

Updated 05/15/2020

STATE PROJECT

BIDDING INSTRUCTIONS

FOR ALL PROJECTS:

1. Use pen and ink to complete all paper Bids.
2. As a minimum, the following must be received prior to the time of Bid opening:

For a Paper Bid:

- a) a copy of the Notice to Contractors, b) the completed Acknowledgement of Bid Amendments form, c) the completed Schedule of Items, d) two copies of the completed and signed Contract Offer, Agreement & Award form, e) a Bid Guaranty, (if required), and f) any other certifications or Bid requirements listed in the Bid Documents as due by Bid opening.

For an Electronic Bid:

NOTE: Not all projects accept Electronic Bids. Please review the Notice to Contractors and see if it specifically states that Electronic Bids will be accepted.

- a) a completed Bid using Expedite® software and submitted via the Bid Express™ web-based service, b) an electronic Bid Guaranty (if required) or a faxed copy of a Bid Bond (with original to be delivered within 72 hours), and c) any other Certifications or Bid requirements listed in the Bid Documents as due by Bid opening.
3. Include prices for all items in the Schedule of Items (excluding non-selected alternates).
 4. Bid Guaranty acceptable forms are:
 - a) a properly completed and signed Bid Bond on the Department's prescribed form (or on a form that does not contain any significant variations from the Department's form as determined by the Department) for 5% of the Bid Amount or
 - b) an Official Bank Check, Cashier's Check, Certified Check, U.S. Postal Money Order or Negotiable Certificate of Deposit in the amount stated in the Notice to Contractors or
 - c) an electronic bid bond submitted with an electronic bid.
 5. If a paper Bid is to be sent, "FedEx First Overnight" delivery is suggested as the package is delivered directly to the DOT Headquarters Building located at 16 Child Street in Augusta. Other means, such as U.S. Postal Service's Express Mail has proven not to be reliable.

IN ADDITION, FOR FEDERAL AID PROJECTS:

6. Complete the DBE Proposed Utilization form, and submit with your bid. If you are submitting your bid electronically, you must FAX the form to (207) 624-3431. This is a curable defect.

If you need further information regarding Bid preparation, call the DOT Contracts Section at (207) 624-3410.

For complete bidding requirements, refer to Section 102 of the Maine Department of Transportation, Standard Specifications, March 2020 Edition.

NOTICE

The Maine Department of Transportation is attempting to improve the way Bid Amendments/Addendums are handled and allow for an electronic downloading of bid packages from our website, while continuing to maintain an optional plan holders list.

Prospective bidders, subcontractors or suppliers who wish to download a copy of the bid package and receive a courtesy notification of project specific bid amendments must fill out the on-line plan holder registration form and provide an email address to the MDOT Contracts mailbox at: MDOT.contracts@maine.gov. Each bid package will require a separate request.

Additionally, interested parties will be responsible for reviewing and retrieving the Bid Amendments from our web site, and acknowledging receipt and incorporating those Bid Amendments in their bids using the Acknowledgement of Bid Amendment Form.

The downloading of bid packages from the MDOT website is not the same as providing an electronic bid to the Department. Electronic bids must be submitted via <http://www.BIDX.com>. For information on electronic bidding contact Rebecca Snowden at rebecca.snowden@maine.gov or Guy Berthiaume at guy.berthiaume@maine.gov.

NOTICE

For security and other reasons, all Bid Packages which are mailed, shall be provided in double (one envelope inside the other) envelopes. The *Inner Envelope* shall have the following information provided on it:

Bid Enclosed - Do Not Open

PIN:

Town:

Date of Bid Opening:

Name of Contractor with mailing address and telephone number:

In Addition to the usual address information, the *Outer Envelope* should have written or typed on it:

Double Envelope: Bid Enclosed

PIN:

Town:

Date of Bid Opening:

Name of Contractor:

This should not be much of a change for those of you who use Federal Express or similar services.

Hand-carried Bids may be in one envelope as before, and should be marked with the following information:

Bid Enclosed: Do Not Open

PIN:

Town:

Name of Contractor:

October 16, 2001

STATE OF MAINE DEPARTMENT OF TRANSPORTATION
Bid Guaranty-Bid Bond Form

KNOW ALL MEN BY THESE PRESENTS THAT_____

_____, of the City/Town of _____ and State of _____

as Principal, and _____ as Surety, a

Corporation duly organized under the laws of the State of _____ and having a usual place of

Business in _____ and hereby held and firmly bound unto the Treasurer of

the State of Maine in the sum of _____ for payment which Principal and Surety bind

themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

The condition of this obligation is that the Principal has submitted to the Maine Department of

Transportation, hereafter Department, a certain bid, attached hereto and incorporated as a

part herein, to enter into a written contract for the construction of _____

_____ and if the Department shall accept said bid

and the Principal shall execute and deliver a contract in the form attached hereto (properly

completed in accordance with said bid) and shall furnish bonds for this faithful performance of

said contract, and for the payment of all persons performing labor or furnishing material in

connection therewith, and shall in all other respects perform the agreement created by the

acceptance of said bid, then this obligation shall be null and void; otherwise it shall remain in full

force, and effect.

Signed and sealed this _____ day of _____ 20_____

WITNESS:

WITNESS

PRINCIPAL:

By _____

By: _____

By: _____

SURETY:

By _____

By: _____

Name of Local Agency: _____

NOTICE

Bidders:

Please use the attached “Request for Information” form when submitting questions concerning specific Contracts that have been advertised for Bid, include additional numbered pages as required. RFI’s may be faxed to 207-624-3431, submitted electronically through the Departments web page of advertised projects by selecting the RFI tab on the project details page or via e-mail to RFI-Contracts.MDOT@maine.gov.

These are the only allowable mechanisms for answering Project specific questions. Maine DOT will not be bound to any answers to Project specific questions received during the Bidding phase through other processes.

When submitting RFIs by Email please follow the same guidelines as stated on the “Request for Information” form and include the word “RFI” along with the Project name and Identification number in the subject line.

RFI No: _____

Date _____ **Time** _____

WIN(S): _____ **Town(s):** _____ **Bid Date:** _____

Question(s): _____

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Company Name: _____ **Phone: ()** _____

Email: _____ **Fax:** (____) _____

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Vendor Registration

Prospective Bidders must register as a vendor with the Department of Administrative & Financial Services if the vendor is awarded a contract. Vendors will not be able to receive payment without first being registered. Vendors/Contractors will find information and register through the following link –

<http://www.maine.gov/purchases/venbid/index.shtml>

Notice to Contractors

STATE OF MAINE DEPARTMENT OF TRANSPORTATION NOTICE TO CONTRACTORS

Sealed Bids addressed to the Maine Department of Transportation, Augusta, Maine 04333 and endorsed on the wrapper "Bids for **Light Capital Paving Preservation** in the Town of **Canaan & Highway Rehabilitation** in the Towns of **Fairfield & Clinton**" will be received from contractors at the Reception Desk, MaineDOT Building, Capitol Street, Augusta, Maine, until 11:00 o'clock A.M. (prevailing time) on **May 22, 2024** and at that time and place, publicly opened and read. Bids will be accepted from all bidders. The lowest responsive bidder must have completed, or successfully complete, a **Highway Construction, Paving**, or project specific prequalification to be considered for the award of this contract. We now accept electronic bids for bid packages posted on the [bids.com](http://bids.maine.gov) website. Electronic bids do not have to be accompanied by paper bids. **Please note: The Department will accept a facsimile of the bid bond; however, the original bid bond must then be received at the MDOT Contract Section within 72 hours of the bid opening.** Until further notice, dual bids (one paper, one electronic) will be accepted, with the paper copy taking precedence.

Description: WINs 027336.00 & 027662.00

Location: In **Kennebec & Somerset** Counties. WIN **027336.00** begins at the Clinton town line and extends north 3.96 miles to the intersection of US Route 2. WIN **027662.00** is on Route 23, beginning at the intersection of Route 201 and extending northeast 3.16 miles to the Canaan town line.

Outline of Work: Light Capital Paving Preservation, Highway Rehabilitation with PMRAP and other incidental work.

For general information regarding Bidding and Contracting procedures, contact George Macdougall at (207) 624-3410. Our webpage at <http://www.maine.gov/mdot/contractors/> contains a copy of the Schedule of Items, Plan Holders List, written portions of bid amendments, drawings, bid results and an electronic form for RFI submittal. For Project-specific information fax all questions to Project Manager Rob Betz at (207) 624-3431, use electronic RFI form or email questions to RFI-Contracts.MDOT@maine.gov, project name and identification number should be in the subject line. Questions received after 12:00 noon of Monday (or if that Monday is a state holiday, Friday) prior to bid date will not be answered. Bidders shall not contact any other Departmental staff for clarification of Contract provisions, and the Department will not be responsible for any interpretations so obtained. TTY users call Maine Relay 711.

Bid Documents, specifications and bid forms can be viewed and obtained digitally at no cost at <http://www.maine.gov/mdot/contractors/>. They may be purchased from the Department between the hours of 7:00 a.m. to 3:30 p.m. by cash, credit card (Visa/Mastercard) or check payable to Treasurer, State of Maine sent to Maine Department of Transportation, Attn.: Mailroom, 24 Child Street, Augusta, Maine 04333-0016. They also may be purchased by telephone at (207) 624-3536 between the hours of 7:00 a.m. to 3:30 p.m. Bid Book \$10 (\$13 by mail), Single Sheets \$2, payment in advance, all non-refundable.

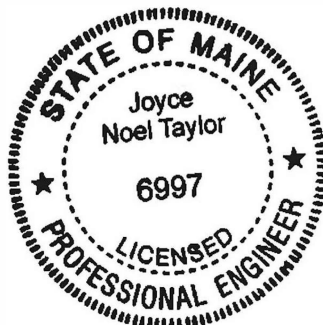
Each Bid must be made upon blank forms provided by the Department and must be accompanied by a bid bond at 5% of the bid amount or an official bank check, cashier's check, certified check, certificate of deposit, or United States postal money order in the amount of 5% of the bid amount, payable to Treasurer, State of Maine as a Bid guarantee. A Contract Performance Surety Bond and a Contract Payment Surety Bond, each in the amount of 100 percent of the Contract price, will be required of the successful Bidder.

This Contract is subject to all applicable State Laws.

All work shall be governed by *State of Maine, Department of Transportation, Standard Specifications, March 2020 Edition*, price \$10 [\$15 by mail], and *Standard Details, March 2020 Edition*, price \$10 [\$15 by mail]. They also may be purchased by telephone at (207) 624-3536 between the hours of 7:00 a.m. to 3:30 p.m. *Standard Detail* updates can be found at <http://www.maine.gov/mdot/contractors/publications/>.

The right is hereby reserved to the MaineDOT to reject any or all bids.

Augusta, Maine
May 8, 2024



JOYCE NOEL TAYLOR P. E.
CHIEF ENGINEER

NOTICE TO CONTRACTORS - PREFERRED EMPLOYEES

Sec. 1303. Public Works; minimum wage

In the employment of laborers in the construction of public works, including state highways, by the State or by persons contracting for the construction, preference must first be given to citizens of the State who are qualified to perform the work to which the employment relates and, if they can not be obtained in sufficient numbers, then to citizens of the United States. Every contract for public works construction must contain a provision for employing citizens of this State or the United States. The hourly wage and benefit rate paid to laborers employed in the construction of public works, including state highways, may not be less than the fair minimum rate as determined in accordance with section 1308. Any contractor who knowingly and willfully violates this section is subject to a fine of not less than \$250 per employee violation. Each day that any contractor employs a laborer at less than the wage and benefit minimum stipulated in this section constitutes a separate violation of this section. [1997, c. 757, §1 (amd).]

SPECIAL PROVISION 102.7.3
ACKNOWLEDGMENT OF BID AMENDMENTS

With this form, the Bidder acknowledges its responsibility to check for all Amendments to the Bid Package. For each Project under Advertisement, Amendments are located at <http://www.maine.gov/mdot/contractors/> . It is the responsibility of the Bidder to determine if there are Amendments to the Project, to download them, to incorporate them into their Bid Package, and to reference the Amendment number and the date on the form below. The Maine DOT will not post Bid Amendments any later than noon the day before Bid opening without individually notifying all the planholders.

Amendment Number	Date

The Contractor, for itself, its successors and assigns, hereby acknowledges that it has received all of the above referenced Amendments to the Bid Package.

CONTRACTOR

Date

Signature of authorized representative

(Name and Title Printed)

4/24/2024

Maine Department of Transportation

Proposal Schedule of Items

Page 1 of 4

Proposal ID: 027336.00

Project(s): 027336.00, 027662.00

SECTION: 1 INITIAL GROUP

Alt Set ID: Alt Mbr ID:

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0010	202.202 REMOVING PAVEMENT SURFACE	4,625.000 SY	_____	 _____	_____	 _____
0020	202.203 PAVEMENT BUTT JOINTS	400.000 SY	_____	 _____	_____	 _____
0030	204.21 ADD SHOULDER AGGREGATE - TRUCK MEASURE	2,000.000 CY	_____	 _____	_____	 _____
0040	403.209 HOT MIX ASPHALT 9.5 MM (SIDEWALKS, DRIVES, INCIDENTALS)	125.000 T	_____	 _____	_____	 _____
0050	403.211 HOT MIX ASPHALT (SHIMMING)	2,200.000 T	_____	 _____	_____	 _____
0060	403.213 HOT MIX ASPHALT 12.5 MM BASE	25.000 T	_____	 _____	_____	 _____
0070	409.15 BITUMINOUS TACK COAT - APPLIED	5,700.000 G	_____	 _____	_____	 _____
0080	411.10 UNTREATED AGGREGATE SURFACE COURSE (TRUCK MEASURE)	275.000 CY	_____	 _____	_____	 _____
0090	461.13 LIGHT CAPITAL PAVING	7,000.000 T	_____	 _____	_____	 _____
0100	603.179 18 INCH CULVERT PIPE OPTION III	60.000 LF	_____	 _____	_____	 _____
0110	603.219 36 INCH CULVERT PIPE OPTION III	60.000 LF	_____	 _____	_____	 _____
0120	606.1303 31" W-BM GR, MID-WAY SPLICE-15' RAD AND LESS	37.500 LF	_____	 _____	_____	 _____

4/24/2024

Maine Department of Transportation

Proposal Schedule of Items

Page 2 of 4

Proposal ID: 027336.00

Project(s): 027336.00, 027662.00

SECTION: 1 INITIAL GROUP

Alt Set ID: Alt Mbr ID:

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0130	606.1304 31" W-BM GR, MID-WAY SPLICE-OVER 15' RAD	25.000 LF	_____	 _____	_____	 _____
0140	606.356 UNDERDRAIN DELINEATOR POST	26.000 EA	_____	 _____	_____	 _____
0150	609.21 CONCRETE SLIPFORM CURB	650.000 LF	_____	 _____	_____	 _____
0160	610.08 PLAIN RIPRAP	50.000 CY	_____	 _____	_____	 _____
0170	613.319 EROSION CONTROL BLANKET	1,700.000 SY	_____	 _____	_____	 _____
0180	615.07 LOAM	675.000 CY	_____	 _____	_____	 _____
0190	615.10 DIRTY BORROW	1,350.000 CY	_____	 _____	_____	 _____
0200	618.13 SEEDING METHOD NUMBER 1	55.000 UN	_____	 _____	_____	 _____
0210	618.14 SEEDING METHOD NUMBER 2	235.000 UN	_____	 _____	_____	 _____
0220	619.12 MULCH	290.000 UN	_____	 _____	_____	 _____
0230	620.58 EROSION CONTROL GEOTEXTILE	150.000 SY	_____	 _____	_____	 _____
0240	627.733 4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	87,000.000 LF	_____	 _____	_____	 _____

4/24/2024

Maine Department of Transportation

Proposal Schedule of Items

Page 3 of 4

Proposal ID: 027336.00

Project(s): 027336.00, 027662.00

SECTION: 1 INITIAL GROUP

Alt Set ID: Alt Mbr ID:

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0250	627.75 WHITE OR YELLOW PAVEMENT & CURB MARKING	300.000 SF	_____	 _____	_____	 _____
0260	627.78 TEMPORARY 4 INCH PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW	147,000.000 LF	_____	 _____	_____	 _____
0270	629.05 HAND LABOR, STRAIGHT TIME	65.000 HR	_____	 _____	_____	 _____
0280	631.12 ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	440.000 HR	_____	 _____	_____	 _____
0290	631.14 GRADER (INCLUDING OPERATOR)	20.000 HR	_____	 _____	_____	 _____
0300	631.161 PAVING CREW	80.000 HR	_____	 _____	_____	 _____
0310	631.162 PAVING CREW (OVERTIME)	40.000 HR	_____	 _____	_____	 _____
0320	631.172 TRUCK - LARGE (INCLUDING OPERATOR)	580.000 HR	_____	 _____	_____	 _____
0330	631.175 CONTRACTOR TRUCKING	7,000.000 T	_____	 _____	_____	 _____
0340	631.179 PUGMILL TRUCKING	5,850.000 T	_____	 _____	_____	 _____
0350	631.21 ROAD BROOM (INCLUDING OPERATORS AND HAULER)	25.000 HR	_____	 _____	_____	 _____

4/24/2024

Maine Department of Transportation

Proposal Schedule of Items

Page 4 of 4

Proposal ID: 027336.00

Project(s): 027336.00, 027662.00

SECTION: 1 INITIAL GROUP

Alt Set ID:

Alt Mbr ID:

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0360	631.22 FRONT END LOADER (INCLUDING OPERATOR)	10.000 HR	_____	 _____	_____	 _____
0370	631.32 CULVERT CLEANER (INCLUDING OPERATOR)	10.000 HR	_____	 _____	_____	 _____
0380	639.19 FIELD OFFICE TYPE B	1.000 EA	_____	 _____	_____	 _____
0390	652.33 DRUM	12.000 EA	_____	 _____	_____	 _____
0400	652.34 CONE	300.000 EA	_____	 _____	_____	 _____
0410	652.35 CONSTRUCTION SIGNS	1,025.000 SF	_____	 _____	_____	 _____
0420	652.36 MAINTENANCE OF TRAFFIC CONTROL DEVICES	93.000 CD	_____	 _____	_____	 _____
0430	652.38 FLAGGER	2,100.000 HR	_____	 _____	_____	 _____
0440	656.75 TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LUMP SUM	LUMP SUM		_____	 _____
0450	659.10 MOBILIZATION	LUMP SUM	LUMP SUM		_____	 _____
Section: 1			Total:		_____	 _____
			Total Bid:		_____	 _____

CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street, Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and

_____ a corporation or other legal entity organized under the laws of the State of _____, with its principal place of business located at _____

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, **WINs 027336.00 & 027662.00.00** for **Light Capital Paving Preservation & Highway Rehabilitation** in the towns of **Canaan, Fairfield & Clinton**, Counties of **Kennebec & Somerset**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work; performing construction quality control including inspection, testing and documentation; providing all required documentation at the conclusion of the project; warranting its work; and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract. Payment shall be made as provided in the same.

B. Time.

The Contractor agrees to complete all Work, except warranty work, within **60** Working Days. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the *State of Maine Department of Transportation Standard Specifications, March 2020 Edition* and related Special Provisions.

C. Price.

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is _____

\$_____ Performance Bond and Payment Bond each being 100% of the amount of this Contract.

D. Contract.

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, *Standard Specifications, March 2020 Edition, Standard Details March 2020 Edition* as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

E. Certifications.

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in the Federal Contract Provisions Supplement, and the Contract are still complete and accurate as of the date of this Agreement.
2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.
3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, *Standard Specifications March 2020 Edition*, *Standard Details March 2020 Edition* as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

WINs 027336.00 & 027662.00.00 - Light Capital Paving Preservation & Highway Rehabilitation - in the towns of Canaan, Fairfield & Clinton,

State of Maine, on which bids will be received until the time specified in the “Notice to Contractors” do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached “Schedule of Items.”

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached “Schedule of Items” in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached “Schedule of Items,” which may be ordered by the Resident, and to accept as full compensation the amount determined upon a “Force Account” basis as provided in the *Standard Specifications, March 2020 Edition*, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier’s check, certificate of deposit or U. S. Postal Money Order in the amount given in the “Notice to Contractors”, payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work as stated in Section 107.2 of the *Standard Specifications March 2020 Edition* and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor’s Disadvantaged Business Enterprise Utilization Plan with their bid.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

Date

(Signature of Legally Authorized Representative
of the Contractor)

Witness

(Name and Title Printed)

G. Award.

Your offer is hereby accepted.
documents referenced herein.

This award consummates the Contract, and the

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: Bruce A. Van Note, Commissioner

Witness

CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street, Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and

_____ a corporation or other legal entity organized under the laws of the State of _____, with its principal place of business located at _____

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, **WINs 027336.00 & 027662.00.00** for **Light Capital Paving Preservation & Highway Rehabilitation** in the towns of **Canaan, Fairfield & Clinton**, Counties of **Kennebec & Somerset**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work; performing construction quality control including inspection, testing and documentation; providing all required documentation at the conclusion of the project; warranting its work; and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract. Payment shall be made as provided in the same.

B. Time.

The Contractor agrees to complete all Work, except warranty work, within **60** Working Days. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the *State of Maine Department of Transportation Standard Specifications, March 2020 Edition* and related Special Provisions.

C. Price.

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is _____

\$_____ Performance Bond and Payment Bond each being 100% of the amount of this Contract.

D. Contract.

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, *Standard Specifications, March 2020 Edition, Standard Details March 2020 Edition* as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

E. Certifications.

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in the Federal Contract Provisions Supplement, and the Contract are still complete and accurate as of the date of this Agreement.
2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.
3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, *Standard Specifications March 2020 Edition*, *Standard Details March 2020 Edition* as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

WINs 027336.00 & 027662.00.00 - Light Capital Paving Preservation & Highway Rehabilitation - in the towns of Canaan, Fairfield & Clinton,

State of Maine, on which bids will be received until the time specified in the “Notice to Contractors” do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached “Schedule of Items.”

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached “Schedule of Items” in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached “Schedule of Items,” which may be ordered by the Resident, and to accept as full compensation the amount determined upon a “Force Account” basis as provided in the *Standard Specifications, March 2020 Edition*, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier’s check, certificate of deposit or U. S. Postal Money Order in the amount given in the “Notice to Contractors”, payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work as stated in Section 107.2 of the *Standard Specifications March 2020 Edition* and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor’s Disadvantaged Business Enterprise Utilization Plan with their bid.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

Date

(Signature of Legally Authorized Representative
of the Contractor)

Witness

(Name and Title Printed)

G. Award.

Your offer is hereby accepted.
documents referenced herein.

This award consummates the Contract, and the

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: Bruce A. Van Note, Commissioner

Witness

CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and

(Name of the firm bidding the job)

a corporation or other legal entity organized under the laws of the State of Maine, with its principal place of business located at **(address of the firm bidding the job)**

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, PIN No.01 **12345.00**, for the **Hot Mix Asphalt Overlay** in the town/city of **South Nowhere**, County of **Washington**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before **November 15, 2006**. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the *State of Maine Department of Transportation Standard Specifications, March 2020 Edition* and related Special Provisions.

C. Price.

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is (Place bid here in alphabetical form such as One Hundred and Two dollars and 10 cents)
\$ (repeat bid here in numerical terms, such as \$102.10) Performance Bond and Payment Bond each being 100% of the amount of this Contract.

D. Contract.

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, *Standard Specifications, March 2020 Edition, Standard Details March 2020 Edition*, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

E. Certifications.

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the *Standard Specifications March 2020 Edition* (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.
2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.
3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, *Standard Specifications, March 2020 Edition, Standard Details March 2020 Edition*, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

PIN 012345.00 South Nowhere, Hot Mix Asphalt Overlay

State of Maine, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items."

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items," which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the *Standard Specifications, March 2020 Edition*, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check, certificate of deposit or U. S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work as stated in Section 107.2 of the *Standard Specifications March 2020 Edition* and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan with their bid.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

Date

(Witness Sign Here)
Witness

CONTRACTOR

(Sign Here)
(Signature of Legally Authorized Representative
of the Contractor)

(Print Name Here)
(Name and Title Printed)

G. Award.

Your offer is hereby accepted.
documents referenced herein.

This award consummates the Contract, and the

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: Bruce A. Van Note, Commissioner

(Witness)

BOND # _____

CONTRACT PERFORMANCE BOND
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That _____
_____ **in the State of** _____, as principal,
and.....
a corporation duly organized under the laws of the State of and having a
usual place of business
as Surety, are held and firmly bound unto the Treasurer of the State of Maine in the sum
of _____ **and 00/100 Dollars (\$** _____ **)**,
to be paid said Treasurer of the State of Maine or his successors in office, for which
payment well and truly to be made, Principal and Surety bind themselves, their heirs,
executors and administrators, successors and assigns, jointly and severally by these
presents.

The condition of this obligation is such that if the Principal designated as Contractor in
the Contract to construct Project Number _____ in the Municipality of
_____ promptly and faithfully performs the Contract, then this
obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the State
of Maine.

Signed and sealed this day of, 20.....

WITNESSES:

Signature.....
Print Name Legibly

Signature
Print Name Legibly

SURETY ADDRESS:

.....
.....
.....

TELEPHONE.....

SIGNATURES:

CONTRACTOR:

.....
Print Name Legibly

SURETY:

.....
Print Name Legibly

NAME OF LOCAL AGENCY:

ADDRESS
.....
.....

BOND # _____

CONTRACT PAYMENT BOND
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That _____
_____ **in the 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 Treasurer of the State of Maine for the use
and benefit of claimants as herein below defined, in the sum of
_____ **and 00/100 Dollars (\$** _____ **)**
for the payment whereof Principal and Surety bind themselves, their heirs, executors and
administrators, successors and assigns, jointly and severally by these presents.

The condition of this obligation is such that if the Principal designated as Contractor in
the Contract to construct Project Number _____ in the Municipality of
_____ promptly satisfies all claims and demands incurred for all
labor and material, used or required by him in connection with the work contemplated by
said Contract, and fully reimburses 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.

A claimant is defined as one having a direct contract with the Principal or with a
Subcontractor of the Principal for labor, material or both, used or reasonably required for
use in the performance of the contract.

Signed and sealed this day of, 20

WITNESS:

SIGNATURES:

CONTRACTOR:

Signature.....

.....

Print Name Legibly

Print Name Legibly

SURETY:

Signature.....

.....

Print Name Legibly

Print Name Legibly

SURETY ADDRESS:

NAME OF LOCAL AGENCY:

.....

ADDRESS

.....

.....

TELEPHONE

.....

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

Wage Determination - In accordance with 26 MRS §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.

2024 Fair Minimum Wage Rates -- Highway & Earth Statewide

Occupational Title	Minimum Wage	Minimum Benefit	Total
Brickmasons And Blockmasons	\$32.25	\$4.33	\$36.58
Bulldozer Operator	\$28.00	\$5.85	\$33.85
Carpenter	\$28.12	\$6.74	\$34.86
Cement Masons And Concrete Finisher	\$22.67	\$2.21	\$24.88
Commercial Divers	\$30.00	\$4.62	\$34.62
Construction And Maintenance Painters	\$26.00	\$3.81	\$29.81
Construction Laborer	\$23.09	\$2.98	\$26.07
Crane And Tower Operators	\$33.93	\$9.47	\$43.40
Crushing Grinding And Polishing Machine Operators	\$23.00	\$5.21	\$28.21
Drywall And Ceiling Tile Installers	\$26.20	\$10.62	\$36.82
Earth Drillers - Except Oil And Gas	\$25.00	\$2.53	\$27.53
Electrical Power - Line Installer And Repairers	\$38.93	\$8.91	\$47.84
Electricians	\$33.64	\$18.07	\$51.71
Elevator Installers And Repairers	\$68.38	\$45.29	\$113.67
Excavating And Loading Machine And Dragline Operators	\$26.50	\$4.23	\$30.73
Excavator Operator	\$31.87	\$5.85	\$37.72
Fence Erectors	\$20.00	\$0.00	\$20.00
Flaggers	\$20.00	\$0.38	\$20.38
Floor Layers - Except Carpet/Wood/Hard Tiles	\$27.00	\$6.21	\$33.21
Glaziers	\$37.00	\$6.60	\$43.60
Grader/Scraper Operator	\$23.00	\$3.21	\$26.21
Hazardous Materials Removal Workers	\$21.50	\$1.54	\$23.04
Heating And Air Conditioning And Refrigeration Mechanics And Installers	\$32.00	\$5.46	\$37.46
Heavy And Tractor - Trailer Truck Drivers	\$25.00	\$4.92	\$29.92
Highway Maintenance Workers	\$20.00	\$0.00	\$20.00
Industrial Machinery Mechanics	\$31.25	\$1.01	\$32.26
Industrial Truck And Tractor Operators	\$29.25	\$4.06	\$33.31
Insulation Worker - Mechanical	\$24.05	\$3.59	\$27.64
Ironworker - Ornamental	\$27.75	\$4.50	\$32.25
Light Truck Or Delivery Services Drivers	\$19.00	\$0.33	\$19.33
Millwrights	\$33.75	\$8.78	\$42.53
Mobile Heavy Equipment Mechanics - Except Engines	\$27.75	\$4.89	\$32.64
Operating Engineers And Other Equipment Operators	\$22.50	\$2.02	\$24.52
Paver Operator	\$27.03	\$6.49	\$33.52
Pile-Driver Operators	\$32.75	\$1.95	\$34.70
Pipelayers	\$28.50	\$4.43	\$32.93
Plumbers Pipe Fitters And Steamfitters	\$30.00	\$5.87	\$35.87
Pump Operators - Except Wellhead Pumps	\$31.49	\$32.08	\$63.57
Radio Cellular And Tower Equipment Installers	\$26.00	\$3.77	\$29.77
Reclaimer Operator	\$27.03	\$7.68	\$34.71
Reinforcing Iron And Rebar Workers	\$22.67	\$25.11	\$47.78
Riggers	\$31.25	\$7.68	\$38.93
Roofers	\$24.00	\$3.35	\$27.35
Screed/Wheelman	\$29.13	\$5.21	\$34.34
Sheet Metal Workers	\$25.25	\$5.68	\$30.93
Structural Iron And Steel Workers	\$30.04	\$7.22	\$37.26
Tapers	\$28.00	\$1.71	\$29.71
Telecommunications Equipment Installers And Repairers - Except Line Installers	\$28.33	\$6.08	\$34.41
Telecommunications Line Installers And Repairers	\$26.00	\$4.83	\$30.83
Tile And Marble Setters	\$27.75	\$6.73	\$34.48

Welders are classified as the trade to which welding is incidental (e.g. welding structural steel is Structural Iron and Steel Worker)

Apprentices – The minimum wage rates for registered apprentices are the rates recognized in the sponsorship agreement for registered apprentices working in the pertinent classification.

For any other specific trade on this project not listed above, contact the Bureau of Labor Standards for further clarification.

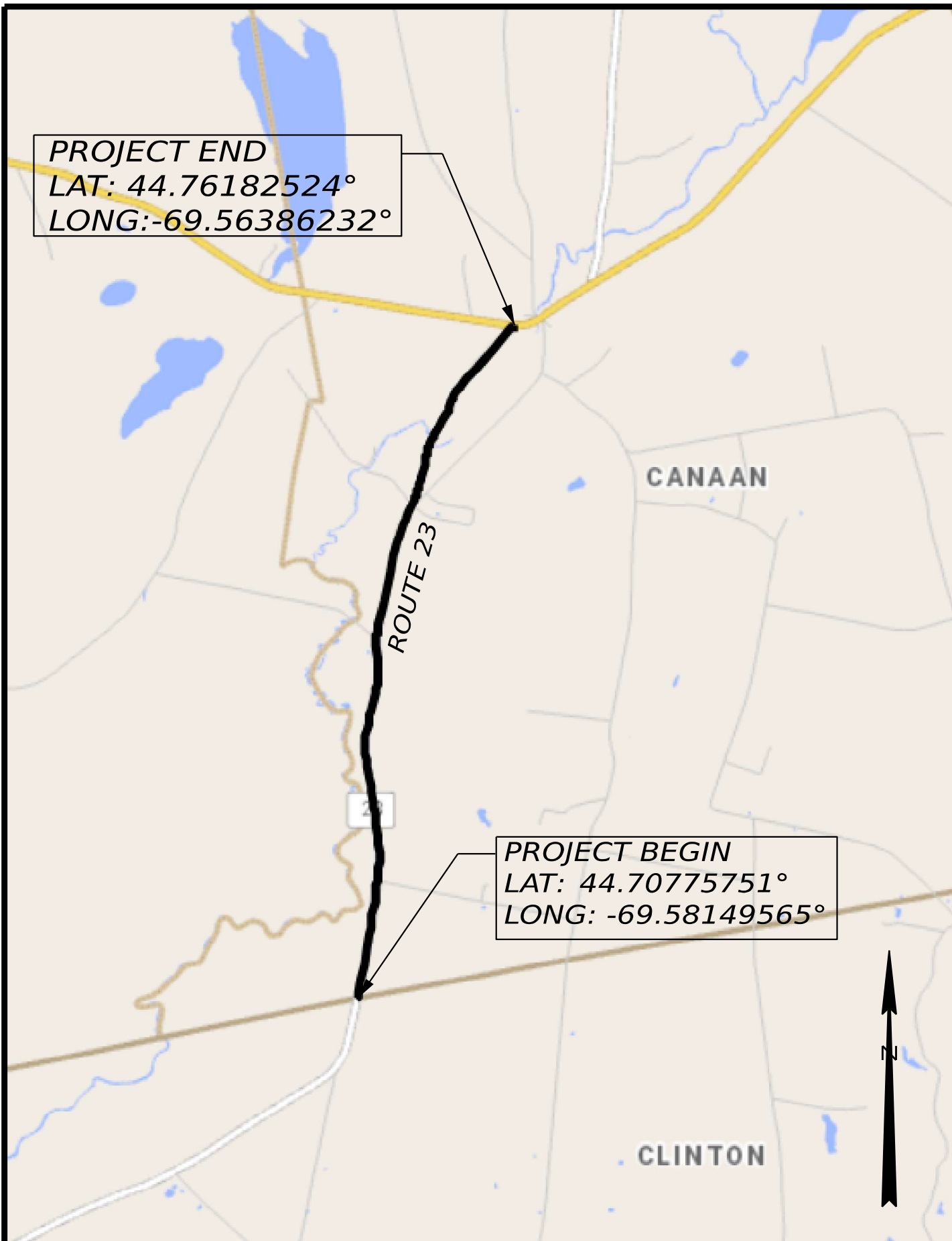
Title 26 §1310 requires that a clearly legible statement of all fair minimum wage and benefits rates to be paid the several classes of laborers, workers and mechanics employed on the construction on the public work must be kept posted in a prominent and easily accessible place at the site by each contractor and subcontractor subject to sections 1304 to 1313.

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.

A true copy

Attest: 
Scott R. Cotnoir
Wage & Hour Director
Bureau of Labor Standards

Expiration Date: 12-31-2024
Revision Date: 1-3-2024



PROJECT END
LAT: 44.76182524°
LONG: -69.56386232°

ROUTE 23

CANAAN

PROJECT BEGIN
LAT: 44.70775751°
LONG: -69.58149565°

CLINTON

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

ROUTE 23

CANAAN

SOMERSET COUNTY

SHEET NUMBER

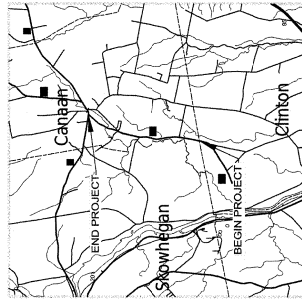
1
32

27336.00

LOCATION MAP

OF 1

ROUTE 23



Scale in Miles

LOCATION MAP

Factored AADT	1855
Hourly Capacity	1800
Federal Functional Class	MAJ. COLLECTOR
Corridor Priority	3
Design Speed (MPH)	35-45

<u>PROJECT LOCATION:</u>	BEGINNING AT THE CLINTON TOWN LINE AND EXTENDING NORTH 3.96 MILES
<u>PROGRAM AREA:</u>	REGIONAL
<u>SCOPE OF WORK:</u>	LIGHT CAPITAL PAVEMENT PRESERVATION

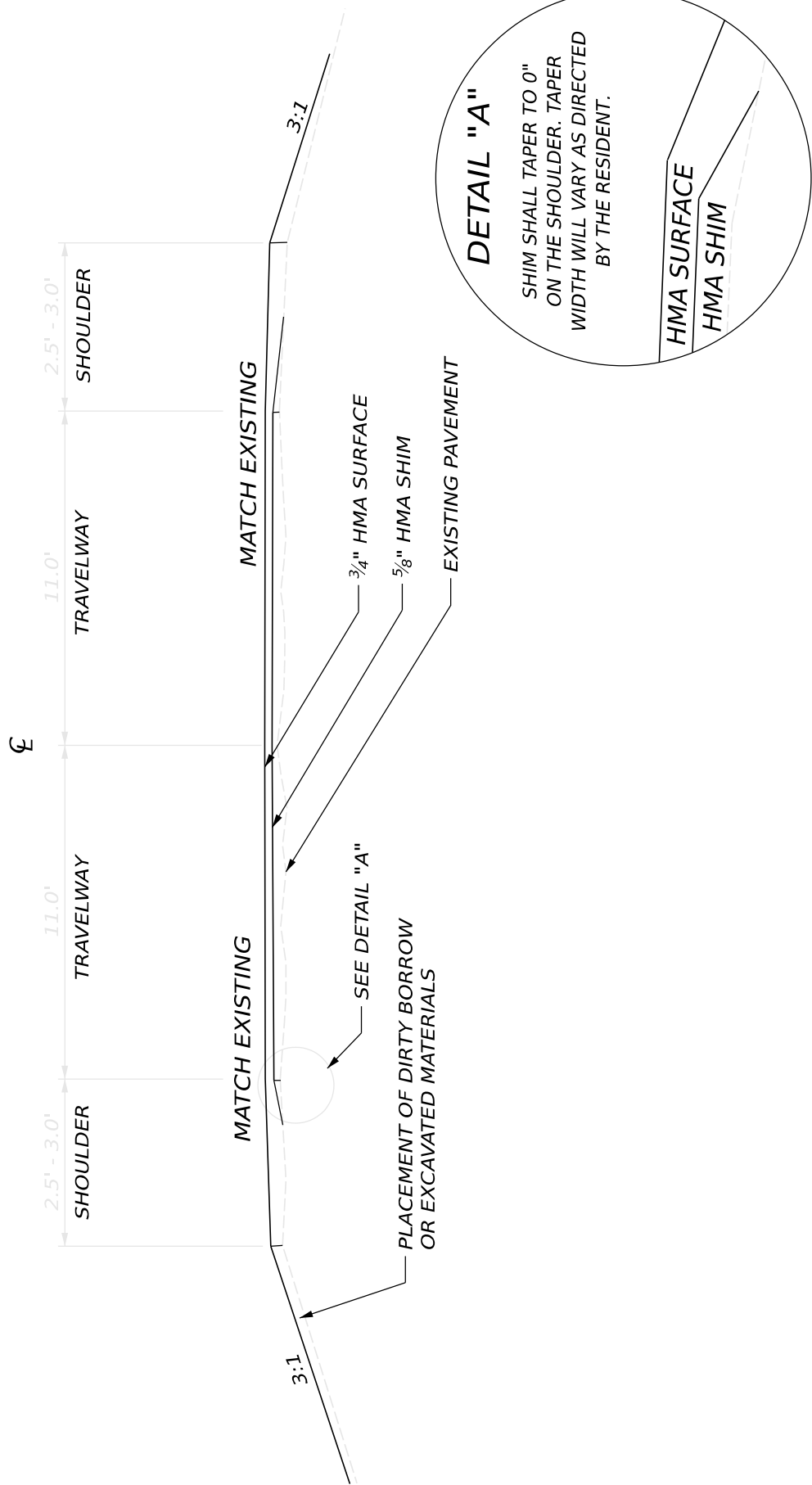
STATE PROJECT NO. 27336.00

SHEET NUMBER

1 OF 1

PROJECT INFORMATION		REGIONAL PROJECT MANAGER MONTH PROJECT LEADER GROVES DESIGNER CONSULTANT PROJECT RESIDENT CONTRACTOR PROJECT COMPLETE DATE	
SIGNATURE 12/02/2022		DATE 12/21/2022 P.B. NUMBER 10022 DEPARTMENT OF TRANSPORTATION STATE OF MAINE	
APPROVED		CHIEF ENGINEER: COMMISSIONER: DATE 5-02-2022	

5/8" SHIM WITH 3/4" HOT MIX ASPHALT OVERLAY



NOT TO SCALE				NOT TO SCALE		
CANAAN ROUTE 23		WIN 27336.00	STATE OF MAINE DEPARTMENT OF TRANSPORTATION			SHEET NUMBER 1 OF 1
TYPICAL SECTIONS			2733600 HIGHWAY PLANS			
34						

PROJECT STATIONING

End Project	385+50	End Project
	369+57	Pole # 10/307/10
	347+21	Pole # 23/23
Moores Mills Road	324+11	Tuttle Road
	312+04	Pole # 40/31
Red Bridge Road	283+73	
Stream Lane	222+42	
	211+26	Sand Road
Begin Project	175+98	Begin Project

CONSTRUCTION NOTES

202.202 – Removing Pavement Surface

Bridge #2602 – Mill 1” full width with transitions (approximate length 200’).

202.203 – Pavement Butt Joints

At Intersection of Route 2, and other possible locations as determined by the Department.

411.10 – Untreated Aggregate Surface Course (Truck Measure)

Shall be used to back up driveway lips, mailboxes, and other locations as determined by the Department.

627.733 – 4” White or Yellow Painted Pavement Marking Line

Center lines and edge lines shall be painted on all matched pavement within one week.

Center line TOMs may be utilized until final striping and will be considered incidental to the contract.

Multilane sections and truck lanes must be striped daily on all matched pavement layers.

Prior to final marking lines applications on the surface course, Contractor shall confirm and receive approval for marking line layout from the Department.

627.75 – White or Yellow Pavement & Curb Marking

Stop Bar @ Route 2 = 2’X 20’

See Standard Details / MUTCD for distances/spacing.

627.78 – Temporary 4 Inch Painted Pavement Marking Line, White or Yellow

Temporary center lines and edge lines will be painted on all matched pavement within one week.

Multilane sections, truck lanes, and milled surfaces must be striped daily on all matched pavement layers.

Temporary lines will require one coat on the milled surface and one coat on the shim layer.

CONSTRUCTION NOTES

Item 629 & 631 – Hand Labor & Equipment Rental

Shall be used to clean around guardrails, grade slopes and ditches, and at other locations as determined by the Department.

652.35 – Construction Signs

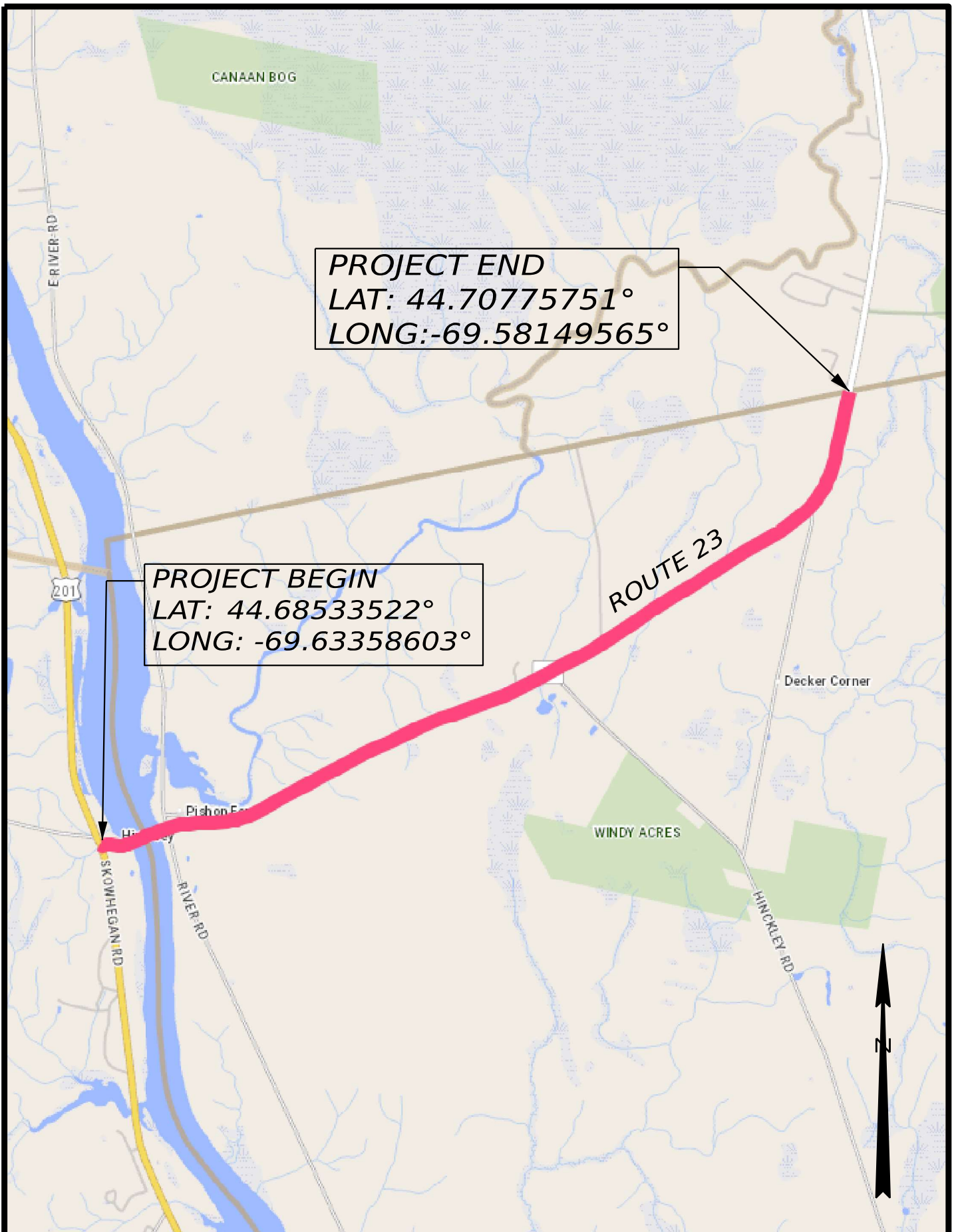
One **Road Work Next 7 Miles** sign is required for this project on South-bound approach. North-bound approach signing will be carried on WIN 27662.00, which directly abuts this project.

