mixing pugmill with mixing paddles to thoroughly blend the lime with the aggregate. The Contractor shall adjust the retention time of the mixture in the pugmill so no unmixed lime is visible after the lime and aggregate exit the pugmill.
- B. The Contractor shall add lime to the produced aggregates during stockpiling using a pugmill. The Contractor shall distribute the lime per the stockpile ratios stated in the asphalt concrete mix design. A minimum moisture content of 2 percent by dry weight for coarse aggregate and 4 percent by dry weight for fine aggregate is required at the time the aggregates and lime are mixed. The Contractor shall marinate treated aggregate in stockpiles from 24 hours to 60 days before using in asphalt concrete mix. Do not use aggregate marinated longer than 60 days.
- C. The Contractor shall add lime to the combined cold feed aggregate by introducing the lime between aggregate layers as the aggregate flows from the cold feed bins. The Contractor shall thoroughly mix the lime and aggregate on the conveyor belt. The Contractor shall provide a lime introduction system so that no unmixed lime is visible before the lime and combined aggregate enter the drum.
- D. Other methods of hydrated lime introduction as approved by the Authority.

The cold storage for hydrated lime shall be a separate bulk storage bin with a vane feeder or other approved feeder system which can be readily calibrated. The system shall provide a means for convenient sampling of the hydrated lime additive and verifying the quantity of lime dispensed. If the hydrated lime is to be introduced directly into the plant then the additive equipment shall be synchronized with the cold feed controls to operate concurrently with the cold feed operation. The system will be configured to automatically adjust the hydrated lime feed to variations in the cold aggregate feed. The hydrated lime system shall have out-of-tolerance sensing ability by weight, and have a means to indicate the out-of-tolerance condition.

#### 401.14 Mixing

Hydrated lime shall be added into the HMA aggregate mixture prior to the aggregate blend mixing with the PGAB. Aggregate feed rate, or pugmill mixing times shall be adjusted to ensure complete blending of Hydrated Lime and aggregate before the PGAB is added.

#### 401.18 Quality Control

The Contractor shall provide a written supplement to the project specific QCP outlining the proposed methods of adding and mixing the hydrated lime for approval by the Authority. This written summary shall also provide information describing how the Contractor will perform quality control on the addition of hydrated lime, specifically the method of introduction and how the lime use will be measured to assure that the specified percentage is consistently added, and

appropriately mixed. The supplemental QCP covering hydrated lime introduction shall be provided to the Authority at least one week prior to the prepave meeting.

## SPECIAL PROVISION

### SECTION 403

#### HOT MIX ASPHALT PAVEMENT

##### 403.01 Description

This work shall also consist of the construction, maintenance and removal of all temporary bituminous ramps at locations as shown on the Plans or as directed by the Resident.

##### 403.02 General

The Contractor shall compose the Hot Mix Asphalt Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), and mineral filler if required. The Performance Graded Asphalt Binder (PGAB) shall be polymer modified as detailed in this special provision and shall conform to the requirements of AASHTO M 332 (including Appendix 1). The PG64E-28 Binder shall contain a minimum of 2.5% Styrene-Butadiene-Styrene (SBS) polymer {BWT} in a homogeneous blend with a minimum average percent recovery of 75% as determined by AASHTO T350 @ 3.2 kPA (R3.2) on RTFO residue at 64°C to assure significant polymer load and performance. The stability of the modified binder shall be verified in accordance with ATSM D7173 using the Dynamic Shear Rheometer (DSR). The DSR  $G^*/\sin(\delta)$  results from the top and bottom sections of the ATSM D7173 test shall not differ by more than 10%. The results of ASTM D7173 shall be included on the Certified Test Report.

When required PG70E-34 Binder shall be modified with Styrene-Butadiene-Styrene (SBS) polymer {BWT} in a homogeneous blend with a minimum average percent recovery of 75% as determined by AASHTO T350 @ 3.2 kPA (R3.2) on RTFO residue at 70°C to assure significant polymer load and performance. The stability of the modified binder shall be verified in accordance with ATSM D7173 using the Dynamic Shear Rheometer (DSR). The DSR  $G^*/\sin(\delta)$  results from the top and bottom sections of the ATSM D7173 test shall not differ by more than 10%. The results of ASTM D7173 shall be included on the Certified Test Report.

##### 403.03 Construction

All areas which have been milled or overlaid shall have a minimum length temporary ramp constructed as determined by the Resident at the milled or overlaid limits prior to opening the roadway to traffic. Temporary ramps shall be constructed using the same material as being placed on that day or as directed by the Resident. All temporary ramps are to be constructed on a sand joint. The Contractor shall be responsible for all repairs and maintenance required for the temporary ramps.

The Contractor shall be responsible for the layout of the longitudinal centerline between the travel lanes.

The sand and loose debris adjacent to the median guardrail shall be removed and disposed of by the Contractor off of Turnpike property.

The forty-five degree pavement safety edge needed between lanes 1 and 2 shall be incidental to the 202 pay items.

A test section in Lane 2 containing a minimum of 500 tons of HMA shall be constructed on the project using PG70E-34 binder including Zycotherm added at a rate of 0.1% BWT of PGAB

A minimum test strip of 100 tons placed at a nominal depth of 1 ½ inches, full lane width, shall be required. It shall be evaluated under testing requirements for mix volumetric and density. The exact location will be identified by the Authority. Prior to placement of the test strip, a leveling course (Item 403.211) shall be placed at the chosen location. A fog coat of Item 409.15, Bituminous Tack Coat, shall be applied to the level course prior to the placement of the HMA surface course, payment to be made under the 409.15 pay item. The test strip will be excluded from the remainder of the projects' QA analysis. The Contractor shall notify the Authority at least 48 hours in advance of placing the test strip. The test strip is intended to allow the Contractor to establish a method of compaction and adjust plant settings prior to mainline plant production.

#### 403.04 Method of Measurement

The construction and removal of temporary ramps on sand joints, and maintaining the ramps will not be measured separately for payment, but shall be incidental to Items 403.

The removal of sand and loose debris will not be measured separately for payment, but shall be incidental to paving items.

Hot Mix Asphalt, 12.5 mm (Polymer Modified pavement with (up to) 15% RAP, placed as a wearing surface will be measured under Item 403.2081 Hot Mix Asphalt, 12.5 mm (Polymer Modified) - RAP.

Hot Mix Asphalt, 12.5 mm (Polymer Modified pavement with (up to) 15% RAP, placed as a wearing surface will be measured under Item 403.20811 Hot Mix Asphalt, 12.5 mm (Polymer Modified) - RAP.

403.05 Basis of Payment

Hot Mix Asphalt, 12.5 mm (Polymer Modified) pavement with (up to) 15% RAP, placed as a wearing surface will be paid under Item 403.2081 Hot Mix Asphalt, 12.5 mm (Polymer Modified) – RAP.

Hot Mix Asphalt, 12.5 mm (Polymer Modified) pavement with (up to) 15% RAP, placed as a wearing surface will be paid under Item 403.20811 Hot Mix Asphalt, 12.5 mm (Polymer Modified) – RAP.

The following pay items are added:

| <u>Pay Item</u> |  | <u>Pay Unit</u> |
|-----------------|--|-----------------|
| 403.2081        | Hot Mix Asphalt, 12.5 mm (Polymer Modified) – RAP                                      | Ton             |
| 403.20811       | Hot Mix Asphalt, 12.5 mm (Polymer Modified) – RAP                                      | Ton             |
| 403.2084        | Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (sidewalks,drives, islands& incidentals) | Ton             |

SPECIAL PROVISION

SECTION 403

HOT MIX ASPHALT PAVEMENT

| Course | HMA Grading | Item Number | Total Thickness | No. of Layers | Complimentary Notes |
|--------|-------------|-------------|-----------------|---------------|---------------------|
|--------|-------------|-------------|-----------------|---------------|---------------------|

Mainline Mill and Fill and Shim and Overlay

|              |        |           |        |          |                         |
|--------------|--------|-----------|--------|----------|-------------------------|
| Wearing      | 12.5mm | 403.2081  | 1.5"   | 1        | A,C,F,G,H,I,J,K,L,M,N,O |
| Intermediate | 12.5mm | 403.213   | 1.75"  | 2        | B,E,J,L,N               |
| Base         | 19.0mm | 403.207   | 2-2.5" | multiple | B,E,J,L,N               |
| Shim         | 4.75mm | 403.212   | 1/2"   | 1        | B,E,J,L,N               |
| Wearing      | 12.5mm | 403.20811 | 1.5"   | 1        | A.1,C,F,G,H,I,J,K,L,N,O |
|              |        |           |        |          |                         |

COMPLEMENTARY NOTES

- A. The required PGAB for this mixture shall be **64E-28**.
- A.1 The required PGAB for this mixture shall be **70E-34**.
- B. The required PGAB for this mixture shall be **64-28**.
- C. A maximum of 15 percent RAP may be used.
- D. RAP may not be used.
- E. The Maine DOT will conduct the job mix verification. The aggregate qualities shall meet the design traffic level of 3 to <10 million ESALS for mix placed under this contract. The design verification, Quality Control, and Acceptance tests for this mix will be performed at **75 gyrations**. (N design) Minimum and Maximum PGAB content shall not apply.
- F. The MTA will conduct the job mix verification. The aggregate qualities shall meet the design traffic level of 10 to <30 million ESALS for mix placed under this contract. The design verification, Quality Control, and Acceptance tests for this mix will be performed at **75 gyrations**. (N design)
- G. A material transfer vehicle (MTV) shall be used for the placement of Hot Mix Asphalt wearing surface on all roadways including acceleration and deceleration lanes and all ramps.
- H. Joints shall be constructed as the "notched wedge" type in accordance with Subsection 401.17.
- I. Joint density will be measured in accordance with Subsection 401.165.
- J. Tack coat shall be applied between all layers of pavement at a rate of 0.04 G/SY.
- K. PGAB shall conform to the provisions of 403.02 – Polymer Modified PGAB for HMA
- L. The contractor shall furnish a quality control technician equipped with an approved densometer to ensure density requirements are met.
- M. Hydrated Lime shall be incorporated into the mixture.
- N. No vehicular loads shall be permitted on newly completed pavement until adequate stability has been attained and the material has cooled sufficiently to prevent distortion or loss of fines. The newly paved area may be opened to traffic after the internal temperature of the pavement has cooled to 120° F. The Resident will test the internal

- temperature of the pavement and shall be the sole judge as to the opening to traffic. The period of time before opening to traffic may be extended at the discretion of the Resident. The lane closure may not be removed until the internal temperature has cooled to 120° F.
- O. The warm mix/antistrip additive Zycotherm manufactured by Zydex Industries shall be incorporated into the PGAB at a rate of 0.1%.

