Updated **05/15/2020**

STATE PROJECT

Effective May 15, 2020
Supersedes April 22, 2020

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.

April 28, 2017
Supersedes October 15, 2015

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 Diane Barnes at diane.barnes@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:

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, executers, 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.

State of Maine
Department of Transportation

RFI No: _____

REQUEST FOR INFORMATION

Date _____ Time _____

Information Requested for:

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

Question(s):_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Request by:

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

Email: _____ Fax: (_____)_____

Complete this form and fax to 207-624-3431, Attn: Project Manager (name listed on the "Notice to Contractors"), or Email questions to RFI-Contracts.MDOT@maine.gov, Please include the word "RFI" along with the Project Name and Identification Number in the Subject line, or electronically by using the RFI Tab located on the Individual Projects Detail page.

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

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 "**Light Capital Paving Preservation in the Towns of Brownville and Milo.** will be received from contractors at the Reception Desk, Maine DOT Building, Capitol Street, Augusta, Maine, until 11:00 o'clock A.M. (prevailing time) on **May 1, 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 or Paving Prequalification, or project specific prequalification to be considered for the award of this contract. **We now accept electronic bids for those bid packages posted on the bidx.com 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.**

State Project: 028706.00, WIN 28706.00

Location: In Piscataquis County, project is in Milo and Brownville on Route 11 beginning at the intersection of Route 6 and extending northerly to 0.36 miles south of Van Horne Avenue. To also include the intersection of Pleasant Street and High Street in Milo.

Outline of Work: Light Capital Paving Preservation and other incidental work.

Total length is 7.74 miles.

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 **Tim Pelotte** 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 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.

Specifications and bid forms may be seen at the Maine DOT Building in Augusta, Maine. They may be purchased from the Department between the hours of 8:00 a.m. to 4:30 p.m. by cash, credit card (Visa/Mastercard) or check payable to Treasurer, State of Maine sent to Maine Department of Transportation, Attn.: Mailroom, 16 State House Station, Augusta, Maine 04333-0016. They also may be purchased by telephone at (207) 624-3536 between the hours of 8:00 a.m. to 4:30 p.m. Bid Book $10 ($13 by mail), payment in advance, all non-refundable.

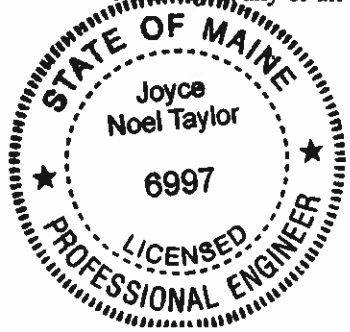
Each Bid must be made upon blank forms provided by the Department and must be accompanied by a bid bond at 5% of the bid amount or an official bank check, cashier's check, certified check, certificate of deposit, or United States postal money order in the amount of 5% of the bid amount, payable to Treasurer, 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 $20 [$25 by mail]. They also may be purchased by telephone at (207) 624-3536 between the hours of 8:00 a.m. to 4:30 p.m. Standard Detail updates can be found at http://www.maine.gov/mdot/contractors/publications/ .

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

Augusta, Maine
April 17, 2024



Joyce Noel Taylor

JOYCE NOEL TAYLOR P. E.
CHIEF ENGINEER

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)

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 028706.00 **Project(s):** 028706.00

SECTION: 1 HIGHWAY ITEMS

Alt Set ID: **Alt Mbr ID:**

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price Dollars	 Cents	Bid Amount Dollars	 Cents
0010	202.203 PAVEMENT BUTT JOINTS	1,275.000 SY				
0020	461.13 LIGHT CAPITAL PAVING	8,015.000 T				
0030	631.14 GRADER (INCLUDING OPERATOR)	80.000 HR				
0040	631.175 CONTRACTOR TRUCKING	8,015.000 T				
0050	631.212 SMALL PAVEMENT GRINDER (INCLUDING OPERATOR)	80.000 HR				
0060	652.352 LIGHT CAPITAL PAVING SIGNAGE	25.000 WD				

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, **WIN 28706.00 for Pavement Milling, Light Capital Paving Preservation with Drainage and Safety Improvements in the Towns of Brownville JCT. and Milo, County of Aroostook, 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, within **25** 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 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: **WIN 28706.00 for Pavement Milling, Light Capital Paving Preservation with Drainage and Safety Improvements in the Towns of Brownville JCT. and Milo, County of Aroostook,** 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: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Fifth: 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. This award consummates the Contract, and the documents referenced herein.

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, **WIN 28706.00 for Pavement Milling, Light Capital Paving Preservation with Drainage and Safety Improvements in the Towns of Brownville JCT. and Milo, County of Aroostook, 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, within **25** 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 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: **WIN 28706.00 for Pavement Milling, Light Capital Paving Preservation with Drainage and Safety Improvements in the Towns of Brownville JCT. and Milo, County of Aroostook,** 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: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Fifth: 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. This award consummates the Contract, and the documents referenced herein.