The following side roads will require **Road Work Ahead** and **End Road Work** signs:

- Sand Road
- Moore's Mills Road
- Tuttle Road / Shady Lane

GENERAL NOTES

1. Pavement thicknesses shown on the typical sections are intended to be nominal.
2. Paved driveways may need additional work including extending the wing and raking the edge joint. This area will be compacted by roller or vibratory plate compactor. This work will be considered incidental to item #461.13.
3. Grind transition tapers at Catch Basins under Standard Specifications Item 202.203, Pavement Butt Joints in accordance with Standard Detail 609(05), Gutter Grade Transition at Catch Basin, or as directed by the Resident.
4. The Contractor is limited to one paving crew per day unless authorized by the Department.
5. The Contractor will be responsible for maintaining all existing mailboxes to ensure that the mail will be deliverable. Payment for this work will be considered incidental to the contract.
6. Where deemed necessary by the Resident, unsuitable excess material shall be removed from the edges of shoulders and placed in designated areas or disposed of. Payment will be made under the appropriate Contract items.
7. All waste material not used on the project shall be disposed of off the project in acceptable waste areas reviewed by the Resident. Grading, seeding and mulching of waste areas shall be considered incidental.
8. Any damage to the slopes caused by the Contractor's equipment, personnel, or operation shall be repaired to the satisfaction of the Resident. All work, equipment, and materials required to make repairs shall be at the Contractor's expense.
9. Stations referenced are approximate.
10. Final striping for the project shall be done by the Contractor per the existing striping layout in the field. The Contractor will be responsible to maintain current striping pattern changes. Payment shall be made under appropriate Contract items.
11. The Contractor will paint every full station (100 feet) on the existing roadway and will transfer the painted stationing through all intermediate lifts (not surface). Appropriately-sized striping pattern changes will be painted on surface. Stationing control must be placed before work can commence. Striping change controls must be placed before paving can commence.



STATE OF MAINE

DEPARTMENT OF TRANSPORTATION



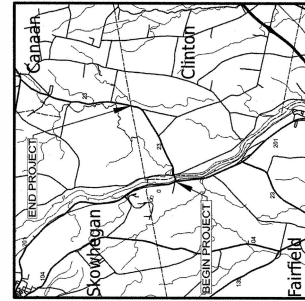
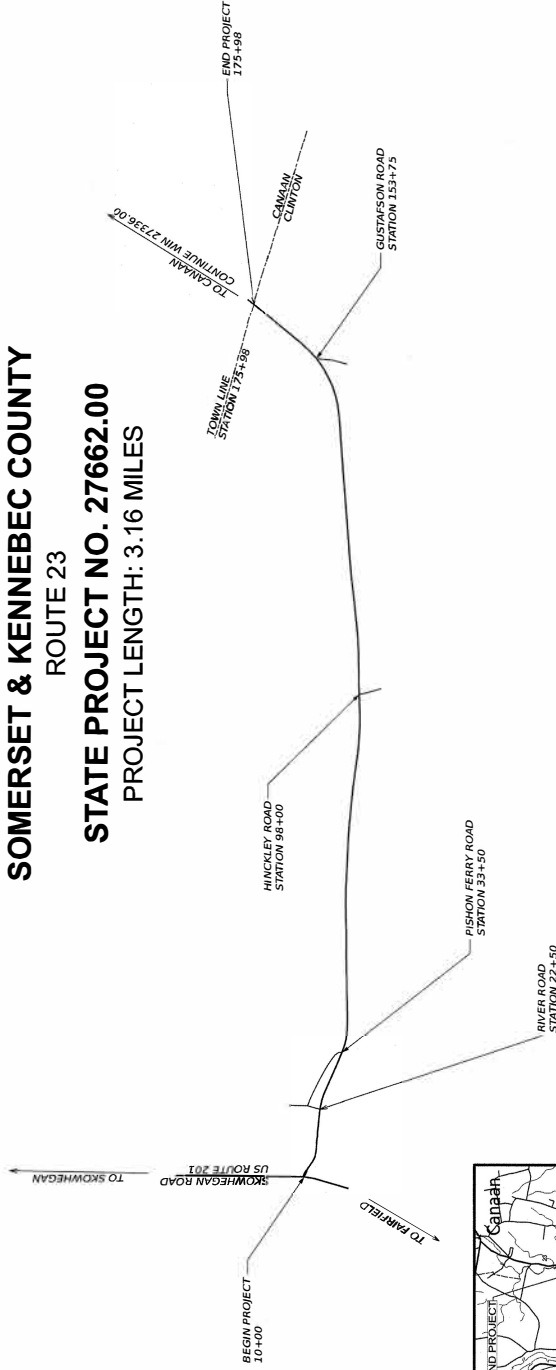
FAIRFIELD - CLINTON

SOMERSET & KENNEBEC COUNTY

ROUTE 23

STATE PROJECT NO. 27662.00

PROJECT LENGTH: 3.16 MILES



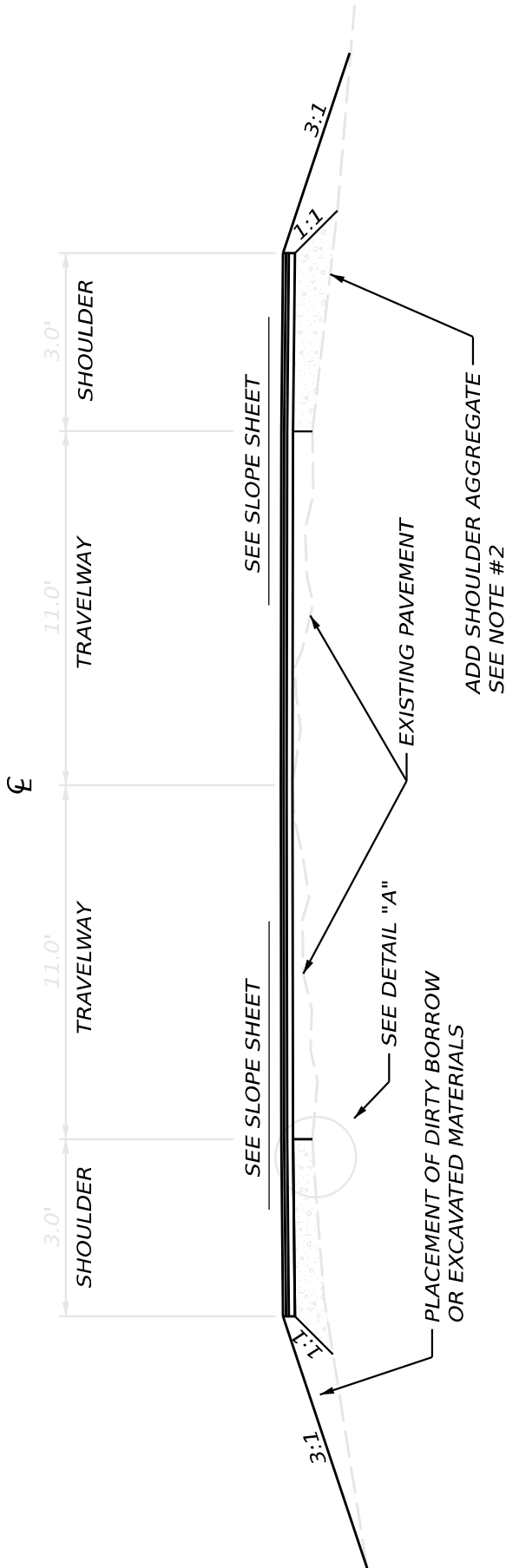
TRAFFIC DATA	
Current (2024) AADT	2390
Future (2044) AADT	2840
Design Hour Volume	317
% Heavy Trucks (AADT)	10%
% Heavy Trucks (DHV)	2%
Directional Distribution (DHV)	64%
18-kip Equivalent P 2.0	234
Design Speed (mph)	222
Corridor Priority	45
	3

PROJECT LOCATION:	BEGINNING AT ROUTE 201 AND EXTENDING NORTHEAST 3.16 MILES.
PROGRAM AREA:	REGIONAL
SCOPE OF WORK:	HIGHWAY REHABILITATION CHIP

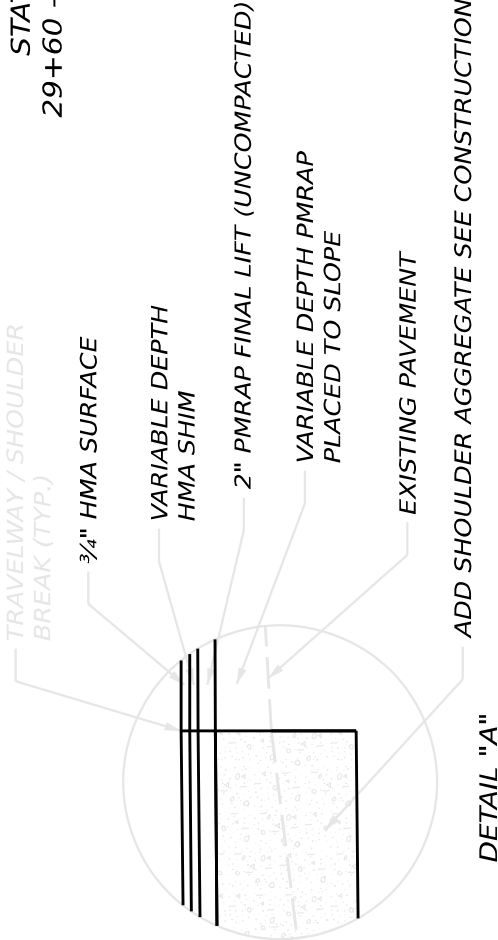
STATE OF MAINE DEPARTMENT OF TRANSPORTATION APPROVED: <i>[Signature]</i> DATE: 5-2-2024 CHIEF ENGINEER: <i>[Signature]</i>		PROJECT INFORMATION PROJECT NO. 27662.00 PROJECT NAME: ROUTE 23 PROJECT LOCATION: FAIRFIELD - CLINTON PROJECT LENGTH: 3.16 MILES PROJECT STATUS: IN PROGRESS PROJECT COMPLETION DATE: 12/31/2024 DATE: 4/24/2024 P.E. NUMBER: 12622 SIGNATURE: <i>[Signature]</i> REGIONAL: ROB BEITZ DISTRICT: HEATHER GROVES
SHEET NUMBER: 1 OF 1		TITLE SHEET ROUTE 23 STATE PROJECT NO. 27662.00

027662.00 Title Sheet

VARIABLE DEPTH PMRAP WITH HOT MIX ASPHALT OVERLAY

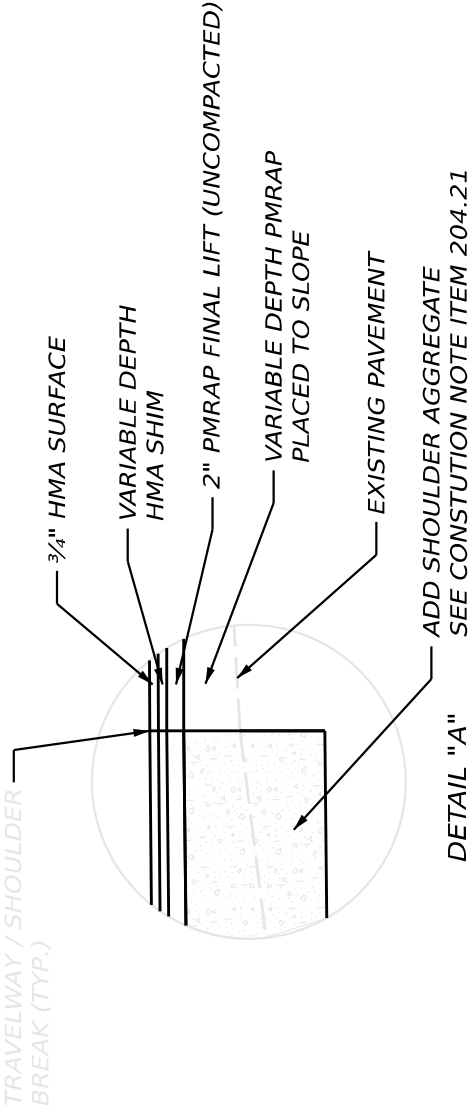
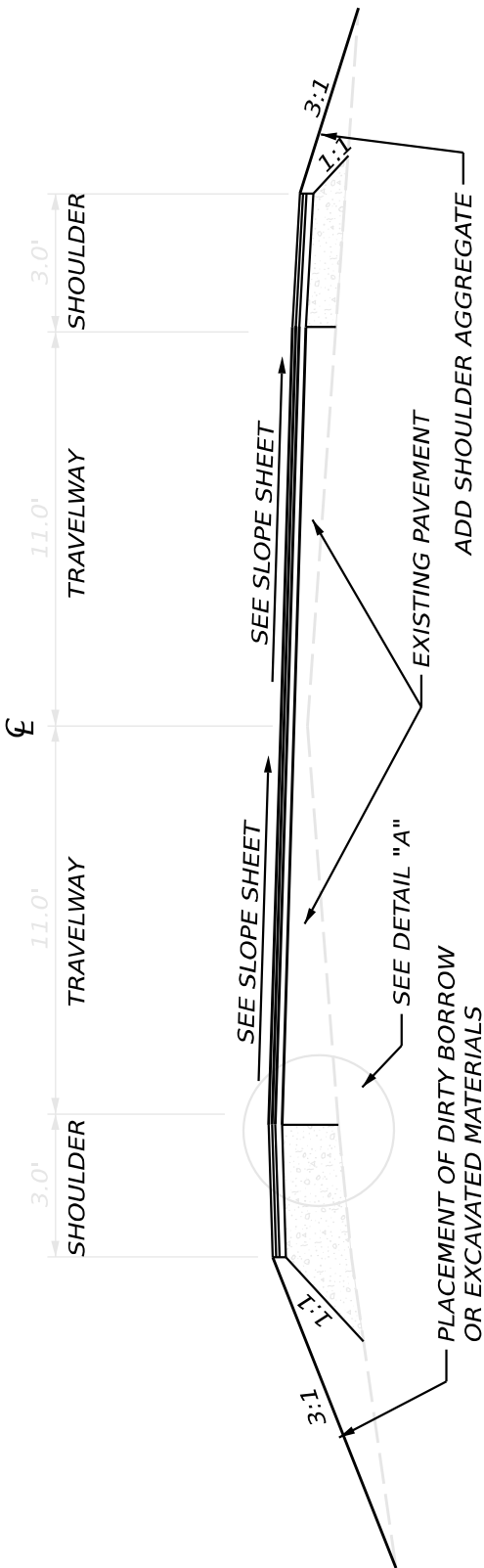


STATION
29+60 - 175+88



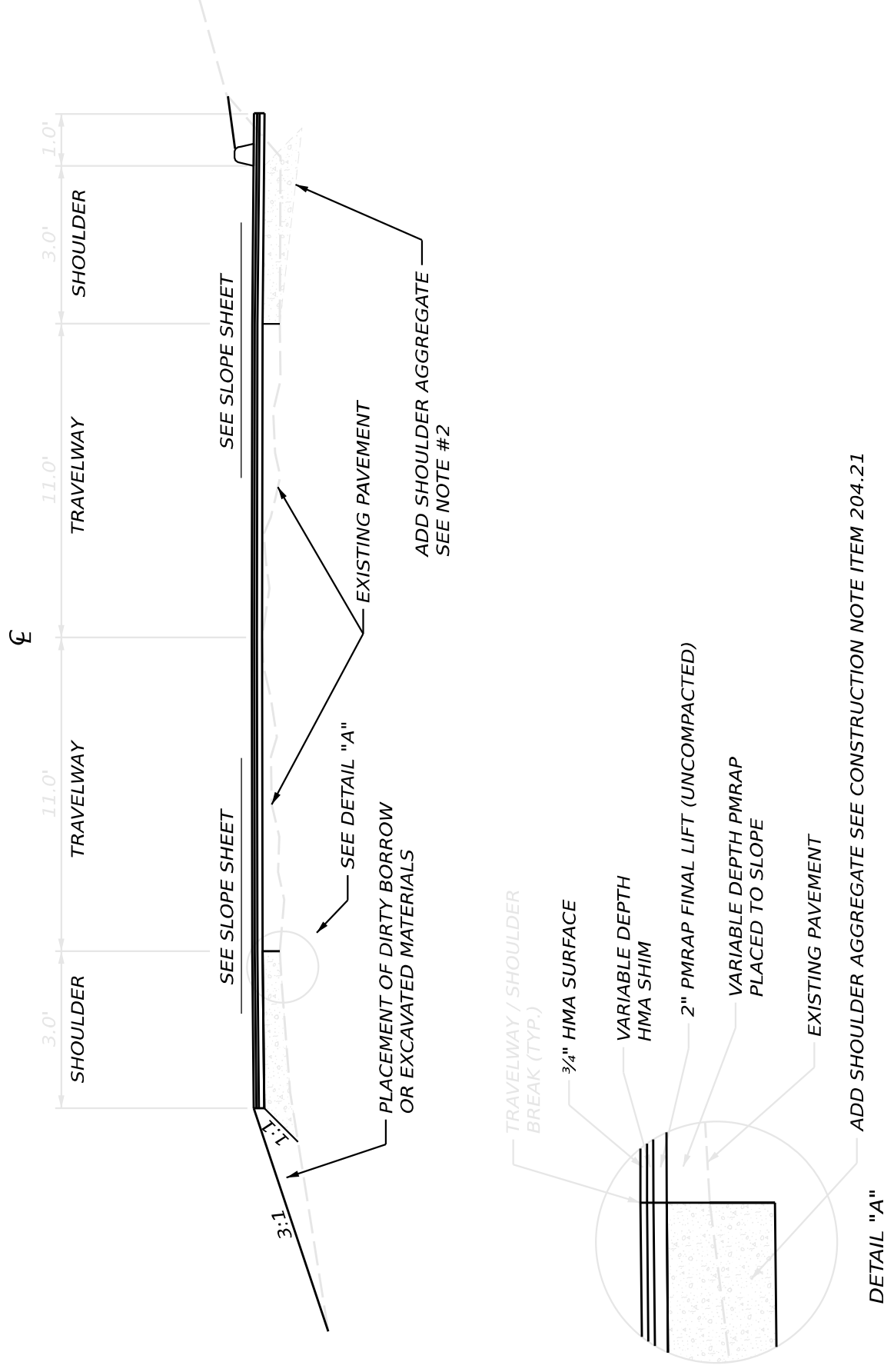
NOT TO SCALE		STATE OF MAINE		SHEET NUMBER	
FAIRFIELD - CLINTON		DEPARTMENT OF TRANSPORTATION		1 OF 6	
ROUTE 23		2766200		HIGHWAY PLANS	
TYPICAL SECTIONS		WIN 27662.00			
42					

VARIABLE DEPTH PMRAP WITH HOT MIX ASPHALT OVERLAY
SUPERELEVATED SECTION



NOT TO SCALE		STATE OF MAINE	
FAIRFIELD - CLINTON		DEPARTMENT OF TRANSPORTATION	
ROUTE 23		2766200	
TYPICAL SECTIONS		HIGHWAY PLANS	
43			
SHEET NUMBER		2 OF 6	

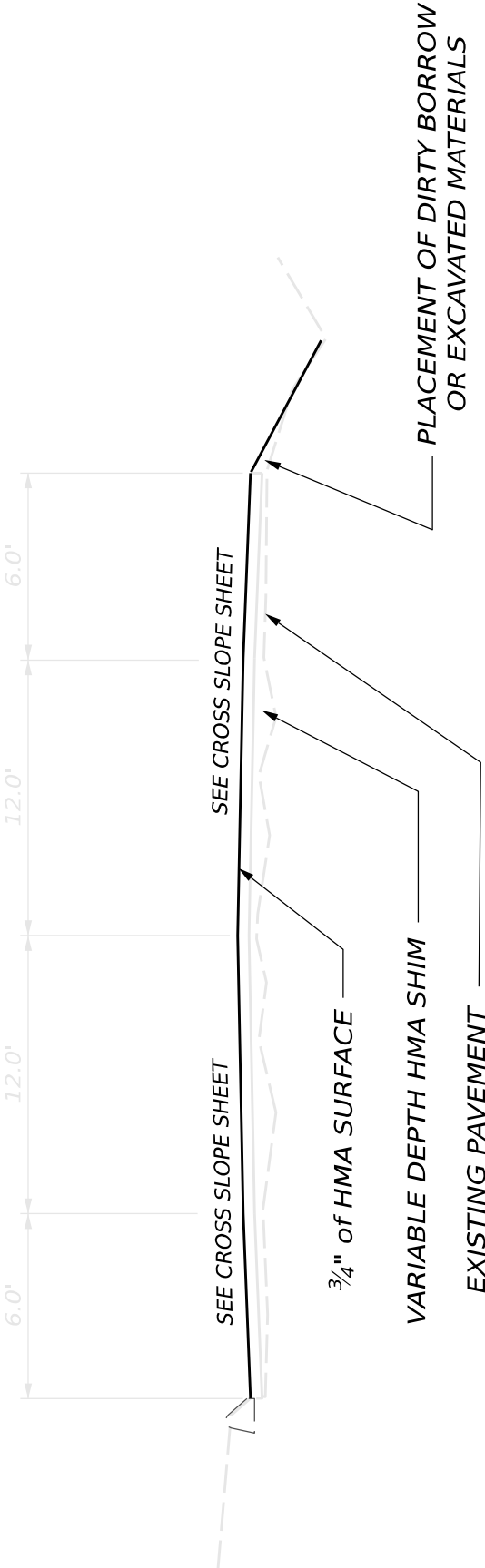
VARIABLE DEPTH PMRAP WITH HOT MIX ASPHALT OVERLAY & CURB



FAIRFIELD - CLINTON ROUTE 23		WIN 27662.00	STATE OF MAINE DEPARTMENT OF TRANSPORTATION 2766200	NOT TO SCALE
4	TYPICAL SECTIONS			
				SHEET NUMBER 3 OF 6

3/4" HMA OVERLAY SHOWING EXISTING CURB

℄

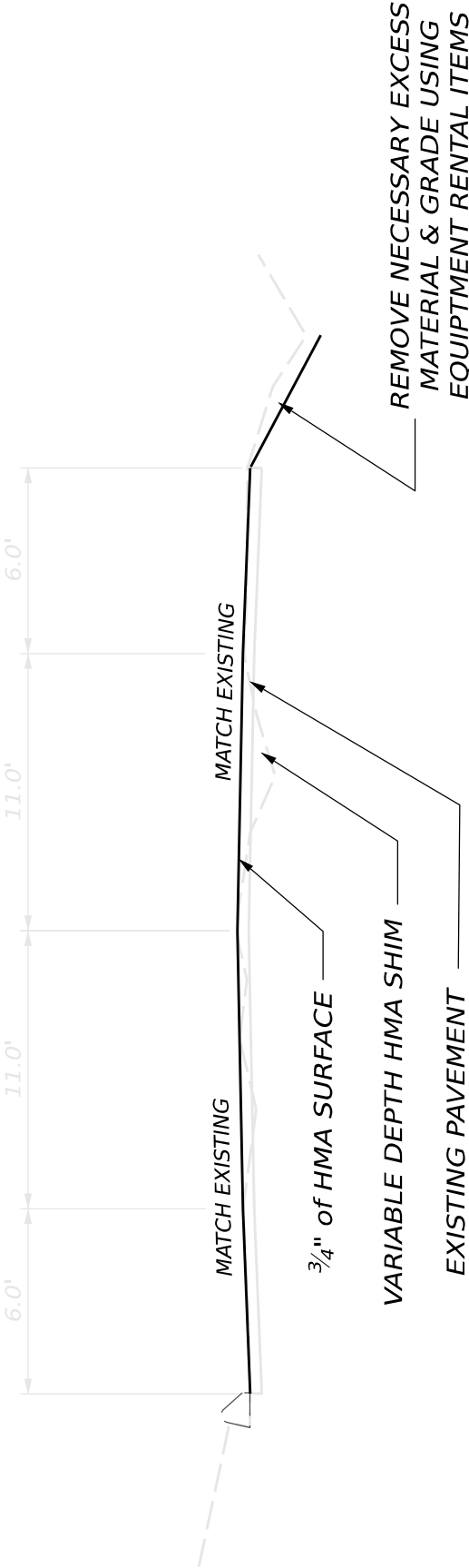


STATION
21+95 - 29+60

NOT TO SCALE			
45	FAIRFIELD - CLINTON ROUTE 23 TYPICAL SECTIONS	STATE OF MAINE DEPARTMENT OF TRANSPORTATION 2766200 HIGHWAY PLANS	SHEET NUMBER 4 OF 6
		WIN 27662.00	

1½" MILL AND FILL SHOWING EXISTING CURB

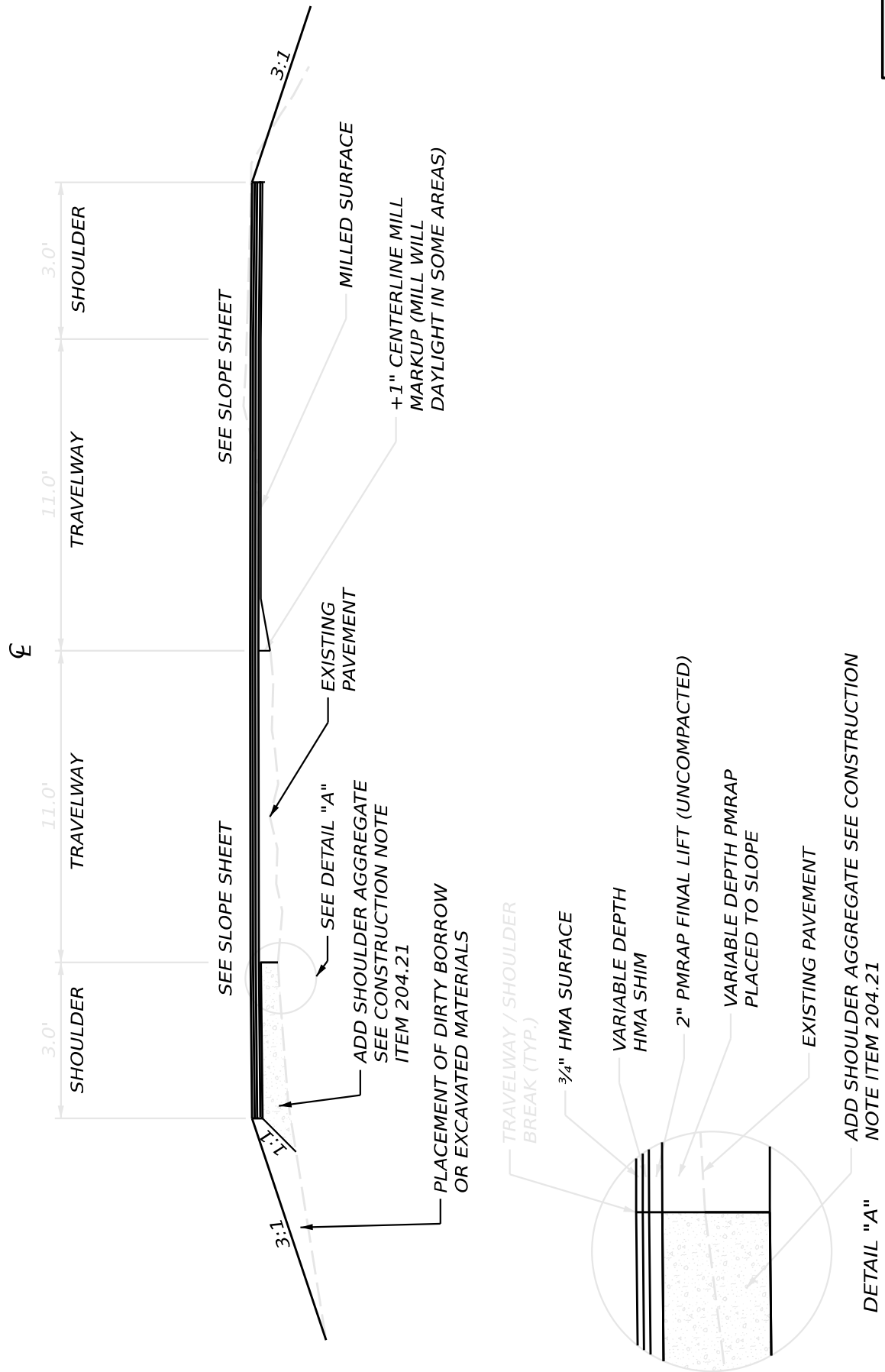
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STATION
10+00 - 15+50

FAIRFIELD - CLINTON		STATE OF MAINE		NOT TO SCALE
ROUTE 23		DEPARTMENT OF TRANSPORTATION		SHEET NUMBER
TYPICAL SECTIONS		2766200		5 OF 6
46		WIN 27662.00		HIGHWAY PLANS

VARIABLE DEPTH PMRAP WITH HOT MIX ASPHALT OVERLAY
AND SPOT MILLING



NOT TO SCALE		STATE OF MAINE	
6 OF 6		DEPARTMENT OF TRANSPORTATION	
2766200		HIGHWAY PLANS	
WIN 27662.00		FAIRFIELD - CLINTON	
ROUTE 23		TYPICAL SECTIONS	
47		SHEET NUMBER	

<u>Left Side</u>	Project Stationing <u>Station</u>	<u>Right Side</u>
	159+61	Box #563
	149+00	CMP Pole #58
	140+23	CMP Pole 55/222
CMP Pole #59	133+75	
Box #417	123+91	
	114+08	CMP Pole #48
Pole # 41	108+17	
CMP Pole #39	104+00	
CMP Pole #37	100+00	
	90+23	CMP Pole #32
CMP Pole #87/32	83+75	
CMP Pole #25	74+00	
CMP Pole #18	59+22	
CMP Pole #15	52+31	
CMP Pole #10 S	40+51	
	31+24	CMP Pole #87
Bridge Joint	21+95	Bridge Joint
Bridge Joint	15+50	Bridge Joint
Begin Project	10+00	Begin Project

<u>Left Side</u>	Project Stationing <u>Station</u>	<u>Right Side</u>
End Station/ Town Line	175+98	End Station/Town Line
CMP Pole #65S	166+76	

CONSTRUCTION NOTES

202.203 – Pavement Butt Joints

<u>Description</u>	<u>Station</u>
Bridge Joint	21+95

<u>Description</u>	<u>Quantity</u>
Paved Drives	40
Sideroads	5

All butt joints shall be full width mainline and shoulder. All paved driveways and side roads within the project limits and are to be done as directed by the resident.

204.21 – Add Shoulder Aggregate to Existing Shoulder, (Truck Measure)

This material will be used to back up PMRAP and surface pavement. This operation could take several passes determined by the number of PMRAP lifts and/or shim.

The Contractor shall prepare shoulders and match the edge of pavement prior to PMRAP placement. When full width from centerline is less than 14 feet the Contractor will start backing up the PMRAP within 2 days after placement if there is a 3 inch or more drop off at the edge of the PMRAP. If less than 3 inches backup within 15 days. When full width from centerline is greater than 14 feet the Contractor will start backing up the PMRAP within 14 days after placement if there is a 3 inch or more drop off at the edge of the PMRAP. If less than 3 inches backup within 30 days. The contractor shall place Item 204.21 – Add Shoulder Aggregate to Existing shoulder to back up the PMRAP prior to placing the final lift of PMRAP. The contractor shall place Item 204.21 – Add Shoulder Aggregate to Existing shoulder again after the HMA surface course has been placed. This will be paid for under Item 204.21 – Add Shoulder Aggregate to Existing Shoulder.

603.179 – 18 inch Culvert Pipe Option III

Station
33+60 – Phison Ferry Rd

603.219 – 36 inch Culvert Pipe Option III

Station
99+40

606.1303 – 31" W-BM GR, MID-WAY Splice- 15' Rad. and Less

<u>Left Side</u>	<u>Right Side</u>
<u>Station</u>	<u>Station</u>
22+00	22+00

CONSTRUCTION NOTES

606.1304 – 31" W-BM GR, MID-WAY Splice- Over 15' Rad.

Left Side	Right Side
<u>Station</u>	<u>Station</u>
22+00	22+00

606.356 – Underdrain Delineator Post

This item to be used in the following areas: 36" and less Cross Culvert Outlet's and at the end of each run of bituminous or concrete slipform curb. Exact locations to be determined by the Resident.

609.21 – Concrete Slipform Curb

Left Side		Right Side		
<u>Station</u>	<u>To</u>	<u>Station</u>	<u>To</u>	<u>Station</u>
10+00	10+80	10+00		10+85
11+00	11+84	159+59		160+90
12+15	12+88			
22+78	23+41			
42+60	43+90			
167+30	167+90			
168+10	168+33			
168+48	170+00			

* Exact locations to be determined by the Resident.

610.08 – Plain Rip Rap

<u>Station</u>
10+80 LT
12+90 LT
33+60 LT
99+40 LT/RT
167+00 LT
170+00 LT

* To be used as directed by the Resident as outlet, inlet, and slope protection.

CONSTRUCTION NOTES

627.733 – 4 Inch White or Yellow Painted Pavement Marking Line

Final striping shall not commence until ten days have elapsed from the completion of the surface pavement and must be completed within 20 days of the completion of surface pavement. Unless otherwise directed, failure to comply will result in a Traffic Control Violation.

Prior to final marking line application on the surface course, the contractor shall confirm and receive approval for marking line layout from the Department.

Once construction is complete, Maintenance of Traffic Control Devices (652.36) will not be paid while waiting to final stripe.

Once construction is complete, liquidated damages will not be charged while waiting to final stripe.

627.75 – White or Yellow Pavement & Curb Marking

To be used for existing stop bars on side roads and railroad crossing. Contractor shall place markings back in their existing locations unless directed otherwise by the Department approved striping plan.

Stop Bars

Route 23/Route 201 Intersection
Hinckley Road

Railroad Crossing

10+50 RT
12+50 LT

CONSTRUCTION NOTES

627.78 – Temporary 4 Inch Painted Pavement Marking Line, White or Yellow

Center lines and edge lines shall be painted on all matched pavement within one week.

Temporary edge lines shall be painted on all pavement layers within four weeks.

All temporary lines shall be painted prior to final striping.

TOMs must be used on all pavement layers until temporary paint is applied.

TOMs must be removed before final striping.

TOMs removal will be addressed in the Traffic Control Plan.

631.14 – Grader (Including Operator)

This item will be used to pay for existing shoulders to be cleaned of all winter sand and organics and replaced with gravel to the proposed shoulder widths per the typical.

631.179 – Pugmill Trucking

The estimated quantity of PMRAP to be hauled is 5850 tons. Maine DOT will produce the PMRAP in Skowhegan at 264 Canaan Road, Skowhegan (44.769181, -69.682656). MaineDOT will be responsible for loading the contractor trucks.

631.21 – Road Broom (Including operator)

This item is to be used for sweeping of roadway ahead of PMRAP placement.

652.35 – Construction Signs

One **Road Work Next 7 Miles** sign is required for this project on North-bound approach. South-bound approach signing will be carried on WIN 27336.00, which directly abuts this project.

The following side roads will require **Road Work Ahead** and **End Road Work** signs:

- River Road
- Hinckley Road
- Gustafson Road

Fairfield & Clinton

027662.00

Route 23

April 30, 2024

Cross Slope Sheet

SLOPES TO BE ADDED VIA AMENDMENT

GENERAL NOTES

1. Pavement thicknesses shown on the typical sections are intended to be nominal.
2. Construct butt joints at all paved drives and entrances. Butt joints shall have a minimum width of 18 inches or as directed by the Resident.
3. Grind transition tapers at Catch Basins under Standard Specifications Item 202.203, Pavement Butt Joints in accordance with Standard Detail 609(05), Gutter Grade Transition at Catch Basin, or as directed by the Resident.
4. Where deemed necessary by the Resident, unsuitable excess material shall be removed from the edges of shoulders and placed in designated areas or disposed of. Payment will be made under the appropriate Contract items.
5. The Contractor shall place suitable existing or other material acceptable to the Resident on all pavement edges to allow a drop off no greater than the surface pavement thickness. The material shall be graded to match the existing inslope or as directed by the Resident before surface is placed. The Contractor will be paid under appropriate equipment rental items. Borrow is not authorized until all acceptable waste material has been utilized. Seed and Mulch will be paid for at the contract unit price.
6. Driveway fill side slopes shall be the same as the fill side slopes without guardrail unless otherwise noted on the Plans.
7. All waste material not used on the project shall be disposed of off the project in acceptable waste areas reviewed by the Resident. Grading, seeding and mulching of waste areas shall be considered incidental.
8. A 3-foot paved lip shall be placed at all unpaved entrances unless otherwise noted in the Plans or directed by the Resident.
9. Any necessary cleaning of existing pavement prior to paving (or milling) shall be incidental to the related paving (or milling) items. This includes killing and removal of all vegetative matter.
10. When superelevation exceeds the slope of the low-side shoulder, the low-side shoulder will have same slope as the travelway.
11. The algebraic difference between travelway and shoulder cross slope shall not exceed 8 percent.
12. The following shall be incidental to the Standard Specifications Section 603, Pipe Culverts and Storm Drains:

GENERAL NOTES

- a. Any cutting of existing culverts and or connectors necessary to install new culvert replacements or extensions;
 - b. All pipe excavation including any cutting and removal of pavement;
 - c. All ditching at pipe ends;
 - d. Furnishing, placing, grading, and compacting of any new gravel and for temporary detours to maintain traffic during pipe installation (excavation is also incidental);
 - e. All work necessary to connect to existing pipes and drainage structures;
 - f. Existing flow lines may be changed by up to 1.5 feet;
 - g. Any necessary clearing of brush and non-pay trees within 10 feet of culvert ends;
 - h. An 18-inch wide strip of non-woven geotextile meeting the requirements of Standard Specifications Item 620.58, Erosion Control Geotextile, shall be placed over all RCP joints.
13. Prior to surface paving, existing culverts to remain shall be cleaned as directed by the Resident. Payment will be made under Standard Specifications Item 631.32, Culvert Cleaner (including operator).
14. Existing culverts and catch basins will be cleaned as directed by the Resident under the appropriate pay items.
15. No existing drainage shall be abandoned, removed or plugged without prior approval of the Resident.
16. All existing guardrail removed and not reused on the project will become the property of the Contractor. Removal and disposal shall be considered incidental to the guardrail items.
17. A delineator post (Standard Specifications Item 606.356, Underdrain Delineator Post) will be installed at each end of each run of bituminous curb.
18. Connections for proposed guardrail to existing guardrail will be considered incidental to Standard Specifications Section 606, Guardrail.
19. Backing up bituminous or concrete slipform curb is incidental to the curb items. In areas where new bituminous or concrete slipform curb is designated to replace existing, the removal of the old bituminous or concrete slipform curb shall be incidental to the new curb. If called for on the Plans or directed by the Resident, loam or dirty borrow will be paid for separately.
20. Unless otherwise noted Seeding Method No. 1 shall be utilized on all lawns and developed areas; Seeding Method No. 2 shall be utilized on all other areas.

GENERAL NOTES

21. The Contractor will be responsible for maintaining all existing mailboxes to ensure that the mail will be deliverable. Payment for this work will be considered incidental to the contract
22. Any damage to the slopes caused by the Contractor's equipment, personnel, or operation shall be repaired to the satisfaction of the Resident. All work, equipment, and materials required to make repairs shall be at the Contractor's expense.
23. No separate payment for superintendent or foreman will be made for the supervision of equipment and layout of work being paid for under the equipment rental items.
24. "Undetermined locations" shall be determined by the Resident.
25. Stations referenced are approximate.
26. The Contractor will place appropriately-marked stakes at the following locations on the project: striping pattern changes, cross-slope changes, and every 500 feet for stationing. The Contractor will paint every full station (100 feet) on the existing roadway and will transfer the painted stationing through all intermediate lifts (not surface). Appropriately-sized striping pattern changes will be painted on surface. Stationing control must be placed before work can commence. Cross-slope and striping change controls must be placed before paving can commence.

SPECIAL PROVISION
SECTION 101
CONTRACT INTERPRETATION
(Working Day – Pavement Preservation)

Add the following to 101.2 – Definitions:

Weather Event Any precipitation, such as rain, sleet, snow, or fog that causes wet pavement that prevents the contractor from completing work within the Construction Limits as determined by the Department. This excludes ambient air temperatures below Specification.

Weather Dependent Activities Contractor's work, as shown on the approved Schedule of Work, that cannot be completed should a Weather Event occur. Paving, crack sealing, fog sealing, or other activities as determined by the Department will be considered Weather Dependent Activities.

Working Day Any Calendar Day except:

- Identified non-work days in the Contract Special Provision 107
- Saturdays, Sundays and Holidays – as outlined in Section 107.3.3
- Approved work suspensions
- Any day a Weather Event prevents the Contractor from performing at least seven hours of weather dependent activities, as determined by the Department. Up to a three-hour hold, with the crew and equipment on-site, prior to the start of work may be required if weather conditions are uncertain.

The Contractor may request, in writing, a non-working day due to a Weather Event up to 16 hours in advance of the normal start time. The Department may approve this request depending on the certainty of the forecast.

For day work, if the Contractor elects to work a Saturday, an allowable holiday, or receives approval to work Sunday, the same process will be utilized to determine if it is a Working Day. If the Contractor requests approval to work Saturday and does not cancel their request by Thursday at the end of shift, that Saturday will be considered a Working Day regardless of the actual weather conditions and whether work occurred.

For night work, if the Contractor elects to work a Friday night, an allowable holiday, or receives approval to work Saturday night, the same process will be utilized to determine if it is a Working Day. If the Contractor requests approval to work Friday night and does not cancel their request by Wednesday morning at the end of shift, that Friday night will be considered a Working Day regardless of the actual weather conditions and whether work occurred.

**SPECIAL PROVISIONS
SECTION 104
UTILITIES**

UTILITY COORDINATION

The Contractor has primary responsibility for coordinating their work with Utilities and/or Railroad **AFTER** contract award. The Contractor shall communicate directly with the Utilities and/or Railroad regarding any utility work necessary to maintain the Contractor's schedule and prevent project construction delays. The Contractor shall notify the Resident of any issues.

THE CONTRACTOR SHALL PLAN AND CONDUCT WORK ACCORDINGLY.

MEETING

A Preconstruction Utility Conference, as defined in Subsection 104.4.6 of the Standard Specifications is **NOT** required.

GENERAL INFORMATION

These Special Provisions outline the arrangements that have been made by the Department for utility and/or railroad work to be undertaken in conjunction with this project. The following list identifies all known Utilities and/or Railroads having facilities presently located within the limits of this project or intending to install facilities during project construction.

Utilities have been notified and will be furnished with a project specification.

The Contractor shall give all Utilities **10** working days' notice prior to beginning **ANY** work on this project.

OVERVIEW

Utility	Aerial	Subsurface	Contact	Phone
Central Maine Power Company	X		Derick Hemingway	(207) 215-6136
Charter Communications, Inc.	X		Jeff Greenwald	(207) 478-1423
Consolidated Communications	X		Marty Pease	(207) 272-7993
Firstlight	X		Mike Ellingwood	(207) 462-2759
GoNetSpeed		X	Jim Knight	(207) 590-5111

LCPP Coordinator

Brian Cooley

(207) 592-2298

Temporary utility adjustments are **NOT** anticipated. If any unexpected utility relocations become necessary, they shall be scheduled in accordance with Section 104 of the Standard Specifications and shall be performed by the appropriate Utility company in conjunction with the work by the Contractor. Should the Contractor choose to have any poles temporarily relocated, all work shall be done at the Contractor's request and expense, with no additional cost or schedule impacts to the Department.

All adjustments are to be made by the respective Utility/Railroad unless otherwise specified herein.

Fire hydrants, if present, shall not be disturbed until all necessary work has been accomplished in order to ensure proper fire protection.

**** Specific information regarding line voltages can be requested from Central Maine Power Co. ****

Utility working days are Monday through Friday.

AERIAL

Aerial utility adjustments are **NOT** anticipated at this time for the project. Though unexpected, if utility relocations become necessary, they will be scheduled in compliance with Section 104 of the Standard Specifications and will be done by the Utilities after the Contractor has finished their work.

Aerial Utilities require **5** working days' notice prior to any operations involving work around their lines.

**** POLE LIST - Resulting from a Field Review on 9/18/2023 ****

CMP 1 / CCI 307 / 1 - Transfer cable tv & telephone, remove down-guy, old pole & anchor.
CMP 2 / CCI 2 - Transfer cable tv & telephone, remove old pole.
CMP 3 / CCI 3 - Transfer cable tv, telephone & drops, remove old pole.
CMP 5 / CCI 5 - Transfer cable tv, telephone & drops, remove old pole.
CMP 7 / CCI 7 - Transfer cable tv, telephone & drops, remove old pole.
CMP 8 / CCI 8 - Transfer cable tv, telephone, repeater & drops, remove old pole.
CMP 9 / CCI 9 - Transfer cable tv, telephone & drop, remove old pole.
CMP 9.1 - Remove abandoned pole.
CMP 11.1 / CCI 11.1 - Transfer drops, remove down-guy, old pole & anchor.
CMP 14 / CCI 14 - Transfer telephone & drop, remove down-guy, old pole & anchor.
CMP 18 / CCI 307 / 18 - Transfer telephone and remove old pole.
CMP 29 / CCI 29 - Pole spotted & staked. Transfer power, cable tv & telephone once set, and remove old pole.
CMP 30 / CCI 307 / 30 - Transfer cable tv, telephone & repeater, remove old pole.
CMP 31 / CCI 31 - Transfer power, cable tv & telephone, remove old pole.
CMP 35 / CCI 35 (*Broken pole-Tuttle Rd.*) - Transfer cable tv, telephone & down-guy, remove old pole & anchor.
CMP 36 / CCI 36 - Transfer cable tv, telephone, drops & down-guys, remove old pole & anchors.
CMP 40 / CCI 31 - Transfer telephone, drops & overhead-guy, remove old pole.
CMP 40S / CCI 31S - Transfer overhead & down-guy, remove down-guy, old pole & anchor.
CMP 41 / CCI 32 - Transfer telephone & drop, remove old pole.
CMP 43 / CCI 311 / 33 - Transfer telephone & drop, remove old pole.
CMP 43.1 / CCI 33.1 - Transfer drop & remove old pole.
CMP 43½ / CCI 34 - Transfer telephone & drop, remove old pole.
CMP 47.1 / CCI 38.1 - Remove abandoned pole stub.
CMP 49 / CCI 311 / 40 - Transfer telephone, drops & down-guy, remove old pole & anchor.
CMP 50 / CCI 311 / 41 - Transfer cable tv, telephone, drops & down-guys, remove old pole & anchors.
CMP 75 / CCI 311 / 70 - Transfer cable tv & telephone, remove old pole.
CMP 78 / CCI 73 - Transfer cable tv, telephone, drops & down-guy, remove old pole & anchor.
CMP 83 / CCI 78 - Transfer cable tv & drops, remove old pole.

SUBSURFACE

Subsurface utility adjustments are **NOT** anticipated in order to complete the scope of this project. If subsurface utility installations become necessary, they will be scheduled in compliance with Section 104 of the Standard Specifications and will be done by the Utilities after the Contractor has finished their work.

GoNetSpeed - has an underground fiber-optic cable located within the project's limits along the eastern side of Route 23 from Sand Rd. to the Clinton town-line, and beyond. The Contractor shall give GoNetSpeed **5** working days' notice to have personnel on-site while the Contractor is excavating near their facilities.