SPECIAL PROVISION

SECTION 409

BITUMINOUS TACK COAT

409.01 Description

This Subsection is deleted and replaced with the following:

This work consists of furnishing and applying one uniform application of UltraTack (NTSS-1HM) by Blacklidge or an approved equal as indicated in this specification and as per manufacturers' recommendation.

409.05 Equipment

Add "or as determined by the Resident", after the words "gal/yd<sup>2</sup>]" in the fourth line of the second paragraph of this Subsection.

409.06 Preparation of Surface

The following paragraph is added:

All existing pavement and shoulder areas on which bituminous concrete mixtures are to be placed shall receive a tack coat. The surface area where the tack coat is to be applied shall be dry and cleaned of all dirt, sand, and loose material. Cleaning shall be accomplished by use of revolving brooms or mechanical sweepers. Undesirable material not removed by the above means shall be cleaned by hand sweeping or scraping, or a combination of both. Small areas otherwise inaccessible may be swept with hand brooms. The tack coat shall be applied only when the existing surface is dry.

409.08 Method of Measurement

The following paragraphs are added:

Measurement will be based on delivery slips made out in duplicate by the Contractor and signed by the Resident, or his representative, at the point of delivery. One of these slips shall be retained by the Resident and one by the Contractor. Delivery slips shall be furnished by the Contractor and shall provide space for identifying the vehicle and driver, for stating the volume of material carried, the source of the material, the date, and the Resident or his representative's signature.

Material included in the delivery slips and not used or rejected shall be deducted from the amount being measured for payment. Each day's delivery slips shall be reconciled by the Contractor and the Resident within 24-hours.

Cleaning of the surface area where tack coat is to be applied shall be incidental to Item 409.152, Bituminous Tack Coat - Applied.



409.09 Basis of Payment

The following pay items are added:

| <u>Pay Item</u> |                                | <u>Pay Unit</u> |
|-----------------|--------------------------------|-----------------|
| 409.152         | Bituminous Tack Coat – Applied | Gallon          |

SPECIAL PROVISION

SECTION 419

SAWING AND SEALING JOINTS IN BITUMINOUS PAVEMENT

(Sawing Bituminous Pavement)

419.01 Description

This work consists of sawing bituminous concrete pavement as shown on the Plans, as specified herein or as approved by the Resident.

419.02 General

The bituminous concrete pavement to be sawed shall be accurately marked before cutting. The marking shall be in accordance with the locations as shown on the Plans or as approved by the Resident. Cutting shall be with an approved power driven saw with an abrasive blade.

Unless otherwise noted or directed, the sawcut shall be vertical, a minimum of 3/8 inch wide, and extend to the depth as shown on the Plans.

Residue or debris from the sawing operation shall be removed immediately and legally disposed of by the Contractor.

419.03 Method of Measurement

Sawing Bituminous Pavement will be measured by the linear foot of pavement actually cut and accepted. No additional payment will be made for variations in the pavement thickness.

419.04 Basis of Payment

Sawing Bituminous Pavement will be paid for at the Contract unit price per linear foot which shall be full compensation for all materials, tools, equipment labor, and all incidentals necessary for the completion of the work to the satisfaction of the Resident. The disposal of sawcut residue shall be incidental to this item.

Payment will be made under:

Pay Item

Pay Unit

|         |  |             |
|---------|--|-------------|
| 419.30  | Sawing Bituminous Pavement             | Linear Foot |
| 419.301 | Sawing and Sealing Bituminous Pavement | Linear Foot |

## SPECIAL PROVISION

### SECTION 424

#### ASPHALT RUBBER MASTIC CRACK SEALER

##### 424.01 Description

This work shall consist of the furnishing and placement of a mastic material in the longitudinal, transverse and random cracks of the milled bituminous concrete pavement in accordance with these Special Provisions.

Placement shall consist of:

1. Crack cleaning and drying
2. Material preparation and application
3. Material finishing and shaping.

##### 424.02 Materials

GAP 201 Mastic shall be supplied by Maxwell Products or an approved equal designed especially for improving the strength and performance of the base asphalt cement with sealant and engineered aggregates.

##### 424.03 Weather

Mastic shall not be applied on a wet surface or when the atmospheric temperature is below 45°F as determined by an approved thermometer (placed in the shade at the crack sealing location), or when weather conditions are otherwise unfavorable for proper construction procedures.

##### 424.04 Equipment

Equipment used in the performance of the work shall be subject to the Resident's or authorized representative's approval and shall be maintained in a satisfactory working condition at all times.

(a) Air Compressor: Air compressors shall be portable and capable of furnishing not less than 4 yd<sup>3</sup> of air per minute at not less than 90 psi pressure at the nozzle. The compressor shall be equipped with traps that will maintain the compressed air free of oil and water.

(b) Sweeper: Manually operated, gas powered air-broom or self-propelled sweeper designed especially for use in cleaning pavements shall be used to remove debris, dirt, and dust from the cracks.

(c) Hot Air Lance: Should operate with propane and compressed air in combination at 2000°F - 3000°F, exit air heated at 310 m/s [1000 ft/s]. The lance should draw propane from no

smaller than a 100 pound tank using separate hoses for propane and air draw. The hoses shall be wrapped together with reflectorized wrap to keep them together and to protect workers in low light situations.

(d) Hand Tools: Shall consist of a square shaped box screed, brooms, shovels, metal bars with chisel shaped ends, and any other tools which may be satisfactorily used to accomplish this work. The joints shall be raked open.

(e) Melting Kettle: The unit used to melt the joint sealing compound shall be a double boiler. indirect fired type. The space between inner and outer shells shall be filled with a suitable heat transfer oil or substitute having a flash point of not less than 320°C [608°F]. The kettle shall be equipped with a satisfactory means of agitating and mixing the mastic. This may be accomplished by continuous stirring with mechanically operated paddles and/or a continuous circulating gear pump attached to the heating unit. The kettle must be equipped with thermostatic control calibrated between 200°F and 550°F.

#### 424.05 Preparations of Cracks

All cracks greater than 1 1/4 in shall be blown free and raked off of loose material, dirt, vegetation, and other debris by high pressure air. Material removed from the crack shall be removed from the pavement surface by means of a power sweeper or appropriate hand tools as required. Cracks showing evidence of vegetation after being blown out shall be additionally cleaned by appropriate hand tools and additionally blown out. All cracks must be blown and heated via the hot air lance 10 minutes prior to the crack being sealed. Distance between the hot air lance and the crack sealing unit should be no more than 50 ft to eliminate reinvasion of water, debris, and other incompressibles. All debris, vegetation, and water shall be removed to enhance adhesion of the crack sealing material. This work shall not be done in inclement weather.

#### 424.06 Preparation and Placement of mastic

The mastic material shall be heated and applied at the temperature specified by the manufacturer and approved by the Resident or authorized representative. Any material that has been heated above the manufacturer's specification longer than thirty minutes shall not be used. Material that is reheated or held at temperature for an extended period of time may be used as allowed by the manufacturer's specification and approval of the Resident or authorized representative. The Contractor shall provide the Resident or authorized representative with a suitable device for verifying the mastic temperature in the kettle and at the application site.

Any over application or spills are to be removed to the satisfaction of the Resident or authorized representative. Any sealed areas with damaged or contaminated sealer or visible voids are to be removed, prepared and resealed.

Mastic shall be delivered to the crack while the cracks are still hot from the hot air lance preparation through a pressure hose line and applicator shoe.. The cracks are to be filled, struck off with a 2" overband on each side and smoothed at the surface of the milled surface. A heated steel hotplate may be used on the surface of the repair area after the mastic has been applied. Any loose material on the surface or in the crack, which may contaminate the crack sealer or impede bonding of the sealant to the pavement, is to be removed by hand tools prior to crack

filling. No crack filling material shall be applied in a crack that is wet or where frost, snow, or ice is present.

424.07 Quality of Work

A Maxwell Products representative shall be present to verify the proper application, installation, material and pavement preparation on the first days' production. Excess of spilled mastic shall be removed from the pavement by approved methods and discarded. Any quality of work determined to be below normal acceptable standards will not be accepted and will be corrected and/or replaced as directed by the Resident or authorized representative at no additional expense to the Authority.

424.08 Method of Measurement

Asphalt Rubber Mastic Crack Sealer - Applied will be measured by the pound of mastic used. The manufacturer's weights of the mastic will be accepted as the basis for measurement.

424.09 Basis of Payment.

Asphalt Rubber Mastic Crack Sealer – Applied will be paid for at the contract unit price per pound complete in place. This price shall be full compensation for furnishing and placing crack sealer, including cleaning and drying cracks; and furnishing all labor, materials, tools, equipment and incidentals necessary to complete the work.

Payment will be made under:

| <u>Pay Item</u>                                      | <u>Pay Unit</u> |
|--|-----------------|
| 424.323 Asphalt Rubber Mastic Crack Sealer - Applied | Pound           |

SPECIAL PROVISION

SECTION 429

PAVEMENT REINFORCING SYSTEM

(Grid/Paving Fabric Composite Pavement Interlayer)

429.01 Description

This work consists of furnishing and placing a section of GlasGrid8511 interlayer in the HMA base layers. GlasGrid8511 shall be installed as indicated in this specification and as per manufacturers' recommendations.