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. **1224.00**, 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, Revision of December 2002 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, Revision of December 2002, Standard Details Revision of December 2002, 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 Revision of December 2002 (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, Revision of December 2002, Standard Details Revision of December 2002, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

PIN 1234.00 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, Revision of December 2002, 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 Revision of 2002 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

_____ **(Sign Here)**
Date (Signature of Legally Authorized Representative of the Contractor)

_____ **(Witness Sign Here)** **(Print Name Here)**
Witness (Name and Title Printed)

G. Award.

Your offer is hereby accepted. This award consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

_____ _____
Date By: David Bernhardt, 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 la ws of the State of ..... and having a usual place of business ...., as Surety, are held and firm ly 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 m ade, Principa l and Surety bind them selves, their heirs, executors and adm inistrators, successors a nd 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 Num ber _____ in the Municipality of _____ prom ptly and faithfully perfor ms 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 altera tion or extension of time made by the State of Maine.

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

WITNESSES: 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.....	.....…….....

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 ..... …….....

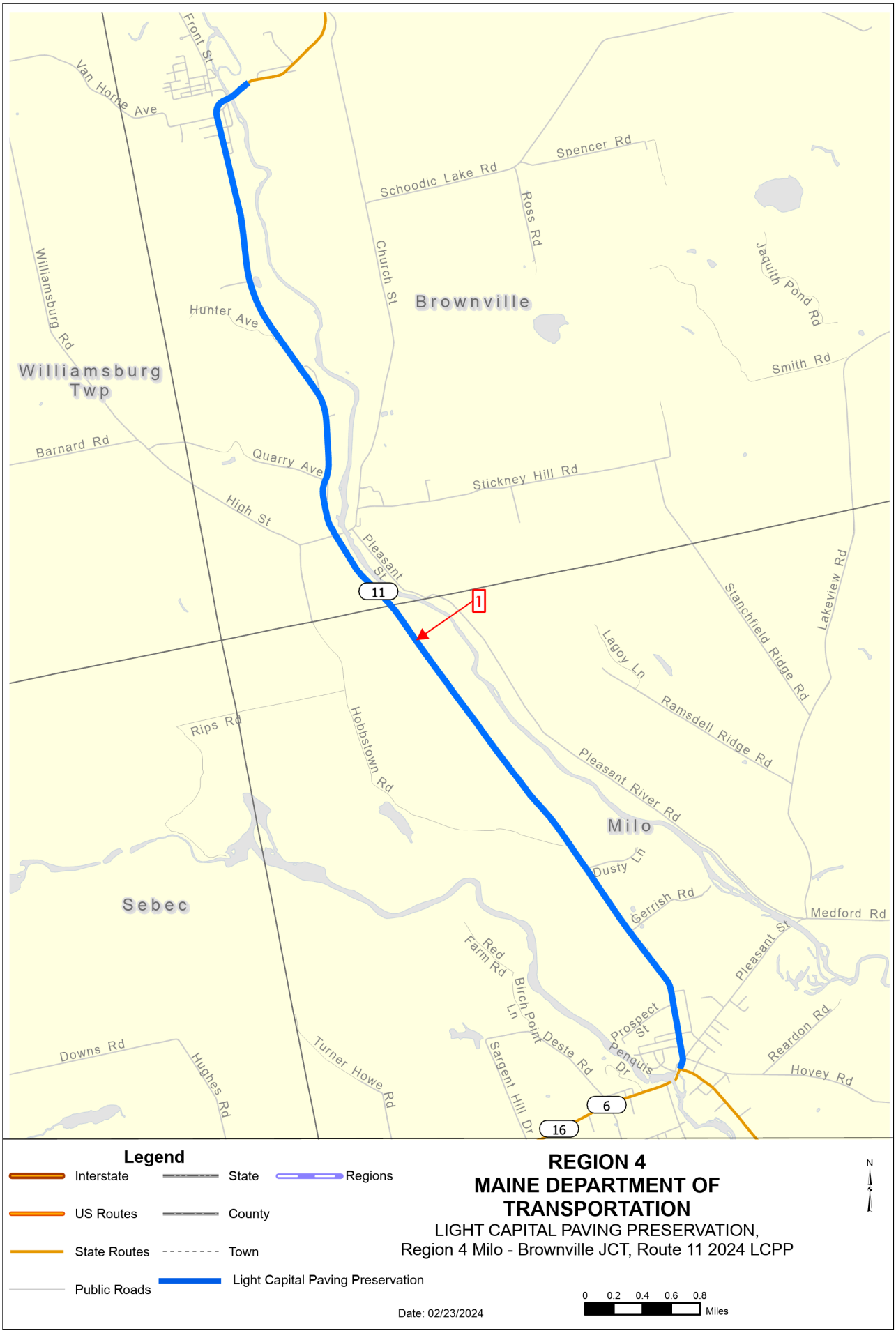
March 14, 2007
Supersedes March 3, 1966

Non-federal Projects Only

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).]