MAINTAINING UTILITY LOCATION MARKINGS

The Contractor will be responsible for maintaining the buried utility location markings following the initial locating by the appropriate Utility or their designated representative.

UTILITY SIGNING

Any Utility working within the construction limits of this project shall ensure that the traveling public is adequately protected at all times. All work areas shall be signed, lighted, and traffic flaggers employed as determined by field conditions. All traffic controls shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices for Streets and Highways, as issued by the Federal Highway Administration.

Town: Clinton - Fairfield, Route 23
Project: 027662.00
Date: April 17, 2024

**SPECIAL PROVISIONS
SECTION 104
UTILITIES**

UTILITY COORDINATION

The Contractor has primary responsibility for coordinating their work with Utilities and/or Railroad **AFTER** contract award. The Contractor shall communicate directly with the Utilities and/or Railroad regarding any utility work necessary to maintain the Contractor's schedule and prevent project construction delays. The Contractor shall notify the Resident of any issues.

THE CONTRACTOR SHALL PLAN AND CONDUCT WORK ACCORDINGLY.

MEETING

A Preconstruction Utility Conference, as defined in Subsection 104.4.6 of the Standard Specifications **IS** required.

GENERAL INFORMATION

These Special Provisions outline the arrangements that have been made by the Department for utility and/or railroad work to be undertaken in conjunction with this project. The following list identifies all known Utilities and/or Railroads having facilities presently located within the limits of this project or intending to install facilities during project construction.

Utilities and/or Railroads have been notified and will be furnished with a project specification.

The Contractor shall give all Utilities and/or Railroads **10** working days' notice prior to beginning **ANY** work on this project.

OVERVIEW

Utility	Aerial	Subsurface	R.R.	Contact	Phone
Brookfield Renewable Energy Partners	X			Ernest Deluca	(207) 242-3491
Central Maine Power Co. (CMP)	X			Kristian Suttie	(207) 210-0754
Charter Communications	X			Jeff Greenwald	(207) 478-1423
Consolidated Communications (CCI)	X	X		Mike Rocque Marty Pease	(207) 485-2613 (207) 272-7993
GoNetSpeed	X	X		Jim Knight	(207) 590-5111
Springfield Terminal Railway (CSX)			X	Michael Sliper Ryan Peploski	(518) 767-6081 (315) 212-7644

Temporary utility adjustments are **NOT** anticipated. If any unexpected utility relocations become necessary, they shall be scheduled in accordance with Section 104 of the Standard Specifications and shall be performed by the appropriate Utility company in conjunction with the work by the Contractor. Should the Contractor choose to have any poles temporarily relocated, all work shall be done at the Contractor's request and expense, with no additional cost or schedule impacts to the Department.

Town: Clinton - Fairfield, Route 23
Project: 027662.00
Date: April 17, 2024

All adjustments are to be made by the respective Utility unless otherwise specified herein.

Fire hydrants, if present, shall not be disturbed until all necessary work has been accomplished to ensure proper fire protection.

**** Specific information regarding line voltages can be requested from Central Maine Power Co. ****

Utility working days are Monday through Friday.

AERIAL

Aerial Utility adjustments are **NOT** anticipated at this time for the completion of this project. Though unexpected, if utility relocations become necessary, they will be scheduled in compliance with Section 104 of the Standard Specifications and will be done by the Utilities after the Contractor has finished their work.

Aerial utilities require **5** working days' notice prior to any operations involving work around their lines.

**** POLE LIST - Resulting from a Field Review on 11/02/2023 ****

Clinton:

CMP 51 / CCI 226 - Remove abandoned pole.

CMP 48 / CCI 229 - Remove abandoned pole.

CMP 11 / CCI 87/15 - Transfer CATV, telephone, drops & down-guy, remove old pole & anchor.

CMP 501 / CCI 87/5 (River Rd. / Riser) - Transfer telephone, drop, overhead & down-guy, remove old pole.

Fairfield:

CMP 2 / CCI 2 - Transfer CATV, telephone, & drops, remove old pole.

CSX Service Pole (in R.R. right-of-way) - CSX is responsible for facilities transfer and pole removal.

SUBSURFACE

Subsurface Utility adjustments are **NOT** anticipated at this time for the completion of this project. Though unexpected, if utility relocations become necessary, they will be scheduled in compliance with Section 104 of the Standard Specifications and will be done by the Utilities after the Contractor has finished their work.

Drainage items requiring work within the Railroad's right-of-way will be performed in accordance with the Protection of Railroad Traffic and Structures (PRTS), using Railroad flaggers as required.

Consolidated Communications (CCI) - has underground facilities located within the project limits in the vicinity of Bridge St. and Route 201. CCI has a single communications manhole located off-project in the churchyard on the corner of Canaan Rd. & River Rd. CCI facilities should **NOT** be impacted by this project. The Contractor shall give CCI **5** working days' notice to have personnel on-site while the Contractor is excavating near their facilities.

GoNetSpeed - has underground facilities located within the project limits in the vicinity of Bridge St. and Route 201. GoNetSpeed facilities should **NOT** be impacted by this project. The Contractor shall give GoNetSpeed **5** working days' notice to have personnel on-site while the Contractor is excavating near their facilities.

Town: Clinton - Fairfield, Route 23
Project: 027662.00
Date: April 17, 2024

RAILROAD

Springfield Terminal Railway Co. (CSX) - has a rail crossing located within the limits of this project. The Contractor shall grind and pave up to and between the tracks, as directed by the Resident at Rail Crossing #365225N. The Railroad agrees to allow the Department to pave up to and between the tracks, as well as replace curbing, and adjust/repair a single catch-basin located within the Railroad's right-of-way, and the Department agrees to complete this work as part of this contract.

Scope of Work Summary / R.R. Crossing #365225N:

- 1 ½" mill and fill up to, and in between the rails.
- Replacement of missing curb on station left.
- Adjusting catch basin frame next to the island on station left.
- There is no plan to adjust catch basin on station far left (outside of shoulder / in RR's right-of-way).

It is the Contractor's responsibility to coordinate and schedule this work with the Railroad. Work will need to be completed with temporary ramps to the top of the rails, as needed, prior to opening the lane to traffic flow. The Contractor shall keep all personnel, equipment, and materials out of the Railroad's right-of-way (25 feet from the tracks) unless duly authorized by the Railroad, and a Railroad Flagger is present. The Contractor shall provide a minimum of 2 weeks' notification to the Railroad to discuss the work plan and the scheduling of Rail Protection Services.

No work shall be performed in the Railroad's right-of-way without prior notification to, and approval by the Railroad. All work performed within the Railroad's right-of-way is governed by the **Protection of Railroad and Traffic Structures (PRTS)** Special Provisions, as set forth by the Railroad. Refer to the **PRTS and Schedule I (Contractor's Acceptance)** at the end of this Special Provision for more detail on what is required when working within the Railroad's right-of-way.

MAINTAINING UTILITY LOCATION MARKINGS

The Contractor will be responsible for maintaining any buried utility location markings following the initial locating by the appropriate Utility or their designated representative.

UTILITY SIGNING

Any Utility working within the construction limits of this project shall ensure that the traveling public is adequately protected at all times. All work areas shall be signed, lighted, and traffic flaggers employed as determined by field conditions. All traffic controls shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices for Streets and Highways, as issued by the Federal Highway Administration.

EXHIBIT C

PROTECTION OF RAILROAD TRAFFIC AND STRUCTURES SPECIAL PROVISIONS

1. GENERAL REQUIREMENTS

Part of the work required by the contract between MaineDOT and the Contractor for the performance of the Project (the "Contract") will be performed within a railroad right of way and/or adjacent to the tracks, telephone, telegraph, signal, and electric supply lines of Springfield Terminal Railway Company ("Railroad"), a subsidiary of CSX Transportation. The Contractor agrees to perform all such work in compliance with all of the terms of these Special Provisions and all safety rules, regulations, or standards applicable to the Railroad. The Contractor shall be fully responsible for all damages arising from the Contractor's failure to comply with the requirements of these Special Provisions. The Contractor shall be deemed to have included all costs associated with complying with these requirements in the unit prices of the Schedule of Prices and the Proposal.

Additionally, the Contractor shall comply with the current version of the CSX *Special Provisions for Construction Near CSX Property* found in the CSX Public Project Information Manual. In instances where these Special Provisions and the aforementioned CSX Special Provisions conflict, the more stringent requirement shall prevail; where there is a conflict between a general requirement and a specific requirement, the specific requirement shall prevail.

2. AMOUNT OF WORK NEAR TRACKS

The estimated amount of work to be done within 50 feet of the Railroad's track is >1% of the Contract.

3. NUMBER OF TRAINS AND TRAIN SPEED

The Contractor is notified that a maximum speed of 10 mph will be considered as prevailing for the operation of trains of the Railroad at the Project location and that the approximate number of trains per day at the Project location is 2.

4. PRIORITY OF RAILROAD OPERATIONS

The train movements of the Railroad, and its lessees and licensees, shall have absolute priority over the performance of the Project within the Railroad right of way. The Contractor hereby agrees that the hours and times of work within the Railroad right of way must be coordinated through the Railroad and that such hours and times are subject to change without prior notice to the Contractor unless other prior arrangements have been made through the Railroad.

5. AUTHORITY OF RAILROAD TO STOP WORK

If the Contractor fails to comply with the safety terms of these Special Provisions, or if the Railroad determines that the Contractor is using unsafe practices that threaten the safety of rail traffic, rail workers, or the general public, the Railroad shall have the right to immediately order the Contractor to cease work and vacate the Railroad's property. The Railroad agrees to confirm any cessation of work in writing by delivering to MaineDOT's Construction Manager a completed Stop Work Order form attached as Exhibit A within 24 hours of giving any such order.

The Contractor shall arrange and conduct its work so that there will be no interference with the Railroad's operations, including train, signal, telephone and telegraphic services, or damage to the Railroad's property, or to poles, wires, and other facilities of tenants on the Railroad's property or right-of-way. The Contractor shall store materials so as to prevent trespassers from causing damage to trains or to the Railroad's property. Whenever work is likely to affect the operations or safety of trains, the method of doing such work shall first be submitted to the Railroad's representative for approval, but such approval shall not relieve the Contractor from liability in connection with such work.

If conditions arising from or in connection with the Project require that immediate and unusual provisions be made to protect train operation or the Railroad's property, the Contractor shall make such provision. If the Railroad's representative determines that such provision is insufficient, the Railroad may, at the expense of the Contractor, require or provide such provision as may be deemed necessary, or cause the work to cease immediately.

6. ENTRY UPON RAILROAD PROPERTY

The Railroad hereby agrees to permit the Contractor, together with their subcontractors, suppliers, consultants, and engineers (the "Contractor"), to enter upon the Railroad property for the purpose of performing the Project, PROVIDED THAT the Contractor complies with all of the terms of these Special Provisions and all safety requirements and directions of the Railroad's representative.

7. NOTICE REQUIRED BEFORE ENTRY

The Contractor shall not commence any work on the Railroad's property or rights-of-way until it has complied with the following conditions:

A. Notify the Railroad in writing of the date that it intends to commence work on the Project. Such notice must be received by the Railroad at least **14** calendar days in advance of the date the Contractor proposes to begin work on the Railroad's property. The notice must refer to the agreement between MaineDOT and the Railroad for the Project (the "Agreement") by date. Additional notice requirements when flagging/inspection services are required are set forth in Section 21.

B. Obtain authorization from the Railroad's representative to begin work on the Railroad's

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property, such authorization to include an outline of specific conditions with which it must comply.

C. Obtain from the Railroad the names, addresses and telephone numbers of the Railroad's personnel who must receive notice under provisions in the Agreement. Where more than one individual is designated, the area of responsibility of each shall be specified.

8. HAZARDS

The Contractor shall assess to its own satisfaction hazards which may be caused by its operations. At a minimum, the Contractor agrees that the following shall constitute Hazards:

An operating track shall be considered fouled and subject to hazard when any object is brought nearer than 25 feet to the gauge line of the near rail of the track.

A signal line or communication line shall be considered fouled and subject to hazard when any object is brought nearer than 25 feet to any wire or cable.

An electric supply line shall be considered fouled and subject to hazard when any object is brought nearer than 25 feet to any wire of the line.

Cranes, trucks, power shovels or any other equipment shall be considered as fouling and subjecting to hazard a track, signal line, communication or electric supply line when working in such position that failure of equipment, with or without load, could foul the track, signal line, communication, or electric supply line.

Railroad operation will be considered subject to hazard when explosives are used in the vicinity of Railroad premises, or during the driving or pulling of sheeting for any footing adjacent to a track, or when erecting structural steel adjacent to a track, or when performing work under, across or adjacent to a track, or when operations involve swinging booms or chutes that could in any way come nearer than 25 feet to the gauge line of the near rail of the track, or when erection or removal of staging, false work or forms fouls a track or wire line.

None of the operations specified as a Hazard above shall be carried on during the approach or passing of a train or without permission from the Railroad and the presence of a Railroad inspector/flagman, unless other prior arrangements have been made through the Railroad.

9. MINIMUM CLEARANCES

During the construction of staging, false work or forms, the Contractor shall at all times maintain a minimum vertical clearance of 23 feet above the top of high rail and a minimum side clearance of 10 feet from the gauge line of the near rail where track is tangent. Additional side clearance must be maintained where track is on a curve.

10. COOPERATION AND DELAYS

Contractor shall arrange a schedule with the Railroad for accomplishing stage construction involving work by the Railroad. In arranging its schedule, the Contractor shall ascertain, from the Railroad, the lead time required for assembling crews and materials and shall make due allowance therefore.

The Contractor may not charge any costs or submit any claims against the Railroad for hindrance or delay caused by railroad traffic; work done by the Railroad or other delay incident to or necessary for safe maintenance of railroad traffic; or for any delays due to compliance with these Special Provisions.

The Contractor shall cooperate with others participating in the construction of the Project to the end that all work may be carried on to the best advantage.

The Contractor understands and agrees that the Railroad does not assume any responsibility for work performed by others in connection the Project. The Contractor further understands and agrees that it shall have no claim whatsoever against the Railroad for any inconvenience, delay or additional cost incurred by the Contractor on account of operations by others.

11. WORK PLAN SUBMITTAL AND APPROVAL

The Contractor shall submit in writing to the Railroad's representative and MaineDOT's representative, at least 30 calendar day(s) in advance of the start of the Project, an outline of the Contractor's plan for work within the Railroad right of way, including contemplated method(s) of construction. This plan must meet with the approval of the Railroad's representative and MaineDOT's representative in every respect. If the Contractor contemplates the use of "on the track equipment", it should so state and obtain from the Railroad the conditions pertaining to such operations. All Railroad costs included in this operation will be borne by the Contractor. In a like manner, any of the Contractor's equipment or material on cars for the Project shall be handled in conformance with existing traffic rules, with all costs borne by the Contractor.

Prior to submitting its Proposal, the Contractor shall have ascertained, from the Railroad's representative and from MaineDOT's representative, all information relating to the Railroad's requirements and regulations and all costs in connection with compliance thereto.

The Railroad may require additional construction submittals pending review of the Work Plan. Such submittals may include but are not limited to:

1. Hoisting Operations
2. Demolitions Procedure
3. Erection Procedure
4. Temporary Excavation and Shoring
5. Track Monitoring

Submission requirements and review periods for such submittals will be communicated at the pre-construction utility meeting.

12. WORK FOR THE BENEFIT OF THE CONTRACTOR

No temporary or permanent changes to wire lines or other facilities (other than third-party fiber optic cable transmission systems) on the Railroad's property that are considered necessary to the work are anticipated or shown on the Plans. If any such changes are, or become, necessary in the opinion of the Railroad or MaineDOT, such changes will be covered by appropriate revisions to the Plans and by preparation of a force account estimate. Such force account estimate may be initiated by either the Railroad or MaineDOT but must be approved by both the Railroad and MaineDOT. MaineDOT or Contractor shall be responsible for arranging for the relocation of the third-party fiber optic cable transmission systems, at no cost or expense to the Railroad.

Should MaineDOT or Contractor desire any changes in addition to the above, then it shall make separate arrangements with the Railroad for such changes to be accomplished at MaineDOT's or Contractor's expense.

13. HAUL ACROSS RAILROAD

If Contractor desires access across the Railroad's property or tracks at other than an existing and open public road crossing in or incident to construction of the Project, Contractor must first obtain the permission of the Railroad and shall execute a license agreement or right of entry satisfactory to the Railroad, wherein Contractor agrees to bear all costs and liabilities related to such access.

Contractor shall not cross the Railroad's property and tracks with vehicles or equipment of any kind or character, except at such crossing or crossings as may be permitted pursuant to this section.

14. STORAGE OF MATERIALS AND EQUIPMENT

Contractor shall not store its materials or equipment on the Railroad's property or where they may potentially interfere with the Railroad's operations unless Contractor has received the Railroad representative's prior written permission. Contractor understands and agrees that the Railroad will not be liable for any damage to such materials and equipment from any cause and that the Railroad may move, or require Contractor to move, such material and equipment at Contractor's sole expense. To minimize the possibility of damage to the railroad tracks resulting from the unauthorized use of equipment, all grading or other construction equipment that is left parked near the tracks unattended by watchmen shall be immobilized to the extent feasible so that it cannot be moved by unauthorized persons.

15. EXCAVATIONS

Before excavation for footings adjacent to tracks and/or within the Railroad's right-of-way may commence, whether or not also within the limits of a public highway, plans and calculations for

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such excavations, prepared by a Professional Engineer authorized to practice in Maine, shall be submitted to the Railroad's representative for review and approval. Unless other prior arrangements have been made, the Railroad shall have 30 calendar days to perform such review and approval and issue written permission to proceed with the excavation. No excavation shall proceed without such permission. If permission is denied, the Railroad shall have an additional 30 calendar days to perform such review of any re-submittal.

At a minimum, excavations must utilize proper bracing, shoring, sheeting, or other support, as determined by the Railroad, to support the tracks with railroad traffic. Open excavation shall be suitably planked over when construction operations are not in progress. No excavation work shall be performed by the Contractor within the limits of the Railroad right of way, whether or not also within the limits of a public highway, until the Contractor has ascertained from the Railroad the location of any wires, conduits, pipes, cables, or other railroad facilities below the surface of the ground. Damage to any such facilities caused by the failure of the Contractor to ascertain the location of such facilities or by failure to use due care to avoid injury to such facilities shall be at the expense of the Contractor.

16. EQUIPMENT

Equipment of the Contractor shall be in such condition so as to prevent failure that would cause delay in the operation of trains or damage to railroad facilities. Equipment shall not be placed or put in operation adjacent to a track without first obtaining permission of the Railroad. The Railroad agrees that such permission shall not be unreasonably withheld.

17. RAILROAD SERVICES - GENERALLY

When work is to be performed within the Railroad's right-of-way, the Railroad shall provide the services, equipment and materials provided in these Special Provisions including, but not limited to, engineering, flagging, inspection, signal protection and/or relocation, and restoration or replacement of the Railroad's track structure or ballast. Further, if the Railroad determines that the Contractor's operations do not comply with all of the safety requirements of these Special Provisions and all of the Railroad's safety requirements and directions, the Railroad will employ the necessary qualified employees to protect its trains and other facilities. The Contractor shall pay to the Railroad the cost for performing all Railroad Services unless said costs are to be paid by MaineDOT as specified in these Special Provisions.

18. CONSTRUCTION PROCEDURES

A. General

1. Construction work on the Railroad's property shall be subject to the Railroad's inspection and approval.
2. Construction work on the Railroad's property shall be in accord with the Railroad's written

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outline of specific conditions and with these Special Provisions.

3. Contractor shall observe the terms and rules of the Railroad's Safe Way manual, which Contractor shall be required to obtain from the Railroad, and in accord with any other instructions furnished by the Railroad or the Railroad's Representative.

B. Blasting

1. Contractor shall obtain the Railroad's prior written approval for use of explosives on or adjacent to the Railroad's property. If permission for use of explosives is granted, Contractor must comply with the following:

- a. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of Contractor.
- b. Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.
- c. No blasting shall be done without the presence of an authorized Railroad representative. At least 10 calendar days' advance notice to the Railroad is required to arrange for the presence of an authorized Railroad representative and any flagging that the Railroad may require.
- d. Contractor must have at the Project site adequate equipment, labor and materials, and allow sufficient time, to (i) clean up (at Contractor's expense) debris resulting from the blasting without any delay to trains; and (ii) correct (at Contractor's expense) any track misalignment or other damage to the Railroad's property resulting from the blasting, as directed by the Railroad's Representative, without delay to trains. If Contractor's actions result in delay of any trains, including Amtrak passenger trains, Contractor shall bear the entire cost thereof.
- e. Contractor shall not store explosives on the Railroad's property.

2. The Railroad's representative will:

- a. Determine the approximate location of trains and advise Contractor of the approximate amount of time available for the blasting operation and clean-up.
- b. Have the authority to order discontinuance of blasting if, in his or her opinion, blasting is too hazardous or is not in accord with these Special Provisions.

19. MAINTENANCE OF DITCHES ADJACENT TO RAILROAD'S TRACKS

Contractor shall maintain all ditches and drainage structures free of silt or other obstructions that may result from Contractor's operations. Contractor shall provide erosion control measures during construction and use methods that accord with applicable state standard specifications for road and bridge construction, including either (1) silt fence; (2) hay or straw barrier; (3) berm or temporary ditches; (4) sediment basin; (5) aggregate checks; and (6) channel lining. All such maintenance and repair of damages due to Contractor's operations shall be performed at Contractor's expense.

20. UTILITY FACILITIES ON RAILROAD'S PROPERTY

MaineDOT shall arrange, upon approval from the Railroad, to have any utility facilities on or over the Railroad's property changed as may be necessary to provide required clearances.

21. INSPECTION / FLAGGING

The Railroad has sole authority to determine the need for inspection/flagging required to protect its operations and property. The Railroad shall furnish and assign all inspectors/flaggers for general inspection purposes and for general protection of Railroad property and operations during construction as the Railroad determines are necessary to preserve safety.

(a) Responsibility for Cost. MaineDOT will bear the cost of flagging or inspection (including travel time), or any combination thereof, up to **10-man days** of said flagging or inspection. If, in the opinion of the Railroad, further services of a flagger or inspector will be required due to the operations of the Contractor, the services will be furnished and the cost thereof (salary, expenses, insurance, taxes and vacation allowance, etc.) shall be paid to the Railroad by MaineDOT and will be recovered by MaineDOT from the Contractor.

(b) Terms. The minimum hours per day for the Railroad employees engaged in inspection or flagging services shall be eight (8) hours. Time at rates for straight time, overtime or for deadheading starts in accordance with established practices in effect in the territory in which the Project is located. Information as to these practices should be obtained from the Railroad.

(c) Notice. The Contractor shall notify the Railroad's representative in writing at least **30** calendar days before the Contractor first commences work within 50 feet of the track or that otherwise requires inspection or flagging services so that Railroad can provide these services. Thereafter, following this initial notice, the Contractor shall notify the Railroad's representative in writing at least **10** calendar days before suspending such work, and shall notify the Railroad's representative in writing at least **10** calendar days before resuming such work. Failure to give notice of intent to suspend work shall be cause to charge the Contractor the cost of inspection during the period when work is suspended.

(d) Estimated Cost. The following is an estimate of the cost per day of inspection/flagging necessary for this Project. The rates shown include all overhead charges, travel time, deadheading

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and personal expenses.

Estimated daily rate for four (4) consecutive hours Monday-Friday (straight time): \$600
Estimated daily rate for four (4) consecutive hours Saturday, Sunday, Holiday (overtime):
\$900

Estimated rate for hours worked in excess of eight (8) hours in any one day: \$225/hour.

Rates charged will be the actual pay rate of the flaggers and inspectors used, plus standard additives, whether that amount is above or below the rate provided in the Estimate. The Railroad agrees to notify MaineDOT if rates used to calculate the above estimates change before the date of bids are received for this Contract.

(e) Definitions.

Man day (M.D.) - eight (8) consecutive hours or any portion thereof.

Overtime - Each additional hour or fraction thereof consecutive to and beyond the standard man day will count as 3/16 of a man day.

Standard Man Day - Eight (8) consecutive hours, Monday - Friday between the hours of 8:00 a.m. to 4:00 p.m. unless otherwise noted and agreed to by all parties.

Travel Time - Time required by flagger and/or inspector to commute between his or her point of headquarters to the project site. This time shall not be included in determining available man days.

22. CLEAN-UP

Contractor, upon completion of the Project, shall remove from the Railroad's property any temporary grade crossings, any temporary erosion control measures used to control drainage, all machinery, equipment, surplus materials, falsework, rubbish, or temporary buildings belonging to Contractor. Contractor, upon completion of the Project, shall leave the Railroad's property in neat condition, satisfactory to the Railroad's representative.

23. OTHER CONTRACTOR RESPONSIBILITIES

The restoring and resurfacing of tracks, if disturbed due to the Contractor's operations, shall be at the expense of the Contractor.

Any other changes made, or services furnished by the Railroad as a result of the Contractor will be at the Contractor's expense.

24. INDEMNIFICATION

A. Generally. To the maximum extent permitted by applicable law, Contractor shall indemnify, defend, and hold Railroad and its affiliates harmless from and against all claims, demands, payments, suits, actions, judgments, settlements, and damages of every nature, degree, and kind (including direct, indirect, consequential, incidental, and punitive damages), for any injury to or death to any person(s) (including, but not limited to the employees of Railroad, its affiliates, MaineDOT, or MaineDOT's other contractors, if any), for the loss of or damage to any property whatsoever (including but not limited to property owned by or in the care, custody, or control of Railroad, its affiliates, MaineDOT, or Maine DOT's other contractors (if any), and environmental damages and any related remediation brought or recovered against Railroad and its affiliates), arising directly or indirectly from the negligence, recklessness or intentional wrongful misconduct of Contractor, its agents, employees, invitees, or subcontractors in the performance of or in connection with the work or activities incidental thereto, or from their presence on or about Railroad's property. The foregoing indemnification obligation shall not be limited to the insurance coverage required herein, except to the extent required by law or otherwise expressly provided herein.

B. Compliance with Laws. Contractor shall comply with any federal, state, or local laws, statutes, codes, ordinances, rules, and regulations applicable to its work and shall indemnify, defend, and hold Railroad and its affiliates harmless with respect to any fines, penalties, liabilities, or other consequences arising from breaches of this requirement.

C. "Railroad Affiliates". For the purpose of this indemnification provision, Railroad's affiliates include Springfield Terminal Railway Company and all entities, directly or indirectly, owned or controlled by or under common control of Springfield Terminal Railway Company and their respective officers, directors, employees, and agents.

D. Notice of Incidents. Contractor shall notify Railroad and MaineDOT promptly of any loss, damage, injury, or death arising out of or in connection with its work.

E. Survival. This indemnification provision shall survive the termination or expiration of the Contract.

25. INSURANCE

A. Insurance Policies. To the extent that Contractor is performing work on or about Railroad's property, Contractor shall procure and maintain the following insurance policies:

1. Commercial General Liability coverage at Contractor's sole cost and expense with limits of not less than \$5,000,000 in combined single limits for bodily injury and/or property damage per occurrence, and such policy shall name Railroad as an additional insured. The policy shall include endorsement ISO CG 24 17 evidencing that coverage is provided for work within 50 feet of a railroad. If such endorsement is not included, railroad protective

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liability insurance must be provided as described in item 4 below.

2. Statutory Worker's Compensation and Employers Liability Insurance with limits of not less than \$1,000,000, which insurance must contain a waiver of subrogation against Railroad and its affiliates (if permitted by state law).
3. Commercial automobile liability insurance with limits of not less than \$1,000,000 combined single limit for bodily injury and/or property damage per occurrence, and such policy shall name Railroad as an additional insured. The policy shall include endorsement ISO CA 20 70 evidencing that coverage is provided for work within 50 feet of a railroad. If such endorsement is not included, railroad protective liability insurance must be provided as described in item 4 below.
4. If either the commercial general liability insurance described in item 1 above or the commercial automobile liability insurance described in item 3 above does not include the referenced endorsement evidencing that coverage is provided for work within 50 feet of a railroad, then Contractor also shall procure and maintain Railroad Protective Liability Insurance with limits of not less than \$5,000,000 combined single limit for bodily injury and/or property damage per occurrence and an aggregate annual limit of \$10,000,000, which insurance shall satisfy the following additional requirements:
 - a. The Railroad Protective Insurance Policy must be on the ISO/RIMA Form of Railroad Protective Insurance - Insurance Services Office (ISO) Form CG 00 35.
 - b. Springfield Terminal Railway Company must be the named insured on the Railroad Protective Insurance Policy.
 - c. Name and Address of Contractor must appear on the Declarations page.
 - d. Description of operations must appear on the Declarations page and must match the Project description.
 - e. Authorized endorsements must include the Pollution Exclusion Amendment - CG 28 31, unless using form CG 00 35 version 96 and later.
 - f. Authorized endorsements may include:
 - (i) Broad Form Nuclear Exclusion - IL 00 21
 - (ii) 30-day Advance Notice of Non-renewal or cancellation
 - (iii) Required State Cancellation Endorsement
 - (iv) Quick Reference or Index - CL/IL 240
 - g. Authorized endorsements may not include:
 - (i) A Pollution Exclusion Endorsement except CG 28 31

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- (ii) A Punitive or Exemplary Damages Exclusion
 - (iii) A "Common Policy Conditions" Endorsement
 - (iv) Any endorsement that is not named in Section 4 (e) or (f) above
 - (v) Policies that contain any type of deductible
5. All insurance companies must be A. M. Best rated A- and Class VII or better.
6. The Springfield Terminal Railway Company project number contract number, as applicable, must appear on each Declarations page and/or certificates of insurance.
7. Such additional or different insurance as Railroad may require.
- B. Additional Terms.
1. Contractor must submit the original Railroad Protective Liability policy, Certificates of Insurance and all notices and correspondence regarding the insurance policies to:
- Springfield Terminal Railway Company
1700 Iron Horse Park
North Billerica, MA 01862
2. Neither Agency nor Contractor may begin work on the Project until it has received Railroad's written approval of the required insurance.

26. ROADWAY WORKER SAFETY REGULATION

All Contractors/Subcontractors and individuals must be aware of the Federal Roadway Worker Safety Regulation, CFR 49, Part 214(c), and all Contractor employees designated as Roadway Workers must comply with this regulation. Additional safety requirements can be found here: Safety Requirements - CSX.com.

Requirements will be discussed at the pre-construction utility meeting.

27. FAILURE TO COMPLY

If MaineDOT or Contractor violate or fail to comply with any of the requirements of these Special Provisions, (a) the Railroad may require MaineDOT and/or Contractor to vacate the Railroad's property; (b) the Railroad may withhold monies due MaineDOT and/or Contractor; (c) the Railroad may request that MaineDOT withhold monies due Contractor; and (d) the Railroad may cure such failure and MaineDOT or Contractor shall reimburse the Railroad for the cost of curing such failure.

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EXHIBIT A
ORIGINAL TO CONTRACTOR

MDOT/RAILROAD STOP WORK ORDER

Section A - Contractor	Town
	DOT Railroad Project #
Railroad Name	Location
	Notice #
DESCRIPTION OF SAFETY HAZARD/REASON FOR ORDER	
Standard Violated	RAC (Risk Assessment Code)
	N/R
Railroad Official (Flagger/Inspector) Name	Date
Signature	
SECTION B - ACTION TAKEN:	

cc: MDOT - R.E. or Inspector
MDOT - Utility Section
MDOT - Construction Division
Railroad - Chief Engineer

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1. **Risk Assessment.** Each identified/validated hazard shall be assigned a Risk Assessment Code (RAC) by the Safety Office. The RAC represents the degree of risk associated with the deficiency and combines the elements of hazard severity and mishap probability. The RAC is derived as follows:

a. **Hazard Severity.** The hazard severity is an assessment of the worst potential consequence: Defined by degree of injury, occupational illness, or property damage, which is likely to occur as a result of a deficiency. Hazard severity categories shall be assigned by roman numeral according to the following criteria.

- (1) **Category I - Catastrophic:** The hazard may cause death or loss of a facility.
- (2) **Category II - Critical:** May cause severe injury, severe occupational illness, or major property damage.
- (3) **Category III - Marginal:** May cause minor injury, minor occupational illness, or minor property damage.
- (4) **Category IV - Negligible:** Probably would not affect personnel safety or health but is nevertheless in violation of a NAVOSH standard.

b. **Mishap Probability.** The mishap probability is the probability that a hazard will result in a mishap, based on an assessment of such factors as location, exposure in terms of cycles or hours of operation, and affected population. Mishap probability shall be assigned an Arabic letter according to the following criteria:

- (1) Sub-category A - Likely to occur immediately or within a short period of time.
- (2) Sub-category B - Probably will occur in time.
- (3) Sub-category C - May occur in time.
- (4) Sub-category D - Unlikely to occur.

c. **Risk Assessment Code.** The RAC is an expression of risk which combines the elements of hazard severity and mishap probability. Using the matrix shown below, the RAC is expressed as a single Arabic number that can be used to help determine hazard abatement priorities.

	Mishap Probability					RAC
		A	B	C	D	
Hazard Severity	I	1	1	2	3	1 - Critical
	II	1	2	3	4	2 - Serious
	III	2	3	4	5	3 - Moderate
	IV	3	4	5	5	4 - Minor
						5 - Negligible

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SCHEDULE I

CONTRACTOR'S ACCEPTANCE

To and for the benefit of Springfield Terminal Railway Company ("Railroad"), and to induce Railroad to permit Contractor on or about Railroad's property for the purposes of performing work in accordance with the Agreement dated _____, 2024, between the Maine Department of Transportation and Railroad for Pavement Resurfacing project on Route 23, Fairfield - Clinton, Maine; WIN #027662.00, Contractor hereby agrees to abide by and perform all applicable terms of Exhibit C to the Agreement, titled "Protection of Railroad Traffic and Structures – Special Provisions."

Contractor: _____

By: _____

Name: _____

Title: _____

Date: _____

SPECIAL PROVISION 105
CONSTRUCTION AREA

Construction Areas located in the Town of Canaan have been established by the Maine Department of Transportation (MDOT) in accordance with provisions of 29-A § 2382 Maine Revised Statutes Annotated (MRSA).

The sections of highway under construction in Somerset County:

Project 027336.00 is located in the town of Canaan along Route 23, beginning at the Clinton town line and extending north 3.96 miles to the intersection of US Route 2.

Per 29-A § 2382 (7) MRSA, the MDOT may “issue permits for stated periods of time for loads and equipment employed on public way construction projects, United States Government projects or construction of private ways, when within construction areas established by the Department of Transportation. The permit:

A. Must be procured from the municipal officers for a construction area within that municipality;

B. May require the contractor to be responsible for damage to ways used in the construction areas and may provide for:

(1) Withholding by the agency contracting the work of final payment under contract; or

(2) The furnishing of a bond by the contractor to guarantee suitable repair or payment of damages.

The suitability of repairs or the amount of damage is to be determined by the Department of Transportation on state-maintained ways and bridges, otherwise by the municipal officers;

C. May be granted by the Department of Transportation or by the state engineer in charge of the construction contract; and

D. For construction areas, carries no fee and does not come within the scope of this section.”

The Municipal Officers for the Town of Canaan agreed that an Overlimit Permit will be issued to the Contractor for the purpose of using loads and equipment on municipal ways in excess of the limits as specified in 29-A MRSA, on the municipal ways as described in the “Construction Area.”

As noted above, a bond may be required by the municipality, the exact amount of said bond to be determined prior to use of any municipal way. The MDOT will assist in determining the bond amount if requested by the municipality.

The maximum speed limits for trucks on any town way will be 25 mph (40 km per hour) unless a higher legal limit is specifically agreed upon in writing by the Municipal Officers concerned.

SPECIAL PROVISION 105
CONSTRUCTION AREA

Construction Areas located in the Towns of Fairfield & Clinton have been established by the Maine Department of Transportation (MDOT) in accordance with provisions of 29-A § 2382 Maine Revised Statutes Annotated (MRSA).

The sections of highway under construction in Kennebec & Somerset Counties:

Project 027662.00 is on Route 23, beginning at the intersection of Route 201 and extending northeast 3.16 miles to the Canaan town line.

Per 29-A § 2382 (7) MRSA, the MDOT may “issue permits for stated periods of time for loads and equipment employed on public way construction projects, United States Government projects or construction of private ways, when within construction areas established by the Department of Transportation. The permit:

A. Must be procured from the municipal officers for a construction area within that municipality;

B. May require the contractor to be responsible for damage to ways used in the construction areas and may provide for:

(1) Withholding by the agency contracting the work of final payment under contract; or

(2) The furnishing of a bond by the contractor to guarantee suitable repair or payment of damages.

The suitability of repairs or the amount of damage is to be determined by the Department of Transportation on state-maintained ways and bridges, otherwise by the municipal officers;

C. May be granted by the Department of Transportation or by the state engineer in charge of the construction contract; and

D. For construction areas, carries no fee and does not come within the scope of this section.”

The Municipal Officers for the Towns of Fairfield & Clinton agreed that an Overlimit Permit will be issued to the Contractor for the purpose of using loads and equipment on municipal ways in excess of the limits as specified in 29-A MRSA, on the municipal ways as described in the “Construction Area.”

As noted above, a bond may be required by the municipality, the exact amount of said bond to be determined prior to use of any municipal way. The MDOT will assist in determining the bond amount if requested by the municipality.

The maximum speed limits for trucks on any town way will be 25 mph (40 km per hour) unless a higher legal limit is specifically agreed upon in writing by the Municipal Officers concerned.

SPECIAL PROVISION
SECTION 105
General Scope of Work
(Environmental Requirements)

- I. To protect Northern Long Eared Bat (*Myotis septentrionalis*) a federally Endangered species:
 - A. If the Contractor witnesses a bat (dead or alive), any activities that may injure any live bats must cease immediately and must contact the MaineDOT Environmental (ENV) Office for further coordination. Dead and/or injured bats will be collected by a MaineDOT biologist for further investigation or transfer to a veterinarian. Work in the vicinity of the live/dead bat sighting will not resume until the ENV office or project resident confirms it is acceptable to do so.
- II. To protect migratory birds pursuant to the Migratory Bird Act of 1918:
 - A. If the Contractor observes an active bird nest within the project limits, any activities that may disturb the nest or injure birds (i.e., nesting adults, chicks, eggs) must cease immediately, and the Contractor shall contact the ENV Office for further coordination.
- III. Approvals:
 - A. Temporary Soil Erosion and Water Pollution Control Plan (SEWPCP)

SPECIAL PROVISION
SECTION 105
GENERAL SCOPE OF WORK
(LIMITATIONS OF OPERATIONS)

1. Only one paving operation is allowed at one time, excluding hand placed paving, unless otherwise approved by Resident.
2. The Contractor shall plan operations so that the Resident will have sufficient advance notification to provide the necessary inspection and testing. Sufficient notification is considered 48 hours.
3. The Contractor will be allowed to commence work 15 minutes after sunrise and must be completely off the road 15 minutes before sunset. Sunrise and sunset will be determined according to <http://www.sunrisesunset.com/usa/Maine.asp>. Failure to adhere to this requirement will result in a Traffic Control Penalty, non-payment of any material placed outside of the allowable times, and the Contractor will be required to implement the Night Work section of their Traffic Control Plan.
4. The Contractor's Traffic Control Plan shall address construction practices and schedules that will be implemented to minimize vehicle, pedestrian, and bicycle disruptions.
5. The Contractor will not be allowed to work Saturdays placing PMRAP. The Contractor may work Saturdays placing HMA. Notification of Saturday work must be made 48 hours in advance to the Department.
6. A 24-hour notice is required for any changes in the work schedule.
7. The Contractor shall maintain one-way alternating traffic.
8. Daily operating hours for PMRAP placement will be determined by the Department. A typical full production day can range from 10 to 16 hours. See Special Provision 631 section 631.07 for explanation of overtime pay.
9. The Contractor shall request absences at least 72 hours in advance. The Department will review and approve based on existing roadway conditions, paving deadlines, adherence to schedule, traffic restrictions, detours, etc. The Contractor shall assure that the roadway surface and signage are maintained for safe passage of the traveling public during any approved absences. The Department will not modify the Contract Completion Date for approved absences.

10. Hourly Payment for item 631.161 (Paving Crew) shall begin 15 minutes prior to commencement of the placement (placement time will be determined the previous day). No payment will be made if the placement does not commence due to inclement weather unless the Department authorizes the Contractor to stand by.
11. PMRAP laydown shall be continuous until completed unless otherwise agreed upon by the Department.
12. The Department and the Contractor shall hold a coordination meeting a minimum of 7 calendar days prior to beginning work. The tentative date for the pugmill to be on site and ready to begin work is **June 24, 2024**.

SPECIAL PROVISION
SECTION 107
PROSECUTION AND PROGRESS
(Contract Time – Working Days)

This Contract shall be completed within **60** working days. The Contractor may begin work **anytime** in accordance with Standard Specification 104.4.2 and upon approval of all required submittals. Time charge will commence on the start date or no later than **June 17, 2024**, whichever occurs first.

At least 21 calendar days prior to the desired Begin Construction Date, the Contractor shall submit an **electronic copy of their signed request to begin work and the Begin Construction Date**. This signed request shall be sent read receipt through **email** with their **Schedule of Work**, in accordance with Standard Specification 107.4.2, to **Emory.Lovely@maine.gov**, **Thomas.Stevens@maine.gov** and **Timothy.Pelotte@maine.gov**. The Contractor shall notify all utility contacts listed in the 104 Special Provision and provide the utility contacts the submitted schedule of work within 2 calendar days of the schedule of work submittal. Upon receipt of the schedule of work, a pre-construction meeting will be scheduled.

The Contractor may request to adjust the submitted schedule of work and Begin Construction Date once after the initial submittal. The Department will allow adjustments in the Begin Construction Date of up to **seven calendar days** if the request is made at least **21 calendar days** prior to the updated Begin Construction Date. This signed request shall be sent read receipt through **email** with their **Schedule of Work**, in accordance with Standard Specification 107.4.2, to **Emory.Lovely@maine.gov**, **Thomas.Stevens@maine.gov** and **Timothy.Pelotte@maine.gov**. The Contractor shall notify all utility contacts listed in the 104 Special Provision and provide the utility contacts the updated schedule of work within 2 calendar days of the request to adjust the Begin Construction Date.

SPECIAL PROVISION
SECTION 107
SCHEDULING OF WORK

Replace Section 107.4.2 with the following:

"107.4.2 Schedule of Work Required Within 21 Days of Contract Execution and before beginning any on-site activities, the Contractor shall provide the Department with its Schedule of Work. The Contractor shall plan the Work, including the activity of Subcontractors, vendors, and suppliers, such that all Work will be performed in Substantial Conformity with its Schedule of Work. The Schedule must include sufficient time for the Department to perform its functions as indicated in this Contract, including QA inspection and testing, approval of the Contractor's TCP, SEWPCP and QCP, and review of Working Drawings.

At a minimum, the Schedule of Work shall include a bar chart which shows the major Work activities, milestones, durations, submittals and approvals, and a timeline. Milestones to be included in the schedule include: (A) start of Work, (B) beginning and ending of planned Work suspensions, (C) Completion of Physical Work, and (D) Completion. If the Contractor Plans to Complete the Work before the specified Completion date, the Schedule shall so indicate.

Any restrictions that affect the Schedule of Work such as paving restrictions or In-Stream Work windows must be charted with the related activities to demonstrate that the Schedule of Work complies with the Contract.

The Department will review the Schedule of Work and provide comments to the Contractor within 20 days of receipt of the schedule. The Contractor will make the requested changes to the schedule and issue the finalized version to the Department."

SPECIAL PROVISION
SECTION 107
TIME
(Liquidated Damages)
(Working Days)

107.7.2 SCHEDULE OF LIQUIDATED DAMAGES

Revise this section by removing the numbers in the chart and replace with the following:

Original Contract Amount

From More Than		To and Including	Amount of Liquidated Damages per Working Day
\$ 0	to	\$ 100,000.00	\$400.00
\$ 100,000.00	to	\$ 250,000.00	\$800.00
\$ 250,000.00	to	\$ 500,000.00	\$1,000.00
\$ 500,000.00	to	\$1,000,000.00	\$1,250.00
\$1,000,000.00	to	\$2,000,000.00	\$1,600.00
\$2,000,000.00	to	\$4,000,000.00	\$2,000.00
\$4,000,000.00	and	More	\$3,350.00

SPECIAL PROVISIONS
SECTION 202
REMOVING STRUCTURES AND OBSTRUCTIONS
(Removing Pavement Surface)

The March 2020 Revision of the Standard Specifications, Section 202-Removing Structures and Obstructions, subsection 202.061-Removing Pavement Surface, has been removed and replaced in its entirety by the following:

202.061 Removing Pavement Surface The equipment for removing the bituminous surface shall be a power operated milling machine or grinder capable of removing bituminous concrete pavement to the required depth, transverse cross slope, and profile grade using 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 equipment shall be capable of accurately establishing profile grades by referencing from a fixed reference such as a 30 foot minimum contact ski (floating beam), 24 foot non-contact ski (floating beam) with 3 or more sensors; or 3 non-contact sensors directly affixed at the fore, mid, and aft points of the milling machine. Systems designed to incorporate a contact sensor located at the mid-point of the milling machine in lieu of the non-contact sensor will be permitted. Grade control sensors shall all be located on the same side. A single sensor, contact or otherwise, shall not be permitted unless otherwise approved by the Department.

The rotary drum shall be a minimum of 7 feet in width and utilize carbide tip tools at a minimum triple wrap configuration. The difference in height from the top of any ridge to the bottom of the groove adjacent to that ridge shall not exceed $\frac{1}{4}$ inch. The forward speed of the milling machine shall be adjusted to produce a milled surface meeting the groove spacing, groove depth, and surface tolerance requirements of this specification. The tools on the revolving cutting drum must be continually maintained and shall be replaced as warranted to provide a uniform pavement texture. The Department may evaluate the texture of the milled surface for information purposes by performing the Sand Patch test according to ASTM E 965.

The Contractor shall locate and remove all objects in the pavement through the work area that would be detrimental to the milling or grinding machine. Any structures or obstructions left within the travel lane or shoulders shall have tapers installed according to Standard Detail 202(01). The finished milled surface will be inspected before being accepted, and any deviations in the profile exceeding $\frac{1}{2}$ 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 $\frac{3}{8}$ inch under a 10 foot string line or straightedge placed transversely to centerline will be corrected. All corrections will be made with approved methods and materials. Any areas that require corrective measures will be subject to the same acceptance tolerances. Excess material that becomes bonded to the milled surface will be removed to the Resident's satisfaction before the area is accepted.

On roadways with adjoining lanes carrying traffic, the Contractor shall remove the pavement surface in each lane per the conditions in Table 1, unless otherwise noted by the Department in Special Provision, Section 105 – Limitations of Operations.