429.02 General

The bituminous concrete pavement shall be milled five inches deep by twenty-four feet wide northbound at bridge location(Route 126 – MM101.7). The marking of the layout shall be checked and approved by the Resident.

The GlasGrid8511 interlayer shall be placed between the two layers of 1 3/4" - 12.5mm HMA as shown on the plans.

429.03 Method of Measurement

The Grid/Paving Fabric Composite Pavement Interlayer shall be measured by the square foot of pavement in place.

419.04 Basis of Payment

The accepted quantity of Grid/Paving Fabric Composite Pavement Interlayer will be paid for at the Contract unit price per square foot which shall be full compensation for all materials, tools, equipment labor, and all incidentals necessary for the completion of the work to the satisfaction of the Resident.

Payment will be made under:

| <u>Pay Item</u> |  | <u>Pay Unit</u> |
|-----------------|--|-----------------|
| 429.341         | Grid/Paving Fabric Composite Pavement Interlayer | Square Foot     |

SPECIAL PROVISION

SECTION 470

BERM DROPOFF CORRECTION

BERM CORRECTION

(Grindings)

470.01 Description

This work shall consist of furnishing and placing bituminous grindings to eliminate the berm dropoff along the inside and outside shoulder edges at all locations, including guardrail sections at locations shown on the plans or as directed by the Resident.

The work shall also consist of removing materials at the inside and outside shoulder edges at all locations, including guardrail sections at locations shown on the plans or as directed by the Resident.

470.02 Bituminous Materials

The recycled bituminous pavement shall be reprocessed (crushed) to meet the following gradations:

| Sieve Designation | Percentage by Weight<br>Passing Square Mesh Sieve |
|-------------------|---|
| ¾"                | 100   |
| ½"                | 95-100  |
| No. 4             | 50-80   |
| No. 50            | 18-28   |
| No. 200           | 3-10  |

470.03 Method of Construction

Work under this item shall be in accordance with the details as shown on the Plans or as directed by the Resident.

At a minimum, a walk behind plate compactor shall be used for compaction. Other methods may be used upon approval by the Resident.

470.04 Method of Measurement

Pavement grindings shall be measured by the ton.

Material included in the delivery slips and not used or rejected shall be deducted from the amount being measured for payment.

Material removed shall be measured by the linear foot.

470.05 Basis of Payment

The accepted quantity of “Berm Dropoff Correction – Grindings” will be paid for at the contract unit price per ton, which price shall include all materials, crushing to gradation range, weighing, transportation, placement, labor, equipment, and all incidentals necessary to accomplish the work.

The accepted quantity of “Berm Correction” will be paid for at the contract unit price per linear foot, which price shall include removing all materials, grading, transportation, labor, equipment, and all incidentals necessary to accomplish the work.

Payment will be made under:

| <u>Pay Item</u> |                                     | <u>Pay Unit</u> |
|-----------------|-------------------------------------|-----------------|
| 470.08          | Berm Dropoff Correction – Grindings | Ton             |
| 470.081         | Berm Correction                     | LF              |



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):

| <u>Maintenance Area</u>                         | <u>Linear Feet of Barrier</u> |
|---|-------------------------------|
| Gardiner Maintenance Area Mile 101.8 Northbound | 590.                          |

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:

| <u>Pay Item</u> |  | <u>Pay Unit</u> |
|-----------------|--|-----------------|
| 526.306         | Temporary Concrete Barrier, Type I – Supplied by Authority(590 LF) | Lump Sum        |

## SPECIAL PROVISION

### SECTION 527

#### ENERGY ABSORBING UNIT

(Energy Absorbing System (CAT) – New)

##### 527.01 Description

The following sentences are added:

This work consists of installing new Crash-cushion Attenuating Terminal (CAT) System as shown on the plans, backfilling post holes, and repairing pavements as required.

##### 527.02 Materials

The energy absorbing system shall be the SYRO® CAT-350 (SS-546) as manufactured by Trinity Industries, Inc. as approved and crash tested by the Federal Highway Administration. The units shall conform to the Federal NCHRP Report 350 Standard of Testing. Existing units shall be removed and reset as noted on the plans.

Reflective sheeting shall meet the requirements of Subsection 719.01, Reflective Sheeting - High Intensity Reflective Sheeting, Type III. Reflective sheeting shall be provided by the Authority.

Any parts and/or components of the Crash-cushion Attenuating Terminal (CAT) that are found to be deficient, damaged, or otherwise in unsatisfactory condition prior to removal shall be replaced by the contractor with parts and components furnished by the Authority.

Any parts and/or components of the Crash-cushion Attenuating Terminal (CAT) that are damaged by the contractor during removal and resetting of the units shall be replaced with new parts and/or components at no cost to the Authority.

##### 527.03 Construction Requirements

The Contractor shall submit a set of installation drawings to the Resident for approval. The system shall be installed in accordance with the manufacturer's recommendation and the installation drawings.

A 12" x 36" reflective adhesive sheeting shall be applied to the nose of the CAT System after fabrication. The color of the reflective sheeting shall be amber (yellow) when installed on the inside shoulder (median). Sheeting shall be provided by the Authority.

527.04 Method of Measurement

Energy Absorbing System (CAT) – New will be measured by each unit complete, in place and accepted.

527.05 Basis of Payment

Energy Absorbing System (CAT) – New will be paid for at the Contract unit price, complete in place and accepted. Payment shall be full compensation for furnishing all labor, equipment, materials and incidentals necessary to complete the work.

Connection of the CAT Systems to the existing median guardrail will not be paid for separately, but shall be incidental to Items 527.301 as appropriate.

Payment will be made under:

| <u>Pay Item</u>                                  | <u>Pay Unit</u> |
|--|-----------------|
| 527.301      Energy Absorbing System (CAT) – New | Each            |

SPECIAL PROVISION

SECTION 527

ENERGY ABSORBING UNIT

(Work Zone Crash Cushion)

527.01 Description

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

The Contractor shall furnish and install work zone crash cushions where shown on the Plans, as specified herein, in Special Provision 652, or as approved by the Resident. Work zone crash cushions are required at each exposed end of temporary concrete barrier or guardrail.

The exposed end of the concrete barrier within 30 feet of the mainline travel lane shall be protected at all times. Barrier shall not be reset until after the work zone crash cushion(s) has been set to protect the exposed end of the barrier.

527.02 Materials

The following paragraph is added:

Only work zone crash cushions meeting the NCHRP Report 350 TL-3 crash test requirements may be used on the turnpike and local roadways with posted speeds of 45 MPH or greater. Work zone crash cushions meeting the NCHRP Report 350 TL-2 crash test requirements may be used on local roadways with posted speeds of 40 MPH or less. The Contractor shall provide the Resident with documentation of the proposed work zone crash cushion's NCHRP Report 350 Crash Test Results prior to installation at the jobsite.

527.03 Construction Requirements

The following is added to the end of the first paragraph:

The design speeds for work zone crash cushions shall be 45 mph for local road and 70 mph for turnpike roadways unless otherwise noted on the Plans.

527.05 Basis of Payment

Payment will be made under:

| <u>Pay Item</u> |                                 | <u>Pay Unit</u> |
|-----------------|---------------------------------|-----------------|
| 527.341         | Work Zone Crash Cushions – TL-3 | Unit            |
| 527.342         | Work Zone Crash Cushions – TL-2 | Unit            |

SPECIAL PROVISION

SECTION 603

PIPE CULVERTS AND STORM DRAINS

(Reinforced Concrete Pipe)  
(Concrete Collar)

603.01 Description

The following paragraphs are added:

This work shall also consist of furnishing and installing Class III reinforced concrete pipe at the locations as shown on the Plans or as approved by the Resident. These pipes shall meet the requirements of Subsection 706.02.

This work shall also consist of furnishing and installing various sizes of corrugated HDPE pipe with a dual wall adaptor fitting by Hancor or an approved equal as shown on the plans.

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

603.11 Method of Measurement

The following paragraph is added:

The Concrete Collar shall be measured by each unit installed, complete in place and accepted. This shall be full compensation for furnishing labor and materials to construct a Concrete Collar to connect the existing and proposed pipe ends in a working like manner.

603.12 Basis of Payment

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

Payment will be made under:

| <u>Pay Item</u> |  | <u>Pay Unit</u> |
|-----------------|--|-----------------|
| 603.155         | 12 Inch Reinforced Concrete Pipe – Class III | Linear Foot     |
| 603.28          | Concrete Collar                              | Each            |
| 603.281         | Catch Basin Outlet Pipe Concrete Collar      | Each            |

SPECIAL PROVISION

SECTION 604

MANHOLES, INLETS AND CATCH BASINS

(Rebuild Catch Basin to Grade Type II)  
(Rebuild Catch Basin to Grade Type IV)

604.01 Description

This Subsection is amended by the addition of the following:

The Type II work shall consist of rebuilding catch basins as specified in the Specifications to grade, removing the existing unsound concrete, frame and grate, applying a bead of Elastomeric sealer to the frame seat and reinstalling the existing grate in accordance with these Specifications and in reasonable close conformity with the lines and grades as shown on the Plans.

The Type IV work shall consist of rebuilding catch basins as specified in the Specifications to grade, removing the existing unsound concrete, frame and grate, and reinstalling the existing frame and grate in accordance with these Specifications and in reasonable close conformity with the lines and grades as shown on the Plans.

The work locations are listed on the Drainage Summary sheets of the Plans.

604.02 Materials

The following sentences are added:

Elastomeric sealer shall be Sikaflex 1a as manufactured by Sika or an approved equal.

Class AAA concrete shall conform to Subsection 502.05; except that the minimum cement factor shall be 750 pounds per cubic yard and the coarse aggregate size shall conform to ASTM C33 Grading 7.

Catch Basin Frames and Grates shall be as outlined below and be manufactured by EJ Company of Brockton, Massachusetts or an approved equal and shall meet or exceed the AASHTO M306 Loading Requirements.