Front St
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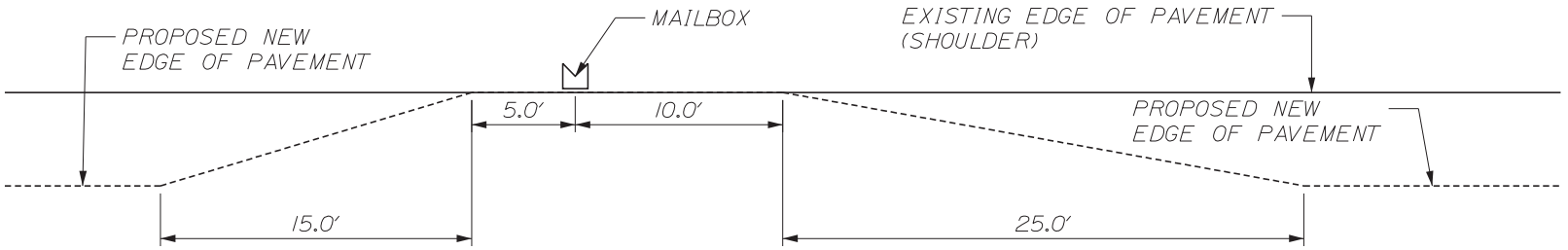
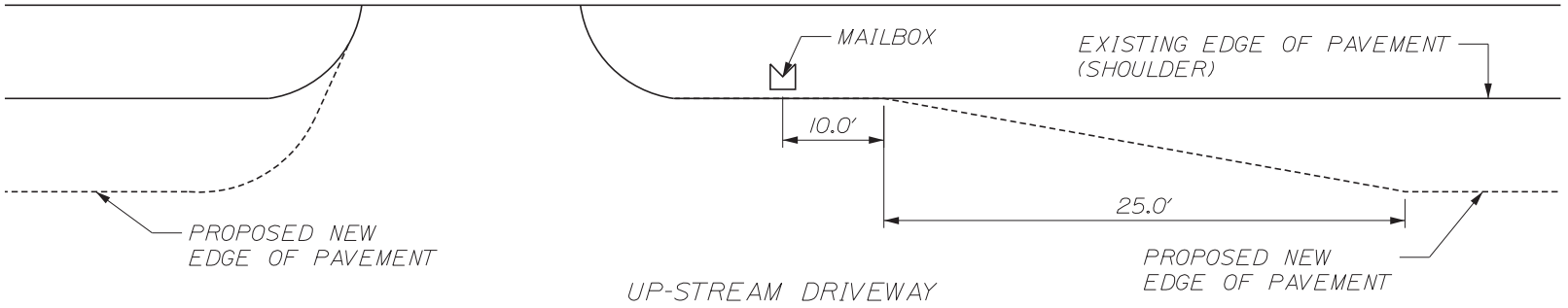
Schoodic Lake Rd
Spencer Rd
Ross Rd
Church St
Brownville
Jaquith Pond Rd
Smith Rd
Williamsburg Rd
Hunter Ave
Williamsburg Twp
Barnard Rd
Quarry Ave
Stickney Hill Rd
High St
Pleasant St
11
1
Stanchfield Ridge Rd
Lakeview Rd
Lagoy Ln
Ramsdell Ridge Rd
Rips Rd
Hobbstown Rd
Pleasant River Rd
Milo
Dusty Ln
Gerrish Rd
Medford Rd
Sebec
Red Farm Rd
Birch Point Ln
Deste Rd
Prospect St
Penquis Dr
Pleasant St
Reardon Rd
Hovey Rd
Downs Rd
Hughes Rd
Turner Howe Rd
Sargent Hill Dr
6
16
Legend
Interstate
State
Regions
US Routes
County
State Routes
Town
Public Roads
Light Capital Paving Preservation
REGION 4
MAINE DEPARTMENT OF TRANSPORTATION
LIGHT CAPITAL PAVING PRESERVATION,
Region 4 Milo - Brownville JCT, Route 11 2024 LCPP
Date: 02/23/2024
0 0.2 0.4 0.6 0.8
Miles
N