TABLE 1: MILLING CONDITIONS FOR ADJOINING LANES

Depth (At Centerline)	Milling Conditions
Vertical Longitudinal Joint	
2" and less	The Contractor may remove the pavement on a single travel lane width for each production day and will be required to mill the adjacent section of travel lane before the end of the following calendar day.
Greater than 2"	The Contractor shall remove the pavement over the full width of the traveled way section being paved that day.
12:1 Tapered Centerline Joint	
1 ½" to 2"	The Contractor may remove the pavement on a single travel lane width for each production day and will be required to mill the adjacent section of travel lane before weekend or holiday suspension. A maximum unmatched centerline joint length of 0.5 miles will be permitted over the weekend.
Greater than 2"	The Contractor shall remove the pavement on a single travel lane width for each production day and will be required to mill the adjacent section of travel lane before the end of the following calendar day.

The Contractor will be required to remove the pavement over the full width of the mainline traveled way, regardless of highway type, cut depth, or longitudinal joint type prior to Memorial Day, July 4th, Labor Day, suspensions exceeding three days, or other dates as specified by Special Provision, Section 105 – Limitations of Operations.

The Contractor will also be responsible for installing additional warning signage that clearly defines the centerline elevation differential hazard. Unless otherwise addressed in the contract, the Contractor shall install additional centerline delineation such as a double RPM application, or temporary painted line. The Traffic Control Plan shall be amended to include this option and the additional requirements. All signs and traffic control devices will conform to Section 719.01, and Section 652, and will be installed prior to the work, at a maximum spacing of 0.50 mile for the entire length of effected roadway section. If this option is utilized, all additional signing, labor, traffic control devices, or incidentals will not be paid for directly, will be considered incidental to the appropriate 652 items.

On roadways with immediately adjacent shoulders, the Contractor shall remove the pavement surface in each lane per the conditions in Table 2, unless otherwise noted by the Department in Special Provision, Section 105 – Limitations of Operations.

TABLE 2: MILLING CONDITIONS FOR THE EDGE OF TRAVELED WAY

Depth (At Edge of Traveled Way)	Conditions
2" and less	The Contractor may leave a vertical edge joint exposed for up to 21 days after milling is performed. The Contractor shall treat vertical edge joints exposed beyond 21 days per the criteria below.
Greater than 2"	The Contractor shall treat vertical edge joints exposed per the criteria below.

When required by Table 2, the Contractor shall treat vertical edge joints through one of the options below:

1. The vertical edge shall be tapered to a zero edge by means of milling a 12:1 transition from the edge of traveled way onto the shoulder before opening the lane to traffic. Tapers shall be removed to form a vertical edge prior to the placement of the new pavement course. No additional payment will be made for tapers, or taper removal.
2. An additional 2 feet of pavement shall be removed from the shoulder to eliminate the vertical edge at the edge of travelway before opening the lane to traffic. Unless otherwise authorized by the Department, no additional payment will be made for the additional milling.
3. A pavement layer shall be placed to reduce the vertical edge to 1 inch or less before opening the lane to traffic.

As a minimum, the use of temporary painted line, or RPMs placed along the edge of traveled way at 200 foot intervals is required for all elevation differentials. When pavement milling is extended into the shoulder (including milled tapers), appropriate channelization devices shall be placed 2 feet outside the edge of the vertical face at intervals not exceeding 600 feet, and RPMs shall be placed on the remaining pavement surface along the vertical edge at 200 foot intervals. Uneven pavement signs shall be placed at a maximum spacing of ½ mile when any pavement milling operations leaves an exposed uneven pavement surface.

Weepers shall be ground across the full width sections adjacent shoulders or remaining pavement surface matching the milled travel way or shoulder milled depth to minimize water ponding in any lanes carrying traffic. Weepers shall typically be 18 - 24" inches in width, installed along each lane, at a frequency of approximately one per half mile at locations as directed by the Resident or in areas that will provide drainage for the milled areas. Installation of weepers will not be paid for directly but will be considered incidental to the contracts pavement removal item. The replacement of mix in the weeper locations shall be performed concurrently within the pavement placement operation closure using the appropriate HMA item produced for the Contract or a MaineDOT approved 9.5mm HMA. There will be no separate payment for repaving the weeper locations as they are considered incidental to the square yard price of the contracts pavement removal item.

The milled surface shall be cleaned of all material resulting from the pavement removal operation. Loaders, skid steers, motorized side cast brooms, sweeper pick up brooms, vacuum pick up machines and hand labor may be used in any number or sequence as determined by the Contractor in order to clean the milled surfaces to the satisfaction of the Department before acceptance and opening the area up to traffic. The use of compressed air may be required to loosen any bonded materials from the surface to aid in cleaning.

Any areas of concern, such as de-lamination or pot-holing shall be identified on a continuous basis as milling progresses. Proper corrective action will be determined by the Resident and paid for under the appropriate contract items, and if required, completed prior to opening lane to traffic. Any issues that arise up to 7 calendar days after being milled will be the responsibility of the MaineDOT unless otherwise noted in Special Provision Section 105 – Limitations Of Operations.

Basis of Payment

The square yard or hourly rental contract price will be full compensation for mobilizing to the site, de-mobilizing from the site, labor, supervision, cleaning of the milled surface, and all other incidentals required to complete the work. Hauling and stockpiling of the material will not be paid for directly, but will be considered incidental to the milling items.

Square Yard: Payment will be made at the contract unit price for the number of square yards removed.

Hourly: Payment will be made at the contract unit price for the number of hours of operation removing pavement surface as directed by the Resident. The equipment used for pavement removal shall be operated at the minimum speed of 50 fpm, unless the Resident directs otherwise for milled surface quality reasons, or traffic control limitations impact pavement removal operations, or site conditions make operations at the prescribed rate unreasonable. Trimming to create a vertical face along curb line, guardrail, or around structures will be considered incidental to the 202.202 items. Additional trimming beyond the incidental work described will be paid under the appropriate rental items as listed in the Contract.

Pay Item

Pay Unit

202.202 Removing Pavement Surface
202.20201 Removing Pavement Surface (Hourly)

S.Y.
Hour

SPECIAL PROVISION
SECTION 204
SHOULDER REHABILITATION

The following additions are made to Section 204 Subsections 204.10 and 204.11 of the March 2020 revision of the Standard Specifications.

204.06 Method of Measurement:

The accepted quantity of Add Shoulder Aggregate to existing shoulder will be paid for at the contract unit price per cubic yard.

204.11 Basis of Payment:

<u>Pay Item</u>	<u>Pay Unit</u>
204.21 Add Shoulder Aggregate – Truck Measure	Cubic Yard

SPECIAL PROVISION
SECTION 310
PLANT MIXED RECYCLED ASPHALT PAVEMENT

310.01 Description This work shall consist of the Processing (screening, crushing, sizing, and stockpiling) of Department supplied recycled asphalt pavement (RAP), as well as the mixing of the processed materials with the required additives in an approved cold mix plant, and the successful placement of the processed materials in the locations identified in the contract per Section 310.020.

All plant mixed recycled asphalt pavement (PMRAP) shall be placed with a paver as described within this specification in subsection 310.032. All PMAP shall be placed in one or more courses on an approved base, and in accordance with these specifications. It shall be placed in reasonably close conformity with the lines, grades and thicknesses indicated on the plans and specifications, or as established by the Resident. Excess untreated recycled asphalt pavement materials not used in the pugmill process will remain as the property and responsibility of the Department. Excess treated PMRAP not placed in the actual roadway sections identified in the contract will remain the property and responsibility of the Department unless agreements are made otherwise.

MATERIALS

310.20 Composition of Mixture The PMRAP mixture shall be composed as directed in the job mix formula (JMF). The actual JMF additive proportions will be established by executing a mix design using recycled material samples once the recycled asphalt stockpiles have been constructed.

A JMF shall be furnished by the Department establishing the percentage of emulsified asphalt cement, Portland cement, aggregate, and water to be used in the mixture. Emulsion, water, aggregate and Portland cement shall be added in percentage by weight and verified by tank checks done in accordance with the minimum testing and monitoring frequencies. Portland cement additive may be done in dry form or introduced as a cement slurry.

310.41 Recycled Asphalt Pavement Materials All recycled asphalt materials shall be sourced from Department supplied piles, unless otherwise specified in the contract. All materials shall be processed to pass a $\frac{3}{4}$ inch, [19.0mm] square sieve, and stockpiled as to minimize segregation. The stockpile shall be free of any materials not generally considered to be asphalt pavement, or bituminous treated material.

If additional material is required, the material will be supplied by the Department or acquired from the contracted sources through the Contract Modification process. Materials from offsite sources shall be processed so that all materials will be no larger than $\frac{3}{4}$ inch [19.0mm] and stockpiled so as to minimize segregation.

310.21 Emulsified Asphalt The emulsified asphalt materials shall be sourced from a supplier contracted by the Department. The emulsified asphalt shall be grade MS-4 as determined by the Department and meeting the requirements of Section 702.04 - Emulsified Asphalt. It shall be the Pugmill Manager's responsibility to coordinate the emulsion delivery with the emulsion supplier.

The Pugmill Manager shall provide the emulsion supplier 72 hours prior notice of their intent to start the PMRAP processing portion of contract. Once PMRAP processing has begun, a 12-hour notice must be provided for delivery. A delivery slip and lab certificate will be obtained from each load of emulsified asphalt. Each load shall be recorded in the Pugmill Operators' production log, and load documents delivered to the Pugmill Manager daily to be recorded in the Plant Report.

310.22 Portland Cement Portland Cement shall be Type I or II meeting the requirements of AASHTO M85. A delivery slip and lab certificate will be obtained from each load. Each load shall be recorded in the Pugmill Operators' production log and load documents delivered to the Pugmill Manager daily to be recorded in the Plant Report.

310.23 Water Water shall be clean and free from deleterious concentrations of acids, alkalis, salts or other organic or chemical substances. Each load used, as well as the percentage of water added to the mixture, shall be recorded in the Pugmill Operators production logbook daily. Should adjustments to the percent water used be made during the day, those adjustments should be recorded in the production log as well.

EQUIPMENT

310.30 Mixing Plant The Department will provide the mixing plant.

The mixing plant shall be equipped with belt scales to accurately proportion the additives by mass, adjusted by moisture content of the processed recycled asphalt pavement stockpile. The belt scale will be checked for calibration at each new location prior to mix production. The belt scale calibration shall be verified daily prior to mixing. Each scale check and adjustment made to accurately measure material production shall be recorded in the Pugmill Operators' production log.

The cement hopper, silo feed, or other cement introduction systems shall be readily adjusted to meet the percentages required by the JMF. Mathematical yield calculations will be required daily to ensure the setup provides the target cement percentage. Adjustments the feed setup will be required if actual cement usage deviates from the desired percentage. The plant shall be operated at a production rate so as to provide a uniform, well-mixed product. Adjustments made to maintain additive percentages shall be recorded in the Pugmill Operators production log.

All yield calculations for emulsion, cement and water will be recorded in a in a daily production log to be maintained by the Pugmill Operator and presented to the Pugmill Manager upon end of day.

310.31 Hauling Equipment Hired trucks, if utilized, hauling the mixture shall meet the requirements of Division 400 - subsection 401.08.

310.32 Bituminous Pavers Pavers shall meet the requirements of Special Provision 631, and Division 400 - subsection 401.09.

310.33 Rollers Rollers shall meet the requirements of Special Provision 631, and Division 400 - subsection 401.10. As a minimum, a 10 ton dual drum vibratory or oscillatory roller, 16 ton pneumatic roller, and 10 ton final roller will be required. The sequence of rollers, and number of passes will be as determined during the control strip.

CONSTRUCTION REQUIREMENTS

310.040 Weather Limitations PMRAP production and placement shall be performed under the following conditions:

- a. PMRAP placement operations will be allowed between May 15th and September 15th inclusive in Zone 1 - Areas north of US Route 2 from Gilead to Bangor and north of Route 9 from Bangor to Calais. PM-RAP will be allowed between May 1st and September 30th inclusive in Zone 2 - Areas south of Zone 1 including the US Route 2 and Route 9 boundaries.
- b. When the atmospheric temperature, as determined by an approved thermometer placed in the shade at the placement location, is 50°F and rising.
- c. When there is no standing water on the surface to be paved.
- d. During generally dry conditions, or when weather conditions are such that proper mixing, and curing can be obtained using proper procedures, and when compaction can be accomplished as determined by the Resident.
- e. When the surface is not frozen and when overnight temperatures are expected to be above 40°F.

310.42 Preparation of Existing Pavement Surface - The Department will prepare the existing roadway by the means of sweeping and grading as required. All existing pavement will receive an asphalt tack coat before placing PMRAP. Placement of the PMRAP material will not be allowed on wet pavement surfaces, unless otherwise authorized by the Department.

310.43 Material Mixing Mixing shall be allowed if weather conditions permit, and when the temperature is not less than 50°F. The emulsified asphalt shall meet the mixing temperature requirements listed in Section 702.05 - Application Temperatures. Recycled bituminous materials, emulsified asphalt, water, and Portland cement shall be properly proportioned according to the JMF, and the mixing time shall be set to produce a mixture in which uniform distribution of the emulsified asphalt and coating of the recycled pavement is obtained. The plant shall be operated at a production rate so as to provide a uniform, well-mixed product.

Moisture content of the stockpiled recycled materials shall be checked before the start of a new location and at least once during each day of production to determine adjustments to the belt scale totals, and to determine if increased or decreased water percentages are required. Moisture test results will be recorded in a daily production Plant Report.

Following mixing, the PMRAP material shall be stockpiled and incorporated into the work. The PMRAP must be stockpiled prior to use, but not for longer than 24 hours.

310.44 Spreading and Finishing The PMRAP mixture shall be spread and finished in accordance with Division 400 - Section 401.15. Areas requiring the placement of PMRAP in excess of 4 inches total depth shall be paved in multiple layers. Each layer placed will not exceed 4 inches. **Extended cure times may be required for such areas.**

310.45 Compaction Compaction of the mixture shall be in accordance with Section 401.16. The processed material shall be compacted to a minimum density of 96% of the target density as determined in the control section. See also Section 310.051.

310.46 Joints Joints shall be constructed in accordance with Division 400 - section 401.17.

310.47 Surface Tolerances The surface tolerances shall be as specified in Division 400 - section 401.101, except that the maximum allowable variation shall be ½ inch.

310.48 Repairs Delaminations, potholes, or low areas will be repaired using a hot mix asphalt shim course. High areas will require PMRAP removal. Any repair work required as a result of workmanship, equipment malfunction or failure will be at the Contractor's expense.

TESTING REQUIREMENTS

310.050 Testing and Monitoring Plan The Pugmill Operator shall operate the plant in accordance with this document or as directed by the Pugmill Manager.

Prior to beginning the PMRAP mixing process, the Department shall hold a pre-recycle conference to discuss the recycling schedule, type and amount of equipment to be used, sequence of operations, traffic control, and the Contractor's responsibilities. All supervisors including the responsible trucking and traffic control supervisors shall attend this meeting.

The meeting agenda and discussion shall address any items that affect the quality of the recycling process including, but not limited to, the following:

- a. Methods to adhere JMF(s).
- b. Mixing details, pugmill type, production rates, material processing.
- c. Make and type of paver(s).
- d. Make and type of rollers including weight, weight per inch of steel wheels, and average contact pressure for pneumatic tired rollers.
- e. Methods of monitoring moisture contents of stockpiles, emulsion and other additive control, and compaction efforts.
- f. Transportation, including process for ensuring that truck bodies are clean and free of debris or contamination that could adversely affect the finished product, type of release agent used (if required)
- g. Laydown operations, including procedures for mix design modification, avoiding recycling and curing in inclement weather, material yield monitoring, methods to ensure that segregation is minimized, longitudinal joint construction, procedures to

- determine the maximum rolling and placing speeds based on field quality control, and achieving the best possible smoothness.
- h. Methods for protecting the finished product from damage and procedures for any necessary corrective action.
 - j. Examples of TMP and logbook forms.
 - k. Method for calibration/verification of density gauge.
 - l. Stockpile procedures including method of moisture monitoring.

The Contractors paving superintendent shall be in attendance, the onsite paving crews roles, responsibilities and communication process determined.

The Project Resident shall coordinate the sampling and testing in accordance with the following procedures and minimum frequencies:

MINIMUM TMP FREQUENCIES

Test or Action	Frequency	Test Method
Density	1 per 1000 ft / lane	ASTM D 2950
Air Temperature	4 per day at even intervals	
Surface Temperature	At the beginning and end of each days operation	
Yield of all materials (Both the daily yield and yield since last test)	4 per day at even intervals	

The Pugmill Operator shall cease recycling operations whenever one of the following occurs:

- a. The computed yield of each additive differs from the approved Job Mix Formula by 10% or more.
- b. The finished product is visually segregated, unstable, or otherwise defective, as determined by the Pugmill Manager.

Recycling operations shall not resume until the Department determines the corrective action to be taken.

310.051 Control Strip / Field Proctor The Project Resident shall assemble all items of equipment for the recycling operation on the first day of the recycling work. The Contractor shall construct a control strip for the project at a location approved by the Resident. The control strip section is required to:

- a. Demonstrate that the equipment and processes can produce recycled layers to meet the requirements specified in these special provisions;
- b. Determine the sequence and manner of rolling necessary to obtain optimum compaction requirements; and;
- c. Establish the number of roller passes per roller.

The strip shall be full lane-width and at least 300 feet in length. After the control strip has been placed, it will be compacted with the required number of rollers as directed until density readings show an increase in density of less than 2 pcf for the final four roller passes. The number of passes for each roller shall be recorded and become part of the compaction process.

Should three consecutive test results for density fail to meet a minimum of 96.0% of TMD, or exceed the maximum of 102.0% of field established TMD, a new control strip shall be constructed.

310.06 Curing No new hot mix asphalt pavement shall be placed on the PMRAP asphalt pavement until a curing period of **(5) five days** has elapsed. The curing period starts once the final PMRAP layer has been placed on the roadway section paved. When weather conditions are unfavorable, the curing period may be extended by the Resident.

SECTION 401 - HOT MIX ASPHALT PAVEMENT

401.01 Description The Contractor shall furnish a uniformly blended, homogeneous mixture placed as one or more courses of Hot Mix Asphalt Pavement (HMA) on an approved base in accordance with the contract documents and in reasonably close conformity with the lines, grades, thickness, and typical cross sections shown on the plans or established by the Resident. The Department will accept this work under Quality Assurance provisions, in accordance with these specifications and the requirements of Section 106 – Quality, the provisions of AASHTO M 323 except where otherwise noted in sections 401 and 703 of these specifications, and the MaineDOT Policies and Procedures for HMA Sampling and Testing.

401.02 Materials 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

401.03 Composition of Mixtures The Contractor shall compose the Hot Mix Asphalt Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), approved antistrip, warm mix additive, and/or mineral filler if required. HMA shall be designed and tested according to AASHTO R 35 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). Unless otherwise noted in Special Provision 403 - Hot Mix Asphalt Pavement, the design, verification, Quality Control, and Acceptance tests for this mix will be performed at 65 gyrations.

TABLE 1: VOLUMETRIC DESIGN CRITERIA

Design ESAL's (Millions)	Required Density (Percent of G _{mm})			Voids in the Mineral Aggregate (VMA) (Minimum Percent)					Voids Filled with Binder (VFB) (Minimum %)	Fines/Eff · Binder Ratio
				Nominal Maximum Aggregate Size (mm)						
	N _{initial}	N _{design}	N _{max}	25.0	19.0	12.5	9.5	4.75		
< 3.0	≤90.5	96.0	≤98.0	13.0	14.0	15.0	16.0	16.0	65-80*	0.6-1.2
3 to <10	≤89.0									
> 10										

*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.

The Contractor shall submit a JMF to the Department for each mixture to be supplied. The JMF will be approved by the Department in accordance with the MaineDOT HMA Policies and Procedures for HMA Sampling and Testing Manual. 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 coarse aggregate stockpiles and 75 ton for fine aggregate stockpiles before the JMF may be submitted. The Contractor shall provide aggregate samples to the Department unless otherwise required. The Contractor shall also make available to the Department 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. 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 for a JMF as outlined in the MaineDOT HMA Policies and Procedures for HMA Sampling and Testing Manual: Mix Design Approval Section.

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 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. The cold feed percentage for RAP may be reduced up to 10 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 under any circumstances.

401.031 Warm Mix Technology The Contractor may place Hot Mix Asphalt Pavement produced with an accepted WMA technology if approved by the Department. Methods or technologies shall generally be at the Contractors option, but will be limited to proven, Agency and Industry accepted practice. Mixture production, placement and volumetric testing details, including temperatures, shall be included in the project specific QCP, and submitted to the Department for approval prior to any work.

401.04 Temperature Requirements The temperature of the mixture shall conform to the tolerances in Table 2 as measured at the truck at the mixing plant and at the paver unless otherwise authorized by the Department.

TABLE 2: ALLOWABLE TEMPERATURE RANGES

PGAB Grade(s)	Temperature Range (°F)
PG58-28 / PG64-28	275-325
PG64E-28 / PG70E-28	285-335

401.05 Performance Graded Asphalt Binder The Contractor shall utilize either a PG58-28, PG64-28, PG64E-28, PG70E-28, or other grade as specified in the 403 Special Provision. The Contractor shall utilize a PG64-28 if no liquid grade is specified within the 403 Special Provision.

401.06 Weather and Seasonal Limitations The State is divided into two paving zones as follows:

- a. Zone 1 Areas north of US Route 2 from Gilead to Bangor and north of Route 9 from Bangor to Calais.
- b. Zone 2 Areas south of Zone 1 including the US Route 2 and Route 9 boundaries.

TABLE 3: SEASONAL AND TEMPERATURE LIMITATIONS

Use	Minimum Ambient Air Temperature	Zone 1 Allowable Placement Dates	Zone 2 Allowable Placement Dates
Surface course (travelway & adjacent shoulders*) less than 1 in. thick placed during conditions defined as “night work”	50°F	June 1 to Saturday following September 1	
Surface course (travelway & adjacent shoulders*) less than 1 in. thick	50°F	May 15 to Saturday following September 15	
Travelway surface course greater than or equal to 1 in. thick	50°F	May 1 to Saturday following October 1	April 15 to Saturday following October 15
HMA for surface course on bridge decks	50°F	May 1 to Saturday following October 1	April 15 to Saturday following October 15
HMA for base or shim course on bridge decks	50°F	April 15 to November 15	
HMA for use other than travelway surface course	40°F	April 15 to November 15	
HMA for curb, driveways, sidewalks, islands, or other incidentals	40°F	N/A	N/A
HMA produced with an approved WMA technology for base or shim course	35°F	April 15 to November 15	
*Adjacent shoulders shall be considered shoulders paved in the same operation as the travelway.			

The ambient air temperature shall be determined by an approved thermometer placed in the shade at the paving location. Unless otherwise specified, the Contractor shall not place Hot Mix Asphalt Pavement on a wet or frozen surface regardless of the ambient air temperature. The Hot Mix Asphalt Pavement produced with an approved WMA technology shall meet the requirements of section 401.04 - Temperature Requirements, unless otherwise approved by the Department. For the purposes of this Section, the traveled way includes truck lanes, ramps, approach roads and auxiliary lanes.

401.07 Hot Mix Asphalt Plant

401.071 General Requirements HMA plants shall conform to AASHTO M 156, Standard Specification for Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures with exception of Section 4.2.1, 4.2.2, 4.3.4, 4.3.5, and 4.12.2.

All HMA plants will be inspected annually by the Department prior to producing HMA for Department projects. The Contractor shall provide the Department at least 72 hours' notice that the plant is ready for inspection. The Contractor shall equip the plant with ladders and platforms that are accessible and safe to obtain samples of PGAB, aggregate and mix from the relevant tanks, collector belts and haul units. Silo storage time of mixtures shall not exceed 36 hours.

401.072 Stockpiles The Contractor shall provide sufficient space for stockpiles and maintain a minimum of supply for 2 days production of all aggregate products used in MaineDOT approved mix designs currently under production. A minimum stockpile supply of 100 ton (70 yards) shall be

maintained at all times. The Contractor shall construct stockpiles to prevent intermingling and to minimize segregation. All stockpiles used in MaineDOT mixes shall be identified with weatherproof signs at least 12" high and 24" wide, with reflective lettering at least 2" high.

401.073 Cold Feeds Cold Feed Bins will have bin dividers to keep aggregate products separated. Adequate means must be provided for obtaining samples of the combined flow of all Cold feed bins.

401.074 Dryer Dryer shall be capable of heating aggregate to required mixing temperature and shall be in good operation and condition. Dryer shall be subject to annual inspection prior to start-up. The Contractor shall dry and heat the aggregates for the HMA to the required temperature, adjusting flames to avoid damaging the aggregates. The Contractor shall provide the Department a minimum period of 72 hours to inspect the dryer and provide at least 24 hours' notice that the dryer is ready for inspection.

401.075 Asphalt Binder The plant shall include a heating system and insulation to maintain the asphalt binder at a uniform temperature for proper mixing and compaction. A thermometer shall be provided in the asphalt binder line. No direct flame may come in contact with tank. A sampling valve shall be provided in the circulation line downstream of any binder additive used unless otherwise approved by the Department. The Contractor shall drain down the asphalt as low as safely possible in any tank that will be switched to a new source or grade prior to adding the new PGAB.

401.076 Additives Additives (WMA, anti-strip, etc.) introduced into the binder at the HMA plant shall be introduced per the supplier's recommendations and shall be approved by the Department. The system for introducing additives shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all production rates and batch sizes. Additive introduction systems shall be controlled by a proportioning device to the amount required on the JMF plus or minus 0.1% of the target. Additive introduction systems shall be interlocked with the plant and the recordation (batch tickets or drum recordation) shall display the additive and the weight and percentage added. A means for sampling the PG binder with additive introduced will be provided. The sampling point shall be after the additive is mixed with the PGAB before entering the drum or mixer unit.

401.077 Batch Plants

Hot Bins Hot bins shall provide uniform continuous operation and be in good working condition. The plant shall be able to provide samples of hot bins upon request. Overflow shall be provided for each hot bin. Hot bin gates shall close without leaking. Bin walls must prevent intermingling between bins. Each hot bin shall have low level indicators which will alert the operator when the bin is empty.

Mixer Unit Clearance between blades and liner shall be 1" maximum, unless the aggregate exceeds 1 ¼" then the clearance shall be 1 ½". The spray bar length shall be at least 75% of the mixer length. The mixer unit shall be a twin pug mill-type mixer capable of mixing continuously for at least 45 seconds after all materials have been introduced into the mixer. The blades in the mixer shall be capable of producing a homogenous mixture. If the mixer is not enclosed, it shall be equipped with an adjustable hood to prevent loss of dust by dispersion. The mixer unit shall be subject to annual inspection prior to removal of safety features and being readied for service. The Contractor shall provide the Department the opportunity to inspect the mixer unit prior to the

annual inspection. The Contractor shall provide the Department a minimum period of 72 hours to inspect the mixer unit and provide at least 24 hours' notice that the mixer unit is ready for inspection.

Mineral Filler Mineral filler and fiber shall utilize separate bins and feed systems to store and proportion the required quantity into the mixture. The feed systems shall be accurate to no more than 10% of the required weight with a convenient and accurate means of calibration. Mineral filler and fiber shall be introduced in the weigh hopper and uniformly distributed prior to the injection of the asphalt binder.

Automation The HMA batch plant shall automatically batch, mix and discharges mixes. The batch plant shall accurately proportion the various materials in the proper order by weight. The entire batching and mixing cycle shall be continuous and shall not require any manual operations. The batch plant shall use auxiliary interlock circuits to trigger an audible alarm whenever an error exceeding the acceptable tolerance occurs. Along with the alarm, the printer shall print an asterisk on the delivery slip in the same row containing the out-of-tolerance weight. The automatic proportioning system shall be capable of consistently delivering material within the full range of batch sizes. When RAP is being used, the plant must be capable of automatically compensating for the moisture content of the RAP.

The HMA batch plant shall be operated within the following tolerances:

Each aggregate component	+/- 1.5% cumulative, per bin
Mineral Filler	+/- 0.5%
Bituminous Material	+/- 0.1%
Zero return (aggregate)	+/- 0.5%
Zero Return (AC)	+/- 0.1%
Additives	+/- 0.1%

Recordation All plants shall be equipped with an approved digital recording device. The printer shall mark any weight on the ticket that exceeds tolerance. The delivery slip shall contain information required under Section 108.1.3 - Provisions Relating to Certain Measurements, Mass and paragraphs a, b, and c of Section 401.078.

401.078 Drum Plants

Cold Feeds and Delivery System A scalper screen shall be used to remove oversize material. The accuracy of the belt scale shall be within +/- 1.0% of the actual weight being measured. The plant shall be capable of correcting for aggregate moisture. Mineral filler and fiber shall utilize separate bin(s) and feeder systems to store and proportion the required quantity into the mixture. The feed systems shall be accurate to no more than +/- 10% of the required weight with a convenient and accurate means of calibration. The plant shall be equipped with a single control to change all feed rates. Mineral filler and fiber shall be introduced such that dry mixing is accomplished no less than 18 inches prior to the injection of the asphalt binder. The Contractor shall ensure that the mineral filler does not become entrained in the exhaust stream of the dryer.

Binder System The flow of asphalt binder shall adjust automatically with dry aggregate weights. The Department will conduct an asphalt flow meter check annually and after each change of plant location. The flow meter check must be performed prior to producing mix for Department projects. The plant must be configured to provide a convenient means to check accuracy of the flow meter. The flow meter will be considered accurate if the measured weight is within 1% of actual weight.

Drum Mixer The plant shall be equipped with a diversion system where mix can be diverted at startup/shutdown and any time. The drum mixer shall be subject to annual inspection prior to removal of safety features and being readied for service. The Contractor shall provide the Department a minimum period of 72 hours to inspect the drum mixer while providing at least 72 hours' notice that the drum mixer is ready for inspection.

Recordation An approved automatic ticket printer system shall be used to print delivery slips. The requirements for delivery slips for payment of materials measured by weight, as given in the following Sections, shall be waived: 108.1.3 a., 108.1.3 b., 108.1.3 c., and 108.1.3 d. The automatic printed ticket will be considered as the Weight Certificate. The dry aggregate weights and binder flow shall be recorded as well as mineral filler and all binder additives. The recordation of materials shall be printed a minimum of every ten minutes while in production.

The requirements of Section 108.1.3 f. - Delivery Slips, shall be met by the delivery slip printed by the automatic system, which accompanies each truckload, except for the following changes:

- a. The quantity information required shall be individual weights of each batch or total net weigh of each truckload.
- b. Signatures (legible initials acceptable) of Weighmaster (required only in the event of a malfunction as described in 401.074 c.).
- c. The MaineDOT designation for the JMF.

401.079 Scales and Weight Checks Scales shall meeting the requirements of Section 108 - Payment. The scales shall be inspected and sealed by the State Sealer (or approved alternative) as often as the Department deems necessary to verify their accuracy. Plant scales shall be checked prior to the start of the paving season, and each time a plant is moved to a new location. Subsequent checks will be made as determined by the Resident. The Contractor will have at least ten 50 pound masses for scale testing at batch plants. At Contractor's option, the Contractor can use one single test weight that has been checked on sealed scales. This weight shall be 1,000 lbs. or greater. At least twice during each 5 days of production either of the following checks will be performed:

- a. A loaded truck may be intercepted and weighed on a platform scale that has been sealed by the State Sealer of Weights and Measures within the past 12 months. The inspector will notify the producer to take corrective action on any discrepancy over 1.0%. The producer may continue to operate for 48 hours under the following conditions.
 1. If the discrepancy does not exceed 1.5%; payment will still be governed by the printed ticket.
 2. If the discrepancy exceeds 1.5%, the plant will be allowed to operate as long as payment is determined by truck platform scale net weight.

If, after 48 hours the discrepancy has not been addressed and reduced below 1.0%, then plant operations will cease. Plant operation may resume after the discrepancy has been brought within 1.0%.

- b. Where platform scales are not readily available, a check will be made to verify the accuracy and sensitivity of each scale within the normal weighing range and to assure that the interlocking devices and automatic printer system are functioning properly. If platform scales are not readily available, a weight with a known mass-verified and sealed annually by a licensed scale company, may be used by hanging weight from silo or surge hopper, at lower middle and upper third levels upon request to verify scale accuracy.
- c. In the event of a malfunction of the automatic printer system, production may be continued without the use of platform truck scales for a period not to exceed the next two working

days, providing total weights of each batch are recorded on weight tickets and certified by a Licensed Public Weighmaster.

401.08 Hauling Equipment Units hauling HMA shall have tight, clean, and smooth metal bodies, which have been thinly coated with a small amount of approved release agent to prevent the mixture from adhering to the bodies. Release agents that dissolve or strip asphalts, including diesel fuel, will not be allowed.

All mix haul units shall have a cover of water repellent material capable of heat retention, which completely covers the mixture. The cover shall be securely fastened on the truck, unless unloading. Haul units shall have an opening on both sides near the midpoint of the body, at least 12 in above the bed, which will accommodate a thermometer stem.

401.09 Pavers The Contractor shall use pavers meeting the requirements of this section unless otherwise authorized by the Department. Pavers shall meet the requirements of Table 4: Paver Requirements.

TABLE 4: PAVER REQUIREMENTS

Use	Paver Requirement
Traveled Way & Auxiliary Lanes	Equipped with a 10 ft minimum main screed with activated extensions. The minimum tractor weight shall be 30,000 pounds.
	Equipped with automatic grade and slope controls that automatically adjust the screed and increase or decrease the layer thickness to compensate for irregularities in the preceding course. The controls shall maintain the proper transverse slope and be readily adjustable so that transitions and superelevated curves can be properly paved. The controls shall operate from a fixed or moving reference such as a grade wire or ski type device (floating beam) with a minimum length of 30 ft, a non-contact grade control with a minimum span of 24 ft, except that a 40 ft reference shall be used on interstate and divided highway projects.
All HMA Placement	Self-contained, self-propelled units of sufficient class and size to place Hot Mix Asphalt Pavement in full lane widths specified in the contract on the main line, shoulder, or similar construction.
	Equipped with a free-floating activated heated main screed with activated extensions. Pavers with extendible screeds shall have auger extensions and tunnel extenders as per the manufacturer's recommendations, a copy of which shall be available if requested.
	Equipped with a receiving hopper with sufficient capacity for a uniform spreading operation and a distribution system to place the mixture uniformly, without segregation in front of the screed.
	Operated in such a manner as to produce a visually uniform surface texture and a thickness within the requirements of Section 401.11 - Surface Tolerances. The screed assembly shall produce a finished surface of the required evenness and texture without tearing, shoving, or gouging the mixture.

The Contractor shall have the paver at the project site sufficiently before the start of paving operations to be inspected and approved by the Department. The Contractor shall repair or replace any paver found worn or defective, either before or during placement, to the satisfaction of the Department. Pavers that produce an unevenly textured or non-uniform mat will be repaired or replaced before continuing to place HMA on MaineDOT projects. On a daily basis, the Contractor shall perform density testing across that mat as detailed in Section 401.191 Quality Control - Method A, B & C.

401.10 Rollers Rollers shall be static steel, pneumatic tire, oscillatory, or approved vibrator type. Rollers shall be in good mechanical condition, capable of starting and stopping smoothly, and be free from backlash when reversing direction. Rollers shall be equipped and operated in such a way as to prevent the picking up of hot mixed material by the roller drums or tires. Crushing of the aggregate or displacement of the HMA during rolling will not be permitted. Any HMA Pavement that becomes loose, broken, contaminated, shows an excess or deficiency of PGAB, or is in any other way defective shall be removed and replaced at no additional cost with fresh material which shall be immediately compacted to conform to the adjacent area.

The Contractor shall repair or replace any roller found to be worn or defective, either before or during placement, to the satisfaction of the Department. Rollers that produce grooved, unevenly textured or non-uniform mat will be repaired or replaced before continuing to place HMA. The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor's option unless otherwise specified in the contract, provided specified density is attained and with the following requirements:

- a. On variable-depth courses, the first lift of pavement over gravel, reclaimed pavement, on irregular or milled surfaces, or on bridges, at least one roller shall be 16 ton pneumatic-tired. Pneumatic-tired rollers shall be equipped with skirting to minimize the pickup of HMA materials from the paved surface. When required by the Resident, the roller shall be ballasted to 20 ton.
- b. Compaction with a vibratory or steel wheel roller shall precede pneumatic-tired rolling, unless otherwise authorized by the Department.
- c. Vibratory rollers shall not be operated in the vibratory mode on bridge decks.
- d. Any method, which results in cracking or checking of the mat, will be discontinued and corrective action taken.
- e. The use of an oscillating steel roller shall be required to compact all mixtures placed on bridge decks.

The maximum operating speed for a steel wheel or pneumatic roller shall not exceed the manufacturer's recommendations, a copy of which shall be available if requested.

401.11 Surface Tolerances The Department will check the following surface tolerances:

- a. Longitudinally: The pavement surface profile shall be free of deviations in excess of $\pm \frac{1}{4}$ inches from the required pavement surface profile grade. To verify the surface tolerance a straight plane shall be established using 16 foot straight edge or a taught string line placed parallel to the direction of travel and checked continuously across the width of the lane.
- b. Transversely: The pavement surface profile shall be free of deviations in excess of 0 inches below and $\frac{1}{4}$ inches above the required cross-sectional profile grade. To verify the surface tolerance a straight plane shall be established using a 10 foot straight edge or taught string line placed perpendicular to the direction of travel and checked continuously along the length of the lane.

The Contractor shall correct defective areas by removing defective work and replacing it with new material as directed by the Department. The Contractor shall furnish a 10 foot straightedge for the Department's use.

401.12 Preparation of Existing Surface The Contractor shall thoroughly clean the surface upon which Hot Mix Asphalt Pavement is to be placed of all objectionable material. When the surface of the existing base or pavement is irregular, the Contractor shall bring it to uniform grade and cross section. All surfaces shall have a tack coat applied prior to placing any new HMA course. Tack coat shall conform to the requirements of Section 409 – Bituminous Tack Coat, Section 702 – Bituminous Material, and all applicable sections of the contract.

401.13 Spreading and Finishing On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impracticable, the Contractor shall spread, rake, and lute the HMA with hand tools to provide the required compacted thickness. Release agents that dissolve or strip asphalts, including diesel fuel, will not be allowed. On roadways with adjoining lanes carrying traffic, the Contractor shall place each course per the conditions in Table 5, unless otherwise noted by the Department in Section 403 - Hot Mix Asphalt Pavement.

TABLE 5: PLACEMENT CONDITIONS FOR ADJOINING LANES

Depth (at centerline)	Placement Conditions
Vertical Longitudinal Joint	
¾" and less (incl. shim)	The Contractor may place the HMA course over the full single travel lane width for each production day.
1" to 1 ¼"	The Contractor may place the HMA course over the full single travel lane width for each production day and will be required to place a matching course of HMA over the adjacent section of travel lane before weekend or holiday suspension.
1 ½" to 2"	The Contractor may place the HMA course over the full single travel lane width for each production day and will be required to place a matching course of HMA over the adjacent section of travel lane before the end of the following calendar day.
Greater than 2"	The Contractor shall place each course over the full width of the traveled way section being paved that day.
Notched-Wedge Longitudinal Joint	
1 ½" to 2"	The Contractor may place the HMA course over the full single travel lane width for each production day and will be required to place a matching course of HMA over the adjacent section of travel lane before weekend or holiday suspension. A maximum unmatched centerline joint length of 0.5 miles will be permitted over the weekend.
Greater than 2"	The Contractor may place the HMA course over the full single travel lane width for each production day and will be required to place a matching course of HMA over the adjacent section of travel lane before the end of the following calendar day.

The Contractor shall place the specified course over the full width of the mainline traveled way being paved, regardless of use, depth, or longitudinal joint type prior to Memorial Day, July 4th, Labor Day, paving suspensions exceeding three days, or other dates as specified by special provision.

The Contractor shall install additional warning signage that clearly defines the centerline elevation differential hazard. Unless otherwise addressed in the contract, the Contractor shall install additional centerline delineation such as a double application of raised pavement markers at 100 foot intervals, or temporary painted line. For any exposed vertical edge between the shoulder and traveled way, at a minimum, the use of temporary painted line, or RPMs placed along the edge of traveled way at 200 foot intervals is required. The Traffic Control Plan shall be amended to include this option and the additional requirements. All signs and traffic control devices will conform to Section 719.01, and Section 652, and will be installed prior to the work, at a maximum spacing of

0.50 mile for the entire length of effected roadway section. If this option is utilized, all additional signing, labor, traffic control devices, or incidentals will not be paid for directly, will be considered incidental to the appropriate 652 items.

401.14 Hot Mix Asphalt Placement on Bridge Decks Hot mix asphalt pavement placed on bridges shall also conform to Section 508.04 and the following requirements.

- a. The minimum production and placement temperature for the Hot Mix Asphalt placed over membrane shall conform to the manufacturer's recommendations.
- b. The bottom course shall be placed with an approved rubber mounted paver of such type and operated in such a manner that the membrane waterproofing will not be damaged in any way.
- c. The top course shall not be placed until the bottom course has cooled sufficiently to provide stability.
- d. The Contractor will not be required to cut sample cores from the compacted pavement on the bridge deck, unless otherwise directed by Special Provision.
- e. After the top course has been placed, the shoulder areas shall be sealed 3 ft wide with two applications of an emulsified bituminous sealer meeting the requirements of Section 612.03 - Sealing and Section 702.12 - Emulsified Bituminous Sealing Compound. The first application shall be pre-mixed with fine, sharp sand, similar to mortar sand, as needed to fill all voids in the mix in the area being sealed. The second application may be applied without sand. The sealer shall be carried to the curb at the gutter line in sufficient quantity to leave a bead or fillet of material at the face of the curb. The area to be sealed shall be clean, dry and the surface shall be at ambient temperature. The furnishing and applying of the required quantity of sealer for the bridge shoulder areas shall be incidental to placing the hot mix asphalt pavement.
- f. The area between the edge of the membrane and the vertical surface shall be completely sealed with hot-applied rubberized asphalt material, meeting the requirements of Type 4 crack seal; shall be applied to form a complete seal between the membrane and the vertical surface and shall extend up the vertical surface to within ½ inch of the top of the HMA wearing surface. This work shall be considered incidental to the contract pavement items unless 508 membrane items are included in the contract.

401.15 Compaction Immediately after the Hot Mix Asphalt Pavement has been spread, struck off, and any surface irregularities adjusted, the Contractor shall thoroughly and uniformly compact the HMA by rolling.

The Contractor shall roll the surface when the mixture is in the proper condition and when the rolling does not cause undue displacement, cracking, or shoving. The Contractor shall prevent adhesion of the HMA to the rollers or vibrating compactors without the use of fuel oil or other petroleum-based release agents. Solvents designed to strip asphalt binders from aggregates will not be permitted as release agents on equipment, tools, or pavement surfaces.

The Contractor shall immediately correct any displacement occurring as a result of the reversing of the direction of a roller or from other causes to the satisfaction of the Department. Any operation other than placement of variable depth shim course that results in breakdown of the aggregate shall be discontinued. Any new pavement that shows obvious cracking, checking, or displacement shall be removed and replaced for the full lane width as directed by the Resident at no cost to the Department.

Along forms, curbs, headers, walls, and other places not accessible to the rollers, the Contractor shall thoroughly compact the HMA with mechanical vibrating compactors. The Contractor shall only use hand tamping in areas inaccessible to all other compaction equipment. On depressed areas, the Contractor may use a trench roller or cleated compression strips under a roller to transmit compression to the depressed area.

Any HMA that becomes unacceptable due to cooling, cracking, checking, segregation or deformation as a result of an interruption in mix delivery shall be removed and replaced with material that meets contract specifications at no cost to the Department.

For all items requiring pavement density testing, the Contractor shall cut 6-inch diameter cores at no additional cost to the Department by the end of the working day following paving. Cores shall be cut such that the nearest edge at least 9 inches from any joint. Pre-testing of the cores will not be allowed. If the Contractor and the Department mutually determine that a core is damaged, the Contractor shall cut new core(s) at the same offset and within 3 ft of the initial sample. The Contractor and the Department will mutually determine if underlying material is adhered to the core and if so will mark the core at the point where sawing is needed. The Department will place the cores in a secure container and the Contractor shall transport the cores to the designated MaineDOT lab. The cores will be saw cut by the Department to remove underlying layers. No recuts are allowed at a test location after the core has been tested.

On all sections of overlay with wearing courses designed to be 1 in or less in thickness, there shall be no pay adjustment for density otherwise noted in Section 403 - Hot Mix Asphalt Pavement. For overlays designed to be 1 in or less in thickness, density shall be obtained by the same rolling train and methods as used on mainline travelway surface courses with a pay adjustment for density, unless otherwise directed by the Department.

There shall be no pay adjustment for density on shoulders unless otherwise noted in Section 403 - Hot Mix Asphalt Pavement. Density for shoulders shall be obtained by the same rolling train and methods as used on mainline travelway, unless otherwise directed by the Department. Efforts to obtain optimum compaction will not be waived by the Department unless it is apparent during construction that local conditions make densification to this point detrimental to the finished pavement surface course.

401.16 Joints The Contractor shall construct wearing course transverse and longitudinal joints in such a manner that minimum tolerances shown in Section 401.11 - Surface Tolerances are met when measured with a straightedge. The paver screed shall maintain a uniform head of HMA during transverse and longitudinal joint construction. The HMA shall be free of segregation and meet temperature requirements outlined in Section 401.04. Transverse joints of the wearing course shall be straight and neatly trimmed. The Contractor may form a vertical face exposing the full depth of the course by inserting a header, by breaking the bond with the underlying course, or by cutting back with hand tools. The Contractor shall apply a coating of emulsified asphalt immediately before paving all joints to the vertical face and 3 in of the adjacent portion of any pavement being overlaid except those formed by pavers operating in echelon. The Contractor shall use an approved spray apparatus designed for covering a narrow surface. The Department may approve application by a brush for small surfaces, or in the event of a malfunction of the spray apparatus, but for a period of not more than one working day.

Where pavement under this contract joins an existing pavement, or when the Department directs, the Contractor shall cut the existing pavement along a smooth line, producing a neat, even, vertical joint. The Department will not permit broken or raveled edges. The cost of all work necessary for the preparation of joints is incidental to related contract pay items. Longitudinal joints shall be generally straight to the line of travel and constructed in a manner that best ensure joint integrity. Methods or activities that prove detrimental to the construction of straight, sound longitudinal joints will be discontinued.

The Contractor may utilize an approved notched wedge joint device on all HMA layers 1 ½ inches in depth or greater. A notched wedge joint shall be constructed as shown in Figure 1 using a device that is attached to the paver screed and is capable of independently adjusting the top and bottom vertical notches.