Catch Basin Frames shall be manufactured by EJ Company of Brockton, Massachusetts (or an approved equal) with the following product numbers:

5521Z - 8 Inch Frame Product Number 00552111  
5546Z - 6 Inch Frame Product Number 00554611  
5544Z - 4 Inch Frame Product Number 00554411

Catch Basin Frames shall be 8" frames unless otherwise specified by the plans or approved by the resident.



Catch Basin Grates shall be a square holed grate as manufactured by EJ Company of Brockton, Massachusetts (or an approved equal) with the following product number:

5520M5 Grate Product Number 00552060

If a cascade catch basin grate is specified on the plans then it shall be manufactured by EJ Company of Brockton, Massachusetts (or an approved equal) with the following product numbers depending on the direction of flow:

5520M8 Product Number 00552084 or 5520M8 Product Number 00552085

#### 604.04 Altering, Adjusting, and Rebuilding Catch Basins and Manholes

This Subsection is deleted and replaced with the following:

When adjusting the existing catch basins they shall be dismantled sufficiently to allow reconstruction in accordance with the following requirements and as shown on the Plans:

Any frame or grate damaged by the Contractor's operations shall be replaced by the Contractor at no additional cost to the Authority. Replacement frame and grate shall meet the requirements of Subsection 604.02. Damaged frames and grates shall become the property of the Contractor and shall be removed from Turnpike property.

#### Rebuild Catch Basin to Grade – Type II

The existing frame and grate shall be removed, stacked and reset. Remove all unsound concrete and anchor rods shall be removed to sound concrete as determined by the Resident. Install four Number 4 dowels, twelve inches in length, in each sidewall, reform catch basin to necessary grade using Class AAA concrete. The existing frame shall be reinstalled to the pavement grade as determined by the Resident.

Prior to installation of the grate, the frame shall be cleaned to accept a bead of elastomeric sealer. Sealer shall be placed in a continuous bead over the horizontal surface in accordance with the manufacturer's recommendation. The existing grate shall be reinstalled and allowed to set for a minimum of 1 ½-hour before receiving traffic loads.

#### Rebuild Catch Basin to Grade – Type IV

The existing frame and grate shall be removed, stacked and reset. Remove all unsound concrete and anchor rods to sound concrete as determined by the Resident. Install four Number 4 dowels, twelve inches in length, in each sidewall, reform catch basin to necessary grade using Class AAA concrete. Reinstall the existing frame and grate to the finished grade as designated by the Resident and construct a bituminous concrete waterway including regrading (raising) the drainage swale with gravel borrow.

The Contractor shall remove unsound concrete (two inches minimum) from the existing floor slab and replace if directed by the Resident. Existing sumps shall be retained in the basin. Prior to placement of the concrete, the catch basin floor and walls shall be cleaned of all debris, loose and foreign materials to the satisfaction of the Resident.

604.05 Method of Measurement

The following are added after Subsection e. Grate:

Rebuild Catch Basin to Grade – Type II will be measured for payment by each unit rebuilt, secured and accepted.

Rebuild Catch Basin to Grade – Type IV will be measured for payment by each unit rebuilt, and accepted.

Each unit includes removing and replacing a depth up to 12 inches from the bottom of the frame to the top of sound concrete in the wall. Each six inches of concrete removed and replaced over 12 inches will be measured for payment as one eighth (1/8) of a unit. Depth measurements in excess of the dimensions authorized will not be included.

604.06 Basis of Payment

The following paragraphs are added after the first paragraph:

The accepted quantity of Rebuild Catch Basin to Grade – Type II will be paid for at the Contract unit price each. This price shall be full compensation for removing existing frame and grate, rebuilding the catch basin top to grade, reinstalling the existing frame, cleaning the horizontal surface, applying the elastomeric sealer, reinstalling the existing grate, and all other labor, equipment and materials required to complete the work.

The accepted quantity of Rebuild Catch Basin to Grade – Type IV will be paid for at the Contract unit price each. This price shall be full compensation for removing existing frame and grate, rebuilding the catch basin top to grade, reinstalling the existing frame and grate, and all other labor, equipment and materials required to complete the work.

The second paragraph is deleted and replaced with the following:

Excavation and backfill will not be measured separately for payment, but shall be incidental to the following pay items.

Bituminous concrete waterways shall be paid for under Item 459.06 or 459.061.

Sawing bituminous pavement will not be measured separately for payment, but shall be incidental to the related drainage items.

Payment will be made under:

| <u>Pay Item</u> |  | <u>Pay Unit</u> |
|-----------------|--|-----------------|
| 604.184         | Rebuild Catch Basin to Grade – Type II | Each            |
| 604.186         | Rebuild Catch Basin to Grade – Type IV | Each            |

SPECIAL PROVISION

SECTION 606

GUARDRAIL

(Delineator Post)

(Delineator Post - Remove and Stack)

(Underdrain Delineator Post)

(Underdrain Delineator Post - Remove and Reset)

606.01 Description

The following paragraphs are added:

This work shall also consist of furnishing and installing new delineator posts and/or removing and resetting and/or removing and stacking existing delineator posts within the Contract limits at the Auburn Maintenance Facility at Mile Marker 76.9 NB. The existing reflectorized delineator panels shall be removed and replaced with new reflectorized delineator panels as required by the Resident.

Existing and new delineator posts shall be located as follows, with the indicated panel:

Outside Shoulder:

- One at guardrail trailing ends (green delineator).
- Two at guardrail approach ends (one red delineator on first post and one red delineator on angle points.)

Median:

- One at guardrail trailing ends (green delineator, facing traffic).
- Two at guardrail approach ends (one red delineator on first post of CAT units, green on guard rail side, red on median opening side; and one red (both sides) delineator at angle point.)
- One at all other median guardrail angle points (red on both sides)

Other Locations:

- One at culvert outlets (green delineator).
- Twenty per mile evenly spaced at the edge of outside shoulder (white delineator).
- One at electrical junction boxes not associated with another item (red delineator).
- One at communication only junction boxes not associates with another item (orange delineator).

Delineator posts that do not exist in the locations described above, shall be supplied and installed by the Contractor. The installation of the delineator post shall include the demountable reflectorized delineator panel.

White edge delineators shall not be installed on any portion of the widened shoulder for Guardrail 350 Flared Terminal installations, and shall not be installed behind the Guardrail 350 Flared Terminal rail segments.

#### 606.02 Materials

The following paragraphs are added:

Non-guardrail Delineator Posts shall conform to Subsection 606.02 paragraph 3.

The seventh through ninth sentences of the fourth paragraph are deleted and replaced with the following:

Reflectorized flexible guardrail markers shall be a minimum of 2-inches in diameter, a maximum of 36" in length, ovalized at the top of the post to allow application of 3-inch by 9-inch, high intensity reflective sheeting, and shall be capable of recovering from repeated impacts. The flexible guardrail delineator markers shall be grey and capped at the top with a flexible rubber cap; Safe-Hit Flexible Guardrail Delineator or approved equal. Reflective material shall meet the requirements of ASTM Type IX Diamond Grade VIP (Visual Impact Performance).

The demountable reflectorized delineator panels shall meet the material requirements of Subsection 719.06. The delineator panel shall be rectangles measuring 9" x 3".

#### 606.03 Posts

The following paragraphs are added:

The top of delineator posts shall be installed 4' - 6" (54") above edge of pavement elevation. Delineators shall be installed four feet from edge of pavement except those delineating end treatments, culverts and electrical items.

Mile marker posts shall be mounted on breakaway supports. The bottom of the sign shall be 5' - 0" (60") above the pavement at the solid white line and shall be offset five feet from the edge of pavement.

A mock-up of the guardrail delineator posts shall be submitted to the Resident for approval prior to installation.

Any materials damaged by the Contractor's operations shall be replaced at no additional cost to the Authority.

Top of the delineator panel shall be flush with the top of post.

606.08 Method of Measurement

The following paragraphs are added:

Delineator Posts shall be measured by each unit satisfactorily installed. Delineator Post-Removed and Reset will be measured by each unit satisfactorily removed and reset. Delineator Posts Removed and Stacked will be measured by each unit satisfactorily removed and stacked.

Mile Marker post shall be measured for payment as Delineator Post. The breakaway supports shall be incidental to the Underdrain Delineator Post pay item.

606.09 Basis of Payment

The following sentences are added:

The accepted quantity of Delineator Posts will be paid for under the Underdrain Delineator Post item, at the Contract unit price per each which price shall be full compensation for the post and specified delineator or mile marker panel, complete in place.

The accepted quantity of Delineator Post - Removed and Reset will be paid for at the Contract unit price each, which price shall be full compensation for removing and resetting the delineator panel or mile marker panel and post and all incidentals necessary to complete the work.

The accepted quantity of Delineator Posts Removed and Stacked will be paid for at the Contract unit price each, which price shall be full compensation for removing and stacking delineator panel or mile marker panel and posts and all incidentals necessary to complete the work.

Payment will be made under:

| <u>Pay Item</u> |   | <u>Pay Unit</u> |
|-----------------|---|-----------------|
| 606.353         | Delineator Post                               | Each            |
| 606.355         | Delineator Post - Remove and Stack            | Each            |
| 606.356         | Underdrain Delineator Post                    | Each            |
| 606.3561        | Underdrain Delineator Post - Remove and Reset | Each            |

SPECIAL PROVISION

SECTION 606

GUARDRAIL

(Guardrail – Remove, Modify and Reset, Single Rail)  
(Guardrail – Remove, Modify and Reset, Double Rail)  
(Guardrail Adjust – Single Rail)  
(Guardrail Adjust – Double Rail)

606.01 Description

The following paragraphs are added:

This work shall also consist of adjusting the height of the existing single and double rail guardrail in locations where the existing height of rail is not 30 inches. The guardrail shall be adjusted to a height of 30 inches. Existing single and double rail shall also be adjusted for lean.

The guardrail adjustment shall take place at all necessary locations; approximate locations are listed in the schedule of guardrail limits both median and outside shoulder. Exact locations for adjustment shall be determined by the Resident. If, during the course of the work, the contractor finds additional rail to be adjusted, then he shall notify the Resident, and the Resident determine if the rail is to be adjusted.