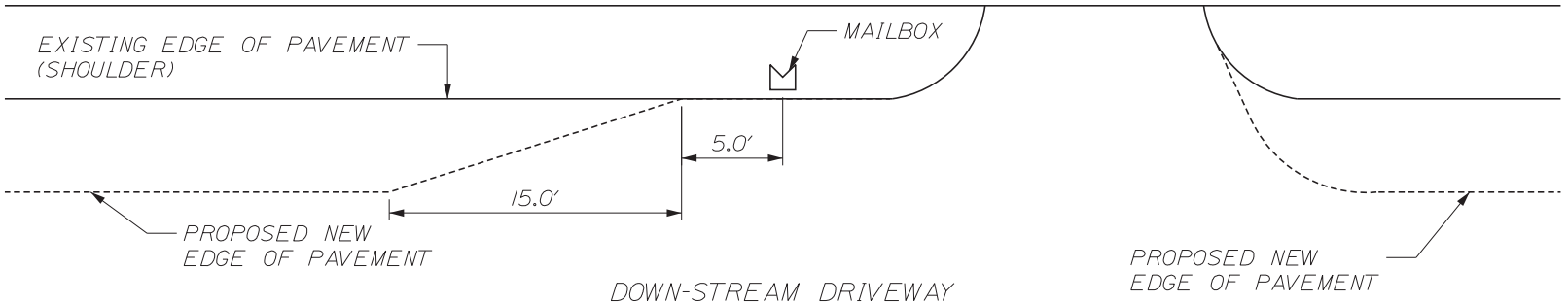
SHOULDER REDUCTION TYPICAL



NON-DRIVEWAY



UP-STREAM DRIVEWAY



DOWN-STREAM DRIVEWAY

NOT TO SCALE

MILO - BROWNVILLE JCT. ROUTE 11		STATE OF MAINE DEPARTMENT OF TRANSPORTATION	SHEET NUMBER 1 OF 1
TYPICAL SECTIONS	WIN 28706.00	28706.00 HIGHWAY PLANS	

CONSTRUCTION NOTES

631.14 Grader

The Grader will be used to back up newly paved shoulders.

631.212 Small Pavement Grinder (Including Operator)

To be used for reducing the width of the existing paved shoulders that are wider than 4 feet, excluding curb, guardrail, and business sections. Millings will be left in place and incorporated into the in-slope as directed by Resident. The contractor will narrow paved shoulders to 4-feet-wide from Gerrish Road to 0.13 miles north of the Milo – Brownville town line, and narrow paved shoulders to 3-foot-wide from 0.18 miles north of Church Street to 0.36 miles south of Van Horne Avenue. Shoulder pavement depths average 2".

Additional Work will be required at all driveways to pave the existing pavement width in these areas. See typical for details.

Town: **Milo-Brownville, Route 11**
Project: **28706.00**
Date: **April 10, 2024**

SPECIAL PROVISIONS
SECTION 104
Utilities

UTILITY COORDINATION

The contractor has primary responsibility for coordinating their work with utilities after contract award. The contractor shall communicate directly with the utilities 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 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 a project specification.

Utility/Railroad	Aerial	Sub-surface	Railroad	Contact Person	Contact Phone
Brownville Water & Sewer Dept.		X		Phillip Cook	965-2561
Central Maine & Quebec Railway (CP)			X	Charles Kretchman	(612)247-0706
Charter Communications	X	X		Robert Knapp	745-7653
Consolidated Communications	X	X		Travis Roberts	944-2361
Firstlight Fiber	X			Michael Ellingwood	333-3471
Milo Water & Sewer District		X		Adam F. LeProvost	943-2501
Premium Choice Broadband	X			Matt Montgomery	217-2991
Versant	X			David Perkins	941-6684

MDOT State Project Construction Superintendent: Jared Stanley 592-1627

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.

When/if shim course is placed, please ensure all utility structures are cleaned off.

All adjustments are to be made by the respective utility/railroad unless otherwise specified herein.

Fire hydrants shall not be disturbed until all necessary work has been accomplished to provide proper fire protection.

***** Specific information regarding the line voltage can be requested from* Versant.****

Utility working days are Monday through Friday. Times are estimated on the basis of a single crew for each utility. Any times and dates mentioned are **estimates only** and are dependent upon favorable weather, working conditions, and freedom from emergencies.

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.

There are approximately 3 forward anchors posing a safety hazard. The project will be reviewed and a plan to address these hazard forward anchors will be developed.

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

SUBSURFACE

Brownville Water & Sewer Department

The Brownville Water & Sewer Department has approximately **1 water gate valve** to adjust to grade. The Department intends to loosen and raise the gate valve prior to paving surface, and estimates **5 working days** to complete the adjustments. **The Contractor will be responsible to make final grade adjustments in conjunction with the paving operations.**
The Brownville Water & Sewer Department also has approximately **6 sewer manholes** within the project limits. The manholes are all located in the shoulder, and may not be adjusted.
The contractor shall provide **two weeks' notification** to the Department for any and all work to be performed by the Department.

Milo Water & Sewer District

The Milo Water & Sewer District has approximately 11 water gate valves to adjust to grade. The District intends to loosen and raise the gate valves prior to paving surface. The Milo Water & Sewer District also has approximately 12 sewer manholes within the project limits. Approximately 6 of the sewer manholes are located in the mainline, and the District intends to adjust the manholes to grade prior to paving surface. The remaining sewer manholes are located in the shoulders and may not be adjusted. The District estimates 20 Working Days to complete the adjustments. **The Contractor will be responsible to make final grade adjustments in conjunction with the paving operations.** The contractor shall provide two weeks notification to the District for any and all work to be performed by the District.

When/if shim course is placed, please ensure all utility structures are cleaned off.

In areas where the existing road width will be narrowed, if any sewer manhole, in part or in whole, extends beyond the edge of the paved shoulder, the Contractor shall leave approx. 1.5' of pavement around the manhole when removing excess shoulder pavement.