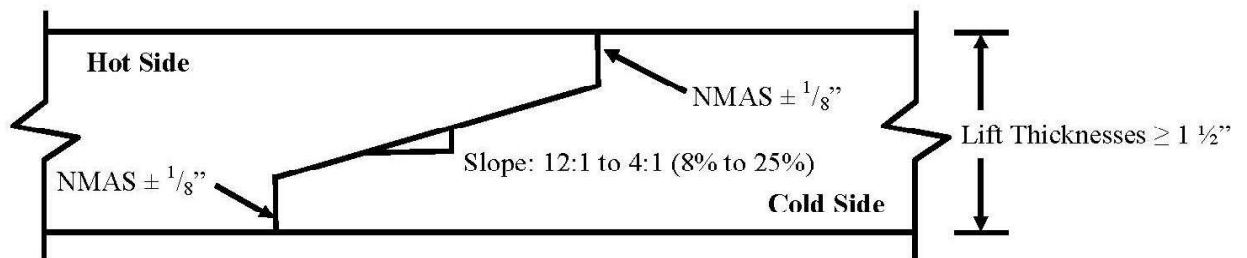


FIGURE 1: Notched Wedge Joint

Notes

1. An emulsified tack coat shall be applied to the vertical edges and the wedge surface so that the total rate is 0.05 G/SY plus the normal specified rate prior to placing the adjacent layer. The Contractor may elect to apply the emulsified tack coat in one or multiple passes.
2. Dimensions shown are compacted depths (after rolling is complete).

The Department reserves the right to have centerline cores cut by the Contractor's QC personnel for informational purposes to monitor the density along the joint. Informational cores at the centerline joint will be taken centered over the tapered part of the wedge joint.

Any notched wedge joint constructed areas that become cracked or broken shall be trimmed back to the limits affected prior to placing the adjoining lane. Any materials that become unbound or separated from the wedge or tapered joint section, or contaminated by materials determined by the Department as being detrimental to the construction of a sound construction joint, shall be removed by sweeping, compressed air and lance, or by hand tools as required. This work, if necessary, will not be paid for directly, but shall be considered incidental to the related contract items.

The Contractor shall apply a coating of emulsified asphalt on the vertical and tapered surface of the longitudinal centerline joint immediately before paving if the notched wedge joint device is used.

The total rate of application shall be 0.050 G/SY plus the normal specified tack coat rate. The Contractor shall use an approved spray apparatus designed for covering a narrow surface. The Department may approve application by a brush for small surfaces.

401.17 Hot Mix Asphalt Documentation The Contractor and the Department shall agree on the amount of Hot Mix Asphalt Pavement that has been placed each day. All delivery slips shall conform to the requirements of 401.078.

401.18 Prepave Meeting Prior to placing any mix, the Department and the Contractor shall hold a Pre-paving conference to discuss the paving schedule, source of mix, type and amount of equipment to be used, sequence of paving pattern, rate of mix supply, random sampling, project lots and sublots and traffic control. A copy of the density QC random numbers to be used on the project shall be provided to the Resident. The Departments' random numbers for Acceptance testing shall be generated and on file with the Resident and the Project Manager. All personnel of the Department and the Contractor who have significant information relevant to the paving items shall attend, including the responsible onsite paving supervisor for the Contractor. The Resident will prepare minutes of the conference and distribute them to all attendees. Any requests to revise the minutes must be made to the Resident within 7 Days of Receipt. These minutes will constitute the final record of the Pre-paving conference. On the first day of paving and whenever there is a change in the onsite paving foreman or paving inspector, the Department and the Contractor shall hold an informal onsite meeting to review the minutes of the Pre-paving conference, Project Specific QCP, Plans, Typical, Special Provisions and communication process. This meeting shall be held prior to placing any mix and, at minimum, shall occur yearly for multi-year contracts. The onsite paving supervisor, QCT, Superintendent, Resident and/or paving inspector shall attend.

401.19 Contractor Quality Control – Method A, B, C & D

The Contractor shall operate in accordance with the approved Quality Control Plan (QCP) to assure a product meeting the contract requirements. The Contractor shall not begin paving operations until the Department approves the QCP in writing.

401.191 Quality Control The QCP shall meet the requirements of Section 106.6 – Acceptance and this Section. The QCP shall address any items that affect the quality of the Hot Mix Asphalt Pavement, and shall include the following personnel meeting these minimum requirements:

- a. **QCP Administrator** – The QCP Administrator must be a full-time employee of or a consultant engaged by the Contractor or paving subcontractor. The QCP Administrator shall have full authority to institute any and all actions necessary for the successful operation of the QCP. The QCP Administrator (or their designee in the QCP Administrator's absence) shall be available to communicate with the Department at all times.
 - For items accepted under Methods A and B, the QCP Administrator shall be certified as a Quality Assurance Technologist (QAT) by NETTCP.
 - For items accepted under Methods C and D, the QCP Administrator shall be certified by NETTCP as a Quality Assurance Technologist (QAT), Plant Technician, or Paving Inspector.
- b. **Process Control Technician(s) (PCT)** shall utilize test results and other quality control practices to assure the quality of aggregates and other mix components and control proportioning to meet the JMF(s). The PCT shall inspect all equipment used in mixing to assure it is operating properly and that mixing conforms to the mix design(s) and other Contract requirements, and that delivery slips and plant recordation accurately reflects the mix being produced with all the required information. The QCP shall detail how these duties and responsibilities are to be accomplished and documented, and whether more than one PCT is required. The Plan shall include the criteria to be utilized by the PCT to correct or reject unsatisfactory materials. The PCT shall be certified as a Plant Technician by the NETTCP.
- c. **Quality Control Technician(s) (QCT)** shall perform and utilize quality control tests at the job site to assure that delivered materials meet the requirements of the JMF(s). The QCT

shall inspect all equipment utilized in transporting, laydown, and compacting to assure it is operating properly and that all laydown and compaction conform to the Contract requirements. The QCP shall detail how these duties and responsibilities are to be accomplished and documented, and whether more than one QCT is required. The QCP shall include the criteria utilized by the QCT to correct or reject unsatisfactory materials. The QCT shall be certified as a Paving Inspector by the NETTCP.

The QCP shall detail the coordination of the activities of the Plan Administrator, the PCT and the QCT. The Project Superintendent shall be named in the QCP, and the responsibilities for successful implementation of the QCP shall be outlined.

The QCP shall address any items that affect the quality of the Hot Mix Asphalt Pavement including, but not limited to, the following:

- a. General Requirements:
 - Job Mix Formulas (JMFs)
 - Name of QCP Administrator, and certification number
 - Description of corrective action process
 - Disposition of defective material
 - A procedure to take immediate possession of acceptance samples once released by MaineDOT and deliver said samples to the designated acceptance laboratory.
- b. Process Control Requirements: Each Hot Mix Asphalt plant shall have a Plant Specific Process Control Plan. At minimum the plan shall include:
 - Name of Plant Specific Process Control Technician(s) and certification number(s)
 - Hot mix asphalt plant details
 - Stockpile Management
 - Mixing & transportation
 - Silo management and details
 - A detailed description of RAP processing, stockpiling and introduction into the plant
 - PG Binder management:
 - Tanks and storage (including polymer modified binders if applicable)
 - Binder temperature
 - Sample points
 - Method to ensure mixture contains the specified binder grade
 - Additive introduction details if introduced at the plant
 - Testing and inspection plan for control of aggregates and RAP
 - Mix Testing and inspection plan
- c. Quality Control Requirements – Method A & B:
 - Name of Quality Control Technicians(s) and certification number(s)
 - Laydown operations
 - Longitudinal joint construction including the tacking of all joints.
 - Procedures for avoiding paving in inclement weather
 - Compaction of shoulders
 - Methods to ensure that segregation is minimized
 - Procedures to determine the maximum rolling and paving speeds based on best engineering practices and past experience in achieving acceptable pavement smoothness.

- Sequence for paving around drainage structures, under guard rail, around curb, at bridges, intersections, drives and minor approaches to ensure proper compaction, finish, and drainage.
- Type of release agent to be used on haul units, tools and rollers.

d. Quality Control Requirements – Method C and D:

- Name of QCP Administrator and certification number(s) as specified in Section 401.19.
- Name of Process Control Technicians(s) and certification number(s).
- Name of Quality Control Technicians(s) and certification number(s).
- Anticipated Compaction Temperature Zones for each roller pass during placement.
- Mix TMD to be used for density gauge setting for method spec density work
- Procedures for avoiding paving in inclement weather.
- Type of release agent to be used on haul units, tools and rollers.
- A note stating that the use of petroleum-based fuel oils, such as diesel or kerosene, or asphalt stripping solvents will not be permitted.

The Contractor shall also supply a Laydown Operation Plan that addresses sequence of work, layout of work, longitudinal joint construction, compaction of shoulders, methods to minimize segregation, and procedures to achieve acceptable pavement smoothness.

For each production day, a summary of each day's results, including a daily paving report, summarizing the mixture type, mixture temperature, equipment used, environmental conditions, and the number of roller passes, shall be recorded and signed by the QCT and presented to the Department's representative by 1 PM the following working day.

Unless otherwise noted in Section 403 – Hot Mix Asphalt Pavement, the Contractor shall submit a modified QC Plan every year detailing, how the mix is to be placed, what equipment is to be used, and what HMA plant is to be used for Items covered under the Plan. All mix designs (JMF) shall be approved and verified by MaineDOT prior to use.

A QCP, certified QC personnel, and a Prepave Meeting shall not be required for Item 403.209 - Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (sidewalks, drives, islands & incidentals) accepted under visual or Method D. An approved JMF shall be provided to the Resident prior to placement.

The Contractor shall certify the mix and the test results for each item by a Certificate of Compliance.

The Contractor shall have a testing lab at the plant site, equipped with all testing equipment necessary to complete the tests in Table 6. The Contractor shall generate QC sampling random numbers for each approved mix design every year. A copy of the random numbers shall be emailed to the QC.mainedot@maine.gov email address and remain on-file (in print) and be available for inspection at the QC laboratory. The Contractor shall sample, test, and evaluate Hot Mix Asphalt Pavement in accordance with the minimum frequencies per each approved mix design.

TABLE 6: MINIMUM QUALITY CONTROL FREQUENCIES

Test or Action	Frequency	Test Method
Temperature of mix	6 per day at street and plant	-
Temperature of mat	4 per day	-
%TMD (In-Place Density - Surface)	1 per 125 ton	AASHTO T 355 or AASHTO T 343
%TMD (In-Place Density - Base)	1 per 250 ton	AASHTO T 355 or AASHTO T 343
Fines / Effective Binder	1 per 500 ton	AASHTO T 312*
Gradation	1 per 500 ton	AASHTO T 30
PGAB Content	1 per 500 ton	AASHTO T 164 or AASHTO T 308
Voids at N_{design}	1 per 500 ton	AASHTO T 312*
VMA at N_{design}	1 per 500 ton	AASHTO T 312*
Rice Specific Gravity	1 per 500 ton	AASHTO T 209
Percent Fractured Particles	1 per 5,000 ton	AASHTO T 335
Flat and Elongated Particles	1 Per 5,000 ton	ASTM D4791
Fine Aggregate Angularity	1 Per 5,000 ton	AASHTO T 304

*Method A and B only

The Contractor shall monitor plant production on each approved mix design using running average of three control charts as specified in Section 106 - Quality. Control limits shall be as noted in Table 7 below. The UCL and LCL, shall not exceed the allowable gradation control points for the particular type of mixture as outlined in Table 1 of Section 703.09.

TABLE 7: CONTROL LIMITS

Property	UCL and LCL
Percent Passing 4.75 mm and larger sieves	Target +/- 4.0
Percent Passing 2.36 mm sieve	Target +/- 2.5
Percent Passing 0.075 mm sieve	Target +/- 1.0
PGAB Content	Target +/- 0.25
VMA at N_{design}	LCL = LSL + 0.2
Voids at N_{design}	JMF Target +/- 1.2
Theoretical Maximum Specific Gravity	JMF Target +/- 0.020

The Contractor shall submit all QC test and inspection reports and updated control charts to the Resident and QC.mainedot@maine.gov by email. The reports and updated control charts shall be signed by the appropriate technician and be submitted to the Department by 1:00 P.M. on the next working day, except when otherwise noted in the QCP and approved by the Department.

The Contractor shall also retain splits of the previous 5 QC tests, with QC results enclosed for random selection and testing by the Department. Test results of splits that do not meet the Dispute Resolution

Variance Limits in Table 18 shall trigger an investigation by the MaineDOT Independent Assurance Unit and may result in that lab losing NETTCP certification and the ability to request a dispute [Section 401.50 - Process for Dispute Resolution].

The Contractor shall make density test results, including randomly sampled densities, available to the Department onsite. Summaries of each day's results, including a daily paving report summarizing the mixture type, mixture temperature, equipment used, environmental conditions, and the number of

roller passes, shall be recorded and signed by the QCT and provided to the QC.mainedot@maine.gov email address and Resident in writing by 1:00 p.m. the next working day. The Contractor shall fill all holes in the pavement resulting from cutting cores by the Contractor or the Department with a properly compacted, acceptable mixture no later than the following working day. Before filling, the Contractor shall carefully clean the holes and apply a coating of emulsified asphalt. The Contractor may only cut additional cores for verification of the densometer, at a rate not to exceed 3 per day or 2 per 1000 ton placed.

If the Contractor's control chart shows the process for a given mix design to be out of control (defined as a single point outside of the control limits on the running average of three chart) on any property listed in Table 7: Control Limits, the Contractor shall notify the Resident of all affected projects in writing of the corrective action by 1:00 PM the next working day. The written description shall detail what action is being taken by the Contractor to bring the property in question back within control limits. Subsequent quality control results are expected to demonstrate an improvement and regression towards the aim. The Department reserves the right to take action, to include cessation of production, in the case of repeated results outside the Table 7 control chart control limits.

On a daily basis, or whenever equipment type or sequence is modified, the Contractor shall perform density testing across the mat being placed, prior to being compacted by equipment at 12 in intervals. If the density values vary by more than 2.0% from the mean, the Contractor shall make adjustments to the screed until the inconsistencies are remedied. Failure to replace or repair defective placement equipment may result in a letter of suspension of work and notification of a quality control violation resulting in possible monetary penalties as governed by Section 106 – Quality.

The Contractor shall cease paving operations whenever one of the following occurs:

- a. The quality level for density using all quality control tests for the current Lot is less than 60 PWL.
- b. The Coarse Aggregate Angularity or Fine Aggregate Angularity value falls below the requirements of Section 703.07, Table 3: Aggregate Consensus Properties Criteria for the design traffic level.
- c. The Flat and Elongated Particles value exceeds 10% by ASTM D4791.
- d. There is any visible damage to the aggregate due to over-densification other than on variable depth shim courses.
- e. The Contractor fails to follow the approved QCP.

The Contractor shall notify the Resident in writing as to the reason for shutdown, as well as the corrective action, by the end of the workday. Failure to do so will be treated as a second incident under 106.4.6 QCP Non-compliance. The Department will only allow the continuation of paving operations when it is satisfied the corrective action will result in an improvement in results. The Department may require the submittal of a passing verification sample to allow further production. The Department

retains the exclusive right, with the exception of the first day's production of a new JMF, to determine whether the resumption of production involves a significant change to the production process. If the Department so determines, then the current lot will be terminated, a pay factor established, and a new lot will begin.

The Contractor may utilize innovative equipment or techniques not addressed by the Contract documents to produce or monitor the production of the mix, subject to approval by the Department.

401.192 Quality Control for Method D, (sidewalks, drives, islands & incidentals) and visual acceptance items A QCP, certified QC personnel, or Prepave Meeting shall not be required for Item 403.209 - Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (sidewalks, drives, islands & incidentals) accepted under visual or Method D. An approved JMF shall be provided to the Resident prior to placement.

401.20 Acceptance Method A & C These methods utilize Quality Level Analysis and pay factor specifications. For Hot Mix Asphalt Pavement designated for acceptance under Quality Assurance provisions, the Department will sample once per subplot on a statistically random basis, test, and evaluate in accordance with the Acceptance Properties as outlined in Table 8:

TABLE 8: ACCEPTANCE PROPERTIES – METHOD A & C

Properties	Point of Sampling	Test Method
Gradation	Paver Hopper	AASHTO T 30
PGAB Content	Paver Hopper	AASHTO T 308
% TMD (In-Place Density)	Mat behind all Rollers	AASHTO T 269
Voids at N_{design}	Paver Hopper	AASHTO T 312
VMA at N_{design}	Paver Hopper	AASHTO T 312
Fines to Effective Binder	Paver Hopper	AASHTO T 312
VFB	Paver Hopper	AASHTO T 312

The Department will obtain samples of Hot Mix Asphalt Pavement in conformance with AASHTO R 97, Sampling Asphalt Mixtures, and the MaineDOT Policies and Procedures for HMA Sampling and Testing. The Contractor shall transport the samples in containers provided by the Department to the designated MaineDOT Laboratory within 48 hours except when otherwise noted in the project specific QCP or as directed by the Resident. Failure to deliver an acceptance sample to the designated acceptance laboratory will be considered the second incident under 106.4.6–QCP Non-Compliance.

Target values shall be as specified in the JMF. The Department will withhold reporting of the test results for the Acceptance sample until 7:00 AM, on the second working day of receipt of the sample, or after receipt of the Contractors results of the Acceptance sample split. Upon conclusion of each lot being evaluated under quality level analysis, where there is a minimum of four sublots, results shall be examined for statistical outliers, as stated in Section 106.7.2 - Statistical Outliers.

Lot sizes and subplot sizes shall be determined as outlined in Table 9.

TABLE 9: LOT AND SUBLOT SIZES – METHOD A & C

Lot Size*	Entire production per item per contract per year up to 6000 ton
Maximum Sublot Size – Mix	750 ton
Maximum Sublot Size – Density	Surface Layers – 250 ton Base / Intermediate Layers – 500 ton
Minimum Number of Samples – Mix	Four
Minimum Number of Samples – Density	Five

*General – Lot and Sublot size may be adjusted to accommodate the work scope and schedule, or as otherwise agreed upon at the Prepave Meeting

If there is less than one-half of a subplot remaining at the end of production for the year, then it shall be combined with the previous subplot. If there is more than one-half subplot remaining at the end of production for the year, then it shall constitute the last subplot and shall be represented by test results. If it becomes apparent partway through a Lot that, due to an underrun, there will be insufficient mix quantity to obtain the minimum number of sublots needed, the Resident may adjust the size of the remaining sublots and select new sample locations based on the estimated quantity of material remaining in the Lot. Unanticipated over-runs of up to 1500 ton shall be rolled into the last lot. Cases where the lot is terminated prior to reaching completion shall be handled in accordance with Section 106.7.3 Early Termination of Lots. In cases where density incentive/disincentive provision apply, additional cores shall be taken to attain a minimum of three for the Lot.

Isolated Areas During the course of inspection, should it appear that there is an isolated area that is not representative of the lot based on a lack of observed compactive effort, excessive segregation, a change in process or any other questionable practice, that area may be isolated and tested separately. An area so isolated that has a calculated pay factor below 0.80 for Method A, based on three random tests shall be removed and replaced at the expense of the Contractor for the full lane width and a length not to be less than 150 ft.

TABLE 10: ACCEPTANCE LIMITS – METHOD A & C

Property	USL and LSL	
	Method A	Method C
Percent Passing 4.75 mm and larger sieves	Target +/- 7%	Target +/- 7%
Percent Passing 2.36 mm to 1.18 mm sieves	Target +/- 4%	Target +/- 5%
Percent Passing 0.60 mm sieve	Target +/- 3%	Target +/- 4%
Percent Passing 0.30 mm to 0.075 mm sieve	Target +/- 2%	Target +/- 2%
PGAB Content	Target +/- 0.4%	Target +/- 0.4%
Voids at N_{design}	4.0% +/- 1.5%	N/A
Fines to Effective Binder	0.9 +/- 0.3	N/A
VMA at N_{design}	LSL from Table 1	N/A
VFB	Table 1 plus a 4% production tolerance for USL	N/A
% TMD (In-place Density)	94.5% +/- 2.5%	94.5% +/- 2.5%

Cease Production The Contractor shall cease paving operations whenever one of the following occurs on a lot in progress:

TABLE 11: CEASE PRODUCTION – METHOD A & C

Property	Percent Within Limits (PWL)	
	Method A	Method C
Percent Passing NMA sieve*	<60 PWL	<60 PWL
Percent Passing 2.36 mm sieve*		
Percent Passing 0.30 mm sieve*		
Percent Passing 0.075 mm sieve*		
PGAB Content		N/A
Voids at N_{design}		
Fines to Effective Binder*		
VMA at N_{design}		
VFB		
% TMD (In-place Density)		<60 PWL

*Paving operations shall not be required to cease if the mean test value is equal to the LSL or USL and $s = 0$.

In cases where the Contractor is to cease paving operations based upon an Acceptance result or payfactor, the Contractor will submit a corrective action plan to the Department. The Department will only allow the continuation of paving operations when it is satisfied the corrective action will result in an improvement in results. The Department may require the submittal of a passing verification sample to allow further production.

401.201 Pay Adjustment - Method A & C The Department will use the following criteria for pay adjustment at the completion of the Lot using the pay adjustment factors under Section 106.7 - Quality Level Analysis.

Density Upon conclusion of each lot, density results shall be examined for statistical outliers as stated in Section 106.7.2. If the pay factor for Density falls below 0.80, all of the cores will be randomly re-cut by Sublot. A new pay factor will be calculated that combines all initial and retest results. If the resulting pay factor is below 0.80, the entire Lot shall be removed and replaced with material meeting the specifications at no additional cost to the Department, except that the Department may, when it appears that there is a distinct pattern of defective material, isolate any defective material by investigating each mix sample subplot and require removal of defective mix sample sublots only, leaving any acceptable material in place if it is found to be free of defective material. Pay factors equal to or greater than the reject level will be paid accordingly.

Mix Properties The Department will determine a pay factor (PF) using the applicable Acceptance Limits. If all three pay factors for PGAB Content, VMA at N_{design} , and Voids at N_{design} fall below 0.80 for Method A, then the composite pay factor for PGAB Content, VMA at N_{design} , and Voids at N_{design} shall be 0.50.

The following variables will be used for pay adjustment:

PA = Pay Adjustment
 Q = Quantity represented by PF in ton
 P = Contract price per ton
 PF = Pay Factor

The Department will determine a pay adjustment using Table 12: Pay Adjustment Calculations as follows:

TABLE 12: PAY ADJUSTMENT CALCULATIONS – METHOD A & C

Acceptance Method	Mix Properties / Gradation	Density
Method A	$PA = (\text{Voids @ } N_d \text{ PF} - 1.0)(Q)(P) \times 0.20 + (\text{VMA @ } N_d - 1.0)(Q)(P) \times 0.20 + (\text{PGAB Content PF} - 1.0)(Q)(P) \times 0.10$	$PA = (\text{density PF} - 1.0)(Q)(P) \times 0.50$
Method C	$PA = (\% \text{ Passing Nom. Max PF} - 1.0)(Q)(P) \times 0.05 + (\% \text{ passing 2.36 mm PF} - 1.0)(Q)(P) \times 0.05 + (\% \text{ passing 0.30 mm PF} - 1.0)(Q)(P) \times 0.05 + (\% \text{ passing 0.075 mm PF} - 1.0)(Q)(P) \times 0.10 + (\text{PGAB Content PF} - 1.0)(Q)(P) \times 0.25$	$PA = (\text{density PF} - 1.0)(Q)(P) \times 0.50$

In addition, for 9.5 mm NMAS mixtures the following pay adjustment shall also apply:

The average percent passing for the 0.075 mm sieve shall be evaluated for each Lot. If the average is greater than 6.5%, a pay adjustment according to Table 13 below shall apply in addition to the other pay adjustments for the given method of testing.

TABLE 13: 0.075 MM SIEVE PAY ADJUSTMENT

Average Percent Passing 0.075 mm Sieve	Pay Adjustment
6.6% - 7.0%	-5%
> 7.0%	-10%

The Department shall notify the Contractor whenever the average of at least three samples in a given Lot is greater than 6.5%.

401.21 Acceptance Method B & D Unless otherwise stated in the 403 special provision, the Lot shall be the entire mix quantity per item per contract per year. The Department will sample once per subplot per pay item on a statistically random basis, test, and evaluate in accordance with the Acceptance Properties in Table 14. The Department will obtain samples of Hot Mix Asphalt Pavement in conformance with AASHTO R 97, Sampling Asphalt Mixtures, and the MaineDOT Policies and Procedures for HMA Sampling and Testing. The Contractor shall transport the samples in containers provided by the Department to the designated MaineDOT Laboratory within 48 hours except when otherwise noted in the project specific QCP or as directed by the Resident. Failure to deliver an acceptance sample to the designated acceptance laboratory will be considered the second incident under 106.4.6–QCP Non-Compliance. Target values shall be as specified in the JMF. The Department will withhold reporting of the test results for the Acceptance sample until 7:00 AM, on the second working day of receipt of the sample, or after receipt of the Contractors results of the Acceptance sample split.

TABLE 14: ACCEPTANCE PROPERTIES – METHOD B & D

Properties	Point of Sampling		Test Method
	Method B	Method D	
Gradation	Paver Hopper	Paver Hopper or Truck	AASHTO T 30
PGAB Content	Paver Hopper	Paver Hopper or Truck	AASHTO T 308
% TMD (In-Place Density)	Mat behind all Rollers	Mat behind all Rollers	AASHTO T 269
Voids at N_{design}	Paver Hopper	N/A	AASHTO T 312
VMA at N_{design}	Paver Hopper	N/A	AASHTO T 312
Fines to Effective Binder	Paver Hopper	N/A	AASHTO T 312
VFB	Paver Hopper	N/A	AASHTO T 312

TABLE 15: LOT AND SUBLOT SIZES – METHOD B & D

Lot Size*	Entire mix quantity per item per contract per year	
Maximum Sublot Size – Mix	(Lot size \leq 1000 tons)	(Lot size $>$ 1000 tons)
	250 ton	750 ton
Sublot Size – Density	125 ton (Max 5 Sublots)	250 ton

*General – Lot and Sublot size may be adjusted to accommodate the work scope and schedule, or as otherwise agreed upon at the Prepave Meeting

If there is less than one-half of a sublot remaining at the end of production for the year, then it shall be combined with the previous sublot. If there is more than one-half sublot remaining at the end of production for the year, then it shall constitute the last sublot.

TABLE 16: ACCEPTANCE LIMITS – METHOD B & D

Property	USL and LSL	
	Method B	Method D
Percent Passing 4.75 mm and larger	Target +/- 7%	Target +/- 7%
Percent Passing 2.36 mm sieve	Target +/- 5%	Target +/- 7%
Percent Passing 1.18 mm sieve	Target +/- 5%	Target +/- 5%
Percent Passing 0.60 mm sieve	Target +/- 4%	Target +/- 4%
Percent Passing 0.30 mm sieve	Target +/- 3%	Target +/- 3%
Percent Passing 0.075 mm sieve	Target +/- 3%	Target +/- 3%
PGAB Content	Target +/- 0.5%	Target +/- 0.5%
Voids at N_{design}	4.0% +/- 2.0%	N/A
Fines to Effective Binder	0.9 +/- 0.3	N/A
VMA at N_{design}	LSL from Table 1	N/A
VFB	Table 1 plus a 4% production tolerance for USL	N/A
% TMD (In-place Density)	94.5% +/- 2.5%	LSL of 92.0%

The Contractor shall cease paving operations whenever two consecutive Method B or D tests fall outside specification limits on the same property. The Contractor will submit a corrective action plan to the Department. The Department will only allow the continuation of paving operations when it is satisfied the corrective action will result in an improvement in results. The Department may require the submittal of a passing verification sample to allow further production.

401.211 Pay Adjustment - Method B & D For items accepted under Method B or D, if the mix is within the tolerances listed in Table 16, the Department will pay the contract unit price, otherwise pay adjustments as shown in Table 17 shall be applied to the quantity of mix represented by the test. The Contractor shall cut one 6 in core per subplot unless otherwise noted in Section 403 - Hot Mix Asphalt Pavement. If the density result is not within the specified limits the disincentive shall apply. If the subplot density is less than 88.5 percent or greater than 99.0 percent of the subplot TMD, two additional cores shall be cut at random locations determined by the Department. If either of the additional cores has a density less than 88.5 percent or greater than 99.0 percent of the subplot TMD, the subplot shall be removed and replaced at no cost to the Department; otherwise, the average of the three cores will be used to determine the subplot pay adjustment.

TABLE 17: PAY ADJUSTMENTS – METHOD B & D

Property	Method B		Method D	
Percent Passing 2.36 mm sieve	N/A		-2.0%	
Percent Passing 0.30 mm sieve	N/A		-1.0%	
Percent Passing 0.075 mm sieve	-2.0%		-2.0%	
PGAB Content	-5.0%		-5.0%	
Voids at N_{design}	-3.0%		N/A	
% TMD (In-place Density)	91.5% - 91.9% or 97.1% - 97.5%	-5.0%	91.5% - 91.9%	-5.0%
	90.5% - 91.4% or 97.6% - 98.5%	-10.0%	90.5% - 91.4%	-10.0%
	89.5% - 90.4% or 98.6% - 99.0%	-20.0%	89.5% - 90.4%	-20.0%
	88.5% - 89.4%	-30.0%	88.5% - 89.4%	-30.0%
	<88.5% or >99.0%	Reject	<88.5% or >99.0%	Reject

401.30 Method of Measurement The Department will measure Hot Mix Asphalt Pavement by the ton in accordance with Section 108.1 - Measurement of Quantities for Payment.

401.40 Basis of Payment The Department will pay for the work, in place and accepted, in accordance with the applicable sections of this Section, for each type of HMA specified.

The Department will pay for the work specified in Section 401.12, for the HMA used, except that cleaning objectionable material from the pavement and furnishing and applying bituminous material to joints and contact surfaces is incidental. Payment for this work under the appropriate pay items shall be full compensation for all labor, equipment, materials, and incidentals necessary to meet all related contract requirements, including design of the JMF, implementation of the QCP, obtaining core samples, transporting cores and samples, filling core holes, applying emulsified asphalt to joints, and providing testing facilities and equipment. The Department will make a pay adjustment for quality as specified in Section 401.20 Acceptance Method A & B or 401.21 Acceptance Method C & D.

401.50 Process for Dispute Resolution At the time of Hot-Mix Asphalt sampling, the Department will obtain a split sample of each Acceptance test random sample for possible dispute resolution testing. The Contractor shall also obtain a split sample of the HMA at this same time. If the

Contractor wishes to retain the option of requesting dispute testing of the initial Acceptance sample, the Contractor will test their split of the Acceptance sample in accordance with applicable AASHTO procedure and accepted supplemental practice as described in the Department's HMA Sampling and Testing Policies and Procedures manual. The Contractor shall report their results to the Resident, with a copy to Contractor.mainedot@maine.gov by 7:00 AM, on the second working day from time of QA sampling, otherwise dispute resolution will not be initiated. The Department's dispute resolution split sample will be properly labeled and stored for a period of at least two weeks after it has been reported, or until the sample is tested. The properties eligible for dispute and the respective variances are shown in Table 18.

The Contractor may dispute the Department's Acceptance results and request that the dispute resolution split sample be tested by notifying the Department's Resident and QA Engineer in writing within two working days after the results of the Acceptance test are reported. The following shall be provided in the request:

- Acceptance sample reference number
- The specific test result(s) or property(ies) being disputed, and
- The complete, signed report of the Contractor's testing (In a lab certified by the NETTCP and MaineDOT) of their split of the Acceptance sample indicating that the variances in Table 18 for the specific test result(s) or property(ies) were exceeded.

TABLE 18: DISPUTE RESOLUTION VARIANCE LIMITS

Property	Method A & B	Method C & D*	Variance Limits
PGAB Content	Yes	Yes	+/- 0.4%
G _{mb}	Yes	No	+/- 0.030
G _{mm}	Yes	Only if referenced to a Core	+/- 0.020
Voids at N _{design}	Only if G _{mb} or G _{mm} is not disputable	No	+/- 0.8%
VMA at N _{design}	Only if G _{mb} or G _{mm} is not disputable	No	+/- 0.8%
Percent Passing 4.75 mm and larger sieves	No	Yes^	+/- 4.0%
Percent Passing 2.36 mm to 0.60 mm sieves	No	Yes^	+/- 3.0%
Percent Passing 0.30 mm to 0.15 mm sieves	No	Yes^	+/- 2.0 %
0.075 mm sieve	Only for 9.5 mm NMAS mixes	Yes	+/- 0.8%

*Disputes will not be allowed on Item 403.209

^Disputes will only be allowed on Sieve Sizes used for pay adjustment calculations

The value of any disputed result or property reported for the initial Acceptance sample shall stand if the value reported for the dispute resolution sample is not closer to the value the Contractor reported for their split sample than to the value reported for the initial Acceptance sample. If the value reported for the dispute resolution falls precisely half-way between the other two values the value reported for the dispute resolution will replace the original acceptance value. Otherwise, the

value reported for the dispute resolution sample will replace the value reported for the initial Acceptance sample and will be used to re-calculate any other affected results or properties.

SECTION 402 - PAVEMENT SMOOTHNESS

402.00 Smoothness Projects Projects to have their pavement smoothness analyzed in accordance with this Specification will be so noted in Special Provision 403 - Hot Mix Asphalt Pavement.

402.01 Pavement Smoothness The final pavement surface shall be evaluated for smoothness using a Class I or Class II profiler as defined by ASTM E950 (94). Smoothness measurements will be expressed in terms of the International Roughness Index (IRI) as defined by the World Bank, in units of inches/mile.

402.02 Lot Size Lot size for smoothness will be 3000 lane-feet. A subplot will consist of 50 lane-feet. Partial lots will be included in the previous lot if less than one-half the size of a normal lot. If equal to or greater than one-half the normal lot size, it will be tested as a separate lot.

402.03 Acceptance Testing The Department will conduct Acceptance testing following completion of the surface course. Sections to be excluded from testing include the following:

- Bridge decks and joints (no smoothness measurements will be taken within 100 ft of bridge joints)
- Acceleration and deceleration lanes
- Shoulders and ramps
- Side streets and roads
- Within 100 ft of transverse joints at the beginning and end of the project
- Within 100 ft of railroad crossings
- Urban areas with speed limits of 30 mph or lower

Each lot shall have 2 measurements made in each wheel path. The average of the 4 measurements will determine the smoothness for that lot. The smoothness measurements will be statistically evaluated for pay factors as described in Subsection 106.7 - Quality Level Analysis, using the specification limits shown below.

TABLE 1: ACCEPTANCE LIMITS

Level	USL
I	55 in/mile
II	65 in/mile
III	75 in/mile

Computation of Smoothness Pay Adjustment:

$PA = (PF - 1.0)(Q)(P)$ where:

Q = Quantity of surface course in the Lot (excluding shoulders, side streets, bridge decks, ramps, acceleration and deceleration lanes)

PF = smoothness pay factor for the Lot

P = Contract unit price for surface pavement

PA = pay adjustment

402.04 Unacceptable Work In the event that any Lot is found to have a pay factor less than 0.80, the Contractor shall take whatever remedial action is required to correct the pavement surface in that Lot at no additional expense to the Department. Such remedial action may include but is not limited to removal and replacement of the unacceptable pavement. In the event remedial action is necessary, the Contractor shall submit a written plan to the Resident outlining the scope of the remedial work. The Resident must approve this plan before the remedial work can begin. Following remedial work, the Lot shall be retested, and will be subject to the specification limits listed above. The resulting pay factor, if within the acceptable range, will be used in the final pay adjustment. The Contractor shall pay the cost of retesting the pavement following corrective action.

Localized surface tolerance defects will be subject to the provisions outlined in Section 401.11 Surface Tolerances.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
402.10 Incentive/Disincentive - Pavement Smoothness	Lump Sum

SECTION 403 - HOT MIX ASPHALT PAVEMENT

403.01 Description This work shall consist of constructing one or more courses of Hot Mix Asphalt pavement on an approved base in accordance with these specifications, and in reasonably close conformity with the lines, grades, thickness and typical cross sections shown on the plans or established. The HMA pavement shall be composed of a mixture of aggregate, filler if required, and asphalt material.

403.02 General The materials and their use shall conform to the requirements of Section 401 - Hot Mix Asphalt Pavement.

403.03 Construction The construction requirements shall be as specified in Section 401 - Hot Mix Asphalt Pavement.

403.04 Method of Measurement Hot mix asphalt pavement will be measured as specified in Section 401.21- Method of Measurement.

403.05 Basis of Payment The accepted quantities of hot mix asphalt pavement will be paid for at the contract unit price per ton for the mixtures, including hot mix asphalt material complete in place. Method A, Method B, Method C and Method D shall be used for acceptance as specified in Section 401 - Hot Mix Asphalt Pavements. (See Complementary Notes, Section 403 - Hot Mix Asphalt Pavement, for Method location).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
403.102 Hot Mix Asphalt Pavement for Special Areas	Ton
403.206 Hot Mix Asphalt, 25 mm Nominal Maximum Size	Ton
403.207 Hot Mix Asphalt, 19.0 mm Nominal Maximum Size	Ton
403.2071 Hot Mix Asphalt, 19.0 mm Nominal Maximum Size (Polymer Modified)	Ton
403.2072 Asphalt Rich Hot Mix Asphalt, 19.0 mm Nominal Maximum Size (Asphalt Rich Base and Intermediate course)	Ton
403.208 Hot Mix Asphalt, 12.5 mm Nominal Maximum Size	Ton
403.2081 Hot Mix Asphalt - 12.5 mm Nominal Maximum Size (Polymer Modified)	Ton
403.209 Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Sidewalks, Drives, Islands & Incidentals)	Ton
403.210 Hot Mix Asphalt, 9.5 mm Nominal Maximum Size	Ton
403.2101 Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Polymer Modified)	Ton
403.2104 Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Thin Lift Surface Treatment)	Ton
403.211 Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Shimming)	Ton
403.2111 Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Shimming, Polymer Modified))	Ton
403.212 Hot Mix Asphalt, 4.75 mm Nominal Maximum Size	Ton
403.213 Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base course)	Ton
403.2131 Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base course, Polymer Modified)	Ton
403.2132 Asphalt Rich Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base course)	Ton
403.214 Hot Mix Asphalt, 4.75 Nominal Maximum Size (5/8" Surface Treatment)	Ton

SPECIAL PROVISION
SECTION 403
HOT MIX ASPHALT

Desc. Of Course	Grad Design.	Item Number	Total Thick	No. Of Layers	Comp. Notes
<u>¾" HMA Overlay w/ Variable Depth Shim</u>					
<u>Travelway, Shoulders & Side Roads (As Indicated)</u>					
Wearing Shim	9.5 mm	461.13	¾"	1	1,4,10,24,30,43
	9.5 mm	403.211	variable	1/more	4,10,20,30,43
<u>Spot Shims (As Directed)</u>					
Shim	9.5 mm	403.211	variable	1/more	4,10,20,30
<u>Drives, Misc. (As Directed)</u>					
Wearing	9.5 mm	403.209	1-2"	1/more	3,20,30

COMPLEMENTARY NOTES

1. The required PGAB for this mixture will meet a **PG 64-28** grading. All asphalt grades utilized on the travelway and shoulders shall be treated with an approved liquid anti-strip. PG binders shall be treated with a minimum 0.50 percent anti-strip by weight of asphalt binder used unless otherwise recommended by the anti-strip manufacturer. The PGAB and anti-strip blend shall meet the **PG 64-28** requirements. The Contractor shall provide supporting test data showing the PGAB and anti-strip blend meet the required criteria.
3. The design traffic level for mix placed shall be <3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **65 gyrations**.
4. 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 **65 gyrations**.
10. Section 106.6 Acceptance, (2) **Method D** as specified Section 401.21 - Quality Assurance Methods B and D. The Contractor may request a contract modification to change to testing method "C" prior to work starting on this item.
20. The combined aggregate gradation required for this item shall be classified as a 9.5mm Thin Lift Mixture (TLM) mixture, using the Aggregate Gradation Control Points as defined in 703.09.
24. See Special Provision 461 – Light Capital Paving Preservation for project specifics.
30. The incentive/disincentive provisions for density shall not apply. Rollers shall meet the requirements of this special provision. The use of an oscillating steel roller shall be required to compact all mixtures pavements placed on **bridge decks**.
43. The Department shall profile railroad and bridge approaches every 10 feet along the roadway center line and edge of travelways, out to a match point at a minimum of 75 feet from the structure, to determine the approach pavement taper, elevations, and pavement removal or shim requirements. This work shall be accomplished in cooperation with the Contractor by means of conventional surveying equipment or blocking and string lines as cooperatively determined by the Contractor and Department. At minimum, the survey work will be completed 10 days prior to milling and/or paving operations.

Tack Coat

A tack coat of emulsified asphalt, RS-1, RS-1h, CRS-1 or CRS-1h, Item 409.15 shall be applied to any existing pavement at a rate of approximately 0.030 gal/yd², and on milled pavement approximately 0.05 gal/yd² prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim /base courses and surface course as well as to any bridge membrane prior to the placement of HMA layers at a rate not to exceed 0.030 gal/yd². Tack used will be **paid for at the contract unit price** for Item 409.15 Bituminous Tack Coat.

SPECIAL PROVISION
SECTION 461
(Light Capital Paving)

Description The Contractor shall furnish a uniformly blended, homogenous mixture placed as one or more courses of Hot Mix Asphalt Pavement (HMA) for use as Light Capital Paving. Mixtures shall be placed in accordance with the contract documents or established by the Resident. The Department will accept this work under Quality Assurance provisions, in accordance with this Special Provision, provisions of AASHTO M 323, the most recent revision of Section 106 – Quality, Sections 401 and 703 as referenced to in this specification, and the MaineDOT Policies and Procedures for HMA Sampling and Testing. The Department will accept this work under the provisions outlined in this specification, except where otherwise referenced to.

MATERIALS

Bituminous Material The bituminous material shall meet the requirements of the most recent revision of the State of Maine Department of Transportation Standard Specifications. The asphalt shall be a PG 64-28, or PG 58-28 grading, unless otherwise approved by the Department.

For bidding purposes, the bidder shall use a PGAB content of 6.7% for all job mixes. The MaineDOT will determine the target PGAB content following submission of the Job Mix Formula and all related aggregates. Should the Department determine that the required PGAB content be adjusted from the 6.7 % target to maintain the air void range specified in Table 1, the following payment adjustments shall be made:

- a.) The Contractor shall have the contract price per ton increased an additional fifty cents (\$0.50/ton) per ton for each one-tenth of one percent (0.1%) increase in the target PGAB content.
- b.) The Contractor shall have the contract unit price per ton decreased an additional fifty cents (\$0.50/ton) per ton for each one-tenth of one percent (0.1%) decrease in the target PGAB content.

Aggregate Materials Materials shall meet the requirements specified in Section 700 – Materials, or as described in this Special Provision.

Asphalt Cement	702.01
Aggregates for HMA Pavement	703.07

Aggregate shall consist of clean, tough, durable fragments free from an excess of flat, elongated, soft or disintegrated particles. In addition, the absorption of the fine aggregate, as determined by AASHTO T84, shall not exceed 3.0 percent by weight. It shall be processed from approved aggregate sources consisting of gravel, quarried stone, or sand source in such a manner that a uniformly graded stockpile of sufficient quantity for at least one day's normal production will be available at all times. Production of the mix will come from prepared stockpiles.

Recycled Asphalt Materials Recycled Asphalt Pavement (RAP) or Recycled Asphalt Shingles (RAS) may be introduced into the mixture at percentages specified in Table 2. RAP shall meet the requirements outlined in the Composition of Mixtures section of this specification. If approved by the Department, the Contractor shall provide documentation stating the source, test results for

average residual asphalt content, and stockpile gradations showing RAP materials have been sized to meet the maximum aggregate size requirements of each mix designation. The Department may obtain samples for verification and approval prior to its use.

The use of RAS will require additional testing and material certification. The Contractor will be required to provide additional documentation for any RAS products used stating the source and test data showing that the material has been tested for asbestos content, and the percent found, if any.

A Bill of Lading and/or other documentation signed by a responsible party for the solid waste or recycling facility and asbestos sampling results indicating that no asbestos is present in the material, must accompany each pre-tested load. Additionally, the asbestos sampling documentation shall identify the name, address and license number of the person(s) collecting the samples and analytical laboratory that conducted the asbestos analysis. The Bill of Lading must identify the permitted facility and the date the load was shipped.

Pre-consumer loads shipped directly from the manufacturer will not require testing. Each load shall be accompanied by appropriate shipping document such as a trip ticket or receipt to demonstrate the point of generation of the load. The RAS processing facility shall maintain on file a Safety Data Sheet (or document indicating that a SDS is not required for that material) for each type of material received for each manufacturer, which shall indicate that no asbestos is present in the material. If asbestos containing material is detected in any of the asphalt roofing materials, then the facility will reject the entire load and inform the supplier of their responsibility to properly dispose of the rejected load in accordance with all local, state and/or federal regulations. In the event that RAP or RAS source or properties change, the Contractor shall notify the Department of the change and submit new documentation stating the new source or properties a minimum of 72 hours prior to the change to allow for obtaining new samples and approval.

Composition of Mixtures The Contractor shall submit for Department approval a Job Mix Formula (JMF) composed of aggregate, Performance Graded Asphalt Binder (PGAB), and mineral filler if required for each mixture to be supplied. The JMF will be recreated in the Department's Central Laboratory and tested at the submitted target asphalt aim, as well as at percentages 0.05 below and above the target. If an acceptable air void content meeting the requirements of Table 1 can be obtained with the supplied gradation blend, then the target PGAB will be as specified in the contract.

TABLE 1: JMF TARGET VALUES

Gyrations	PGAB (%)	Air Void Range (%)
65 N _{design}	6.7	0.02 - 0.08

If an acceptable air void content meeting the Table 1 cannot be obtained, then the Department may require a redesign of the mixture before assigning a target PGAB target. An adjustment to the contract unit price will be made in accordance to this specification if an adjustment to the target PGAB is made as outlined in this special provision.

The Contractor shall provide aggregate samples to the Department unless otherwise required. The Contractor shall also make available to the Department 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. 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 may use a RAP or RAS in mixtures used for Light Capital Paving provided that the material meets the requirements of Table 2.

TABLE 2: RECYCLED ASPHALT MATERIAL REQUIREMENTS

Material	Classification	Percent of Total Mixture
RAP	I, II, II	≤ 20 Max
RAP	Unclassified	≤ 15 Max
RAS*	Unclassified	≤ 3 Max

*The combined RAP and RAS percentage shall not exceed 20% of the total mixture.

The Contractor shall size, uniformly grade, and combine the Aggregate fractions in proportions to provide a mixture meeting the requirements of Table 3.

The HMA supplier shall submit a proposed Job Mix Formula (JMF) to the Central Laboratory in Bangor, which shall include the following information:

- A. Plant data (make, size, type, location)
- B. PG binder data (grade, refiner, supplier)
- C. Aggregate data – Aggregate sizes, (including RAP and RAS if utilized) original source & owner, current location, percentage of each aggregate used, gradation of each aggregate and the target gradation of the mixture.