This work shall also consist of removing existing single and double guardrail elements, component parts and hardware suitable for replacement as approved by the Resident. Any guardrail elements, posts, component parts and hardware unsuitable for reuse shall become property of the Contractor.

Stockpiled materials, suitable for reuse, shall be utilized on Remove, Modify and Reset items prior to new materials being paid for.

Guardrail materials may be temporarily stockpiled at the West Gardiner Maintenance Facility at MM 101.8 NB.

This work shall consist of removing, disposing of existing guardrail elements, component parts and hardware, as directed by the Resident. All materials shall become the property of the Contractor and shall be removed from the site at the completion of the Project. 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 the Maine Department of Environmental Protection Solid Waste Regulations.

606.02 Materials

The following paragraph is added at the end of the subsection:

New non-wood offset blocks conforming to NCHRP 350 Test Level 3 shall be installed on all guardrail being reset. The existing steel offset brackets and backup plates shall become the property of the contractor.

The following Subsection is added:

#### 606.021 General

All existing guardrail to be raised or lowered shall be completed prior to new guardrail or end treatments being attached.

#### 606.036 Adjusting Existing Guardrail

Any materials or galvanizing damaged by the Contractor's operations shall be replaced or touched-up at no additional cost to the Authority.

Guardrail posts shall be raised to a minimum of five inches above final elevation prior to driving post to final elevation; this applies to both raising and lowering rail.

Any given length of guardrail to be adjusted shall be done in such a way that top of rail elevations do not vary drastically between each section of guardrail. Rail height tolerance shall be 30-inches, plus 0-inches, minus ½-inch. The 30-inches shall be measured from the edge of pavement to the top of rail beam when within 2 feet of the edge of pavement.

Rail shall be adjusted for lean where needed. All posts shall be plumb after adjusting for lean.

When the rail tapers from one bound to the other the rail shall be adjusted to the correct height on the farthest ends and shall be adjusted towards the center of the median to create a smooth line.

Earth around each adjusted or reset post shall be raked and compacted with a minimum 8-pound hand tamper or an approved device. Holes created due to adjusting or resetting a post shall be filled with a similar surrounding material and compacted.

#### 606.08 Method of Measurement

The following paragraphs are added:

Adjusting of both single and double rail guardrail shall be measured by the linear foot of Guardrail adjusted and accepted.

Raking and compacting the earth around each reset post with a minimum 8-pound hand tamper or an approved device, and infilling and compacting holes created due to resetting posts with a similar surrounding material will not be paid separately, but shall be incidental to the Guardrail - Remove, Modify and Reset Pay or Guardrail - Adjust pay items.

Guardrail removed and not reset or stacked shall be incidental to Contract Items and include all removal, disposal, equipment and labor necessary to satisfactorily complete the work.

Steel posts to replace damaged posts shall come from the stockpile of guardrail components to be disposed of, from this Contract and will not be measured separately for payment. If, in the opinion of the Resident, there are no suitable steel posts in the stockpile then steel posts will be measured for payment.

W-beam rail elements to replace damaged rail elements shall come from the stockpile of guardrail from the Remove and Stack or the guardrail to be disposed of from this Contract and will not be measured separately for payment. If, in the opinion of the Resident, there are no suitable W-beam rail elements in the stockpile then the W-beam rail elements will be measured for payment.

#### 606.09 Basis of Payment

The following paragraphs are added:

Adjusting of single and double rail guardrail will be paid for at the Contract unit price per linear foot and shall be full compensation for furnishing all labor, equipment and materials necessary to complete the work. Guardrail Adjust will not be measured for payment until all compaction has been completed.

The accepted quantity of guardrail removal will be paid for at the Contract unit price bid, which price shall be full compensation for removing, transporting and stacking all guardrail elements, component parts and hardware, equipment, labor and all incidentals necessary to complete the work. No additional payment will be made for double rail. Stockpiling existing rail elements, posts, and component parts will not be measured separately for payment, but shall be incidental to the guardrail items.

Payment will be made under:

| <u>Pay Item</u> |   | <u>Pay Unit</u> |
|-----------------|---|-----------------|
| 606.3605        | Guardrail – Remove, Modify, and Reset Single Rail | Linear Foot     |
| 606.3606        | Guardrail – Remove, Modify, and Reset Double Rail | Linear Foot     |
| 606.3621        | Guardrail Adjust, Single Rail                     | Linear Foot     |
| 606.3622        | Guardrail Adjust, Double Rail                     | Linear Foot     |



## SPECIAL PROVISION

### SECTION 606

#### GUARDRAIL

(Single Offset Block – W-Beam)

##### 606.01 Description

The following paragraph is added:

This work shall consist of furnishing and installing single offset blocks at all existing guardrail beam locations that are not part of a new or remove, modify and reset location and as shown on the Contract Documents. New NCHRP 350 compliant offset block shall be installed on existing galvanized steel posts and connected to Guardrail Type 3d and Thrie Beam Rail.

##### 606.02 Materials

The following sentences are added:

Offset blocks shall have passed NCHRP 350 Test Level 3 and shall not be wood.

The following Subsection is added:

##### 606.021 General

The existing median guardrail posts have four off-center bolt holes used to attach the existing steel offset blocks. The new offset blocks have two bolt holes centered on the W-beam section. The existing posts must be retrofitted to receive the new non-wood offset block assembly. Additional bolt holes required in the existing posts shall be drilled or punched but the size shall not exceed the dimension given by the manufacturer. Metal around the holes shall be cleaned and painted with a cold-applied zinc-rich paint. The holes shall not be burned with a torch.

The completed guardrail system shall be in conformance with the NCHRP 350 Test Level 3 requirements.

##### 606.08 Method of Measurement

The following paragraphs are added:

Single Offset Block - W-Beam and Single Offset Block - Thrie Beam shall be measured per each unit installed and accepted.

606.09 Basis of Payment

The following paragraphs are added:

New Single Offset Block - W-Beam and Single Offset Block - Thrie Beam furnished and installed at specified locations will be paid for at the Contract unit price each complete in place and accepted. Payment shall be full compensation for furnishing all labor, equipment and materials necessary to complete the work including, but not necessarily limited to, removal of existing rail beam, removal and disposal of existing offset block, drilling new holes in existing post, application of galvanized paint, furnishing and installing new non-wood offset block, removal and disposal of back-up plates, and resetting the rail beam.

Payment will be made under:

| <u>Pay Item</u>                           | <u>Pay Unit</u> |
|---|-----------------|
| 606.471      Single Offset Block – W-Beam | Each            |

SPECIAL PROVISION

SECTION 613

EROSION CONTROL BLANKET

613.01 Description

This work shall also include seeding, mulching and watering the median swale and/or longitudinal flow line to the limits and width as shown on the Plans or as directed by the Resident.

613.02 Materials

The following sentences are added:

Seeding shall meet the requirements of Section 618, Seeding, Method Number 2.

Mulch shall meet the requirements of Section 619.

The following Subsection is added:

613.041 Maintenance and Acceptance

See Section 618.10 for maintenance and acceptance of seeding.

613.042 Mulch

All mulch shall be placed after the area has been seeded and prior to the installation of the Erosion Control Blanket.

613.09 Basis of Payment

The following "and mulch" is added after the words "initial seeding" in the second sentence.

Payment will be made under:

| <u>Pay Item</u>                      | <u>Pay Unit</u> |
|--------------------------------------|-----------------|
| 613.319      Erosion Control Blanket | Square Yard     |

SPECIAL PROVISION

SECTION 619

MULCH

619.01 Description

The first paragraph is modified by the addition of the following:

“as a temporary or permanent erosion control measure” after the word “mulch”.

Add the following sentence at the end of the first paragraph:

Refer to Section 656 Temporary Soil and Water Pollution Control, for more information on Temporary Mulch.

619.03 General

The first paragraph is deleted and replaced with the following:

Cellulose fiber mulch shall not be used within 200 feet of a wetland or stream. The limits shall be 200 feet up station and down station of the wetland or streams as well as the slopes adjacent to the stream. The application of hay or straw mulch with an approved binder shall be used at these locations to prevent erosion.

The use of cellulose fiber mulch will only be allowed at other areas with the approval of the Resident. The Contractor may be required to demonstrate that the material may be applied in a manner that will prevent erosion and will aid in the establishment of permanent vegetation. The Resident reserves the right to require the use of hay or straw mulch at all locations if he determines that the cellulose mulch is ineffective. Cellulose fiber mulch is not acceptable for winter stabilization.

619.06 Method of Measurement

The following sentence is added:

Temporary Mulch will be paid for by the lump sum.

619.07 Basis of Payment

Temporary Mulch will be paid for at the Contract price per lump sum which shall be full compensation for furnishing and spreading the Temporary Mulch as many times as necessary as determined by the Contractor's operations and staging. The price shall also include the additional mulch netting and snow removal necessary during the winter months.

Payment will be made under:

| <u>Pay Item</u> |                 | <u>Pay Unit</u> |
|-----------------|-----------------|-----------------|
| 619.12          | Mulch           | Unit            |
| 619.1202        | Temporary Mulch | Lump Sum        |

SPECIAL PROVISION

SECTION 627

PAVEMENT MARKINGS

(Pavement Marking Paint)  
(Temporary Pavement Marking Paint)

627.01 Description

The following sentence is added:

This work shall consist of furnishing and placing pavement marking paint and temporary pavement marking paint at locations as shown on the Plans or as directed by the Resident.

Temporary pavement marking paint shall 6" wide for Maine Turnpike lines unless otherwise noted.

627.02 Materials

The following is added before the last paragraph:

The paint for pavement markings shall be 100% acrylic waterbase paint.

627.04 General

The third paragraph is deleted and replaced with the following:

Broken lines shall consist of alternate 10 foot painted line segments and 30 foot gaps.

Dotted white lines (DWL) shall consist of alternate 3 foot painted line segments and 9 foot gaps.