RAILROAD

Central Maine & Quebec Railway (Canadian Pacific) has 3 railroad crossings within the limits of the project. The Contractor shall grind up to and between the tracks as directed by the Project Manager at Rail Crossings #**051200Y (in Milo), #051197T and #051194X (in Brownville)**. The Railroad agrees to allow the Department to pave up to and between the tracks located within the Railroad's right-of-way, and the Department agrees to complete this work as part of this contract.

The Contractor shall keep all men, equipment and materials out of the railroad Right of Way (25 feet from the tracks) unless authorized by the railroad and/or a railroad Flagger is present. The contractor will be required to execute a Right-of-Entry License Agreement with the Railroad. **The Contractor MUST contact Charles Kretchman at least 15 days prior to work taking place near the railroad crossing**

No work shall be performed without prior notification and approval by the railroad. Reference the Special Provision for Protection of Railroad Traffic and Structures (PRTS) for additional requirements when working near the railroad. The Contractor must adhere to the PRTS and the Minimum Safety Requirements for Contractors Working on CP Property in the United States documents at all times when working near or within the Railroad Right of Way.

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.

APPENDIX E

PROTECTION OF RAILROAD TRAFFIC AND STRUCTURES
SPECIAL PROVISIONS

1. GENERAL REQUIREMENTS

Part of the work required by 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 a railroad or railroads. The Contractor agrees to perform all such work in compliance with all of the terms of this Special Provision, the CMQR Right of Entry License Agreement ("ROE Agreement") attached hereto and incorporated herewith, and all safety rules, regulations, or standards applicable to the Railroad. The Contractor shall be fully responsible for all damages arising from his failure to comply with the requirements of this Special Provision or the ROE Agreement. The Contractor shall be deemed to have included all costs in the unit prices of the Schedule of Prices and the Proposal.

2. AMOUNT OF RAILROAD WORK

The estimated amount of work to be done within **50** feet of the track of **Central Maine & Quebec Railway US Inc. ("CMQR")** is **1 %** of the contract.

3. NUMBER OF TRAINS AND TRAIN SPEED

The Contractor is notified that a maximum speed of 25 mph will be considered as prevailing for the operation of trains of the Railroad at this project and that the approximate number of trains per day at this project is 1.

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 Construction 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 this Special Provision, the ROE Agreement, or if the Chief Engineer of 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 the Department's Construction Manager a completed Stop Work Order form attached as Exhibit A within 24 hours of giving any such order.

6. WORK PLAN SUBMITTAL AND APPROVAL

The Contractor is required to execute the CMQR Right of Entry License Agreement and pay the associated fee. Payment will be incidental to the contract. The Contractor shall submit in writing to the Railroad's Chief Engineer or duly authorized representative, and the Department's Railroad Property Manager or his appointed representative, at least **15** calendar days in advance of the start of the project, an outline of his 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 Chief Engineer and the Department's Railroad Property Manager 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 this project shall be handled in conformance with existing traffic rules with all costs borne by the Contractor.

Prior to submitting their Proposal, the Contractor shall have ascertained from the Railroad and from the Department's Railroad Property Manager or his appointed representative, all information relating to its requirements and regulations and all costs in connection with compliance thereto.

7. 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 this Special Provision 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's Chief Engineer determines that the Contractor's operations do not comply with all of the safety requirements of this Special Provision or the ROE Agreement and all safety requirements and directions of said Chief Engineer, 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 the Department as specified in this Special Provision.

8. INSPECTION / FLAGGING

The Railroad shall furnish and assign all inspectors / flaggers for general inspection purposes of general protection of railroad property and operations during construction as the Railroad's Chief Engineer determines are necessary to preserve safety.

(a) Responsibility for Cost. The Department will bear the cost of flagging or inspection (including travel time) or any combination thereof up to **Any** man days of said flagging or inspection. If, in the opinion of the Railroad's Chief Engineer, 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 the Department, and will be recovered by the Department from the Contractor.

(b) Terms. The minimum hours per day for the Railroad employees engaged in inspection 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's Chief Engineer.

The Contractor shall notify the Railroad's Chief Engineer and the Chief Engineer of the Department in writing **14** calendar day(s) before beginning, resuming or suspending work within **50** feet of the track, so that an inspector may be provided or removed in accordance with the requirements of this Special Provision. An inspector may be removed upon **0** calendar days' notice. Failure to give notice of intent to suspend work shall be cause of charge to the Contractor the cost of inspection during the period when work is suspended.

(c) Contractor. Contractor supervisor will be designated as the MaineDOT Bridge Supervisor during construction. The supervisor shall sign the Daily Work Report that states "All repairs and/or modifications were supervised by me, and all work was in conformance with the specifications in the design."

(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 and personal expenses.

Date of estimate 03/26/2024

Estimated daily rate for four (4) consecutive hours Monday-Friday (straight time): $**1200/day**

Estimated daily rate for four (4) consecutive hours Saturday, Sunday, Holiday (overtime): **$225/hour**

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

Rates charged will be those in effect at the time of the performing the inspection/ flagging which may be different than the rates used at the date of the Estimate. The Railroad agrees to notify the Department 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 hour, Monday - Friday between the hours of **7:00** a.m. to **15:00** 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 charged in determining available man days.