TABLE 3: MIXTURE LIMITS

Square Mesh Sieve	Standard Range (% Passing)
½"	100
#4	75-90
#16	30-60
#50	10-30
#200	0.0-8.0
PGAB Content	6.7% +/- 0.4%

The Contractor shall submit stockpile samples of aggregate for Department approval to the Central Laboratory in Bangor, for each plant location. These samples shall establish a single percentage/target of aggregate passing each required sieve size within the limits shown in Table 3.

Warm Mix Technology The Contractor may place Hot Mix Asphalt Pavement produced with an accepted WMA technology meeting the requirements of Standard Specification, Section 401.031 Warm Mix Technology.

Hot Mix Asphalt Plant Requirements All Bituminous mixing plants shall conform to Special Provision 400 – Hot Mix Asphalt Pavement, section 401.07 – Hot Mix Asphalt Plant.

Mixing Operations The processing of the aggregate, handling of the asphalt binder, drying of aggregate, and mixing shall conform to acceptable practices of the paving Industry. The Contractor shall furnish and place a uniformly blended, homogenous mixture. Plant locations with a rated

capacity of 100 tons/hour or above shall supply a minimum of 100 tons/hour at the paver. In locations where the Hot Mix Asphalt plant's maximum production rate is less than 100 TPH, the maximum production rate for that location shall determine the minimum rate of supply to the paver.

The Contractor shall provide an adequate supply of approved release agent, as well as the necessary application equipment to safely apply sufficient material to prevent the mixture from adhering to the truck beds. Solvent based agents developed to strip asphalts from aggregates will not be allowed as release agents. Failure to provide an approved release agent will result in the suspension of paving until corrective actions have been taken and MaineDOT representatives are satisfied with the results. The Contractor shall provide silicon additive when requested by the Department.

Pre-Pave Conference The MaineDOT and Contractor shall hold a pre-pave conference prior to placing any Hot Mix Asphalt to discuss specifics related to the sections of highway being paved under the contract. Specifics discussed shall include, but are not limited to; work schedule for each section, Hot Mix Asphalt plants and JMFs to be used, and testing requirements. Production rates (tons per hour) and the number of trucks to be supplied for each location will be discussed and an agreement will be made regarding both issues.

Quality Control The Contractor will be responsible for Quality Control and will determine what is appropriate for Quality Control.

Should the Contractor utilize the option of using Warm Mix Asphalt technology to produce the Light Capital Paving mixture for this contract, the Contractor shall submit a plan to the Department at the pre-pave conference. The plan shall include a modified Quality Control Plan (QCP) outlining the production facility details, technology to be used, production and placement details, including the warm mix asphalt manufacturers' recommended additive percentages (if applicable).

Should the Contractor utilize the option of using RAS to produce the Light Capital Paving mixture for this contract, the Contractor shall submit a plan to the Department at the pre-pave conference. As a minimum, the plan shall include a Quality Control Plan (QCP) outlining material source and stockpile management, percentages to be used, blending of the RAS with any supplemental aggregate or RAP, and method of introduction into the plant.

Acceptance For Hot Mix Asphalt items designated as LCP (Light Capital Paving), Pay Item 461.13, a lot size shall be 1500 tons. The first project identification number in the contract paving area will be used for the purpose of tracking pavement Lots.

The Department will obtain samples of Hot Mix Asphalt Pavement in conformance with AASHTO T168 Sampling Bituminous Paving Mixtures, and the Maine DOT Policies and Procedures for HMA Sampling and Testing, which will then be transported by the contractor in approved transport containers to the designated acceptance laboratory within 48 hours. The Contractor shall notify the Department, in writing, with an alternative proposal for sample delivery if local conditions make adherence to the required timeframe impossible.

The Department will take two (2) full sample boxes randomly for each lot for acceptance or informational testing. The Contractor may obtain split samples of all Department samples for

Quality Control testing. The Contractor shall take immediate possession of acceptance samples once released by MaineDOT and deliver said samples to the designated acceptance laboratory.

The mixtures shall be tested for percent PGAB and gradation. Disputes will be allowed as provided for in Special Provision 401 – Hot Mix Asphalt Pavements; TABLE 10: DISPUTE RESOLUTION VARIANCE LIMITS for percent PGAB and the percent material passing the #200 sieve,

Each test result will represent the Lot, which will be evaluated for price adjustments based upon Table 4 below.

TABLE 4: PRICE ADJUSTMENTS

#200 Sieve	0% - 8.0%	Contract Unit Price
	8.1% - 8.5%	-1% Pay Adjustment
	8.6% - 9.0%	-2% Pay Adjustment
	> 9.0%	-3% Pay Adjustment
JMF % PGAB^{1,2}	Target +/- 0.4%	Contract Unit Price
	0.5% below JMF	-3% Pay Adjustment

1. There will be an additional 1% Deduct for every 0.1% PGAB below the 0.5% listed above.
2. There will be no deducts for PGAB content above the JMF.

In addition to the deductions for PGAB above, if the average of all test results (based on more than one test result, calculated to the nearest hundredth) for the approved JMF is 0.3 percent or lower than the target for the JMF an additional 2% deduct shall be applied to the entire tonnage produced under the approved JMF.

The Contractor shall cease paving operations whenever two consecutive Acceptance tests for the approved JMF fall outside the upper or lower limits for Percent PGAB or individual gradations on the ½", #4, #16, #50 and #200 sieves. Paving operations shall not resume until the Contractor and the Department determines that material meeting the Contract requirements will be produced.

Nothing in this section prevents MaineDOT personnel or their representatives from obtaining additional samples of products to verify the acceptability of the product.

CONSTRUCTION REQUIREMENTS

Seasonal and Weather Limitations The Contractor may place Hot Mix Asphalt Pavement for use as Light Capital Paving between the dates of May 1st and the Saturday following October 1st. Weather conditions shall be satisfactory for the safe set up and operation of traffic control for work zones, and safe operation of equipment. Paving shall be allowed when the atmospheric air temperature is above 45° F and pavement surface temperature is above 40° F.

Temperature Requirements After the JMF is established, the temperatures of the mixture shall conform to the following tolerances:

TABLE 5: ALLOWABLE TEMPERATURE RANGES

Location of Sampling	Temperature Range (°F)
In the truck at the mixing plant	275-325
At the Paver	

Tack Coat - A tack coat of RS-1 or RS-1h emulsified asphalt shall be applied to any existing pavement or recycled layer at a rate of 0.025 gal/yd² and at a rate of 0.05 gal/yd² on milled pavement prior to placing a new course. A tack coat of emulsified asphalt shall be applied between shim layers and subsequent layers at a rate not to exceed 0.025 gal/yd². HFMS-1 emulsified asphalts may be used with approval of the Region LCP Manager.

Traffic Control The MaineDOT will provide all necessary traffic control devices, flaggers and sweeping operations; unless otherwise provided for in the contract documents or added by contract modification.

Placing Operations The Contractor shall be responsible for the actual placing and rolling operations. Placing operations shall conform to acceptable paving practices. Mixtures produced under this contract shall be placed on the roadway with a highway class paver, equipped with a power adjustable main screed. Pavers shall meet the following minimum requirements.

- a. A track or rubber tire mounted highway class paver with a minimum tractor weight of 28,000 pounds, and a minimum main screed width of 8 feet.
- b. All paver screeds shall be outfitted with auger and tunnel extensions as recommended by the manufacturer, and have power extendible, activated, and heated screed extensions designed by the manufacturer for highway paving. Screeds shall be configured to place mixtures to the required width, crown, and breakpoints as directed by the Department.
- c. The paver must have a material receiving hopper size capable of accepting haul trucks, and be of sufficient size and weight to maintain the required rate of placement, line of travel, depth, and cross section while engaged with a loaded tri-axle or trailer haul unit.

If it is determined by the Department that the 8 foot paver supplied is not adequate in meeting the material receiving hopper size, not of sufficient size and weight to maintain the required rate of placement, line of travel, depth and cross section, then a replacement paver meeting the requirements of the contract shall be supplied before work progresses.

Longitudinal joints shall be generally straight to the line of travel, and constructed in a manner that best ensure joint integrity. Longitudinal joints shall not exceed 3/8 inch when matching adjacent lanes. Methods or activities that prove detrimental to the construction of straight, sound longitudinal joints will be discontinued.

Immediately after the material is spread it shall be rolled and compacted by two or more 7 - 10 ton steel 2-axle wheel (one being vibratory) rollers.

During placing operations, the paver shall be operated at a rate of speed not to exceed the mixture delivery rate. The paver speed shall be adjusted in relation to the amount of material actually being delivered to the paver, based on project conditions, plant production, and ability to finish the Hot Mix Asphalt mixture without pushing, shoving or cracking the mixtures.

Increasing placement rates may require additional rollers as determined by the Department or authorized representative. If mixture temperatures during interruptions in mix delivery are

determined to be outside the specification temperature range outlined in this contract, the Contractor may be directed to halt placement operations. The defective materials shall be immediately removed and replaced with material that meets contract specifications at no cost to the Department.

Trucking and placing operations shall be scheduled to provide continuous placement of the mixture regardless of haul distance. The Contractor shall provide sufficient personnel at the paver to assure placement of the pavement in an orderly, safe, and efficient manner so as to assure a quality mat and proper overall yield.

The Contractor shall spot shim in locations as directed by the Department.

If the exposed centerline joint is $\frac{3}{4}$ " or less, the Contractor shall close exposed longitudinal joints before suspending for Memorial Day, 4th of July, Labor Day, and absences greater than 3 days. Exposed centerline joints greater than $\frac{3}{4}$ " will be matched up within $\frac{1}{2}$ mile the next day and prior to weekends, holidays, and absences.

Dust Control The Contractor is responsible for dust control on the access roads for the bituminous plant as described in Section 637 of the Standard Specifications. This work shall be incidental to the contract.

Method of Measurement Light Capital Paving will be measured by the ton, at the contract price, according to delivery slips. Material not placed and compacted satisfactorily due to Contractor's equipment failure, daylight limitations, or weather will not be measured for payment. The delivery slips shall conform to the requirements of the most current edition of the Standard Specifications in use at the time of contract bid. Cover slips will be required to be delivered on the next working day after each paving day. Cover slips shall have the Item number, date and quantity listed.

Basis of Payment Light Capital Paving will be paid for at the contract unit price per ton, adjusted by any applicable material escalator or disincentives based on Acceptance test results. Such payment shall be full compensation for the following: obtaining, furnishing and processing all aggregate; supplying the specified PGAB bituminous material; processing, heating, mixing, weighing, placing, and compaction of the HMA mixtures; supplying and applying RS-1 emulsified asphalt to the existing pavement prior to placing any HMA; furnishing all labor, equipment, tools and all incidentals necessary to complete the work; and performing quality control testing. The maximum composite pay factor for mixes evaluated under this special provision shall be 1.00.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
461.13	Light Capital Paving	Ton

SPECIAL PROVISION SECTION 461**9.5mm Hot Mix Asphalt Mix Design**

Description This work shall consist of furnishing all labor, materials and equipment, for the manufacturing of the 9.5mm Hot Mix Asphalt (HMA) in accordance with these specifications.

The Hot Mix Asphalt Design shall meet all of the Materials requirements of Section 401, with the following additions and changes.

This Specification is to be considered supplemental to the Special Provisions as listed in Table 1 below. All requirements of those special provisions shall apply unless modified by the additions or changes described within this Special Provision.

TABLE 1: APPLICABLE SPECIAL PROVISIONS

Special Provisions	Item Numbers
461 Light Capital Paving	461.13 – Light Capital Paving
461 Light Capital Paving Preservation	461.13 – Light Capital Paving
461 Cyclical Pavement Resurfacing	461.210 – 9.5mm HMA - Cyclical Pavement Resurfacing

MATERIALS

Bituminous Material The asphalt used in the mixture shall meet the requirements of the most recent revision of the State of Maine Department of Transportation Standard Specifications Section 702.01-Asphalt Cement. The asphalt shall meet a PGAB 64-28 grading unless otherwise specified in the contract documents.

Composition of Mixtures The combined aggregate gradation required for the wearing course item shall be classified as a 9.5 mm Thin Lift Mixture (TLM) mixture, using the Aggregate Gradation Control Points as defined in 703.09.

Warm Mix Technology The Contractor may place Hot Mix Asphalt Pavement produced with an accepted WMA technology meeting the requirements of Standard Specification, Section 401.031 Warm Mix Technology.

Quality Control Quality Control shall be performed as described in the related special provision outlined in Table 1.

Should the Contractor utilize the option of using Warm Mix Asphalt technology to produce the Light Capital Paving Preservation mixture for this contract, the Contractor shall submit a plan to the Department at the pre-pave conference. The plan shall include a modified Quality Control Plan (QCP) outlining the production facility details, technology to be used, production and placement details, including the warm mix asphalt manufacturers' recommended additive percentages (if applicable).

Acceptance The lot size shall be 1500 tons. The first project identification number in the contract paving area will be used for the purpose of tracking HMA Lots. Nothing in this section prevents MaineDOT personnel or their representatives from obtaining additional samples of products to verify the acceptability of the product.

The Department will sample once per subplot per pay item on a statistically random basis, test, and evaluate in accordance with the Acceptance Properties in Table 2. The Department will obtain samples of Hot Mix Asphalt Pavement in conformance with AASHTO R 97, Sampling Asphalt Mixtures, and the MaineDOT Policies and Procedures for HMA Sampling and Testing. The Contractor shall transport the samples in containers provided by the Department to the designated MaineDOT Laboratory within

48 hours except when otherwise noted in the project specific QCP or as directed by the Resident. Failure to deliver an acceptance sample to the designated acceptance laboratory will be considered the second incident under 106.4.6–QCP Non-Compliance. Target values shall be as specified in the JMF. The Department will withhold reporting of the test results for the Acceptance sample until 7:00 AM, on the second working day of receipt of the sample, or after receipt of the Contractors results of the Acceptance sample split.

TABLE 2: ACCEPTANCE PROPERTIES

Properties	Point of Sampling		Test Method
Gradation	Paver Hopper	Paver Hopper or Truck	AASHTO T 30
PGAB Content	Paver Hopper	Paver Hopper or Truck	AASHTO T 308

The Department will take two (2) full sample boxes randomly for each lot for acceptance or informational testing. The Contractor may obtain split samples of all Department samples for Quality Control testing. The Contractor shall take immediate possession of acceptance samples once released by MaineDOT and deliver said samples to the designated acceptance laboratory.

The mixtures shall be tested for percent PGAB and gradation. Disputes will be allowed as provided for in Special Provision 401 – Hot Mix Asphalt Pavements; TABLE 10: DISPUTE RESOLUTION VARIANCE LIMITS for percent PGAB and the percent material passing the #200 sieve,

The Contractor shall cease paving operations whenever two consecutive Acceptance tests for the approved JMF fall outside the upper or lower limits for Percent PGAB or individual gradations on the ½", #4, #16, #50 and #200 sieves specified in Table 3. Paving operations shall not resume until the Contractor and the Department determines that material meeting the Contract requirements will be produced.

TABLE 3: MIXTURE LIMITS

Square Mesh Sieve	Standard Range (% Passing)
½"	100%
#4 (4.75 mm)	Target +/- 7%
#16 (1.18 mm)	Target +/- 5%
#50 (0.30 mm)	Target +/- 3%
#200 (0.075 mm)	0.0% - 8.0%
PGAB Content	Target +/- 0.4%

Each test result will represent the Lot, which will be evaluated for price adjustments based upon Table 4 below.

TABLE 4: PRICE ADJUSTMENTS

#200 Sieve	0% - 8.0%	Contract Unit Price
	8.1% - 8.5%	-1% Pay Adjustment
	8.6% - 9.0%	-2% Pay Adjustment
	> 9.0%	-3% Pay Adjustment
JMF % PGAB ^{1,2}	Target +/- 0.4%	Contract Unit Price
	0.5% below JMF	-3% Pay Adjustment

1. There will be an additional 1% Deduct for every 0.1% PGAB below the 0.5% listed above.
2. There will be no deducts for PGAB content above the JMF.

In addition to the deductions for PGAB above, if the average of all test results (based on more than one test result, calculated to the nearest hundredth) for the approved JMF is 0.3 percent or lower than the target for the JMF an additional 2% deduct shall be applied to the entire tonnage produced under the approved JMF.

Method of Measurement & Basis of Payment: This work will be measured by the ton and paid as specified by the special provisions outlined in Table 1.

SPECIAL PROVISION
SECTION 609 – CURB
STRUCTURAL CONCRETE
(Slipform Concrete Curb)

609.01-Description This work shall consist of furnishing and placing Slipform Concrete Curb in close conformity with the plans, or as authorized by the Resident.

609.02 Materials - Except as provided below, the materials used shall meet the requirements specified in Section 700 – Materials:

Portland Cement and Portland Pozzolan Cement	701.01
Water	701.02
Fine Aggregate for Concrete	703.01
Coarse Aggregate for Concrete	703.02
Air Entraining Admixtures	703.03

A mix design for the Portland Cement Concrete shall be submitted to the Resident meeting the requirements below:

- Class A with the exception that permeability requirements shall be waived.
- Entrained air content of Slipform curbing shall be 4.0% to 7.0%.
- Concrete temperature prior to discharge shall not exceed 90 F.
- Proposed mix designs may contain polypropylene fibers.

Partially discharged loads may be retempered with water provided the maximum water to cement ratio is not exceeded.

609.03-General

a. Preparation of Base Before placing the curb, the foundation course shall be thoroughly cleaned of all foreign and objectionable material. The Contractor shall not place Slipform Concrete Curb on a wet or frozen base. Base pavement for placing epoxy resin binder and slipform curbing may be in an SSD condition but no standing water shall be allowed. String or chalk lines shall be positioned on the prepared base to provide guidelines. For HMA or PCC base the foundation shall be uniformly painted with an epoxy resin adhesive from the Departments QPL. The Contractor shall submit the adhesive that they propose to utilize with the concrete mix design. The adhesive must be approved prior to placement and used in accordance with manufacturers recommendations.

b. Placing Concrete shall be placed with an approved Slipform machine that will produce a finished product according to the design specified in the plans. For cold weather slip forming, the outside temperature must be at least 36°F (2.2°C) and rising. The curb shall be placed on a firm, uniform bearing surface, shall conform to the section profile specified in the plans, and shall match the appropriate grade. Expansion joints the curb meets rigid structures such as but not limited to building foundations, catch basin headers or fire hydrants. Contraction joints will be placed at 10 foot (3 m) intervals using sawing methods, which shall cut 1-3" into the concrete. Contraction joints shall be cut between 1 and 7 days after placement. Joints shall be constructed perpendicular to the subgrade and match other joints in roadways, sidewalks, or other structures when applicable.

c. Curing and Sealing Proper curing shall be insured through the use of either a combination curing/sealing compound spray that meets ASTM 1315 Type 1-Class A, or a curing compound spray that meets ASTM 309 type 1-D – Class A. Curing may also be accomplished by the methods specified in Section 502.15 of the Specifications.

If a combination curing/sealing compound spray is not used, a separate sealing compound from the MaineDOT Qualified Products List for a Type 2 sealer shall be applied after the concrete has cured.

d. Protection Slipform curb must be adequately protected after placement. The concrete shall be allowed to cure for at least 72 hours. During cold weather conditions, when temperatures drop below the required temperature of 36°F (2.2°C) after placement, curbing shall be protected by concrete blankets or a combination of plastic sheeting and straw. After any placement of Slipform curb, regardless of weather conditions, the placed curb shall be adequately protected by traffic control devices as necessary.

e. Marking When required, the curb shall be painted and coated with glass beads in accordance with Section 627 - Pavement Marking. Curb designated to be painted shall not be sealed unless a combination curing/sealing compound is used.

f. Acceptance Curb shall be accepted or rejected based on finish, alignment, entrained air content, and compressive strength. Acceptance testing for air content and compressive strength will be under 502 Method C. All damaged curb shall be removed and replaced at the Contractor's expense.

609.04-Method of Measurement Concrete Slipform curb will be measured by the linear foot along the front face of the curb at the elevation of the finished pavement, complete in place and accepted.

609.05 Basis of Payment The accepted quantities of curb will be paid for at the contract unit price per linear foot as specified.

There will be no separate payment for concrete, sealing, incidental materials, or labor needed to install the curb, but these will be considered included in the work of the related curb.

Removal of existing curb and necessary excavation for installing curb will not be paid for directly, but shall be considered to be included in the curb pay item. Base and Subbase material will be paid for under Section 304 - Aggregate Base and Subbase Course. Backing up machine laid curb is incidental to the curb items. Loam, as directed, will be paid under 615 – Loam.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
609.161 Concrete slipform curb - Vertical	Linear Foot
609.21 Concrete Slipform Curb	Linear Foot
609.219 Concrete slipform terminal end	Linear Foot

SPECIAL PROVISION
SECTION 631 EQUIPMENT RENTAL
(PAVING CREW)

631.01 Description This work shall consist of placing processed recycled asphalt pavement (PMRAP) produced by the MaineDOT pugmill in one or more courses in areas designated in the contract. The Department will notify the Contractor two weeks prior to the planned placement of PMRAP. All PMRAP shall be placed on an approved base in accordance with these specifications and in reasonably close conformity with the lines, grades, and thicknesses established in the contract, or as directed by the Department.

631.031 Loading and Hauling Equipment Trucks will be loaded using Department supplied equipment.

631.032 Bituminous Pavers Pavers shall be equipped with a 10 foot heated and activated main screed, and shall be equipped with power extendible, activated extensions and automatic grade and slope controls. Pavers shall conform to the 401 Specification; subsection 401.09 - Pavers.

631.033 Rollers One 10 ton minimum weight dual drum steel roller equipped with vibratory or oscillatory compaction will be required. Two pneumatic-tired rollers shall be required, one ballasted to 16 ton minimum, and the second pneumatic-tired roller ballasted to 8-10 ton. The roller sequence and pattern will be as determined by a density control strip at the beginning of the first day of full lane width PMRAP placement. All rollers shall conform to the 401 Specification; subsection 401.10 – Rollers, unless otherwise authorized by the Department.

631.034 Crew At a minimum, the crew shall consist of a paver operator, three roller operators, two screed/wheel people, a laborer, and a foreperson.

631.042 Spreading and Finishing The mixture shall be spread and finished in accordance with Section 401.15, or as otherwise established by the contract documents. Thicknesses may vary. Localized spot shims or partial width shim layers may be required. With the exception of localized spot or partial width shim layers, the minimum **un-compacted layer thickness will be 2 inches**. Areas requiring the placement of PMRAP in excess of **6 inches un-compacted depth** shall be paved in multiple layers. Each layer will not exceed 6 un-compacted inches. Extended cure times may be needed for multiple lift areas. HMA will not be placed until a minimum curing period of 5 days have elapsed. When weather conditions are unfavorable, the curing period may be extended by the Department.

631.043 Compaction Compaction of the mixture shall be in accordance with Section 401.16 and the PMRAP Special Provision. Rolling effort, timing, or sequence of rollers may be changed as directed by the Department to avoid excessive pushing, shoving, cracking, or other damage to the layer.

631.044 Joints Joints shall be constructed in accordance with Section 401.17.

631.07 Method of Measurement Placement of PMRAP shall be paid by the hour to the nearest ¼ hour. Up to 8 hours per day will be paid under 631.161. Hours past the 8 hour period will be paid under 631.162.

631.08 Basis of Payment The accepted quantity of placement of PMRAP will be paid for at the contract unit price per hour complete in-place. The unit price will be full compensation for furnishing all equipment and labor for placing, compacting, and for all other incidentals necessary to complete the work.

<u>Pay Item</u>	<u>Pay Unit</u>
631.161 Paving Crew	Hour
631.162 Paving Crew (Overtime)	Hour

SPECIAL PROVISION
SECTION 631
(Contractor Trucking)

Description The Contractor shall deliver Hot Mix Asphalt Pavement (HMA) for use as Light Capital Paving.

CONSTRUCTION REQUIREMENTS

Hauling The Contractor will haul all mixtures, unless otherwise outlined in the contract.

Method of Measurement Contractor Trucking will be measured by the ton, at the contract price, according to delivery slips for item #461.13. Material not placed and compacted satisfactorily due to Contractor's equipment failure, daylight limitations, or weather will not be measured for payment.

Basis of Payment Contractor Trucking will be paid for at the contract unit price per ton. Such payment shall be full compensation for hauling the HMA mixtures from the plant to the paver.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
631.175	Contractor Trucking	Ton

SPECIAL PROVISION
SECTION 631
EQUIPMENT RENTAL
Trucking

The following are added to Subsection 631.01, 631.02, 631.07 and 631.08.

631.01 Description

The Contractor is to provide any combination of trucks listed in Section 631.02 below. The capacity will vary between a minimum of 145 tons per round and 290 tons per round on the road either to or from the Departments pugmill and the Contractors paving crew.

631.02 General

Equipment

Requirements

Truck – Wheeler

Capable of legally* hauling 14 or more tons

Truck – Tri-axle

Capable of legally* hauling 20 or more tons

Truck – Live Bottom

Capable of legally* hauling 26 or more tons

*Legal load for non-Interstate

Trucks for hauling Department produced pugmill material shall have tight, clean, and smooth metal dump bodies, which have been thinly coated with a small amount of approved release agent to prevent the mixture from adhering to the bodies. All truck dump bodies shall have a cover of canvas or other material which completely covers the mixture.

The cover shall be securely fastened on the truck, unless unloading. All truck bodies shall have an opening on both sides, which will accommodate a thermometer stem. The opening shall be located near the midpoint of the body, at least 12 inches above the bed.

The Department and the Contractor will identify a trucking contact at the pre-construction meeting. By 5:00 PM, these contacts will discuss the truck start time and amount of trucking tonnage required for the following day.

631.07 Method of Measurement

Payment will be based on the calculated tonnage loaded at the pugmill and delivered and placed on the street. The pugmill supervisor will provide a cover slip by noon the following working day.

631.08 Basis of Payment

Payment will be made under:

Pay Item

631.179 Pugmill Trucking

Pay Unit

Ton

SPECIAL PROVISION
SECTION 652
MAINTENANCE OF TRAFFIC

Approaches. Approach signing shall include the following signs at a minimum. Field conditions may warrant the use of additional signs as determined by the Resident.

Road Work Next X* Miles
Road Work 500 Feet (Ahead)
End Road Work

Work Areas. At each work site, signs and channelizing devices shall be used as directed by the Resident.

Signs include:

Road Work xxxx¹.
One Lane Road Ahead
Flagger Sign

Other typical signs include:

Be Prepared to Stop
Low Shoulder
Bump
Pavement Ends

The above lists of Approach signs and Work Area signs are representative of the contract requirements. Other sign legends may be required.

Unless otherwise defined in Special Provision 105/107 or submitted and approved in the Traffic Control Plan, the following shall apply:

- The Contractor shall conduct their operations in such a manner that the roadway will not be restricted to one lane for more than 2,500 feet at each work area and no more than 4,000 feet for paving, milling, and crack seal/repair work areas.
- Where more than one work area restricts traffic to one lane operation, these work areas shall be separated by at least 1 mile of two-way operation.

Temporary Centerline A temporary centerline shall be placed each day on all new pavement to be used by traffic. The temporary centerline, when specified of reflectorized traffic paint, shall conform to the standard marking patterns used for permanent markings. Failure to apply a temporary centerline daily will result in a Traffic Control Violation and suspension of paving operations until temporary markers are applied to all previously placed pavement.

¹ "Road Work Ahead" to be used in short duration operations and "Road Work xx feet" to be used in stationary operations as directed by the Resident.

2020 STANDARD DETAIL UPDATES

Standard Details and Standard Detail updates are available at:
<http://maine.gov/mdot/contractors/publications/standarddetail/>

<u>Detail #</u>	<u>Description</u>	<u>Revision Date</u>
502(19)	Bridge Drains	3/17/2023
502(15)	Bridge Drains	3/17/2023
502(20)	Bridge Drains	3/17/2023
502(23)	Bridge Drains	3/17/2023
502(24)	Bridge Drains	3/17/2023
502(25)	Bridge Drains	3/17/2023
502(26)	Bridge Drains	3/17/2023
504(07)	Diaphragm & Crossframe Notes	3/17/2023
507(20)	Steel Approach Railing 3-Bar	2/11/2021
507(21)	Steel Approach Railing 3-Bar	2/11/2021
507(22)	Steel Approach Railing 3-Bar	2/11/2021
507(23)	Steel Approach Railing 3-Bar	2/11/2021
507(27)	Steel Approach Railing	2/11/2021
526(01)	Portable Concrete Barrier	1/14/2021
526(01A)	Portable Concrete Barrier	1/14/2021
526(01B)	Portable Concrete Barrier	1/14/2021
526(02)	Portable Concrete Barrier	1/14/2021
526(02A)	Portable Concrete Barrier	1/14/2021
526(03)	Portable Concrete Barrier	1/14/2021
526(04)	Portable Concrete Barrier	1/14/2021
526(04A)	Portable Concrete Barrier	1/14/2021
526(04B)	Portable Concrete Barrier	1/14/2021
526(05)	Permanent Concrete Barrier	3/17/2023
526(21)	Permanent Concrete Barrier	3/17/2023
526(22)	Concrete Transition Barrier	3/17/2023
526(38)	Concrete Transition Barrier	3/17/2023
526(39)	Texas Classic Rail	3/17/2023
526(55)	Texas Classic Rail	3/17/2023

603(10)	Concrete Pipe Ties	6/10/2021
605(01)	Underdrain	7/8/2022
605(01)	Underdrain Notes	7/8/2022
606(17)	Midway Splice Guardrail Transition	6/10/2022
606(23)	Standard Bridge Transition – Type “1”	2/11/2021
606(24)	Standard Bridge Transition – Type “1A”	2/11/2021
608(02)	Detectable Warnings	6/10/2021
609(09)	Precast Concrete Vertical Curb	2/11/2021
627(07)	Crosswalk	2/22/2022
627(08)	Crosswalk	2/22/2022
643(11)	ATCC Cabinet	12/14/2020
801(11)	Pedestrian Ramp Notes	11/20/2023
801(12)	Pedestrian Ramp Requirements	11/20/2023
801(13)	Ramp Length Table	11/20/2023
801(14)	Parallel Pedestrian Ramp	11/20/2023
801(15)	Perpendicular Pedestrian Ramp – Option 1	11/20/2023
801(16)	Parallel Pedestrian Ramp – Option 2A	11/20/2023
801(17)	Perpendicular Pedestrian Ramp – Option 2A	11/20/2023
801(18)	Parallel Pedestrian Ramp – Option 2B	11/20/2023
801(19)	Perpendicular Pedestrian Ramp – Option 2B	11/20/2023
801(20)	Parallel Pedestrian Ramp – Option 3	11/20/2023
801(21)	Perpendicular Pedestrian Ramp – Option 3	11/20/2023
801(22)	Side Street Pedestrian Ramp	11/20/2023
801(23)	Parallel Pedestrian Ramp – Esplanade	11/20/2023
801(24)	Perpendicular Pedestrian Ramp – Esplanade	11/20/2023
801(25)	Island Crossings	11/20/2023
801(26)	Blended Transition	11/20/2023
801(26)	Blended Transition	1/19/2024
801(27)	Pedestrian Ramp Adjacent to Driveway or Entrance	11/20/2023
802(05)	Roadway Culvert End Slope Treatment	1/03/2017

SUPPLEMENTAL SPECIFICATIONS
(Corrections, Additions, & Revisions to Standard Specifications – March 2020)

SECTION 101
CONTRACT INTERPRETATION

101.2 Definitions

Construction Easement revise this definition by removing it in its entirety and replace with;
“A right acquired by the Department for a specific use of private property outside of the established Right-of-Way. Examples include but are not limited to Drainage Easements, Construction and Maintenance Easements, and Slope Easements. Construction Easement areas, including Temporary Construction Limits and Temporary Road Limits, outside of the Right-of-Way remain private property. No use other than to access and perform the specified work activity is permitted without written permission of the owner.”

Construction Limit Line Remove this definition in its entirety.

Holidays Amend this paragraph by adding “**Juneteenth**” between ‘Memorial Day’ and ‘Independence Day’.

Plans Revise this paragraph by removing “**Standard Details, Supplemental Standard Details**” from the first sentence.

Project Limits Revise this definition by removing it in its entirety and replacing it with:
“Areas within the Right-of-Way, Construction Easements, or Temporary Construction Limits shown on the Plans or otherwise indicated in the Contract. If no Project Limits are indicated in the Contract, the Project Limits shall be determined by the Department. For a related Maine statute, see 23 MRSA § 653. “

Right-Of-Way Revise this definition by removing it in its entirety and replacing it with:
“The area of land, property, or interest therein, acquired for or devoted to the Project or other purposes. Portions of the Right-of-Way may be used for storage of materials and equipment and the location of engineering facilities, subject to written approval by the Department.”

Amend this Section by adding the following two definitions (that replace Construction Limit Line);

Temporary Construction Limits The area within which the Contractor may access and perform the Physical Work and outside of which Work may not be performed without written authorization by the property owner.

Temporary Road Limits The area within which the Contractor may construct and maintain a temporary detour for maintenance of traffic.

SECTION 102 BIDDING

102.11 Bid Responsiveness Revise the paragraph that states
“The Bid is not signed by a duly authorized representative of the Bidder.” So that it reads:

“The Bid is not signed by a duly authorized representative of the Bidder.

- **Properly submitted electronic bids meet this requirement.**
- **Paper bids must include at least one signed copy of the Contract Agreement Offer & Award form.”**

SECTION 103 AWARD AND CONTRACTING

103.3.1 Qualification Requirement for Award Revise this subsection so that it reads:

“103.3.1 Qualification Requirement for Award If the Notice to Contractors lists a Prequalification requirement, the Apparent Successful Bidder must successfully complete the Prequalification process as a condition of Award. The Apparent Successful Bidder who does not already hold an Annual Prequalification shall have 21 days to provide the Department with their Prequal documents or the Department may move on to the next low bidder.”

SECTION 104 GENERAL RIGHTS AND RESPONSIBILITIES

104.2.1 Furnishing of Right-of-Way Revise this subsection by removing it in its entirety and replace with the new subsection:

“104.2.1 Furnishing of Property Rights The Department will secure all necessary rights to real property within the Project Limits shown on the Right-of-Way Plans that are provided with the Bid Documents. For related provisions, see Sections 104.3.2 – Furnishing of Other Property Rights, Licenses and Permits and 105.4.5 - Maintenance of Existing Structures. For related definitions, see Construction Easements and Right-of-Way.”

104.3.2 Furnishing of Other Property Rights, Licenses and Permits Revise this subsection by replacing “104.2.1 Furnishing of Right-of-Way” with “**104.2.1 Furnishing of Property Rights**”.

SECTION 105 GENERAL SCOPE OF WORK

105.10.2 Requirements Applicable to All Contracts Under section A, number 2, in the first sentence of the first paragraph, revise this Section by replacing the word “handicap” in two places with the word “disability” so it now reads:

“2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, State that all qualified applicants will receive consideration for employment without regard to race, color, sexual orientation, religious creed, sex, national origin, ancestry, age, physical disability, or mental disability.”

SECTION 106 QUALITY

106.6 Acceptance Revise this Subsection by replacing the paragraph beginning with “Acceptance of Hot Mix Asphalt Pavement will be based” with:

“Acceptance of Hot Mix Asphalt Pavement will be based on Method A or C Statistical Acceptance, or Method B or D Acceptance as specified. The method of acceptance for each item is defined in Special Provision, Section 403, Hot Mix Asphalt Pavement. When items of Hot Mix Asphalt Pavement are not so designated, Method A will be utilized whenever there are more than 1000 tons per Hot Mix Asphalt Pavement item, and Method B will be utilized when there are less than or equal to 1000 tons per Hot Mix Asphalt Pavement item.”

Revise Subsection “B” by removing it and replacing it with:

“B. Items not designated for Statistical Acceptance will utilize Method B or D Acceptance testing to validate the quality of the material incorporated into the Project. For material paid under Item 403.209 – Method D, or designated to be visually accepted, the Contractor shall provide the Department with a Certification Letter that indicates that the material supplied complies with the Specifications. Test results representative of the certified material shall be attached to the letter.

The Department will randomly sample and test the certified Material for properties noted in Table 1 of Section 502 - Structural Concrete or Table 14 of Section –401.21 Acceptance Method B & D. Material will be subject to rejection as noted in Structural Concrete Section 502.195 - Quality Assurance Method C Concrete or Hot Mix Asphalt, Section 401.2022 Pay Adjustment – Method B & D.”

106.7.1 Standard Deviation Method Revise 106.7.1, subsection H by removing the following from the first paragraph:

“Method B: $PF = [70 + (Quality\ Level * 0.33)] * 0.01$ ”

106.9.1 Warranty by Contractor Revise the third paragraph of this section so that it reads:

“For a related provision regarding obligations regarding plantings, see section 621.36 – Maintenance Period. “

SECTION 107 TIME

107.3.1 General Amend this paragraph by adding “**Juneteenth**” between ‘Patriot’s Day’ and ‘the Friday after Thanksgiving’.

SECTION 108 PAYMENT

108.2.3 Mobilization Payments Replace Standard Specification 108.2.3 – Mobilization Payments with the following:

“108.2.3 Mobilization Payments “Mobilization” includes the mobilization and demobilization of all resources as many times as necessary during the Work.

Percent Mobilization Bid will be determined by taking the amount Bid for Mobilization and dividing by the Total Contract Amount less Mobilization. Mob/(Total Contract – Mob).

Payment will be made at the following intervals:

% Mobilization Bid	% Mobilization Paid at Contract Award	% Mobilization Paid after the Department determines 50% of the work is Complete	% Mobilization Paid at Final Acceptance
10% or less	50%	50%	
More than 10% to 15%	33%	33%	34%
More than 15% to 20%	25%	25%	50%
More than 20% to 30%	15%	15%	70%
Greater than 30%	10%	10%	80%

108.3 Retainage Revise the third paragraph of this section so that it reads:

“Upon Final Acceptance, and determination by the department that there are no claims either by or on the Contractor or Subcontractors; no over payments by the department; no LDs due; and no disincentives due, the Department will reduce Retent to 1% of the original Contract Award amount, or \$100,000, whichever is less, as it deems desirable and prudent.”

108.4.1 Price Adjustment for Hot Mix Asphalt Revise this section by removing it in its entirety and replacing it with the following:

“108.4.1 Price Adjustment for Hot Mix Asphalt: For each Contract, a price adjustment for performance graded binder will be made for the following pay items, when the total quantity of Hot Mix Asphalt included in these items is in excess of 500 tons, based on the estimated quantities of these items at the time of bid.

Item 403.102	Hot Mix Asphalt – Special Areas
Item 403.207	Hot Mix Asphalt - 19 mm
Item 403.2071	Hot Mix Asphalt - 19 mm (Polymer Modified)
Item 403.2072	Hot Mix Asphalt - 19 mm (Asphalt Rich Base)
Item 403.208	Hot Mix Asphalt - 12.5 mm
Item 403.2081	Hot Mix Asphalt - 12.5 mm (Polymer Modified)
Item 403.2084	Hot Mix Asphalt - 12.5 mm (Highly Modified HiMAP)
Item 403.209	Hot Mix Asphalt - 9.5 mm (sidewalks, drives, & incidentals)
Item 403.210	Hot Mix Asphalt - 9.5 mm
Item 403.2101	Hot Mix Asphalt - 9.5 mm (Polymer Modified)
Item 403.2104	Hot Mix Asphalt - 9.5 mm (Thin Lift Surface Treatment)
Item 403.21041	Hot Mix Asphalt - 9.5 mm (Polymer Modified Thin Lift Surface Treatment)
Item 403.211	Hot Mix Asphalt – Shim
Item 403.2111	Hot Mix Asphalt – Shim (Polymer Modified)
Item 403.212	Hot Mix Asphalt - 4.75 mm (Shim)
Item 403.213	Hot Mix Asphalt - 12.5 mm (base and intermediate course)
Item 403.2131	Hot Mix Asphalt - 12.5 mm (base and intermediate course Polymer Modified)
Item 403.2132	Hot Mix Asphalt - 12.5 mm (Asphalt Rich Base and intermediate course)
Item 403.301	Hot Mix Asphalt (Asphalt Rubber Gap-Graded)
Item 461.13	Light Capital Pavement
Item 461.210	9.5 mm HMA - Paver Placed Surface
Item 461.2101	Hot Mix Asphalt - 9.5 mm (Polymer Modified)
Item 461.216	Hot Mix Asphalt (Shim)
Item 462.30	Ultra-Thin Bonded Wearing Course
Item 462.301	Polymer Modified Ultra-Thin Bonded Wearing Course

Price adjustments will be based on the variance in costs for the performance graded binder component of hot mix asphalt. They will be determined as follows:

The quantity of hot mix asphalt for each pay item will be multiplied by the performance graded binder percentages given in the table below times the difference in price between the base price and the period price of asphalt cement. Adjustments will be made upward or downward, as prices increase or decrease.

Item 403.102–6.2%
Item 403.207–5.2%
Item 403.2071–5.2%
Item 403.2072–5.8%
Item 403.208–5.6%
Item 403.2081–5.6%
Item 403.2084 – 6.2%
Item 403.209–6.2%
Item 403.210–6.2%
Item 403.2101–6.2%
Item 403.2104–6.2%
Item 403.21041–6.2%
Item 403.211–6.2%
Item 403.2111–6.2%
Item 403.212–6.8%
Item 403.213–5.6%
Item 403.2131–5.6%
Item 403.2132–6.2%
Item 403.301–6.2%
Item 461.13–6.7%
Item 461.210 – 6.4%
Item 461.2101 – 6.4%
Item 461.216 – 6.7%
Item 462.30–0.0021 tons/SY
Item 462.301–0.0021 tons/SY”

SECTION 110 INDEMNIFICATION, BONDING, AND INSURANCE

110.3.9 Administrative & General Provisions Amend this subsection by adding “**Automobile Liability**” under letter A) Additional Insured to the list of exceptions.

SECTION 206 STRUCTURAL EXCAVATION

206.01 Description – *Structural Earth Excavation, Below Grade* delete the entire sentence and replace with “**shall consist of the removal of excavation required for unknown or unanticipated subsurface condition. See 206.04 – Method of Measurement for pay limits.**”

206.04 Method of Measurement – Drainage and Minor Structures Paragraph 1, sentence 2, delete the remainder of the sentence beginning with “....provided the maximum allowable...” And replace with: “**....in accordance with the following limits:**”

- **Vertical pay limits:**
 - o **Below a plane parallel with and 12 inches below the bottom of the drainage or minor structure or**
 - o **Below the excavation limits shown in the Bid Documents; whichever is greater.**
- **Horizontal pay limits – The maximum allowable horizontal dimensions shall not exceed those bounded by vertical surfaces 18 inches outside the base, or extreme limits of, the structure, and to the vertical neat lines of underdrain trenches, as shown in the Contract Documents.**

SECTION 401 HOT MIX ASPHALT PAVEMENT

401.19 Contractor Quality Control Amend this Section by adding the following to the end:
“**Failure to comply with the approved QCP will result in work suspension and pay reductions as outlined in Section 106.4.6. The Quality Control Plan Value shall be the total bid value for all items covered by the QCP as identified in Special Provision 403.**”

SECTION 501 FOUNDATION PILES

501.05 Method of Measurement
c. Piles in Place Revise the third paragraph by replacing the “10” with “20” so that it reads:

Unused pile cutoffs **20** feet or more in length, except those required to accommodate the Contractor’s construction method, as discussed herein, will remain the property of the Department and will be stored at a bridge maintenance yard nearest the project. Hauling and unloading of piles will be done by the Contractor or by the Department, depending upon availability of services.

SECTION 502 STRUCTURAL CONCRETE

502.09 Forms and Falsework Amend this subsection by adding the subsection title “**502.10 Placing Concrete**” after section “D” Removal of Forms and False work” and after the paragraph beginning with “2. Forms and False work, including blocking...”. So that a new subsection starts and reads:

“502.10 Placing Concrete

A. **General** Concrete shall not be placed until forms”

502.1701 Quality Control, Method A and B Revise this Section so that the first paragraph and the first sentence of the second paragraph read:

“502.17 Quality Control The Contractor shall control the quality of the concrete through testing, inspection, and practices which shall be described in the QCP, sufficient to assure a product meeting the Contract requirements. The QCP shall meet the requirements of Section 106, Quality, and this specification. No work under this item shall proceed until the QCP is submitted to and approved by the Department. Failure to comply with the approved QCP will result in work suspension and pay reductions as outlined in Section 106.4.6. The Quality Control Plan Value shall be the total bid value for all cast-in-place items covered by the QCP, using the P value listed in Special Provision 502. If no P value is listed, a value of \$350, or bid value per cubic yard, whichever is less, shall be used.

502.1701 Quality Control, Method A and B The QCP shall address all elements that affect the quality of the structural concrete including, but not limited to, the following: “

Section 502.1701, Quality Control, Revise Table 4 of this Subsection by removing it in its entirety and replacing it with:

TABLE 4
METHOD A & B MINIMUM QUALITY CONTROL TESTING REQUIREMENTS *

TEST	TEST METHOD	SAMPLING LOCATION	FREQUENCY
Gradation	AASHTO T-27 & T-11	Stockpile	One set per proposed grading before production. One set every 100 yd ³ (Min. 1 set per month)
Organic Impurities	AASHTO T-21	Stockpile	Once per fine aggregate per year **
% Absorption	AASHTO T-84 & T-85	Stockpile	Once per aggregate per year
Specific Gravity	AASHTO T-84 & T-85	Stockpile	Once per aggregate per year
Total Moisture in Aggregate	AASHTO T-255	Stockpile	One set per day's production
Free Water and Aggregate Wt.	N/A		One per day's production
% Entrained Air	AASHTO T-152	On Project	On first two loads and every third load thereafter

			provided consistent results are achieved
Compressive Strength	AASHTO T-22	On Project	One set per subplot
Compressive Strength	AASHTO T-22 @ 7days	On Project	One set per subplot

* Additional QC testing will be required any time a process change occurs during a placement, including changes in type or dosage of admixture. Additional testing shall include, but is not limited to, entrained air testing.

**** If the color produced is a laboratory designation Plate III, then the fine aggregate shall be tested once per month.**

502.18, Method of Measurement, Revise Subsection 'F' by removing the word 'transverse' so that it reads: **"Saw cut grooving of concrete wearing surfaces, complete and accepted, will be measured for payment as one lump sum."**

502.19, Basis of Payment, Revise the third paragraph by removing the word 'transverse' so that it reads: **"Saw cut grooving of concrete wearing surfaces will be paid for at the Contract Lump Sum Price, which shall be payment for furnishing all materials, labor, and equipment, including depth gauges and all incidentals, to satisfactorily complete the work."**
(Also see 535.24 and 535.25 for related changes)

SECTION 503 REINFORCING STEEL

Section 503.07 Splicing Revise this section by removing the table and following footnote and replacing them with:

Minimum Lap Splice Length (inches)									
Bar Type	Bar Size								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
Plain or Galvanized	16	20	24	29	38	47	59	72	85
Epoxy or Dual Coated	17	24	36	43	56	71	88	107	128
Stainless	19	24	30	36	47	59	73	89	107
Low-carbon Chromium	24	32	39	47	63	78	97	119	142

"The minimum lap splice lengths in the table above are based on the parameters below. When any of these parameters are altered, appropriate minimum lap splice lengths will be as shown on the Plans.