Permanent pavement marking paint shall be applied at the end of each work week prior to opening the work area to traffic or as approved by the Resident.

Temporary pavement marking paint and temporary pavement markers shall be applied daily prior to opening the work area to traffic during non-work hours or as approved by the Resident.

627.08 Removing Lines and Markings

The last sentence is deleted and is not replaced.

627.09 Method of Measurement

The second and third sentences in the second paragraph are deleted and replaced with the following:

The measurement of broken white lines, both permanent and temporary and dotted white lines, will include the gaps when painted. Temporary painted pavement marking lines will be measured for payment by the linear foot.

The dotted white lines will be measured for payment under Item 627.713.

627.10 Basis of Payment

This Subsection is deleted and replaced with the following:

The accepted quantity of white or yellow pavement marking lines will be paid at the Contract price per linear foot. This price shall include all labor and materials to furnish, and install the paint line.

The accepted quantity of broken and dotted white pavement marking lines will be paid at the Contract price per linear foot. This price shall include all labor and materials to furnish and install the paint line.

The accepted quantity of temporary white or yellow pavement marking lines will be paid at the Contract price per linear foot. This price shall include all labor and materials to furnish, install and maintain the paint marking.

Payment will be made under:

| <u>Pay Item</u> |  | <u>Pay Unit</u> |
|-----------------|--|-----------------|
| 627.712         | White or Yellow Pavement Marking Line            | Linear Foot     |
| 627.713         | Broken White Pavement Marking Line               | Linear Foot     |
| 627.78          | Temporary Pavement Marking Line, White or Yellow | Linear Foot     |

SPECIAL PROVISION

SECTION 627

PAVEMENT MARKINGS

(Temporary Raised Pavement Markers)

627.01 Description

The following sentence are added:

This work shall consist of furnishing, placing and removing temporary raised pavement markers at locations as shown on the Plans or as directed by the Resident.

627.02 Materials

The second paragraph is deleted and replaced with the following:

The temporary raised pavement markers shall be white or yellow one way markers (Type Tom W-1, Y-1, Grade WZ) as distributed by Davidson Plastics Co. (DAPCO), Kent, WA, or an approved equal. Colors shall conform to 2009 MUTCD requirements.

627.04 General

The following sentences are added:

Temporary raised pavement markers shall be used to delineate travel lanes (BWLL) after placement of the surface course (HMA 12.5 mm).

Temporary raised pavement marker that lose reflectivity, becomes broken, dislodged or missing during the life of the Contract shall be replaced by the Contractor at no additional cost to the Authority.

The spacing and number of temporary pavement markers installed as edge lines shall be the same as shown for the BWLL on the Plans for Temporary Pavement Marking.

627.09 Method of Measurement

The following sentence is added:

Temporary Raised Pavement Markers will be measured by each unit, complete in place, maintained and accepted.

627.10 Basis of Payment

The following paragraphs are added:



The accepted quantity of Temporary Raised Pavement Markers white and/or yellow will be paid for at the Contract price each. This price shall include all labor and materials to furnish, install, maintain, and remove the markers.

Payment will be made under:

| <u>Pay Item</u> |                                   | <u>Pay Unit</u> |
|-----------------|-----------------------------------|-----------------|
| 627.812         | Temporary Raised Pavement Markers | Each            |

SPECIAL PROVISION

SECTION 627

PAVEMENT MARKINGS

(Pavement Marking Tape)

627.01 Description

The following sentence is added:

This work shall consist of furnishing and placing reflective pavement marking tape in conformity with the Plans, as specified herein and as directed by the Resident.

The pavement marking tape shall be installed at all locations.

627.02 Materials

The following sentence is added:

For the Broken White Lane Line (BWLL), Pavement Marking Tape shall be 3M Stamark™ High Performance Tape Series 380AW – High Performance pavement marking tape, color- white, six (6) inch width, as manufactured by 3M of St. Paul, Minnesota.

For the Dotted White Lane Line (DWLL), Pavement Marking Tape shall be 3M Stamark™ High Performance Tape Series 380I ES – High Performance pavement marking tape, color- white, six (6) inch wide and twelve (12) inch wide, as manufactured by 3M of St. Paul, Minnesota.

3M Traffic Safety Systems Division  
Mr. Michael D. Allen  
Tel: (401) 368-0438  
Email: [mdallen@mmm.com](mailto:mdallen@mmm.com)

627.04 General

The following paragraphs are added:

The tape shall be used as a supplemental broken white lane line. The tape shall be installed between the painted Broken White Lane Line (BWLL) spaced eighty (80) foot center to center as shown on the Plans. The length of the tape shall be three (3) feet.

The tape shall also be used to mark a Dotted White Lane Line (DWLL) and shall be installed on parallel deceleration and acceleration lanes at locations as noted in the Plans. On deceleration lanes, the tape shall be installed from the beginning of the full width deceleration lane and shall extend to the theoretical gore markings. On acceleration lanes, the DWLL shall extend from the theoretical gore markings to a point one-half of the total length of the acceleration lane (including the lane taper length). Layout data is noted on the Plans. Dotted White Lane Line

tape shall be three (3) foot in length and shall be spaced nine (9) feet apart. Spacing from the Solid White Lane Line (SWLL) or the Theoretical Gore Markings shall be nine (9) feet.

627.05 Preparation of Surface

The following paragraph is added:

The Contractor shall mill a groove in the pavement for each tape length to be placed (“in-and-out” pattern). Continuous grooving for installation of the tape shall not be allowed. The groove length shall be the required tape length plus 12 inches on both ends. Tape length spacing shall be as shown on the plans. The groove width for inlaid tape pavement marking shall be the pavement marking width plus 1 inch, with a tolerance of  $\pm \frac{1}{4}$  inch. The groove shall have a uniform depth of 150 Mils ( $\pm 20$  Mils). Groove position shall be a minimum of 2 inches from the edge of the pavement marking to the longitudinal pavement joint. The bottom of the groove shall have a smooth, flat finished surface. The use of gang stacked Diamond cutting blades is required for asphalt pavement surfaces. The spacers between blade cuts shall be such that there will be less than a 10 mil rise in the finished groove between the blades.

Grooves shall be clean, dry and free of laitance, oil, dirt, grease, paint or other foreign contaminants. The Contractor shall prevent traffic from traversing the grooves, and re-clean grooves, as necessary, prior to application of the primer and pavement marking tape. Depth plates shall be provided by the contractor to assure that desired groove depth is achieved.

Reference is made to 3M Information Folder 5.18 Grooving Applications, May 2011, “Application Guidelines for Pavement Marking in Grooved Pavement Surfaces.”

627.09 Method of Measurements

The following paragraph is added:

The quantity of Pavement Marking Tape measured for payment will be the linear feet of tape in place and accepted. The measurement will not include the gaps.

627.10 Basis of Payment

The following paragraphs are added:

The accepted quantity of pavement marking tape will be paid for at the Contract unit price per linear foot which price shall include all material, pavement grooving, equipment, labor and incidentals necessary to complete the work.

Payment will be made under:

| <u>Pay Item</u> |  | <u>Pay Unit</u> |
|-----------------|--|-----------------|
| 627.94          | Pavement Marking Tape  | Linear Foot     |
| 627.941         | Pavement Marking Tape – Dotted White Lane Line, 6-inch Width | Linear Foot     |

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(Specific Project Traffic Control)

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

The following minimum traffic requirements shall be maintained:

The minimum width required for traffic during the following operations, are shown on the Traffic Control Plans.

- Milling and Paving Operations
- Drainage Installation and/or Adjustment
- Clear Zone Improvements
- Pavement Markings Layout and Placement

Maine Turnpike Traffic Control Requirements

There are no traffic control restrictions from mile 86.0 to mile marker 103.0 unless otherwise noted.

**TABLE A**

**ALLOWABLE NB AND SB LANE CLOSURE TIMES – WEST GARDINER ORT**

| <b><u>LOCATION 1 &amp; 3</u></b> | <b><u>NB/SB(West Gardiner ORT)</u></b>    |
|----------------------------------|---|
| <u>Temporary Single Lane</u>     | <u>NB/SB 9am to 3:30pm Mon. thru Fri.</u> |
| <u>Closures</u>                  | <u>Four hour maximum allowed between</u>  |
| <u>Allowed</u>                   | <u>9am-3:30pm</u>                         |
|                                  |   |

Locations 1-4

All temporary lane closures shall be made utilizing drums.

Three cones or drums shall be placed transversely across the closed lane for every quarter mile of lane closure.

The Contractor will be allowed to store drums on the traffic side of the guardrail (face of guardrail) during non-work hours or when drums are not required for a lane closure. The drums shall be placed no more than six inches from the face of guardrail. If there is a Lane 2 closure the drums need to be stored on non-traffic side of the guardrail.

Portable light towers will be required to illuminate the night construction work area.

652.7 Method of Measurement

The following paragraph is added:

Traffic control devices required to complete the work will be measured for payment under their respective pay items. Installation, maintenance, and removal of traffic setups and the Contractor's dedicated traffic employee's will not be measured separately for payment, but shall be incidental to Item 652.361, Maintenance of Traffic Control Devices.

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(General)

Section 652 of the Maine Turnpike Authority 2016 Supplemental Specifications is modified as follows:

652.1 Description

The following sentence is added to the second paragraph:

652.3.5 Installation of Traffic Control Devices

This Subsection is amended by the addition of the following after the first paragraph.

All signs shall be mounted on easels except the following which shall be mounted on NCHRP 350 approved posts, unless behind guardrail.