9. OTHER CONTRACTOR RESPONSIBILITIES

The restoring and resurfacing of tracks, if disturbed due to 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.

10. EXTRA-CONTRACT SERVICES

Temporary and permanent changes of tracks and telephone, signal and electric supply lines made necessary by or to clear the permanent work of the Contractor as shown on the construction plans and included in the Railroad force account as recollectable from the State will be made or caused to be made by the Railroad without expense to the Contractor.

11. INSURANCE

In addition to any other forms of insurance or bonds required under the terms of the Contract, the Contractor will be required to procure and maintain, at its sole cost and expense, the insurance coverages naming the Railroad as an insured pursuant to Section 9 of the ROE Agreement.

12. ROADWAY WORKER SAFETY REGULATION

Notice to all Contractors/Subcontractors and individuals must be aware of the Federal Roadway Worker Safety Regulation, CFR 49, Part 214(c). They may be required to comply with this regulation. Any requirements for them to comply will be discussed at the pre-construction utility meeting.

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 Signature	Date
SECTION B - ACTION TAKEN:	

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

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	1 - Critical
Hazard Severity	I	1	1	2	3	2 - Serious
	II	1	2	3	4	3 - Moderate
	III	2	3	4	5	4 - Minor
	IV	3	4	5	5	5 - Negligible

RIGHT OF ENTRY LICENSE AGREEMENT

THIS LICENSE AGREEMENT (this **"Agreement"**) is made by and between **CENTRAL MAINE & QUÉBEC RAILWAY US** doing business as Canadian Pacific and **_____Add Your Company Name_____**.

1. PARTIES

CENTRAL MAINE & QUÉBEC RAILWAY US, a Delaware corporation doing business as Canadian Pacific with general offices at:

Address	Contact Info	
Canadian Pacific Plaza 120 South 6th St. – Suite 700 Minneapolis, Minnesota 55402	Name:	Charles Kretchman
	Phone:	(612)247-0706
	Fax:	
	Email:	Charles.kretchman@cpkcr.com

hereinafter called "**CP**,"

and **____Add Your Company Name_____**, a whose address is:

Address	Contact Info	
Add Your Address	Name:	Your Name
	Phone:	
	Fax:	
	Mobile:	
	Email:	

hereinafter called "**Licensee**."

2. PROPERTY; SCHEDULE; GRANT OF LICENSE

2.1 Property

CP hereby grants Licensee a license to enter in and upon certain property owned or controlled by CP in **Add Your City Location , Add Your State Location near railroad mile post Add MP +/-** on the **Add Subdivision Subdivision**, as shown upon the map labeled **Exhibit A** that is attached hereto and made a part hereof (the "**Property"**)

2.2 Work Schedule

for the sole for the purpose of performing, generally, the following activities: Add a Detailed description of your Work/Project (the **"Work"**), as detailed in Licensee's plans, specifications and special provisions. The Work is subject to approval by CP's authorized representative.

2.3 Grant of License

This license is granted subject to all the terms and conditions set forth below and applies to all Work and activities upon the Property that may be performed by Licensee through its employees, agents, and contractors. For the purposes of this Agreement, the actions and omissions of such employees, agents, and contractors shall be deemed the actions and omissions of Licensee.

2.4 Agreement to be Available at Work Site

Licensee shall keep a copy of this Agreement at the Work site and shall make it available upon demand by any employee or agent of CP.

3. TERM, EFFECTIVE DATE, EXPIRATION & TERMINATION

3.1 Term

The term of this Agreement shall

Commence at 12:01 am **on Add Your Start Date, 2020** (the "**Commencement Date**"); and

Expire at 11:59 pm **on Add Your End Date, 2020** (the "**Expiration Date**")

the "**Term**." Upon agreement between CP and Licensee, the Term may be lengthened or shortened without affecting any other provisions of this Agreement.

3.2 Effective Date

This Agreement shall be effective upon the date that it has been signed by both parties.

3.3 Expiration

This Agreement will expire at the Expiration Date, or when the Work is completed, whichever occurs first. Notwithstanding any other provision of this Agreement, the preceding sentence shall not terminate or limit any claim by CP against Licensee arising prior to the Expiration Date. If the Work includes monitoring wells, and if such wells remain on the Property after the Expiration Date, this Agreement shall remain in effect for those wells until the earlier of the following:

(i) the date they are properly closed (*i.e.*, sealed and abandoned in accordance with applicable legal requirements) by Licensee or

(ii) the date CP assumes ownership of such wells pursuant to section 10.8.