- Normal weight concrete
- Minimum 28-day concrete compressive strength from 4,000 psi to 10,000 psi
- Class B tension lap splice

- **Minimum center-to-center spacing between bars of 6 inches**
- **Minimum clear cover of 2 inches**
- **Nominal reinforcing steel yield strengths**
 - **Low-carbon Chromium = 100 ksi**
 - **Stainless = 75 ksi**
 - **All others = 60 ksi**
- **Reinforcement with yield strengths greater than 75 ksi shall have beam transverse reinforcement and column ties provided over the required lap splice length in accordance with the current edition of the AASHTO LRFD Bridge Design Specifications**

When lap splices are placed horizontally in an element where the concrete depth below the splice will be 12 inches, or more, the indicated lap splice lengths shall be multiplied by a factor of 1.3.”

SECTION 506 SHOP APPLIED PROTECTIVE COATING – STEEL

506.13 Surface Preparation Amend this section by adding this paragraph to the end:

“Steel shall meet the requirements of SSPC SP8 Pickling prior to being immersed in the zinc tanks. Verification of the surface preparation shall be included in the QC documentation.”

SECTION 523 BEARINGS

523.051 Protective Coating Revise this subsection by removing the paragraph beginning with “Anchor rods shall be galvanized...” and replacing with:

“Anchor rods shall be galvanized. When anchor rods are designated to secure bare unpainted steel or painted steel, a dielectric coating (epoxy or bituminous type coatings are acceptable) shall be applied to the anchor rod and/or adjacent steel to prevent contact between galvanized surfaces and painted or unpainted steel.”

523.22 Fabrication Amend this subsection by adding the following: **“Elastomeric Bearings shall be fabricated in accordance with AASHTO M251.”**

SECTION 526 CONCRETE BARRIER

Amend this section by deleting it in its entirety and replacing it with:

“526.01 Description This work shall consist of the furnishing, constructing, erecting, setting, resetting, and removal of concrete barrier and associated elements in accordance with these specifications, the Standard Details, and the lines and grades shown on the Plans or established by the Resident.

The types of concrete barrier are designated as follows:

Portable Concrete Barrier Type I Double faced removable barrier in accordance with the Standard Details.

Permanent Concrete Barrier Type II Double faced barrier as shown on the Plans.

Permanent Concrete Barrier Type IIIa Single faced barrier 32 inches high in accordance with the Standard Details or as shown on the Plans.

Permanent Concrete Barrier Type IIIb Single faced barrier 42 inches high in accordance with the Standard Details or as shown on the Plans.

Permanent Concrete Transition Barrier Barrier of various heights joining steel bridge rail to steel guardrail in accordance with the Standard Details or as shown on the Plans.

Permanent Texas Classic Rail Barrier Traffic rail or sidewalk rail, in accordance with the Standard Details or as shown on the Plans.

526.02 Materials

a. **Concrete** Concrete for barriers, both permanent and portable, shall have a design strength of 5,000 psi.

For cast-in-place barrier: The concrete shall be Class LP, in accordance with Standard Specification Section 502, Structural Concrete.

For precast barrier: The concrete shall meet the requirements of Standard Specification 712.061, Structural Precast Concrete Units, except that the stripping strength for precast barriers is 4,000 psi.

b. **Reinforcing Steel** Reinforcing steel shall meet the requirements of Section 503, Reinforcing Steel.

c. **Structural Steel** Plates and barrier connections shall meet the requirements specified in Standard Specification 504 - Structural Steel and shall be hot dip galvanized after fabrication in accordance with Standard Specification 506, Shop Applied Protective Coating – Steel

d. **Bolts** Bolts shall meet the requirements specified in Section 713.02, High Strength Bolts.

e. **Connecting Pins for Portable Concrete Barrier** Portable concrete barriers must be connected using a 1- inch diameter pin. The connecting pin must be smooth, not deformed, i.e., reinforcing bar may not be used, and shall meet the strength requirements of ASTM A449 steel. Materials with greater strength may be used with the approval of the Department.

f. Anchor Pins for Portable Concrete Barrier Anchoring to concrete or asphalt will be required when specified on the Plans. When required, portable concrete barriers must be anchored using a 1 ½ - inch diameter anchor pin. The anchor pin must be smooth, not deformed, i.e., reinforcing bar may not be used, and shall meet the strength requirements of ASTM A36 steel. Materials with greater strength may be used with the approval of the Department.

g. Device Crashworthiness MaineDOT is transitioning to MASH2016 criteria for Portable Concrete Barrier on the following schedule:

New Portable Concrete Barrier shall be crash tested and/or evaluated to MASH2016 criteria.

Current Portable Concrete Barrier in useful serviceable condition that is successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2029.

Other current Portable Concrete Barrier that is deemed acceptable by the Department may be utilized on projects off the National Highway System through December 31, 2024.

526.03 Construction Requirements

Cast-in-place barriers shall be fabricated in accordance with Standard Specification Section 502, Structural Concrete. Precast barriers shall be fabricated in accordance with Standard Specification 534, Precast Structural Concrete.

Concrete finish for permanent barrier shall be rubbed as defined in Standard Specification Section 502, Structural Concrete, 502.13 D2 or an approved equal.

Portable concrete barrier shall be generally free from fins and porous areas and shall present a neat and uniform appearance.

Permanent barrier shall have a protective coating applied in accordance with Standard Specification Section 515, Protective Coating for Concrete Surfaces.

Reflective delineators for concrete median barrier shall meet the requirements of Special Provision 645, Highway Signing.

Preformed Joint Filler shall meet the requirements specified in Subsection 705.01, Preformed Expansion Joint Filler.

Permissible dimensional tolerances for all concrete barriers shall be as follows:

a. Cross-sectional dimensions shall not vary from design dimensions by more than ¼ inch. The vertical centerline shall not be out of plumb by more than ¼ inch.

b. Longitudinal dimensions shall not vary from the design dimensions by more than ¼ inch per 10 feet of barrier section and shall not exceed ¾ inches per section.

c. Location of anchoring holes shall not vary by more than ½ inch from the dimensions shown in the concrete barrier details on the Plans.

d. Surface straightness shall not vary more than ¼ inch under a 10-foot straightedge.

e. The barrier shall have no significant cracking. Significant cracking is defined as fractures or cracks passing through the section, or any continuous crack extending for a length of 12 inches or more, regardless of position in the section.

526.04 Method of Measurement Permanent Concrete Barrier Type II, IIIa, IIIb, Texas Classic Rail, and Precast Median Barrier will be measured for payment by lump sum, complete in place.

Portable concrete barrier, both anchored and unanchored will be measured for payment by lump sum. Lump sum measurement will include verification of the installation and removal of all portable concrete at the completion of the Contractor's operations.

The Contractor shall replace sections of portable concrete barrier, including anchored barrier damaged by the traveling public when directed by the Resident. Replacement sections will be measured for payment in accordance with Standard Specification 109.7, Equitable Adjustments to Compensation and Time.

Transition barrier will be measured by each, complete in place.

526.05 Basis of Payment The accepted quantities of Concrete Barrier Type II, IIIa, IIIb, Texas Classic Rail, and Precast Median Barrier will be paid for at the Contract lump sum price for the type specified, complete in place.

The accepted quantities of Portable Concrete Barrier Type I, both anchored and unanchored will be paid for at the Contract lump sum price. Such payment shall be full compensation for furnishing all materials, assembling, moving, resetting, transporting, temporarily storing, removing barrier, furnishing new parts as necessary, and all incidentals necessary to complete the work.

Portable barrier shall become the property of the Contractor upon completion of the use of the barrier on the project and shall be removed from the project site by the Contractor.

Transition barrier will be paid for at the Contract price each, complete in place.

The accepted quantity of all types of concrete barrier, whether portable or permanent, will be paid for at the lump sum or per each price, as applicable, which payment shall be full compensation for all materials, including reinforcing steel, protective coating, reflective delineators, steel plates and hardware, equipment, labor and incidentals required, as necessary, to complete the work.

Payment will be made under:

	<u>Pay Item</u>	<u>Pay Unit</u>
526.301	Portable Concrete Barrier, Type I	Lump Sum
526.304	Portable Concrete Barrier, Anchored Type I	Lump Sum
526.312	Permanent Concrete Barrier Type II	Lump Sum
526.321	Permanent Concrete Barrier Type IIIa	Lump Sum
526.323	Texas Classic Rail	Lump Sum
526.331	Permanent Concrete Barrier Type IIIb	Lump Sum
526.34	Permanent Concrete Transition Barrier	Each
526.502	Precast Concrete Median Barrier	Lump Sum”

SECTION 527 ENERGY ABSORBING UNIT

527.02 Materials Amend this section by deleting it in its entirety and replacing it with:

“MaineDOT is transitioning to MASH2016 criteria for Work Zone Traffic Control Devices on the following schedule:

Portable Crash Cushions will be crash tested and/or evaluated to MASH2016 criteria by January 1, 2030. Current Category 3 devices in useful serviceable condition that are successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2029.

Work Zone Crash Cushions shall be selected from the Department’s Qualified Products List of Crash Cushions/Impact Attenuators or approved equal.”

SECTION 535 PRECAST, PRESTRESSED CONCRETE SUPERSTRUCTURE

535.22 Tolerances Amend this section by deleting it in its entirety and replacing it with:

“Product dimensional tolerances shall be in conformance with the latest edition of PCI MNL-135, Tolerance Manual for Precast and Prestressed Concrete Construction, as applicable to the particular product (e.g., slab, I-girder, box beam), the Plans, and this Specification. Use Box Beam fabrication tolerances for voided or solid slab beams and use Double Tee tolerances for NEXT beams. In case of dispute, the Fabrication Engineer shall determine the allowable tolerance.”

535.24 Installation of Slabs, Beams, and Girders Revise the 5th paragraph by replacing “6.0 and 9.0” to “5.0 and 8.0” so it reads: **“Ready mixed grout shall achieve a design compressive strength of 6,000 psi at 28 days, have an entrained air content of between 5.0 and 8.0 percent, be non-shrink, flowable, and contain a non-shrink additive listed on the Department QPL for expansive cements.”**

535.25, Installation of Precast/Prestressed Deck Panels Revise the 2nd paragraph by replacing “6.0 and 9.0” to “5.0 and 8.0” so it reads: **“Ready mixed grout shall achieve a design compressive**

strength of 6,000 psi at 28 days, have an entrained air content of between 5.0 and 8.0 percent, be non-shrink, flowable, and contain a non-shrink additive listed on the Department QPL for expansive cements.”

SECTION 606 GUARDRAIL

Amend this section by replacing it with the following:

606.01 Description This work shall consist of furnishing and installing guardrail components in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans or as established. Guardrail is designated as:

31” W-Beam Guardrail - Mid-Way Splice

Galvanized steel w-beam, 8” wood or composite offset blocks, galvanized steel posts

Thrie Beam

Galvanized steel thrie beam, 8” wood or composite offset blocks, galvanized steel posts

Median guardrail shall consist of two beams of the above types, mounted on single posts.

Bridge mounted guardrail shall consist of furnishing all labor, materials, and equipment necessary to install guardrail as shown on the plans. This work shall also include drilling for and installation of offset blocks if specified, and incidental hardware necessary for satisfactory completion of the work.

Remove and Reset and Remove, Modify, and Reset guardrail shall consist of removing the existing designated guardrail and resetting in a new location as shown on the plans or directed by the Resident. Remove, Modify, and Reset guardrail and Modify guardrail include the following guardrail modifications: Removing plate washers at all posts, except at anchorage assemblies as noted on the Standard Details, adding offset blocks, and other modifications as listed in the Construction Notes or General Notes. Modifications shall conform to the guardrail Standard Details.

Bridge Connection shall consist of the installation and attachment of beam guardrail to the existing bridge. This work shall consist of constructing a concrete end post or modifying an existing end post as required, furnishing, and installing a terminal connector, necessary hardware, and incidentals required to complete the work as shown on the plans. Bridge Transition shall consist of a bridge connection and furnishing and installing guardrail components as shown in the Standard Details.

606.02 Materials Materials shall meet the requirements specified in the following Sections of Division 700 - Materials:

Timber Preservative	708.05
Metal Beam Rail	710.04
Guardrail Posts	710.07
Guardrail Hardware	710.08

Guardrail components shall meet the applicable standards of "A Guide to Standardized Highway Barrier Hardware" prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Task Force 13 Report.

Posts for underdrain delineators shall be "U" channel steel, 8 ft long, 2 ½ lb/ft minimum and have 3/8-inch round holes, 1-inch center to center for a minimum distance of 2 ft from the top of the post.

Reflectorized Flexible Guardrail Markers shall be mounted on all guardrails. A marker shall be mounted onto guardrail posts at the flared guardrail terminal end point and tangent point, both at the leading and trailing ends of each run of guardrail. The marker's flexible posts shall be gray with either silver-white or yellow reflectors (to match the edge line striping) at the tangents, red at leading ends, and green at trailing ends. Whenever the guardrail terminal is not flared, markers will only be required at the terminal end point. These shall be red or green as appropriate. Markers shall be installed on the protected side of guardrail posts unless otherwise approved by the Resident. Reflectorized flexible guardrail markers shall be from the Department's Qualified Products List of Delineators. The marker shall be gray, flexible, durable, and of a non-discoloring material to which 3-inch by 9-inch reflectors shall be applied, and capable of recovering from repeated impacts and meeting MASH 16 requirements. Reflective material shall meet the requirements of Section 719.01 for ASTM D 4956 Type III reflective sheeting. The marker shall be secured to the guardrail post with two fasteners, as shown in the Standard Details.

Reflectorized beam guardrail reflectors shall be mounted on all "w" beam guardrail and shall be either the "butterfly" type or linear delineation system panels. "Butterfly" or linear delineation panels shall be installed at approximately 62.5 foot intervals on tangents (after every tenth post) and 31.25 feet on curves (after every fifth post), and shall be centered on the guardrail beam. On Divided highways, the left-hand delineators shall be yellow and the right-hand delineators shall be silver/ white. On two-way directional highways, the right-hand side will have silver / white reflectors and no reflectorized delineator used on the left. Delineators shall have reflective sheeting that meets or exceeds the requirements of Section 719.01.

"Butterfly" reflectors shall be fabricated from high-impact, ultraviolet & weather resistant thermoplastic. Aluminum, galvanized metal or other materials shall not be used. Reflective sheeting will be applied to only one side of the delineator facing the direction of traffic and shall be centered vertically on the guardrail beam as shown in the Standard Detail 606(7).

Linear delineation system panels shall be 1.5 inches wide by approximately 11 inches nominal length, with a minimum of 5 raised lateral ridges spaced at approximately 2.25 inches. The height of each ridge shall be 0.34 inches with a 45 degree profile and a 0.28 inches radius at the top. Sheeting shall be laminated to thin gauge aluminum with a pre-applied adhesive tape on the back. Panels shall not be installed over seams or bolt heads and shall be centered horizontally on the guardrail beam; linear delineation panels shall be attached to only one guardrail beam. The guardrail beam surface shall be cleaned and prepared according to the manufacturer's instructions. Air temperature and guardrail surface temperature must be a minimum of 50 degrees F (10 C) with rising temperature at the time of installation.

Exact locations of the either the “butterfly” type or the linear delineation panels shall be approved by the Resident prior to installation.

Single wood post shall be of cedar, white oak, or tamarack, well-seasoned, straight, and sound and have been cut from live trees. The outer and inner bark shall be removed, and all knots trimmed flush with the surface of the post. Posts shall be uniform taper and free of kinks and bends.

Single steel post shall conform to the requirements of Section 710.07 b.

Single steel pipe post shall be galvanized, seamless steel pipe conforming to the requirements of ASTM A120, Schedule No. 40, Standard Weight.

Acceptable multiple mailbox assemblies shall be listed on the Department’s Qualified Products List and shall be MASH 16 tested and approved.

Flared and Tangent w-beam guardrail terminals and guardrail offset blocks shall be from the Department’s Qualified Products List. Flared terminals shall be installed with a 4 ft offset as shown in the Manufacturer’s installation instructions.

Anchorage assemblies used to anchor trailing ends, radius guardrail, or other ends not exposed to traffic shall meet the applicable standards of "A Guide to Standardized Highway Barrier Hardware" prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Task Force 13 Report, Drawing SEW02a.

Existing materials damaged or lost during adjusting, removing and resetting, or removing, modifying, and resetting, shall be replaced by the Contractor without additional compensation. Existing guardrail posts and guardrail beams found to be unfit for reuse shall be replaced when directed by the Resident.

606.03 Posts Posts for guardrail shall be set plumb in holes or they may be driven if suitable driving equipment is used to prevent battering and distorting the post. When posts are driven through pavement, the damaged area around the post shall be repaired with approved bituminous patching. Damage to lighting and signal conduit and conductors shall be repaired by the Contractor.

When set in holes, posts shall be on a stable foundation and the space around the posts, backfilled in layers with suitable material, thoroughly tamped.

The reflectorized flexible guardrail markers shall be set plumb with the reflective surface facing the oncoming traffic. Markers shall be installed on the protected side of guardrail posts. Markers, which become bent or otherwise damaged, shall be removed and replaced with new markers.

Single wood posts shall be set plumb in holes and backfilled in layers with suitable material, thoroughly tamped. The Resident will designate the elevation and shape of the top. The posts, that are not pressure treated, shall be painted two coats of good quality oil base exterior house paint.

Single steel posts shall be set plumb in holes as specified for single wood posts or they may be driven if suitable driving equipment is used to prevent battering and distorting the post.

Additional bolt holes required in existing posts shall be drilled or punched, but the size of the holes shall not exceed the dimensions given in the Standard Details. Metal around the holes shall be thoroughly cleaned and painted with two coats of approved aluminum rust resistant paint. Holes shall not be burned.

606.04 Rails Brackets and fittings shall be placed and fastened as shown on the plans. Rail beams shall be erected and aligned to provide a smooth, continuous barrier. Beams shall be lapped with the exposed end away from approaching traffic.

End assemblies shall be installed as shown on the plans and shall be securely attached to the rail section and end post.

All bolts shall be of sufficient length to extend beyond the nuts but not more than ½ inch. Nuts shall be drawn tight.

Additional bolt holes required in existing beams shall be drilled or punched, but the size of the holes shall not exceed the dimensions given in the Standard Details. Metal around the holes shall be thoroughly cleaned and painted with two coats of approved aluminum rust resistant paint. Holes shall not be burned.

606.045 Offset Blocks The same offset block material is to be provided for the entire project unless otherwise specified.

606.05 Shoulder Widening At designated locations the existing shoulder of the roadway shall be widened as shown on the plans. All grading, paving, seeding, and other necessary work shall be in accordance with the Specifications for the type work being done.

606.06 Mail Box Post Single wood post shall be installed at the designated location for the support of the mailbox. The multiple mailbox assemblies shall be installed at the designated location in accordance with the Standard Details and as recommended by the Manufacturer. Attachment of the mailbox to the post will be the responsibility of the home or business owner.

606.07 Abraded Surfaces All galvanized surfaces of new guardrail and posts, which have been abraded so that the base metal is exposed, and the threaded portions of all fittings and fasteners and cut ends of bolts shall be cleaned and painted with two coats of approved rust resistant paint.

606.08 Method of Measurement Guardrail will be measured by the linear foot from center to center of end posts along the gradient of the rail except where end connections are made to masonry or steel structures, in which case measurement will be as shown on the plans. When connected to radius rail, measurement will be to the end of the last tangent beam.

Guardrail terminal, reflectorized flexible guardrail marker, terminal end, anchorage assembly, bridge transition, bridge connection, multiple mailbox post, and single post will be measured by each unit of the kind specified and installed.

Widened shoulder will be measured as a unit of grading within the limits shown on the plans.

Excavation in solid rock for placement of posts will be paid under force account unless otherwise indicated in the Bid Documents.

Reflectorized beam guardrail reflectors (“butterfly” type or linear delineation system panels) when identified by pay item, will be measured for payment by each.

606.09 Basis of Payment The accepted quantities of guardrail will be paid for at the contract unit price per linear foot for the type specified, complete in place. Reflectorized beam guardrail (“butterfly”-type) delineators will not be paid for directly but will be considered incidental to guardrail items. Reflectorized flexible guardrail marker, terminal end, anchorage assembly, bridge transition, bridge connection, multiple mailbox post, and single post will be paid for at the contract unit price each for the kind specified complete in place.

Guardrail terminals will be paid for at the contract price each, complete in place which price shall be full payment for furnishing and installing all components including the terminal section, posts, offset blocks, "w" beam, cable foundation posts, plates and for all incidentals necessary to complete the installation within the limits as shown on the Standard Details or the Manufacturer’s installation instructions. Pay limits for a flared terminal will be 37.5 feet. Pay limits for a tangent terminal will be 50 feet. Each guardrail terminal will be clearly marked with the Manufacturer’s name and model number to facilitate any future needed repair. Such payment shall also be full compensation for furnishing all material, excavating, backfilling holes, assembling, and all incidentals necessary to complete the work, except that for excavation for posts or anchorages in solid ledge rock, payment will be made under 109.7.5 – Force Account. Type III Retroreflective Adhesive Sheeting shall be applied to the approach buffer end sections and sized to substantially cover the end section. On all roadways, the ends shall be marked with alternating black and retroreflective yellow stripes. The stripes shall be 3 in wide and sloped down at an angle of 45 degrees toward the side on which traffic is to pass the end section. Guardrail terminals shall also include a set of installation drawings supplied to the Resident.

Anchorage to bridge end posts will be part of the bridge work. Connections thereto will be considered included in the unit bid price for guardrail.

Guardrail to be placed on a radius of curvature of 150 ft or less will be paid for under the designated radius pay item for the type guardrail being placed.

Widened shoulder will be paid for at the contract unit price each complete in place and will be full compensation for furnishing and placing, grading and compaction of aggregate subbase and any required fill material.

Adjust guardrail will be paid for at the contract unit price per linear foot and will be full compensation for adjusting to grade. Payment shall also include adjusting guardrail terminals where required.

Modify guardrail will be paid for at the contract unit price per linear foot and will be full compensation for furnishing and installing offset blocks, additional posts, and other specified modifications; removing, modifying, installing, and adjusting to grade existing posts and beams;

removing plate washers and backup plates, and all incidentals necessary to complete the work. Payment shall also include removing and resetting guardrail terminals where required.

Remove and Reset guardrail will be paid for at the contract unit price per linear foot and will be full compensation for removing, transporting, storing, reassembling all parts, necessary cutting, furnishing new parts when necessary, reinstalling at the new location, and all other incidentals necessary to complete the work. Payment shall also include removing and resetting guardrail terminals when required.

Remove, Modify, and Reset guardrail will be paid for at the contract unit price per foot and will be full compensation for the requirements listed in Modify guardrail and Remove and Reset guardrail.

Bridge Connections will be paid for at the contract unit price each. Payment shall include, attaching the connection to the endpost including furnishing and placing concrete and reinforcing steel necessary to construct new endposts if required, furnishing and installing the terminal connector, and all miscellaneous hardware, labor, equipment, and incidentals necessary to complete the work.

Bridge Transitions will be paid for at the contract unit price each. Payment shall include furnishing and installing the thrie beam or “w”-beam terminal connector, doubled beam section, and transition section, where called for, posts, hardware, precast concrete transition curb, and any other necessary materials and labor, including the bridge connection as stated in the previous paragraph.

No payment will be made for guardrail removed, but not reset and all costs for such removal shall be considered incidental to the various contract pay items.

Reflectorized beam guardrail reflectors (“butterfly” type and the linear delineation panels) will not be paid for directly but will be considered incidental to all new guardrail items. The Contractor shall furnish and install either the “butterfly” type or linear delineation panels, at its discretion, for new guardrail items.

Reflectorized beam guardrail reflectors (either “butterfly” type or linear delineation system panels) will be paid for under the applicable pay items for installation in conjunction with Adjust, Modify, Remove and Reset, Remove Modify and Reset guardrail items. The accepted quantity of “butterfly” type or linear delineation system panels will be paid for at the contract unit price each for all work and materials furnished to install, complete in place, including all incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
606.1301 31” W-Beam Guardrail - Mid-Way Splice – Single Faced	Linear Foot
606.1302 31” W-Beam Guardrail - Mid-Way Splice – Double Faced	Linear Foot
606.1303 31” W-Beam Guardrail - Mid-Way Splice, 15’ Radius and Less	Linear Foot
606.1304 31” W-Beam Guardrail - Mid-Way Splice, Over 15’ Radius	Linear Foot
606.1305 31” W-Beam Guardrail - Mid-Way Splice Flared Terminal	Each
606.1306 31” W-Beam Guardrail - Mid-Way Splice Tangent Terminal	Each

606.1307	Bridge Transition (Asymmetrical) – Type IA	Each
606.1721	Bridge Transition - Type I	Each
606.1722	Bridge Transition - Type II	Each
606.1731	Bridge Connection - Type I	Each
606.1732	Bridge Connection - Type II	Each
606.178	Guardrail Beam	Linear Foot
606.25	Terminal Connector	Each
606.257	Terminal Connector - Thrie Beam	Each
606.259	Anchorage Assembly	Each
606.265	Terminal End-Single Rail - Galvanized Steel	Each
606.266	Terminal End-Single Rail - Corrosion Resistant Steel	Each
606.275	Terminal End-Double Rail - Galvanized Steel	Each
606.276	Terminal End-Double Rail - Corrosion Resistant Steel	Each
606.352	Reflectorized Beam Guardrail Delineators (“Butterfly” type)	Each
606.3521	Linear Delineation System Panel	Each
606.353	Reflectorized Flexible Guardrail Marker	Each
606.354	Remove and Reset Reflectorized Flexible Guardrail Marker	Each
606.356	Underdrain Delineator Post	Each
606.358	Guardrail, Modify	Linear Foot
606.362	Guardrail, Adjust	Linear Foot
606.365	Guardrail, Remove, Modify, and Reset	Linear Foot
606.366	Guardrail, Remove and Reset	Linear Foot
606.367	Replace Unusable Existing Guardrail Posts	Each
606.3671	Replace Unusable Offset Blocks	Each
606.47	Single Wood Post	Each
606.48	Single Galvanized Steel Post	Each
606.50	Single Steel Pipe Post	Each
606.51	Multiple Mailbox Support	Each
606.568	Guardrail, Modify - Double Rail	Linear Foot
606.63	Thrie Beam Rail Beam	Linear Foot
606.64	Guardrail Thrie Beam - Double Rail	Linear Foot
606.65	Guardrail Thrie Beam - Single Rail	Linear Foot
606.66	Terminal End Thrie Beam	Each
606.70	Transition Section - Thrie Beam	Each
606.71	Guardrail Thrie Beam - 15 ft radius and less	Linear Foot
606.72	Guardrail Thrie Beam - over 15 ft radius	Linear Foot
606.73	Guardrail Thrie Beam - Single Rail Bridge Mounted	Linear Foot
606.74	Guardrail - Single Rail Bridge Mounted	Linear Foot
606.753	Widen Shoulder for Low Volume Guardrail End	Each
606.754	Widen Shoulder for Flared Guardrail Terminal	Each
606.78	Low Volume Guardrail End	Each
606.80	Buried-in-Slope Guardrail End	Each

SECTION 608 SIDEWALKS

Section 608.022 Detectable Warning Materials Standard Revise this section by removing the last sentence of this section beginning with “Concrete...” and replacing it with **“Concrete shall meet the requirements of Section 608.021, Sidewalk Materials, of this specification or may be a prepackaged concrete mix from the Department’s Qualified Products List (QPL).”**

SECTION 609 CURB

609.02 Materials Revise the paragraph beginning “The Contractor shall submit a concrete mix...” so that it reads:

“The Contractor shall submit a concrete mix design for the Portland Cement Concrete to the Resident, with a minimum designed compressive strength of 3000 psi concrete fill.”

609.03 Vertical Stone Curb, Terminal Section and Transition Sections and Portland Cement Concrete Curb, Terminal Sections and Transition Sections Revise this section by underlining the section number and title so that it reads in the spec book as:

“609.03 Vertical Stone Curb, Terminal Section and Transition Sections and Portland Cement Concrete Curb, Terminal Sections and Transition Sections”

Revise the last paragraph beginning with “The Contractor may elect...” so that it reads:

“The Contractor may elect to substitute concrete to backfill Stone Curbing or Stone Edging at their option. If the concrete backfill option is elected, the Concrete Fill shall meet the requirements of 609.02. The Contractor shall submit a concrete design for the Portland Cement Concrete, with a minimum designated compressive strength of 3000 PSI meeting the requirements of Class S or Class Fill Concrete. The Contractor may elect to choose a Prepackaged Concrete Mix from the Department’s Qualified Products list (QPL). Concrete backfill shall be completed in conformance with a Department supplied concrete backfill detail.”

SECTION 610 STONE FILL, RIPRAP, STONE BLANKET, AND STONE DITCH PROTECTION

610.02 Materials Amend this subsection by adding the following to the end of the material list:
“Stone Ditch Protection 703.29”

SECTION 618 SEEDING

618.08 Mulching Revise this Section so that the third sentence reads: “Mulch for Seeding Method Number 1 shall only be cellulous fiber mulch Section 619.04 (b) or straw mulch Section 619.04 (a).”

SECTION 619 MULCH

619.03 General Amend this Section by adding the following sentence to the end: “**Straw mulch shall be used in all wetland areas.**”

SECTION 626 FOUNDATIONS, CONDUIT, AND JUNCTION BOXES FOR HIGHWAY SIGNING, LIGHTING, AND SIGNALS

Section 626.021 Miscellaneous Materials Revise this section by removing the fourth paragraph beginning with “ All Concrete for concrete encasement...” and replace it with “**All concrete for concrete encasement of conduit shall be Class S or Class Fill concrete in accordance with the applicable requirements of Section 502 – Structural Concrete, or a Prepackaged Concrete Mix from the Department’s Qualified Products List (QPL).**”

Section 626.031 Conduit Revise the fifth paragraph beginning with “After the trench has been...” by removing the last sentence beginning with “Where concrete encasement...” and replacing it with “**Where concrete encasement is required around the conduit, the concrete shall meet Class S, Class Fill in accordance with the applicable requirements of Section 502 – Structural Concrete, or a Prepackaged Concrete Mix from the Department’s Qualified Products List (QPL).**”

626.034 Concrete Foundations Revise this Section by changing ‘626.037’ to ‘**626.036**’ in the Second Paragraph which begins with “Foundations shall consist of cast-in-place...”.

Revise the 10th paragraph beginning with “Before placing concrete, the required elbows...” by removing “...**in accordance with Standard Specification 633.**”

626.036 Precast Foundations Revise the last sentence of paragraph one so that it reads: “**Construction of precast foundations shall conform to the Standard Details and all requirements of 712.061.**”

SECTION 627 PAVEMENT MARKINGS

627.02 Materials Amend this section by adding the following to the existing Specification:

“When pavement marking paint must be applied on pavement with an air temperature between 35 °F and 50 °F, a low temperature waterborne paint may be used upon the Department’s approval as noted below.

The Contractor shall submit the following information for Department review and approval at least 10 calendar days prior to application:

The manufacturer and product name of the low temperature waterborne paint

The manufacturer’s technical product data sheets

The product’s SDS sheets

All required and recommended application specifications for the product

The manufacturer’s requirements for temperature, surface preparation, paint thickness and the bead application shall be followed. No additional payment will be made for the use of low temperature waterborne paint. “

627.06 Application Revise this subsection by replacing the paragraph beginning with “ On other final pavement markings...” with the following:

“On other final pavement markings and on curb, where the paint is applied by hand painting or spraying, application shall be one uniform covering coat at least 16 mils thick. Before the paint has dried, the glass beads shall be applied by a pressure system that will force the glass beads onto the undried paint as uniformly as possible.

Painted lines and markings shall be applied in accordance with the manufacturer’s published recommendations. These recommendations will be supplied to the Resident prior to installation.”

Revise this subsection by replacing the paragraph beginning with “ If the final reflectivity values are less...” with the following:

The final reflectivity will be acceptable if 90 percent or more of the painted pavement lines and markings meet the specified minimum value. If less than 90 percent of the painted pavement lines and markings meet the specified minimum final reflectivity values, the Contractor shall repaint those areas not meeting required reflectivity at no cost to the Department.

If, after repainting, analysis of the final reflectivity values results in the need for a second repainting, the Contractor will submit in writing a plan of action to meet the reflectivity

minimums prior to continuing any work. Once the plan has been reviewed and approved by the Department, the Contractor shall reapply at no cost to the Department.

SECTION 637
DUST CONTROL

Revise this section by removing it in its entirety.

SECTION 643
TRAFFIC SIGNALS

643.021 Materials Amend this subsection by adding the following at the end:

“MaineDOT is transitioning to MASH2016 criteria for Work Zone Traffic Control Devices on the following schedule:

Temporary Traffic Control Signals will be crash tested and/or evaluated to MASH2016 criteria by January 1, 2030. Current Category 4 devices in useful serviceable condition that are successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2029.”

643.023 Traffic Signal Structures Remove the third paragraph and replace it with the following:

“Traffic signal support structures shall be classified as Fatigue Category III if they are located on roads with a speed limit of 35 mph or less, Fatigue Category II if they are located on roads with a speed limit of greater than 35 mph, and Fatigue Category I if noted on the Contract Plans. Fatigue Importance Factors shall be as specified in Table 11.6-1 (Fatigue Importance Factors). Fatigue analyses are not required for span-wire (strain) pole traffic signal support structures with heights of 55 feet or less unless required by the current edition of AASHTO “LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals”.

643.09 Service Connection Revise this subsection by removing the paragraph that begins with “Traffic signal services shall have...”.

And by removing the paragraphs beginning with “ A service ground rod shall be installed...” and “A total of 4, 10’ service...” and replace them with “A total of 4, 10’ service ground rods shall be installed and properly connected together on the outside of the cabinet foundation. One ground rod shall be located at each corner and shall be either flush or slightly below finished grade. The connection between the ground rod and the ground wire shall be an exothermic connection such as a Cadweld. The ground wire from the interconnected ground rods shall be routed through a conduit in the foundation and into the base of the cabinet”.

SECTION 645 HIGHWAY SIGNING

Section 645.023 Sign Support Structures. Under letter “c.”, revise the fifth paragraph beginning with “In addition to the required details...” by removing the words **”and foundation”** from the 5th sentence.

Section 645.08 Method of Measurement. Revise the second paragraph beginning with “Bridge-type, cantilever and...” by removing the words **”including the foundation”** .

Section 645.09 Basis of Payment. Revise the third paragraph beginning with “The accepted bridge-type, cantilever and...” by removing the word **”foundation”** from the second sentence. Add the following sentence to the end of the paragraph **“Conduits, Junction Boxes, and Foundations will be paid for under Section 626.”**

SECTION 652 MAINTENANCE OF TRAFFIC

652.2.5 Portable Changeable Message Sign Revise the fifth paragraph so it reads:

“The control system shall include a display screen upon which messages can be reviewed before being displayed on the message sign. The control system shall be capable of maintaining memory when power is unavailable. Messages must be changeable with either a portable electronic device like a notebook computer or an on-board keypad. The controller shall have the capability to store a minimum of 200 user-defined and 200 pre-programmed messages. Controller and battery compartments shall be enclosed in lockable, weather-tight boxes. The cabinet shall be locked at all times that the Contractor is not actively changing the message. The Contractor shall change the password for the controller prior to stationing the PCMS and shall provide the password to the Resident. The password shall be unique per PCMS and secure and shall not be written anywhere in, on, around, or stored in the PCMS.”

Amend this Section by adding the following new subsection:

“652.2.6 Device Crashworthiness **MaineDOT is transitioning to MASH2016 criteria for Work Zone Traffic Control Devices on the following schedule:**

Category 1 (Cones, Drums, Tubular Markers, Flexible Delineators, and similar devices that have little chance of causing windshield penetration, tire damage, or other significant effect on the control or trajectory of a vehicle) – All Category 1 devices will be manufacturer self-certified as MASH2016 by January 1, 2025. Current Category 1 devices in useful serviceable condition that are not self-certified as MASH2016 compliant may be utilized through December 31, 2024.

Category 2 (Barricades, Portable Sign Supports, Category 1 devices with attachments, and similar devices that are not expected to produce significant vehicular velocity change but may be otherwise hazardous) – All Category 2 devices will be crash tested and/or evaluated to

MASH2016 criteria by January 1, 2025. Current Category 2 devices in useful serviceable condition that are successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2024.

Category 3 (Portable Concrete Barrier, Portable Crash Cushions, Truck Mounted Attenuators, Category 2 devices weighing more than 100 pounds, and similar devices that are expected to produce significant vehicular velocity change or other harmful reactions) – All Category 3 devices will be crash tested and/or evaluated to MASH2016 criteria by January 1, 2030. Current Category 3 devices in useful serviceable condition that are successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2029. (See Standard Specification 526 for additional Portable Concrete Barrier information).

Category 4 (Trailer Mounted Devices: Arrow Boards, Temporary Traffic Control Signals, Area Lighting, Portable Changeable Message Sign, and other similar devices.) – All Category 4 devices will be crash tested and/or evaluated to MASH2016 criteria by January 1, 2030. Current Category 4 devices in useful serviceable condition that are successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2029.”

652.3.3 Submittal of Traffic Control Plan Amend this section by adding:

“n. A security plan for any PCMS shall be included. The Contractor shall provide a plan for secure access to the PCMS and protection from unauthorized users. The plan shall have details on securing the cabinets via a lock and password from unauthorized users, password changing protocols, and where the access information will be kept so it can be used in the event of emergency. The Contractor shall not Identify or store passwords in the TCP.”

652.4 Flaggers Revise the first paragraph of this section so that it reads:

“The Contractor shall furnish flaggers as required by the TCP or as otherwise specified by the Resident. All flaggers must have successfully completed a flagger test approved by the Department and administered by a Department-approved Flagger-Certifier who is employing that flagger. All flaggers must carry an official certification card with them while flagging that has been issued by their employer.”

SECTION 681

PRECAST AGGREGATE-FILLED, CONCRETE BLOCK GRAVITY WALL

681.08 Basis of Payment Amend this section by adding the Item Number “**681.10**” in front of the item “Precast Aggregate-Filled Concrete Block Gravity Wall” at the end of the section.

SECTION 701

STRUCTURAL CONCRETE RELATED MATERIAL

701.01 Portland Cement and Portland Pozzolan Cement Amend the first sentence of Paragraph 3 by adding “**or Type 1L Portland Limestone cement**” so that it reads:

“A Type IP (MS) Portland-pozzolan cement (blended hydraulic cement with moderate sulfate resistance) or Type 1L Portland Limestone cement meeting the requirements of AASHTO M 240, may be used instead of Type II or where Type I Portland cement, meeting the requirements of AASHTO M 85, is allowed.”

SECTION 703 AGGREGATES

Add the following to Section 703 - Aggregates

703.01 Fine Aggregate for Concrete Fine aggregate for concrete shall consist of natural sand or, when approved by the Resident, other inert materials with similar characteristics or combinations thereof, having strong, durable particles. Fine aggregate from different sources of supply shall not be mixed or stored in the same pile nor used alternately in the same class of construction or mix without permission of the Resident.

All fine aggregate shall be free from injurious amounts of organic impurities. Should the fine aggregate, when subjected to the colorimetric test for organic impurities, AASHTO T 21, produce a color darker than the reference standard color solution (laboratory designation Plate III), the fine aggregate shall be rejected.

Fine aggregate shall have a sand equivalent value of not less than 75 when tested in accordance with AASHTO T 176.

Fine aggregate sources shall meet the Alkali Silica Reactivity (ASR) requirements of Section 703.0201.

The fineness modulus shall not be less than 2.26 or more than 3.14. If this value is exceeded, the fine aggregate will be rejected unless suitable adjustments are made in proportions of coarse and fine aggregate. The fineness modulus of fine aggregate shall be determined by adding the cumulative percentages of material by weight retained on the following sieves: Nos. 4, 8, 16, 30, 50, 100 and dividing by 100.

Fine aggregate, from an individual source when tested for absorption as specified in AASHTO T 84, shall show an absorption of not more than 2.3 percent.

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
$\frac{3}{8}$ inch	100
No. 4	95-100
No. 8	80-100
No. 16	50-85
No. 30	25-60
No. 50	10-30
No. 100	2-10
No. 200	0-5.0

703.02 Coarse Aggregate for Concrete Coarse aggregate for concrete shall consist of crushed stone or gravel having hard, strong, durable pieces, free from adherent coatings and of which the composite blend retained on the $\frac{3}{8}$ inch sieve shall contain no more than 15 percent, by weight of flat and elongated particles when performed in accordance with test method ASTM D 4791, Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate, using a dimensional ratio of 1:5.

The coarse aggregate from an individual source shall have an absorption no greater than 2.0 percent by weight determined in accordance with AASHTO T 85 modified for weight of sample.

The composite blend shall have a Micro-Deval value of 18.0 percent or less as determined by AASHTO T 327 or not exceed 40 percent loss as determined by AASHTO T 96.

Coarse aggregate sources shall meet the Alkali Silica Reactivity (ASR) requirements of Section 703.0201.

Coarse aggregate shall conform to the requirements of the following table for the size or sizes designated and shall be well graded between the limits specified.

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves			
Grading	A	AA	S	LATEX
Aggregate Size	1 inch	$\frac{3}{4}$ inch	$1\frac{1}{2}$ inch	$\frac{1}{2}$ inch
2 inch			100	
$1\frac{1}{2}$ inch	100		95-100	
1 inch	95-100	100	-	
$\frac{3}{4}$ inch	-	90-100	35-70	100
$\frac{1}{2}$ inch	25-60	-	-	90-100
$\frac{3}{8}$ inch	-	20-55	10-30	40-70
No. 4	0-10	0-10	0-5	0-15
No. 8	0-5	0-5	-	0-5
No. 16	-	-	-	-
No. 50	-	-	-	-
No. 200	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5

703.0201 Alkali Silica Reactive Aggregates All coarse and fine aggregates proposed for use in concrete shall be tested for Alkali Silica Reactivity (ASR) potential under AASHTO T 303 (ASTM C 1260), Accelerated Detection of Potentially Deleterious Expansion of Mortar Bars Due to Alkali-Silica Reaction, prior to being accepted for use. Acceptance will be based on testing performed by an accredited independent lab submitted to the Department. Aggregate submittals will be required on a 5-year cycle, unless the source or character of the aggregate in question has changed within 5 years from the last test date.

As per AASHTO T 303 (ASTM C 1260): Use of a particular coarse or fine aggregate will be allowed with no restrictions when the mortar bars made with this aggregate expand less than or equal to 0.10 percent at 30 days from casting. Use of a particular coarse or fine aggregate will be classified

as potentially reactive when the mortar bars made with this aggregate expand greater than 0.10 percent at 30 days from casting. Use of this aggregate will only be allowed with the use of cement-pozzolan blends and/or chemical admixtures that result in mortar bar expansion of less than 0.10 percent at 30 days from casting as tested under ASTM C 1567.

Acceptable pozzolans and chemical admixtures that may be used when an aggregate is classified as potentially reactive include, but are not limited to the following:

- a. Class F Coal Fly Ash meeting the requirements of AASHTO M 295
- b. Ground Granulated Blast Furnace Slag (Grade 100 or 120) meeting the requirements of AASHTO M 302
- c. Densified Silica Fume meeting the requirements of AASHTO M 307
- d. Lithium-based admixtures
- e. Metakaolin

Pozzolans or chemical admixtures required to offset the effects of potentially reactive aggregates will be incorporated into the concrete at no additional cost to the Department.

703.05 Aggregate for Sand Leveling Aggregate for sand leveling shall be sand of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances. The aggregate shall meet the grading requirements of the following table.

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
$\frac{3}{8}$ inch	85-100
No. 200	0-5.0

703.06 Aggregate for Base and Subbase The following shall apply to Sections (a.) and (c.) below. The material shall have a Micro-Deval value of 25.0 or less as determined by AASHTO T 327. If the Micro-Deval value exceeds 25.0, the Washington State Degradation DOT Test Method T113, Method of Test for Determination of Degradation Value (January 2009 version) shall be performed, except that the test shall be performed on the portion of the sample that passes the $\frac{1}{2}$ inch sieve and is retained on the No. 10 sieve. If the material has a Washington Degradation value of less than 15, the material shall be rejected. The material used in Section (b.) below shall have a Micro-Deval value of 25.0 or less as determined by AASHTO T 327. If the Micro-Deval value exceeds 25.0 the material may be used if it does not exceed 25 percent loss on AASHTO T 96, Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.

Recycled Asphalt Pavement (RAP) shall not be used for or blended with aggregate base or subbase.

- a. Aggregate for base, Type A and B shall be crushed ledge or crushed gravel of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances. The gradation of the part that passes a 3 inch sieve shall meet the grading requirements of the following table:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
	Type A	Type B
½ inch	45-70	35-75
¼ inch	30-55	25-60
No. 40	0-20	0-25
No. 200	0-6.0	0-6.0

At least 50 percent by weight of the material retained on the No. 4 sieve shall have at least one fractured face as tested by AASHTO T 335.

Type A aggregate for base shall only contain particles of rock that will pass the 2 inch square mesh sieve.

Type B aggregate for base shall only contain particles of rock that will pass the 4 inch square mesh sieve.

- b. Aggregate for base, Type C shall be crushed ledge or crushed gravel of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances. The material shall meet the grading requirements of the following table:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
	Type C
4 inches	100
3 inches	90-100
2 inches	75-100
1 inch	50-80
½ inch	30-60
No. 4	15-40
No. 200	0-6.0

At least 50 percent by weight of the material coarser than the No. 4 sieve shall have at least one fractured face as tested by AASHTO T 335.

- c. Aggregate for subbase shall be sand or gravel of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances. The gradation of the part that passes a 3 inch sieve shall meet the grading requirements of the following table:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
	Type D	Type E
½ in	35-80	
¼ inch	25-65	25-100
No. 40	0-30	0-50
No. 200	0-7.0	0-7.0

Type D aggregate for subbase gravel may contain up to 50 percent by weight Recycled Concrete Aggregate (RCA). When RCA is used, the portion of the resulting blend of gravel and RCA retained on a 1/2" square mesh sieve shall contain a total of no more than 5 percent by weight of other recycled materials such as brick, concrete masonry block, or asphalt pavement as determined by visual inspection.

RCA shall be substantially free of wood, metal, plaster, and gypsum board as defined in Note 9 in Section 7.4 of AASHTO M 319. RCA shall also be free of all substances that fall under the category of solid waste or hazardous materials.

Aggregate for subbase shall not contain particles of rock which will not pass the 6 inch square mesh sieve.