- G20-1 ROAD WORK NEXT 6 MILES
- G20-2 END ROAD WORK
- G20-5aP WORK ZONE\*
- R2-1 SPEED LIMIT 50\*
- R2-6aP FINES DOUBLE\*
- R2-12 END WORK ZONE SPEED LIMIT\*
- CS4-9P STAY IN LANE
- W8-11 UNEVEN LANES
- W8-15 GROOVED PAVEMENT
- W8-15P MOTORCYCLES (Graphic)
- W20-1 ROAD WORK AHEAD\*
- CS-45 WIDE LOADS
- CS-48 WIDE LOADS
- LOGO S MAINE TURNPIKE
- W24-1aL LANE SHIFT PICTORIAL

\* Where indicated on Plans

All traffic control signs shall be installed and removed daily with the exception of the above construction signs which shall be permanent until all work is complete or as approved by the Resident. During non-working hours, G20-5aP, R2-1 and R2-6aP signs shall be covered so they are not visible to drivers. When the paving operation in a location is completed, the W8-15, W8-15P and CS4-9P construction signs shall be removed or covered.

G20-5a, R2-1 & R2-6aP Construction Signs – Locations 1 through 4

There shall be a set of signs (a set consist of two each of G20-5a, R2-1 and R2-6aP) installed off the edge of pavement on the inside and outside shoulders of both roadways. There shall be a set of signs at approximately every mile:

Beginning at:

Mile 97.5 northbound  
Mile 102.5 southbound

Ending at:

Mile 102.0 northbound  
Mile 98.5 southbound

CS4-9P & W8-11 Construction Signs – Locations 1 through 4

There shall be one set of signs (a set consist of two each of CS4-9P & W8-11) for each area with uneven lanes. Each sign shall be mounted on easels on both sides of the roadway. The CS4-9P signs shall be installed 2100 feet beyond the G20-5a, R2-1, and R2-6aP sign sets and the W8-11 signs shall be installed 500 feet beyond the CS4-9P sign. These signs shall only be installed whenever there is the possibility of traffic traversing uneven lanes.

Drums shall not be placed in front of easel-mounted construction signs. Easel-mounted signs shall be placed adjacent to the drum line in the closed lane or shoulder, not off the edge of pavement.

652.3.6 Traffic Control

The following paragraph is added:

A Spotter shall be required at the front and rear of the paving operation on the mainline or as approved by the Resident and shall not be measured for payment. All spotters shall be equipped with handheld radios and spare batteries. The spotters will be required to move and maintain drums during the mobile paving operation.

The following Subsection is added:

652.62 Patrol Vehicle

The Contractor shall provide one traffic control vehicle(s) dedicated for traffic control only, with traffic coordinator(s) to be used for erecting, maintaining and dismantling lane closures as directed by the Resident. The traffic control vehicle(s) shall provide continuous patrolling (24-hours/seven days a week) when lane closures are installed (during non-work and work hours) to replace any and all damaged traffic control devices (arrow boards, variable message signs, barrels, signs, etc.). The traffic coordinator(s) shall report any and all disabled motorists, accidents or other unusual occurrences to the Resident, his representative or the Turnpike Authority's communication dispatcher throughout the duration of any and all lane closures.

The traffic control vehicle shall meet the following requirements:

- a. In good mechanical condition, clean and presentable at all times.
- b. Be equipped with a cellular phone capable of communicating with the Resident, his representative or the Turnpike Authority's communication dispatcher.

- c. Be equipped with a mounted revolving amber light or amber strobe light capable of 360-degree visibility to meet all lighting requirements.
- d. Be equipped with a light bar (arrow board).

If the proper maintenance of traffic and proper provisions for traffic control are not being provided by the Contractor, the Authority reserves the right to assume maintenance of the traffic control and deduct the cost from any money due or to become due under the Contract. The Authority also reserves the right to suspend all work until the Contractor provides the proper maintenance of traffic and provisions for traffic control to the satisfaction of the Resident.

652.7 Method of Measurement

The second paragraph is deleted and replaced with the following:

Spotters will not be measured separately for payment except as noted, but shall be incidental to Item 652.361, Maintenance of Traffic Control Devices.

The following sentences are added:

The patrol vehicle(s), driver(s), assistant(s) and cellular phone(s) will not be measured separately for payment, but shall be incidental to Item 652.361.

The following is added to the end of the second paragraph:

The Authority will make payment for the State Police officers and vehicles directly to the State Police when utilized for mainline traffic control activities. State Police escorts, if required to move oversize material or equipment loads to the jobsite, will not be paid separately, but shall be incidental to the various pay items.

652.8 Basis of Payment

The following paragraphs are added:

Payment will be made under:

| <u>Pay Item</u>                                   | <u>Pay Unit</u> |
|---|-----------------|
| 652.33      Drum                                  | Lump Sum        |
| 652.361    Maintenance of Traffic Control Devices | Lump Sum        |



SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(Truck Mounted Attenuator)

Section 652 of the Maine Turnpike Authority 2016 Supplemental Specifications is modified as follows:

652.1 Description

The following paragraph is added:

When a pay item for a Truck Mounted Attenuator (TMA) is included in the contract at least one TMA will be required on the project and its use will be required. The truck mounted attenuator should be utilized in lane closures and other construction operations where workers are exposed to traffic and not protected by other positive means. The Contractor shall manage the utilization and operation of the TMA and if at least one is not used as described above then it will be considered a Traffic Control Plan violation and result in a reduction of payment as outlined in Section 652.

652.2.1 Truck Mounted Attenuator

This section is deleted in its entirety and replaced with the following:

The truck mounted attenuator system shall conform to the following requirements:

- Truck and attached attenuator shall conform to the NCHRP Report 350, Test Level 3 criteria.
- A mounted revolving amber light or amber strobe light with 360-degree visibility.
- An arrow light bar fixed to the vehicle.
- The attenuator shall be mounted to a vehicle with a minimum weight of 10,000 lbs.

652.3.7 Operations

This section is deleted in its entirety and replaced with the following:

The Contractor shall manage the operation of the truck mounted attenuator. The truck mounted attenuator should be utilized in lane closures and other construction operations where workers are exposed to traffic and not protected by positive means. The operation of the vehicle shall be in accordance with the Manual of Uniform Traffic Control Devices and the manufacturer's recommendation.

Installation: The chart below identifies the distance from the work zone or hazard where the TMA shall be deployed. If the work zone is within a marked lane closure, the

barrier truck distances shall apply and if the work is mobile, then shadow truck distances shall apply. The TMA shall not be located in the buffer zone. When used as a barrier, the barrier truck shall be parked in low gear with brakes applied and the front wheels turned away from the work zone and the adjacent traffic lane. For placement details, reference the Manual of Uniform Traffic Control Devices (MUTCD).

| Weight of Truck | Barrier Truck Distance from Work Zone of Hazard | Shadow Truck Distance from Work Vehicle or Work Zone |
|-----------------|---|--|
| 10,000 lbs      | 250 ft  | 300 ft   |
| 15,000 lbs      | 200 ft  | 250 ft   |
| >24,000 lbs     | 150 ft  | 200 ft   |

652.7 Method of Measurement

The last paragraph is deleted and replaced with:

Truck mounted attenuator shall be measured for payment by the calendar day for each calendar day that a unit is used on a travel lane or shoulder on the project, as approved by the resident.

652.8.2 Basis of Payment

The last two paragraphs are deleted and replaced with:

The Truck Mounted Attenuator(s) will be paid for at the Contract unit price per calendar day for each TMA used. This price shall include all costs associated with the use of the vehicle. Payment shall include operator, fuel, truck, maintenance, flashing lights, arrow board and all other incidentals necessary to operate the vehicle.

Payment will be made under:

| <u>Pay Item</u>                 | <u>Pay Unit</u> |
|---------------------------------|-----------------|
| 652.45 Truck Mounted Attenuator | Calendar Day    |

SPECIAL PROVISION  
SECTION 652  
MAINTENANCE OF TRAFFIC  
(Automated Speed Limit Sign)

652.1 Description

This special provision provides for furnishing, operating, and maintaining an Automated Trailer Mounted Radar Speed Limit Sign for project use. When a pay item for an Automated Trailer Mounted Radar Speed Limit Sign is included in the Contract at least one will be required on the project when there is a Work Zone Speed Limit in place. The Contractor shall furnish, operate, and maintain the Automated Trailer Mounted Radar Speed Limit Signs during the project operations.

652.1.1 Instruction and maintenance manuals shall be provided.

652.2 Materials

Automated Trailer Mounted Speed Limit Sign

Trailer mounted speed limit signs shall be self-contained units including sign assembly, flashing lights, directional radar to measure speed limits, a regulatory speed limit sign, and power supply specifically constructed to operate as a trailer-mounted sign. The preferred color of the unit shall be “construction orange”.

Signs

Base material for the regulatory speed limit signs shall be weather proof, rigid substrate specifically manufactured for highway signing and meet the retro-reflective sheeting application requirements of the sheeting manufacturer.

Sign text shall consist of the letters, digits and symbols either applied by stick-on or silk screen, to conform to the dimensions and designs indicated in the Contract, MUTCD and/or FHWA Standard Highway Signs. The materials and methods shall be in accordance with standard commercial processes.

“Work Zone” construction signs shall be mounted on the trailer unit above the regulatory speed limit sign. (see Appendix).

Signs and secondary signs shall follow the MUTCD for minimum mounting heights.

### Power supply

The power supply shall be either full battery power with solar panel charging (capable of maintaining a charged battery level) and 135 ampere, 12 volt deep cycle batteries, or diesel powered generator with a fuel capacity sufficient for 10 hours of continuous operation.

### Flashing Lights

Each unit shall be equipped with two mono-directional flashing lights, placed in accordance with the MUTCD, with amber lenses and reflectors, which are visible through a range of 120 degrees when viewed facing the sign. The lights, either strobe, halogen, or incandescent lamps, shall be visible for a minimum distance of one mile under daylight conditions and shall have a minimum flash rate of 40 flashes per minute. An "On" indicator light shall be mounted on the back of the signs, which is visible for at least 500 feet to provide confirmation that the flashing lights are operating.

### Radar

The directional radar shall monitor approaching traffic only. The radar shall be capable of measuring speeds from 5 to 70 MPH at a distance of up to 1500 feet and shall have a high speed cut off thresh hold.

## CONSTRUCTION REQUIREMENTS

### 652.3.2 Responsibility of the Contractor

The Contractor shall furnish the Automated Trailer Mounted Speed Limit Sign as described in this Special Provision for this project.