3.4 TERMINATION; EXCLUSION

NOTHWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED HEREIN, this Agreement is terminable by CP prior to the Expiration Date in the event Licensee breaches any of its obligations under this Agreement. The early termination of this Agreement shall not terminate or limit any claim by CP against Licensee arising prior to such termination. If Licensee is in breach of any of its obligations under this Agreement, any employee or agent of CP may order Licensee off the Property, in which case Licensee shall immediately leave the Property; moreover, Licensee shall leave the property immediately upon termination pursuant to this paragraph.

4. PAYMENTS

4.1 License Fee

In consideration of the permissions herein granted, Licensee shall with its execution hereof pay to CP the sum of **One Thousand Five Hundred Dollars ($1,500.00).**

4.2 Utilities

Licensee shall assume and timely pay for any gas, electrical, telephone, computer, sewer, water, storm water, waste or trash removal or any other service or commodity connected with the Work, collectively "**Utility Service**." If any Utility Service fee is in common with CP or other parties, Licensee shall be liable for its proportionate share of any such Utility Service Fee and upon receipt of a bill therefor, promptly pay CP or such other party for its share. It shall be a default of the terms of this license if it can be shown that Licensee has not made such payments within 30 days if due to CP, or within 60 days if payable to any other party.

4.3 Mechanics' And Materialmen's Liens

If any mechanics' or materialmen's lien, or similar lien, is asserted against the Property, or any other property of CP, as a consequence of the Work, Licensee shall immediately satisfy, defend, or obtain the release of such lien, all at Licensee's expense, and Licensee shall indemnify and defend CP against any Claims arising out of or connected with such lien.

4.4 Additional Charges

Licensee shall within 30 days of receipt of a bill therefor, pay to CP costs for flagging, track changes or damage, or other such charges as may be provided by this Agreement or that CP may reasonably impose in connection with Licensee's Work.

4.5 Due Dates; Penalties; Other Charges

4.3.1 ***Due Dates***

Any item, submission or payment required to be made shall be deemed timely made if received by the other party on or before the specified due date, or prior to expiration of the applicable period for compliance, submission or payment.

4.3.2 ***Late Fees***

In addition to any amounts payable by Licensee to CP, Licensee shall pay CP a late fee for any payment not timely made by Licensee. The late fee shall be at the rate for overdue accounts set by CP's Accounting Department that is in effect at the time that that any such payment is due. Said late fee shall initially be an amount equal to 1% of the invoice amount per month.

4.3.3 ***Fines and Service Fees***

In addition to any other amounts payable by Licensee to CP, Licensee shall pay CP for any bank fines or service incurred by it in connection with the handling, non-payment, return or currency conversion incurred by CP in connection with processing of any payment made by Licensee to CP.

4.6 Work At No Cost To CP

The Work completed by Licensee shall be performed at no cost to CP.

5. CONTACT, NOTICES, ETC.

5.1 Contact Persons; Communications

Communications pursuant to this Agreement shall be directed to the contact persons designated in Section 1 or their designees. Either party may change its contact person, or the address(es), telephone number, or fax number for the contact person, by notice to the other party.

5.2 Notices

Except as otherwise provided in this Agreement, all notices pursuant to this Agreement shall be in writing and shall be effective upon delivery to the address or fax number of the contact person for the party to whom notice is being given. If notice is given by fax, the notice shall not be deemed effective until received in legible form.

5.3 Notification Prior To Beginning Work

Licensee must notify CP's contact person by telephone at least three working days prior to beginning any separate phase of the Work, and again promptly after such phase of the Work has been completed.

6. PERMITTED & PROHIBITED USES; RIGHTS OF CP

6.1 Permitted Uses

6.1.1 ***The Work***

The use of Property by Licensee shall be limited to the completion of the Work set forth in Section 2.2., or such other activities as may be approved by CP in writing.

6.1.2 ***Government Authorities***

Licensee may permit governmental authorities other than Licensee with jurisdiction over the Work to enter the Property for the purpose of inspecting or monitoring the Work. Whenever possible, Licensee shall advise CP (by telephone or other means calculated to bring the matter to CP's immediate attention) prior to permitting such governmental authorities to enter the Property for such purposes. The actions and omissions of such governmental authorities while on the Property for such inspections and monitoring shall be deemed the actions and omissions of Licensee. Licensee is not authorized to permit governmental authorities other than Licensee to enter the Property for any other purpose.

6.2 Prohibited Uses and Activities

Licensee shall not use, occupy or permit the Property to be used for any purpose, activity or improvement except as provided in this Agreement or as may be approved of in writing by CP. Specifically, Licensee shall not:

6.2.1 ***Advertising***

permit any advertisements or signs upon the Property;

6.2.2 ***Use of Hazardous Substances***

without prior written disclosure to and approval by CP, Use or authorize the Use of any Hazardous Substance on the Property, including installation of any above or underground storage tanks; subject thereto, Licensee shall arrange at its own cost for the lawful transportation and off-site disposal of any and all Hazardous Substances that it shall Use or generate;

6.2.3 ***Use of Premises for waste treatment or as storage or disposal facility***

cause or allow the Property or any of CP's adjacent property to become a hazardous waste treatment, storage or disposal facility within the meaning of, or to otherwise bring any such property within the ambit of the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq. or any similar state statute or local ordinance; or

6.2.4 ***Subleasing is prohibited***

sublease the Property or the permissions or rights herein granted in any manner or form.