703.08 Recycled Asphalt Pavement Recycled asphalt pavement shall consist of salvaged asphalt materials from milled pavements or production waste that has been processed before use to meet the requirements of the job mix formula. It shall be free of winter sand, granular fill, construction debris, or other materials not generally considered asphalt pavement.

703.081 RAP for Asphalt Pavement Recycled Asphalt Pavement (RAP) may be introduced into hot-mix asphalt pavement at percentages approved by the Department according to the MaineDOT Policies and Procedures for HMA Sampling and Testing.

If approved by the Department, the Contractor shall provide documentation stating the source, test results for average residual asphalt content, and stockpile gradations showing RAP materials have been sized to meet the maximum aggregate size requirements of each mix designation. The Department will obtain samples for verification and approval prior to its use.

The maximum allowable percent of RAP shall be determined by the asphalt content, the percent passing the 0.075 mm sieve, the ratio between the percent passing the 0.075 mm sieve and the asphalt content, and Coarse Micro-Deval loss values as tested by the Department.

The maximum percentage of RAP allowable shall be the lowest percentage as determined according to Table 4 below:

Classification	Maximum RAP Percentage Allowed	Asphalt content standard deviation	Percent passing 0.075 mm sieve standard deviation	Percent passing 0.075 mm sieve / asphalt content ratio	Residual aggregate M-D loss value
Class III	10%	≤ 1.0	N/A	≤ 4.0	≤ 18
Class II	20%	≤ 0.5	≤ 1.0	≤ 2.8	
Class I	30%	≤ 0.3	≤ 0.5	≤ 1.8	

Table 4: Maximum Percent RAP According to Test Results

The Department will monitor RAP asphalt content and gradation during production by testing samples from the stockpile at approximately 15,000 T intervals (in terms of mix production). The allowable variance limits (from the numerical average values used for mix designs) for this testing are determined based upon the maximum allowable RAP percentage and are shown below in Table 5.

Table 5: RAP Verification Limits

Classification	Asphalt content (compared to aim)	Percent passing 0.075 mm sieve (compared to aim)
Class III	± 1.5	± 2.0
Class II	± 1.0	± 1.5
Class I	± 0.5	± 0.7

For specification purposes, RAP will be categorized as follows:

Class III – A maximum of 10.0 percent of Class III RAP may be used in any base, intermediate base, surface, or shim mixture. A maximum of 20.0 percent of Class III RAP may be used in hand-placed mixes for item 403.209.

Class II – A maximum of 20.0 percent Class II RAP in any base, binder, surface, or shim course.

Class I – A maximum of 20.0 percent Class I RAP may be used in any base, intermediate base, surface, or shim mixture without requiring a change to the specified asphalt binder. A maximum of 30.0 percent Class I RAP may be used in in any base or intermediate base mixture provided that a PG 58-28 or PG 58-34 asphalt binder is used. A maximum of 30.0 percent Class I RAP may be

used in any surface or shim mixture provided that PG 58-34 asphalt binder is used. Mixtures exceeding 20.0 percent Class I RAP must be evaluated and approved by the Department.

The Contractor may use up to two different RAP sources in any one mix design. The total RAP percentage of the mix shall not exceed the maximum allowed for the highest classification RAP source used (i.e. if a Class I & Class III used, total RAP must not exceed 30.0%). The blended RAP material must meet all the requirements of the classification for which the RAP is entered (i.e. 10% Class III with 20% Class I, blend must meet Class I criteria). The Department may take belt cuts of the blended RAP to verify the material meets these requirements. If the Contractor elects to use more than one RAP source in a design, the Contractor shall provide an acceptable point of sampling blended RAP material from the feed belt.

In the event that RAP source or properties change, the Contractor shall notify the Department of the change and submit new documentation stating the new source or properties a minimum of 72 hours prior to the change to allow for obtaining new samples and approval.

SECTION 709 REINFORCING STEEL AND WELDED STEEL WIRE FABRIC

709.01 Reinforcing Steel Remove the second paragraph of Section 709.01 of the standard specification beginning with “Low-Carbon, Chromium,...” and replace with the following:

“ Low-carbon, chromium, reinforcing steel shall be deformed bars conforming to the requirements of ASTM A1035. Bars shall be Grade 100 and alloy Type CS unless otherwise specified on the Plans. “

SECTION 710 FENCE AND GUARDRAIL

710.06 Fence Posts and Braces Revise the first Paragraph so that it reads:

“Wood posts shall be of cedar, white oak, or tamarack or other AWP approved species, of the diameter or section and length shown on the plans.”

Remove the fourth paragraph which starts “ That portion of wood posts...”.

Revise the paragraph beginning with “Braces shall be of spruce, eastern hemlock ... so that it now reads:

“Braces shall be of spruce, eastern hemlock, Norway pine, pitch pine, or tamarack timbers or other AWP approved species, or spruce, cedar, tamarack or other AWP approved species round posts of sufficient length to make a diagonal brace between adjacent posts. All wood posts and braces

shall be pressure-treated in accordance with AASHTO M 133 and AWP A U1, UC4A Commodity Specification B: Posts. “

710.07 Guardrail Posts Revise this section so that the first sentence of section a. reads:

“a. Wood posts shall be of Norway pine, southern yellow pine, pitch pine, Douglas fir, red pine, white pine, or eastern hemlock or other AWP A approved species.”

Revise the next paragraph so that it reads:

Wood posts and offset brackets shall be preservative treated in accordance with the requirements of AASHTO M 133 and AWP A U1, UC4A Commodity Specification B: Posts.

710.08 Guardrail Hardware Revise this subsection by replacing “AASHTO M 298” with “ASTM B695”

SECTION 711 MISCELLANEOUS BRIDGE MATERIAL

711.06 Stud Shear Connector Anchors and Fasteners Amend this section by deleting it in its entirety and replacing it with:

“Shear connectors shall meet the dimensional tolerances of Figure 9.1 of the ANSI/AASHTO/AWS D1.5 Bridge Welding Code (D1.5 Code). Shear connectors, anchors and fasteners shall meet the material requirements of Section 9 of the D1.5 Code. Shear connectors shall meet the mechanical property requirements of Table 9.1, Type B of the D1.5 Code. Anchors and fasteners shall meet the mechanical property requirements of Table 9.1 of the D1.5 Code, Type A.”

SECTION 712 MISCELLANEOUS HIGHWAY MATERIAL

712.061 Structural Precast Units Amend this section by adding the following sentence to the end of the first paragraph of the Construction subsection:

“Facilities certified by NPCA or PCI shall provide to the Fabrication Engineer a copy of their annual audit to include deficiency reports and corrective actions.”

Revise this section by changing the letter “b” of ASTM C1611 of the Concrete Testing subsection so that it reads:

“b. Air content shall be 5.0% to 8.0%.”

SECTION 713 STRUCTURAL STEEL AND RELATED MATERIAL

Section 713.02 High Strength Bolts

Revise the second sentence of this subsection so that it reads “**Nuts shall meet the requirement of ASTM A563**”. Revise the third sentence of this subsection so that it reads “**Circular and beveled washers shall conform to the requirement of ASTM F436**”.

SECTION 718 TRAFFIC SIGNALS MATERIAL

718.03 Signal Mounting Amend the paragraph beginning with “All trunions, brackets and...” by adding “**For polycarbonate signal heads with more than 3 sections or requiring mounting extensions greater than 12 inches in length, reinforcing plates shall be used to reinforce the housings at the point of attachment.**” to the end of the paragraph.

718.08 Controller Cabinet Revise this subsection by replacing the paragraph beginning with “The cabinet shall be supplied with LED light panels...” on or about page 7-66 with “**The cabinet shall be supplied with white LED light panels which shall automatically illuminate via a door open switch whenever one of the four main cabinet doors are opened for the ground mount cabinet or two main doors for the side of pole cabinet. The ground mounted cabinet shall contain four LED light panels per side totaling eight panels for the cabinet; one panel each at the top and bottom portion of the front side and back side on the Control side and Power/Auxiliary side of the cabinet. Each light panel shall produce a minimum of 250 lumens for a total minimum lumen output of 2000 lumens with all eight panels illuminated. The minimum output per side would be 1000 lumens. The LED panels shall be protected by a clear shatterproof shield. The side of pole mounted cabinet shall contain four light panels; one at the top of the rack assembly and one at the bottom rack assembly on each side of the cabinet.**

A second door open status switch per door shall activate a controller input to log a report event that one of the doors was opened. All door open status switches shall be connected to the same controller input. For the ground mount cabinet, there shall be two switches on each of the four main doors. For the side-of-pole mount cabinet, there shall be two switches on each of the two main doors.”

Revise this subsection by replacing the paragraph beginning with “The cabinet shall be supplied with a generator panel ...” on or about page 7-68 with:

“The cabinet shall be supplied with a generator panel. The generator panel shall consist of a manual transfer switch and a twist-lock connector for generator hookup. The transfer switch knob and twist-lock connector shall be located inside a stainless steel enclosure with a separate lockable door accessed with a Corbin #2 key. The unit shall be mounted on the left, exterior of the control side wall of the ground mount cabinet a minimum of 36” above the surrounding grade and on the lower left side of the pole mounted cabinet. The generator transfer switch shall be a Reliance C30A1N Signa Series or approved equal. “

Revise this subsection by removing the following from the paragraph beginning with “The ground mounted cabinet shall be supplied and installed with an electric service meter socket trim and electrical service disconnect switch ...” on or about page 7-69: **“(removed: thus preventing that space from being used either by equipment supplied as part of the project, or future equipment that would be installed in the rack system. Joe indicated that he would add this language to the detail so it is covered.)”**.

Revise this subsection by replacing the following in the paragraph beginning with “The Contractor shall reconfigure the default user name...” on or around page 7-70; “MaineDOT IT” with **“MaineDOT Traffic Division”**.

In the paragraph beginning with “Tests shall be conducted by the contractor...” on or around page 7-73, amend this subsection by removing **“in the state of Maine and”** after “The facility shall be”.

Amend this Section by adding the following subsection:

718.13 Field Monitoring Unit (FMU) This item of work shall conform to this specification. This item shall consist of furnishing and installing a Field Monitoring Unit (FMU) and software, as well as all needed accessories required for a full and complete installation, including but not limited to power adapters, Ethernet cables, and interface cables, as described herein.

Where applicable, communications from MaineDOT’s cloud-based Central Management System (CMS) to the on-street traffic signal controllers shall be made through fiber optic interconnect cable connected back to existing internet connections and/or the Field Monitoring Unit (FMU). The Contractor shall furnish and install all materials necessary for a complete and operational fiber optic interconnection to all project intersections as shown on the plans. All connections to the CMS cloud-based system shall be via a secure VPN network.

The FMU shall be the only remote connection device used by isolated intersections to connect to the cloud-based system. All connections shall be encrypted VPN tunnels. The Contractor shall coordinate all configuration settings with MaineDOT IT and the Engineer.

The FMU central web based interface shall be a separate element from the CMS.

MATERIALS: The materials for this work shall conform to the following requirements:

1. The work under this item specifies the requirements for the FMU. The FMU shall operate independent of the brand/type of intersection controller deployed in the ATC traffic cabinet.
2. The FMU shall conform to the following requirements:
 - 2.1 The FMU shall function correctly between -34 degrees C and +74 degrees C.
 - 2.2 The FMU shall be provided with appropriately rated connectors that allows the FMU to be exchanged by unplugging connectors, without tools.
 - 2.3 The FMU shall monitor and log all ATC Controller and ATC cabinet faults and or alarms.

- 2.4 The FMU shall be wired directly to the ATC cabinet.
- 2.5 The FMU shall have an internal cellular modem running at 4G LTE.
 - 2.5.1 The Cellular modem shall be designed to be replaced / upgraded to 5G service when available.
- 2.6 The FMU shall incorporate an integrated GPS and cell modem.
- 2.7 The configuration of the FMU shall be accomplished by accessing the internal web server with a browser. It shall be possible to configure the FMU without any special software.
- 2.8 The FMU shall be powered via a standard 120V input power.
- 2.9 The FMU shall allow for the routing of the controller configuration packets to and from the controller (either by Ethernet or serial communications) for any type of controller utilized by the MaineDOT. In this way it shall be possible to configure the controller and utilize the controller specific software to interrogate the controller, and the FMU shall provide the communications pipe which allows this to be accomplished.
- 2.10 The FMU shall, within the size limitations above, include a battery and battery charging/monitoring circuit, to allow the FMU to function correctly even when all power to the intersection has failed. The battery shall continue to power the FMU for a minimum of 5 hours after all power has failed to the intersection.
- 2.11 The FMU shall incorporate an integrated GPS which will allow the FMU to geo-locate itself on the FMU management software map, without configuration.
- 2.12 The FMU shall operate without requiring a static IP address. The only configuration required at the FMU is to enter the URL of where the FMU management software is hosted.
- 2.13 In the event that the cell service is interrupted or is not available, the FMU shall store any events that occur in internal memory and forward these events automatically to the FMU management software when the cell service is restored. In this way, a complete record of events at the device can be maintained even if cell service is interrupted for a period. The system will store 5000 events.
- 2.14 The FMU shall utilize HTTP and HTTPS protocols, and XML data structures, for communication with the FMU management software. In this way the data will be open for future expansion and competition. The use of secret proprietary protocols is not permitted.
- 2.15 The FMU shall include Ethernet communications via an Ethernet Port with RJ45 connector.
- 2.16 The FMU shall include weather proof antennas.

3. Map Display FMU Management Software

- 3.1 The FMU shall include a scrollable, zoomable map display, with the intersections and other monitored devices shown as representative icons on the map. The map shall include the ability to see the intersections using Google Streetview.
- 3.2 The alarm status of the intersection shall be clearly indicated on the icon on the map, so that the user can see at a glance which intersections are in alarm.
- 3.3 The map display shall also include a list of intersections, with the number and priority of alarms indicated on the list. Intersections in high priority alarm shall be moved to the top of the list, followed by medium priority, low priority and then finally by intersections not in alarm.
- 3.4 The icons shall change to be able to clearly indicate if an intersection is offline.
- 3.5 Clicking on the icon on the map shall expose a box with the current parameters of the intersection shown.
- 3.6 The default map display position and zoom shall be configurable by user, so that the user's view will default to show the intersections that the user is responsible for managing.
- 3.7 The map view shall have the ability to show Google traffic overlays on the map.

4. Intersection Detail Display FMU Management Software

- 4.1 It shall be possible to drill down, either from the map icon or from the list, to a device level detail for the intersection, which as a minimum shall display the following parameters:
 - 4.1.1 The alarm status, with priority indicated, and a text description of the alarm (if an alarm is present for this device).
 - 4.1.2 The time since the last communication with the device
 - 4.1.3 The following parameters (real time now values, minimum for the day values, maximum for the day values, and average for the day values)
 - 4.1.3.1 The AC mains voltage (value)
 - 4.1.3.2 The battery back-up voltage (value)
 - 4.1.3.3 The cabinet temperature (value)
 - 4.1.3.4 The cabinet humidity (value)
 - 4.1.3.5 The presence of AC power (OK or Fail)
 - 4.1.3.6 The flashing status of the intersection (OK or Flashing)
 - 4.1.3.7 Stop Time status (OK or Stop Time Active)

4.1.3.8 The cabinet door status (Open or Closed)

4.1.3.9 The intersection fan status (Fan On or Fan off)

4.1.4 It shall be possible to view graphs of each of the value parameters in graphical form, over the recent two-week period. This includes real time graphs of:

4.1.4.1 The AC mains voltage

4.1.4.2 The battery back-up voltage

4.1.4.3 The cabinet temperature

4.1.4.4 The cabinet humidity

5. Diagnostics and Log Display FMU Management Software

5.1 From the device level detail within the FMU management software, it shall be possible to drill down to get the raw data; the error logs; and the communications logs to allow a technician to fault-find problems.

5.2 It shall be possible to filter the logs by Device; by Device Type and/or by Group as well as between dates.

5.3 It shall be possible to print these selected logs to a local printer or a PDF file.

5.4 It shall be possible to export these logs to Excel on the local computer for further analysis.

6. Alarms FMU Management Software

6.1 The FMU management software shall have a comprehensive alarm generation capability

6.2 It shall be possible to configure alarms to be generated on any parameter becoming out of tolerance, including analog values, digital values and enumerated values.

6.3 Alarms shall be configurable to be of Low, High or Critical Priority.

6.4 The alarm priority shall be displayed throughout the FMU management software, on all displays, using color codes such as red-critical; yellow – high; and amber-low to indicate the priority of the alarm.

6.5 The current active alarms shall be accessible for view via an expandable window, to see which alarms are active and when the alarm occurred. The highest priority alarms shall rise to the top of the list.

7. Alerts FMU Management Software

7.1 The FMU management software shall have comprehensive alerting capability, to enable the response personnel to be notified when an abnormal situation has occurred.

- 7.2 It shall be possible to configure alerts to one or more personnel for each alarm. This will cause, as selected, an SMS and/or an email to be sent to the person when an alarm occurs.
- 7.3 The alert shall be configurable to optionally send via email and/or via SMS a message when an alarm clears.
- 7.4 The intention is that the FMU management software provides the alerts to the user in near real time. The SMS and email shall be issued within 30 seconds of the occurrence of event which results in an alert being issued.

8. Hosting and Connectivity and Service FMU / FMU Management Software

- 8.1 The contractor shall supply the FMU with the FMU manufacturers 10 year options for Connectivity and Service, as part of the purchase price. The Connectivity and Service agreement shall include at a minimum:
 - 8.1.1 Cellular Connectivity
 - 8.1.2 No cellular overage charges
 - 8.1.3 Extended warranty on the hardware for the period of the Connectivity and Service Agreement
 - 8.1.4 Over-the-air software updates
 - 8.1.5 Over-the-air security updates
 - 8.1.6 Future Connected Vehicles Service

SECTION 720 STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS

720.12 Wood Sign Posts Revise the first sentence so that it reads:

Wood sign posts shall be rectangular, straight and sound timber, cut from live growing native spruce, red pine, hemlock, cedar trees or other AWPAs approved species, free from loose knots or other structurally weakening defects of importance, such as shake or holes or heart rot.

Revise the third paragraph that starts with “When pressure treated...” so that it reads:

All sign posts shall be pressure-treated in accordance with AASHTO M 133 and AWPAs Standard U1, UC4A, Commodity Specification A: Sawn Products.

APPENDIX A

To

2022 Title VI Implementation Plan

The United States Department of Transportation (USDOT) Standard Title VI/Non-Discrimination Assurances

DOT Order No. 1050.2A

The **Maine Department of Transportation** (herein referred to as the "Recipient"), HEREBY AGREES THAT, as a condition to receiving any Federal financial assistance from the U.S. Department of Transportation (DOT), through the **Federal Highway Administration (FHWA)**, is subject to and will comply with the following:

Statutory/Regulatory Authorities

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
- 49 C.F.R. Part 21 (entitled Non-discrimination in Federally Assisted Programs Of The Department Of Transportation-Effectuation Of Title VI Of The Civil Rights Act Of 1964);
- 28 C.F.R. Section 50.3 (U.S. Department of Justice Guidelines for Enforcement of Title VI of the Civil Rights Act of 1964);

The preceding statutory and regulatory cites hereinafter are referred to as the "Acts" and "Regulations," respectively.

General Assurances

In accordance with the Acts, the Regulations, and other pertinent directives, circulars, policy, memoranda, and/or guidance, the Recipient hereby gives assurance that it will promptly take any measures necessary to ensure that:

"No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity, for which the Recipient receives Federal financial assistance from DOT, including the FHWA."

The Civil Rights Restoration Act of 1987 clarified the original intent of Congress, with respect to Title VI and other Non-discrimination requirements (The Age Discrimination Act of 1975, and Section 504 of the Rehabilitation Act of 1973), by restoring the broad, institutional-wide scope and coverage of these non-discrimination statutes and requirements to include all programs and activities of the Recipient, so long as any portion of the program is Federally assisted.

Specific Assurances

More specifically, and without limiting the above general Assurance, the Recipient agrees with and gives the following Assurances with respect to its Federally assisted **Highway Program**:

1. The Recipient agrees that each "activity," "facility," or "program," as defined in §§ 21.23(b) and 21.23(e) of 49 C.F.R. § 21 will be (with regard to an "activity") facilitated, or will be (with regard

to a "facility") operated or will be (with regard to a "program") conducted in compliance with all requirements imposed by, or pursuant to the Acts and the Regulations.

2. The Recipient will insert the following notification in all solicitations for bids, Requests For Proposals for work, or material subject to the Acts and the Regulations made in connection with all **Federal-Aid Highway Program activities** and, in adapted form, in all proposals for negotiated agreements regardless of funding source:

"The **Maine Department of Transportation**, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award."

3. The Recipient will insert the clauses of Appendix C and G of this Assurance in every contract or agreement subject to the Acts and the Regulations.
4. The Recipient will insert the clauses of Appendix E of this Assurance, as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a Recipient.
5. That where the Recipient receives Federal financial assistance to construct a facility, or part of a facility, the Assurance will extend to the entire facility and facilities operated in connection therewith.
6. That where the Recipient receives Federal financial assistance in the form, or for the acquisition of real property or an interest in real property, the Assurance will extend to rights to space on, over, or under such property.
7. That the Recipient will include the clauses set forth in Appendix D and Appendix F of this Assurance, as a covenant running with the land, in any future deeds, leases, licenses, permits, or similar instruments entered into by the Recipient with other parties:
 - a. for the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and
 - b. for the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.
8. That this Assurance obligates the Recipient for the period during which Federal financial assistance is extended to the program, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property, or interest therein, or structures or improvements thereon, in which case the Assurance obligates the Recipient, or any transferee for the longer of the following periods:

- a. the period during which the property is used for a purpose for which the Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits; or
 - b. the period during which the Recipient retains ownership or possession of the property.
9. The Recipient will provide for such methods of administration for the program as are found by the Secretary of Transportation or the official to whom he/she delegates specific authority to give reasonable guarantee that it, other recipients, sub-recipients, sub-grantees, contractors, subcontractors, consultants, transferees, successors in interest, and other participants of Federal financial assistance under such program will comply with all requirements imposed or pursuant to the Acts, the Regulations, and this Assurance.
10. The Recipient agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the Acts, the Regulations, and this Assurance.

By signing this ASSURANCE, the **Maine Department of Transportation** also agrees to comply (and require any sub-recipients, sub-grantees, contractors, successors, transferees, and/or assignees to comply) with all applicable provisions governing the **FHWA and USDOT** access to records, accounts, documents, information, facilities, and staff. You also recognize that you must comply with any program or compliance reviews, and/or complaint investigations conducted by the **FHWA and USDOT**. You must keep records, reports, and submit the material for review upon request to **FHWA and USDOT**, or its designee in a timely, complete, and accurate way. Additionally, you must comply with all other reporting, data collection, and evaluation requirements, as prescribed by law or detailed in program guidance.

The **Maine Department of Transportation** gives this ASSURANCE in consideration of and for obtaining any Federal grants, loans, contracts, agreements, property, and/or discounts, or other Federal-aid and Federal financial assistance extended after the date hereof to the recipients by the U.S. Department of Transportation under the **Federal Aid Highway Program**. This ASSURANCE is binding on **Maine**, other recipients, sub-recipients, sub-grantees, contractors, subcontractors and their subcontractors', transferees, successors in interest, and any other participants in the **Federal Aid Highway Program**. The person(s) signing below is authorized to sign this ASSURANCE on behalf of the Recipient.

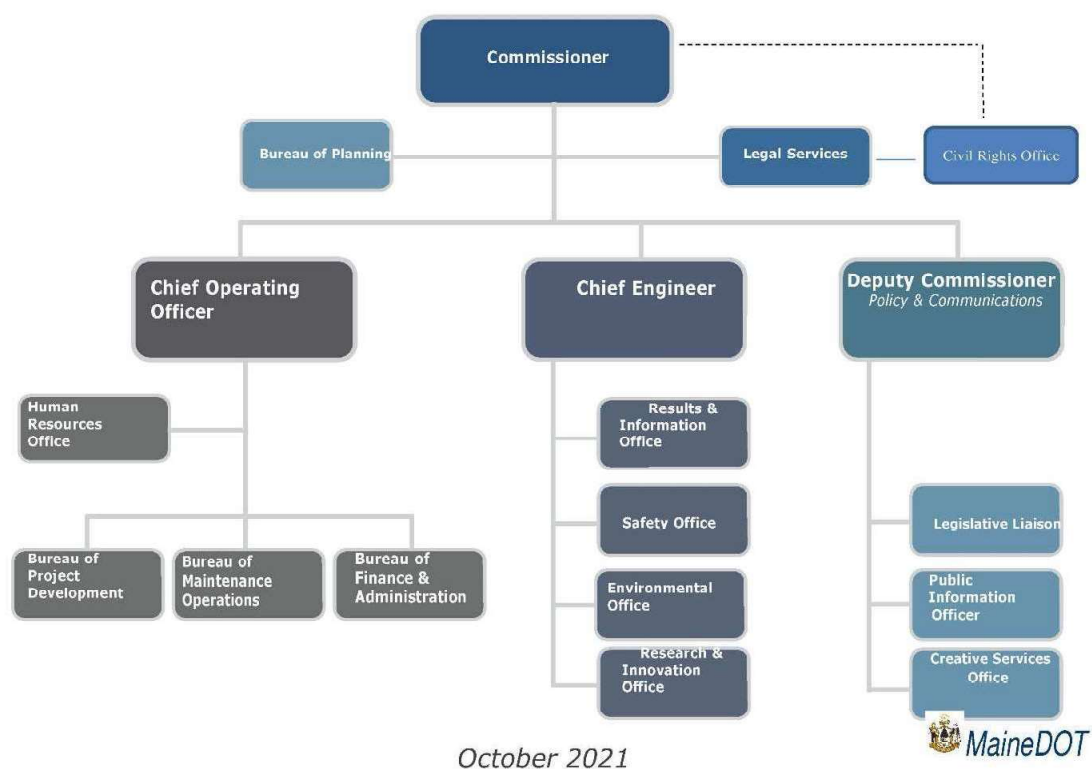
MAINE DEPARTMENT OF TRANSPORTATION
(Name of Recipient)

by 
Bruce A. Van Note, Commissioner

DATED Sept. 13, 2021

APPENDIX B

MaineDOT Organizational Structure



APPENDIX C

Performance Requirements

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
 2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
 3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Nondiscrimination on the grounds of race, color, or national origin.
 4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the FHWA to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the FHWA, as appropriate, and will set forth what efforts it has made to obtain the information.
 5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:
 - a. withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. cancelling, terminating, or suspending a contract, in whole or in part.
 6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto, The
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contractor will take action with respect to any subcontract or procurement as the Recipient or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

APPENDIX D

CLAUSES FOR DEEDS TRANSFERRING UNITED STATES PROPERTY

The following clauses will be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of Assurance 4:

NOW, THEREFORE, the U.S. Department of Transportation as authorized by law and upon the condition that the Maine Department of Transportation will accept title to the lands and maintain the project constructed thereon in accordance with 23 U.S. Code 5 107, the Regulations for the Administration of the Federal Aid Highway Program, and the policies and procedures prescribed by the FHWA of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. S 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the Maine Department of Transportation all the right, title and interest of the U.S. Department of Transportation in and to said lands described in Exhibit A attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto Maine Department of Transportation and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the Maine Department of Transportation, its successors and assigns.

The Maine Department of Transportation, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed I,] [and] * (2) that the Maine Department of Transportation will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, US. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended [i and (3) that in the event of breach of any of the above-mentioned non-discrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation and its assigns as such interest existed prior to this instruction].*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

APPENDIX E

CLAUSES FOR TRANSFER OF REAL PROPERTY ACQUIRED OR IMPROVED UNDER THE ACTIVITY, FACILITY, OR PROGRAM

The following clauses will be included in deeds, licenses, leases, permits, or similar instruments entered into by the Maine Department of Transportation pursuant to the provisions of Assurance 7(a):

- A. The (grantee, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that:
 - 1. In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Acts and Regulations (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.
- B. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Nondiscrimination covenants, Maine Department of Transportation will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued. *
- C. With respect to a deed, in the event of breach of any of the above Non-discrimination covenants, the Maine Department of Transportation will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will there upon revert to and vest in and become the absolute property of the Maine Department of Transportation and its assigns. *

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

APPENDIX F

CLAUSES FOR CONSTRUCTION/USE/ACCESS TO REAL PROPERTY ACQUIRED UNDER THE ACTIVITY, FACILITY OR PROGRAM

The following clauses will be included in deeds, licenses, permits, or similar instruments/agreements entered into by the Maine Department of Transportation pursuant to the provisions of Assurance 7(b):

- A. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, "as a covenant running with the land") that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, set forth in this Assurance.
- B. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Nondiscrimination covenants, the Maine Department of Transportation will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued. *
- C. With respect to deeds, in the event of breach of any of the above Nondiscrimination covenants, the Maine Department of Transportation will there upon revert to and vest in and become the absolute property of the Maine Department of Transportation and its assigns. *

(*Reverter clause and related language to be used only when it is determined that such a clause IS necessary to make clear the purpose of Title VI.)

APPENDIX G

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following nondiscrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. 5 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. 5 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. 5 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. 5 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. 5 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC 5 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. 55 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38; • The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. 5 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq.).

FEDERAL HIGHWAY ADMINISTRATION CIVIL RIGHTS ASSURANCE

The **Maine Department of Transportation** HEREBY CERTIFIES THAT, as a condition of receiving Federal financial assistance under the Civil Rights Act of 1964, as amended, it will ensure that:

1. No person on the basis of race, color or national origin will be subjected to discrimination in the level and quality of transportation services and transportation-related benefits.
2. The Maine Department of Transportation will compile, maintain, and submit in a timely manner Title VI information required in compliance with the Department of Transportation's Title VI regulation, 49 CFR Part 21.9.
3. The Maine Department of Transportation will make it known to the public that those person or persons alleging discrimination on the basis of race, color or national origin as it relates to the provision of transportation services and transportation-related benefits may file a complaint with the Federal Highway Administration and/or the U.S. Department of Transportation.

The person or persons whose signature appears below is authorized to sign this assurance on behalf of the grant applicant or recipient.



Bruce A. Van Note, Commissioner
Maine Department of Transportation

DATE: 9/19/23

APPENDIX I

TITLE VI/NONDISCRIMINATION POLICY STATEMENT

The Commissioner of the Maine Department of Transportation (MaineDOT) is ultimately responsible for and committed to the effective implementation of the Title VI Program to achieve compliance with Title VI of the Civil Rights Act of 1964, as amended, the Civil Rights Restoration Act of 1987, and related statutes and regulations in all Federal programs and activities. Understanding that the Commissioner will not be performing any day-to-day implementation duties, the MaineDOT conducts its Title VI/Environmental Justice Program in a team approach by involving personnel from all program areas, with guidance from the Title VI Coordinator. Responsibility for the day to day administration of the Program will be delegated to the Title VI Program Coordinator who is currently the Director of the Civil Rights Office. The Title VI Program Coordinator has been delegated sufficient authority and responsibility to effectively carry out her duties.

The Title VI Program Coordinator ensures MaineDOT's compliance with Title VI/Environmental Justice implementing regulations. Bureau Directors are responsible for Program implementation in their Bureaus and shall identify and delegate Title VI/Nondiscrimination Federal Program Area Liaisons to perform the routine data collection/data analysis and process reviews.

Inquiries concerning the MaineDOT's policies, investigations, complaints, compliance with applicable laws, regulations, and concerns regarding compliance with Title VI/Environmental Justice may be directed to:

Maine Department of Transportation
16 State House Station
Augusta, Maine 04333-1116
Telephone (207) 624-3066 | TTY users Dial Relay: 711
sherry.tompkins@maine.gov

MaineDOT is committed to ensuring that the fundamental principles of equal opportunity are upheld in all decisions involving our employees and contractors/consultants, and to ensuring that the public-at-large is afforded access to all of our programs and services whether those programs and activities are federally funded or not.

This Policy Statement will be circulated throughout the MaineDOT, made available to the public, and be included by reference in all contracts, agreements, programs and services administered by the Department of Transportation.



Bruce A. Van Note, Commissioner

Date: 7/23/21

APPENDIX J

SAMPLE QUESTIONS FOR PROGRAM AREA REVIEWS

Bureau of Planning

- What measures do you take to ensure that a cross-section of people representative of the populations affected by the Department's projects, including identifying and proactively reaching out to various and diverse social, economic and ethnic groups, participate in the Department's Public Involvement Process?
- How do you ensure that appropriate accommodations are made for persons with Limited English Proficiency (LEP) (persons who have difficulty speaking, reading, writing and/or understanding English)? Were interpreters available when needed to assist with LEP needs?
- How do you collect and analyze statistical data on race, color and national origin of populations in all areas impacted by the Department's programs or services?

Bureau of Project Development

Property Office

- What mechanisms are used to identify what communities (minority, LEP) are represented in the negotiation phase of property acquisition?
- How do you ensure that Property Office staff who have direct contact with persons affected by the Department's acquisition of property needed for projects, including compliance with the Uniform Relocation Act of 1970?
- Have you received any complaints related to discrimination on the basis of race, color or national origin? How many and how did you process them?

Multimodal Program

- How do you ensure that Local Public Agencies (LPA) provide the Department with signed Title VI assurances (Form 1050.2A), including Appendices A and K, annually?
- How do you ensure that LPAs include in their subcontracts FHWA Form 1273 and Title VI Assurances, including Appendices A and K?
- Have you received any complaints related to discrimination on the basis of race, color or national origin? How many and how did you process them?
- How do ensure that public meetings and notices related to LPA projects comply with Title VI?

Bureau of Maintenance and Operations

- How do you ensure that the Bureau's activities comply with Title VI requirements of nondiscrimination on the basis of race, color or national origin?
- Have you received any complaints related to discrimination on the basis of race, color or national origin? How many and how did you handle them?

APPENDIX K

Subrecipient Reviewed: _____ Date(s) of Desk Audit _____

Reviewer(s) _____

- ☐ Title VI/Nondiscrimination Policy Statement
- ☐ Title VI/Nondiscrimination Assurances
- ☐ Name and position of Title VI/Nondiscrimination Coordinator
- ☐ Title VI/Nondiscrimination Plan
- ☐ Procedures for processing external discrimination complaints
- ☐ A list of external discrimination complaints and lawsuits
- ☐ Any Accommodations for Limited English Proficient Persons
- ☐ Addressing Environmental Justice in minority populations and low-income populations
- ☐ Ensuring nondiscrimination in the public participation process
- ☐ Collecting and analyzing data to ensure nondiscrimination in programs and activities
- ☐ Process for ensuring that solicitations for bid/requests for proposals contain the Title VI/Nondiscrimination Assurance paragraph
- ☐ Process for ensuring subcontracts contain the appropriate contract provisions and language from the Title VI Assurances
- ☐ Process for Ensuring nondiscrimination in the award of contracts
- ☐ Developing a Title VI/Nondiscrimination Annual Work Plan & Accomplishment Report

APPENDIX L

SUB-RECIPIENT TITLE VI COMPLIANCE ASSESSMENT TOOL

23 Code of Federal Regulations (CFR) Part 200.9 (b)(7) requires that the Maine Department of Transportation (MaineDOT) conduct periodic reviews of cities, planning agencies and other recipients of federal-aid highway funds, including locally public agencies, to ensure that they are complying with Title VI of the Civil Rights Act of 1964. Title VI states that “no person in the United States shall be excluded from participation, denied the benefits of, or be subjected to discrimination in any Federally-funded program, policy or activity on the basis of race, color or national origin.”

MaineDOT has developed this assessment as a means of determining sub-recipient compliance; helping sub-recipients understand their Title VI responsibilities; and assisting MaineDOT in planning future training and technical assistance.

This assessment is part of MaineDOT's Title VI review process and has been designed to take only a few minutes of your time. Please fax (207-624-3021) or mail (16 State House Station, Augusta, ME 04333-0016) the completed questionnaire with attachments to: Sherry Tompkins, Director of Civil Rights, no later than August 30, 2021

Questions or concerns may be emailed to: sherry.tompkins@maine.gov or you may reach Sherry by phone at (207) 624-3066.

Baseline Questionnaire

1. Name of your Agency: _____
2. Number of full-time and part-time employees: F/T _____ P/T _____
3. Has your agency provided written Title VI Assurances to MaineDOT? If not, please attach a copy. _____
4. Does your agency physically include the Civil Right Special Provisions (FHWA-Form 1273) in all contracts and ensure that they are included in all sub-contracts, including third-tier contracts? _____

5. Who is the Title VI contract person for your agency? _____.
Does this person accept complaints from the public? _____ If not, who does? _____
Please include title, email and telephone number for each person listed. _____

6. In the past three years, has your agency been named in a discrimination complaint or lawsuit? _____. If so, when and what was the nature of the complaint or lawsuit and the outcome. _____
- _____
- _____
7. Does your agency have a written discrimination complaint process? If so, please attach a copy. _____
8. Has your agency made the public aware of the right to file a complaint? _____ If so, by what mechanism _____
- _____. Please attach a copy.
9. Does your agency provide free translation services for persons with Limited English Proficiency (LEP)? _____. Please explain _____
- _____
- _____
- _____
10. In the past twelve (12) months, what has your agency done to receive and consider input from all citizen groups, especially minority, low income, disabled and transit-dependent? Please describe, if applicable. _____
- _____
- _____
- _____
11. Does your agency have a method to collect racial and ethnic data on citizens impacted by your projects? _____. If so, please describe. _____
- _____
- _____
- _____

12. Does your agency include the required Disadvantaged Business Enterprise (DBE) assurance language at 49 CFR 26.13(a) and (b) verbatim in all financial agreements, contracts and sub-contracts? (Please see DBE Assurance language below.) _____

§26.13 What assurances must recipients and contractors make?

- (a) Each financial assistance agreement you sign with DOT operating administration (or a primary recipient) must include the following assurance:

The recipient shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR Part 26. The recipient shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure nondiscrimination in the award and administration of DOT assisted contracts. The recipient's DBE program, as required, by 49 CFR Part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S. C. 3801 et seq.).

- (b) Each contract you sign with a contractor (and each sub-contract the prime contractor signs with a sub-contractor) must include the following assurance:

The contractor, sub recipient or sub-contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

13. Does your agency monitor DBEs on construction projects to ensure they are performing a commercially useful function (CUF)? _____. If so, where is this documented? _____

If a DBE is not performing a CUF, what actions for steps have you taken? _____

Who do you notify? _____

14. Do you have any questions regarding this assessment or Title VI? _____
Please include them here along with your email address and/or phone number and
a MaineDOT representative will respond. _____

15. Would your agency like Title VI training or other Civil Rights technical assistance
from MaineDOT? _____. If yes, please explain. _____

Does your agency have teleconferencing ability? _____

16. Please provide the name, title and contact information of the person who
completed this baseline assessment. _____

17. Provide an annual report on Title VI accomplishments for the previous year and
goals for the next year. _____

APPENDIX M

Maine Department of Transportation
External Discrimination Complaint Form

(Title VI/Nondiscrimination and ADA/Section 504 Complaints)

Name	Phone	Name of Person(s) That Discriminated Against You
Address		Location and Position of Person (If Known)
City, State, Zip		City, State, Zip
Agency involved		Date of Alleged Incident
Discrimination Because of: <input type="checkbox"/> Race <input type="checkbox"/> Color <input type="checkbox"/> National Origin <input type="checkbox"/> Sex <input type="checkbox"/> Age <input type="checkbox"/> Disability		What Remedy are you requesting?
<p>Explain As Briefly And Clearly As Possible What Happened And How You Were Discriminated Against. Indicate Who Was Involved. Be Sure To Include How Other Persons Were Treated Differently Than You. Also Attach Any Written Material Pertaining To Your Case.</p>		
Signature		Date

Please Mail Complaint to:

Maine Department of Transportation
Civil Rights Office
16 State House Station
Augusta, Maine 04333-0016
Or Call (207) 624- 3066 or TYY Relay 711

APPENDIX N



NON-DISCRIMINATION/TITLE VI POSTER

Title VI and Nondiscrimination Commitment to all USDOT funded programs:

Pursuant to Title VI of the Civil Rights Act of 1964 and related laws and regulations, MaineDOT will not exclude from participation in, deny the benefits of, or subject to discrimination anyone on the grounds of race, color, national origin, sex, age or disability.

Complaint Procedures:

MaineDOT has established a discrimination complaint procedure and will take prompt and reasonable action to investigate and eliminate discrimination when found. Any person who believes that he or she has been aggrieved by an unlawful discriminatory practice under Title VI has a right to file a formal complaint with MaineDOT. Any such complaint must be in writing and filed with the MaineDOT Title VI Coordinator within one hundred eighty (180) calendar days following the date of the alleged discriminatory occurrence. For more information, please contact the MaineDOT's Title VI Coordinator.

ADA/504 Statement:

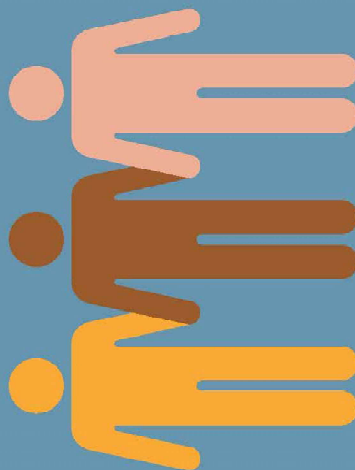
Pursuant to Section 504 of the Rehabilitation Act of 1973 (Section 504), the Americans with Disabilities Act of 1990 (ADA) and related federal and state laws and regulations, MaineDOT will make every effort to ensure that its facilities, programs, services, and activities are accessible to those with disabilities. MaineDOT will provide reasonable accommodation to disabled individuals who wish to participate in public involvement events or who require special assistance to access MaineDOT facilities, programs, services or activities. Because providing reasonable accommodation may require outside assistance, organization or resources, MaineDOT asks that requests be made at least five (5) calendar days prior to the need for accommodation. Questions, concerns, comments or requests for accommodation should be made to MaineDOT's ADA Coordinator.

Services are provided free without charge for individuals with special needs with disabilities. Any fees will be paid by the recipient or subrecipient. The public will have access to translators, "I Speak Cards", TTY/TDD services and vital documents translated when requested.

MaineDOT Title VI

Sherry Y. Tompkins, Director
Civil Rights Office
Maine Department of Transportation
16 State House Station
Augusta, Maine 04333
Office Phone: (207) 624-3066
Cell Phone: (207) 592-0686
TTY: Users Dial MAINE RELAY 711

Know
YOUR
Rights



MaineDOT
Civil Rights Office

Language translation services
available upon request.

Services de traduction de langue disponibles sur demande.

servicios de traducción disponibles bajo petición.

要求提供的语言翻译服务。

Lugha ya tafsiri huduma inapatikana juu ya ombi.
Ladenan panarimahan Basa aya kana paménta.

بانتظار انك قد احسمه غللا قد خرجتوا تادخ

Có các dịch vụ phiên dịch khi quý vị yêu cầu.



MaineDOT

Maine Department of Transportation
 Civil Rights Office

16 State House Station
Augusta, Maine 04333-0016

Phone: 207-624-3056

TTY Users Dial Maine Relay 711



mainedot.gov



**Call Us
with
Questions**

If you believe that you have been discriminated against because of your race, color, national origin, sex, age, disability or income level, or because you have difficulty with the English language, call us at 207-624-3056.

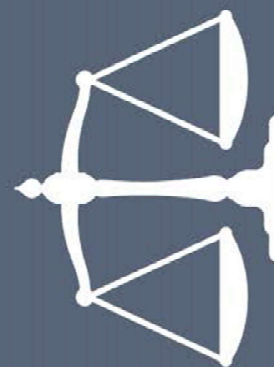
MaineDOT's Civil Rights Office will explain the process for filing a complaint. Complaint forms are on our website.

[maintained.gov/civilrights/title-vi](https://www.fda.gov/civilrights/title-vi)

TITLE VI PROGRAM of the Civil Rights Act

MaineDOT's mission is to provide the people of Maine with a safe, efficient and effective transportation system. Our work is intended to serve the transportation needs of all people in Maine, regardless of race, color, national origin, sex, age, disability, income level or limited English proficiency.

MaineDOT is committed to assuring that none of its activities or programs encourage discrimination. We manage our programs without regard to race, color, national origin, sex, age, disability, income level, or the ability to speak or understand English.



MaineDOT will not allow discrimination by a MaineDOT employee or by recipients of federal-aid funds such as cities, counties, contractors, or planning agencies. MaineDOT prohibits all discriminatory practices which may result in:

- Unfair denial of any service, financial aid or benefit provided by the federally funded program;
- Different standards or requirements for participation in programs;
- Segregation or separate treatment within our programs;
- Differences in the quality, quantity or way in which a benefit is provided;
- Discrimination in any activities in a facility built with federal funds.

To ensure compliance with Title VI, and other related laws, MaineDOT:

- Avoids or reduces harmful health and environmental impacts which programs or activities might have on minority and low-income populations;
- Ensures the full and fair participation by all communities in its decision-making process;
- Prevents the denial, reduction or delay of benefits for minority and low-income populations;
- Provides language interpreters to people who have difficulty understanding English.

How to File a Complaint

If you believe you have been discriminated against, you will need to file a written complaint. The complaint must be submitted within 180 days of the alleged discrimination. The complaint form is on our website for you to download.

Be prepared to fill in:

- Your name, address and phone number;
- The name and address of the organization you believe discriminated against you;
- Details of the alleged discrimination and any other relevant information; and
- The names of anyone we could contact regarding the alleged discrimination.

Once you have filled in the form, mail it to us:

MaineDOT Civil Rights Office

16 State House Station
Augusta, Maine 04333-0016

207-624-3056





Environmental Summary Sheet

WIN: 027662.00

Date Submitted: 4/17/2024

Town: Fairfield – Clinton, Route 23

CPD Team Leader: Joshua Brown

ENV Field Contact: Jamie Bray

NEPA Complete: NA, state funded

Section 106

NA, state funded

Section 4(f) and 6(f)

Section 4(f)

No US DOT funds or approvals

Section 6(f)

No ROW/no takes

Maine Department of Inland Fisheries and Wildlife Essential Habitat

Brook Floater, no survey required, no in water work

Section 7

Species of Concern: NA, no federal nexus

Essential Fish Habitat

NA, no federal nexus

Maine Department of Agriculture, Conservation, and Forestry

Public Lands, Submerged Land Lease: NA

Maine Land Use Planning Commission: NA

Maine Department of Environmental Protection

NA, exempt activity

Army Corps of Engineers: Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act.

NA, exempt activity

Stormwater Review

NA

Hazardous Materials Review

NA, no dredge, no known hazardous materials anticipated.

Special Provisions Required

Special Provision 105-Environmental Requirements

N/A ☐

Applicable ☒

Special Provision 203-Dredge material

N/A ☒

Applicable ☐

Standard Specification 656-Erosion Control Plan

N/A ☐

Applicable ☒

Special Provision 656-Minor Soil Disturbance

N/A ☒

Applicable ☐

Special Provision 203-Dredge Spec

N/A ☒

Applicable ☐