All existing speed limit signs, which conflict with the construction zone trailer mounted speed limit signs shall be covered completely when the work zone speed limit is in place.

Automated Trailer Mounted Speed Limit Signs shall only be used when a work zone speed limit is in place. The Contractor shall manage the utilization and operation of the Automated Trailer Mounted Speed Limit Signs and if at least one is not used when work zone speed limits are in place then it will be considered a Traffic Control Plan violation and result in a reduction of payment as outlined in Section 652.

The Resident will record the actual time and location for the signs on a daily basis when the Automated Trailer Mounted Speed Limit Signs are in use.

The Automated Trailer Mounted Radar Speed Limit Sign may be placed as shown on the plans, or may replace the posted regulatory speed limit signs or may be placed at a location within the closed lane that has a reduced speed limit.

Automated Trailer Mounted Speed Limit Signs shall be delineated with retro-reflective temporary traffic control devices while in use and shall also be delineated by affixing a retro-reflective material directly on the trailer.

Upon delivery of the Automated Trailer Mounted Speed Limit Sign and before acceptance by the Authority, the Contractor shall have a representative of the manufacturer review the condition and notify the Resident in writing, of all deficiencies noted.

The Contractor shall arrange to have all necessary repairs performed at no cost to the Authority.

To avoid impairing driver vision, the Contractor shall dim the lighted speed limit readings by 50 percent during nighttime use, and restore full power lighting during daytime operation.

#### 652.7 Method of Measurement

Automated Trailer Mounted Speed Limit Sign shall be measured for payment by the calendar day for each calendar day that the unit is used on a travel lane or shoulder on the project or per each for the continued use for the duration of the project. Payment shall include the Trailer, Radar Speed Limit Sign, flashing beacon amber lights, regulatory speed limit sign, fuel, necessary maintenance, and all checking of Radar Speed Limit Signs by manufacturer and all project moves including the transporting and delivery of the unit.

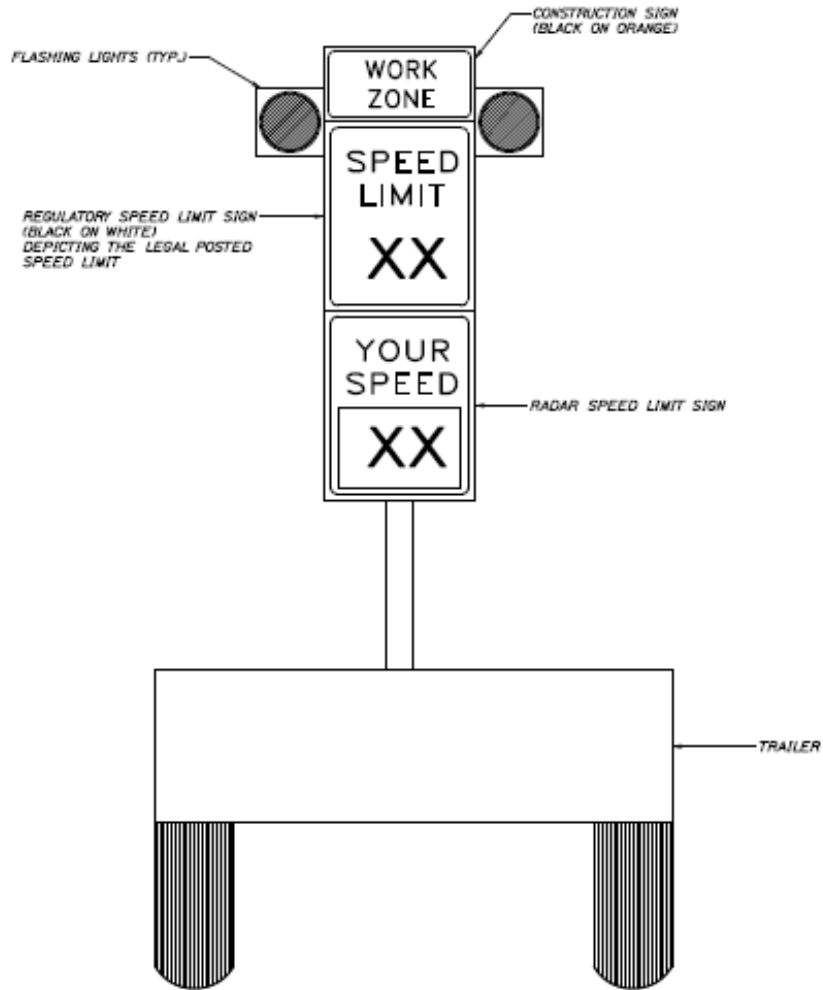
#### 652.8 Basis of Payment

The Automated Trailer Mounted Speed Limit Sign(s) will be paid for at the Contract unit price per calendar day or per each. This price shall include all costs associated with the use of the Automated Trailer Mounted Speed Limit Sign.

| <u>Pay Item</u> |  | <u>Pay Unit</u> |
|-----------------|--|-----------------|
| 652.451         | Automated Trailer Mounted Speed Limit Sign | Calendar Day    |
| 652.452         | Automated Trailer Mounted Speed Limit Sign | Each            |

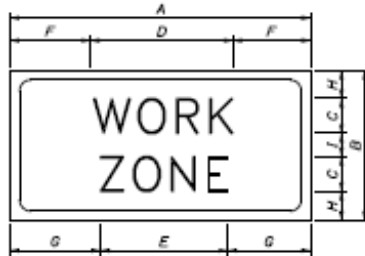
Date: 2/13/2018

Element: Trailer Mounted Speed Limit.dwg

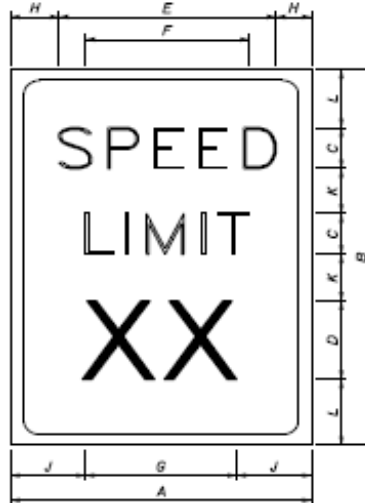


**HNTB**  
FEBRUARY 2018

AUTOMATED TRAILER MOUNTED  
SPEED LIMIT SIGN

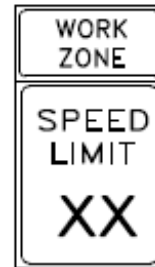


**SIGN #1**  
 1.25" BORDER, 0.75" INDENT,  
 BLACK ON ORANGE, BB GRADE PLYWOOD SIGN



**SIGN #2**  
 1.25" BORDER, 0.75" INDENT,  
 BLACK ON WHITE, BB GRADE PLYWOOD SIGN

| DIMENSIONS (INCHES) / LETTER FONTS |    |    |    |        |        |        |        |       |       |       |     |     |
|------------------------------------|----|----|----|--------|--------|--------|--------|-------|-------|-------|-----|-----|
|                                    | A  | B  | C  | D      | E      | F      | G      | H     | I     | J     | K   | L   |
| *1                                 | 48 | 20 | 50 | 18 1/2 | 16 1/2 | 14 1/2 | 15 1/2 | 4     | 2     | N/A   | N/A | N/A |
| *2                                 | 48 | 60 | 8E | 16E    | 38 1/4 | 29 1/4 | 29 1/2 | 4 1/2 | 9 1/2 | 9 1/4 | 8   | 6   |



SPECIAL PROVISION

SECTION 652

MAINTENANCE OF  
TRAFFIC

(Temporary Portable Rumble Strips)

652.1 Description:

This work consists of furnishing and placing temporary portable rumble strips RoadQuake 2F TPRS or an approved equal.

652.2 Materials:

Furnish a temporary portable rumble strip system, which includes a method to transport and move these to on-site locations where they will be used. The Contractor shall submit for approval, literature and all necessary certifications to the Maine Turnpike prior to procurement of the product.

652.3 General:

If used, Temporary Portable Rumble Strips may not be practicable in areas where the roadway has more than two travel lanes, where volume windows do not allow for breaks in traffic to set up and monitor and adjust, or during night time lane closures.

Placement:

Provide rumble strips where the plans show or as directed by the Resident as follows:

Prior to placing rumble strips, clean the roadway of sand and other materials, that may cause slippage.

Place one end of the rumble strips 6 inches from the roadway centerline. Extend the strips perpendicular to the direction of travel. Ensure strips lay flat on the roadway surface.

Only one series of rumble strips, placed before the first work zone, is required per direction of travel for multiple work zones spaced 1 mile or less apart. Work zones spaced greater than 1 mile apart require a separate series of rumble strips. Each lane shall use one group of temporary rumble strips.

Bracketed "Rumble Strip Ahead" and "Bump" signs shall be utilized and will be paid for under the respective construction sign pay items.

Maintenance:

Maintain rumble strips as follows:



If rumble strips slide, become out of alignment, or are no longer in the wheel path of approaching vehicles during the work period, thoroughly clean both sides of the rumble strips and reset on a clean roadway.

Repair or replace damaged rumble strips immediately.

652.4 Method of Measurement:

The accepted quantity of temporary portable rumble strips shall be measured by the unit complete in place, per lane closure application. A unit shall consist of 1 group of 3 full-lane width of rumble strips. As shown in the plans, a maximum of 3 units may be used at each lane closure. A unit shall be measured for each group of rumble strips, each time they are used for a lane closure.

652.5 Basis of Payment:

The accepted quantity of temporary portable rumble strips will be paid for at the contract unit price per unit which shall include the transport device. Payment is full compensation for providing, relocating, maintaining or replacing, and removing temporary portable rumble strips.

If the pay item is not included in the contract quantities, then the Authority does not anticipate the use of this item on the contract. If contractor wishes to utilize temporary portable rumble strips and the item is not in the contract, then the contractor may propose use of them to the Authority for consideration.

Pay Item

Pay Unit

652.46 Temporary Portable Rumble Strip

Unit