6.3 Reservations and Rights of CP

6.3.1 ***Railroad Activities Take Priority over Work***

All Work by Licensee shall always and all times be subordinate to the needs of CP in connection with the operation and movement of railroad trains and equipment, and the repair of railroad track, structures, communications and appurtenances thereto.

6.3.2 ***Reservation of prior and future uses not inconsistent with Licensee's activities***
The rights herein granted to Licensee are subject to the rights granted in all other licenses, permits and easements for tracks, roads, walkways, poles, wires, pipelines, sewers, billboards and other improvements that exist or may be placed upon, across, above or underneath the Property by CP, or its employees, agents, licensees, grantees, representatives or invitees. Further, CP reserves unto itself the right to place (or to give others the right to place) additional tracks, roads, walkways, poles, wires, pipelines, sewers and billboards upon, across, above or underneath the Property in any manner that does not unreasonably interfere with Licensee's Work.

6.3.3 ***Monitoring***
CP may elect to be present during the conduct of the Work and to monitor same.

7. COVENANTS, CONDUCT & RESPONSIBILITIES

7.1 Definitions

7.1.1 "**Claim**" or "**Claims**" means any and all liabilities, suits, claims, counterclaims, causes of action, demands, penalties, debts, obligations, promises, acts, fines, judgments, damages, consequential damages, losses, costs, and expenses of every kind (including without limitation any attorney's fees, consultants' fees, response costs, remedial action costs, cleanup costs and expenses which may be related to any Claims);

7.1.2 "**Environmental Law**" or "**Environmental Laws**" means the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9601 et seq., the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq., the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq., the Clean Water Act, 33 U.S.C. '§1321 et seq., the Clean Air Act, 42 U.S.C. § 7401 et seq., the Toxic Substances Control Act, 15 U.S.C. § 2601 et seq., all as amended from time to time, and any other federal, state, local or other governmental statute, regulation, rule, law, ordinance, order or decree dealing with the protection of human health, safety, natural resources or the environment now existing or hereafter enacted;

7.1.3 "**Hazardous Substance**" or "**Hazardous Substances**" means any pollutant, contaminant, hazardous substance or waste, solid waste, petroleum product, distillate, or fraction, radioactive material, chemical known to cause cancer or reproductive toxicity, polychlorinated biphenyl or any other chemical, substance or material listed or identified in or regulated by any Environmental Law;

7.1.4 "**Release**" or "**Released**" means any actual or threatened spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, disposing or spreading of any Hazardous Substance into the environment, as "environment" is defined in CERCLA;

7.1.5 "**Response**" or "**Respond**" means action taken in compliance with Environmental Laws to correct, remove, remediate, cleanup, prevent, mitigate, monitor, evaluate, investigate, assess or abate the Release of a Hazardous Substance;

7.1.6 "**Use**" means to manage, generate, manufacture, process, treat, store, use, re-use, refine, recycle, reclaim, blend or burn for energy recovery, incinerate, accumulate speculatively, transport, transfer, dispose of, or abandon.

7.2 Investigation; Compliance with Laws; Safety Requirements

7.2.1 *Tenants and Licensees in possession of Property*

Before entering the Property, Licensee shall secure the consent of all persons or entities who are using or occupying any portion of the Property. CP will cooperate with Licensee to obtain consent from any such person or entity who unreasonably withholds consent.

7.2.2 *Underground Utilities and Structures*

a. Licensee shall be responsible for determining the location of all underground utilities (electric lines, telephone lines, gas lines, steam lines, sewer lines, water lines, fiber optic cables, pipes, wires, and the like) and underground structures.

b. Licensee shall call **CPCBYD "Canadian Pacific Call before You Dig"** at **1-866-291-0741 for Signal, Fiber Optics, and Power for CP Facilities on Canadian Pacific Right of Way and the STATE "ONE CALL"** a minimum of 5 business prior to commencing any excavation or boring on the Property.

c. CP will cooperate with Licensee to identify the location of underground utilities and structures known to CP, but such cooperation shall not relieve Licensee from its primary responsibility to determine the locations of such utilities and structures.

7.2.3 *Permits And Licenses; Compliance With Laws*

Licensee shall secure, at no expense to CP, any permits or licenses required in connection with the Work and shall comply with all laws applicable to the Work and the Property, including (but not limited to) any laws, standards, regulations, and permit requirements relating to environmental pollution or contamination or to occupational health and safety. Licensee shall indemnify and defend CP against any and all Claims arising out of or connected with the violation of any law by Licensee while on or about the Property.

7.2.4 *Compliance with CP Safety Requirements; Identification*

a. While on the Property, Licensee shall comply with the safety requirements of CP, as such requirements may be amended from time to time during the duration of the Work, all at no expense to CP. CP's safety requirements are set forth "**Exhibit B**" titled "**MINIMUM SAFETY REQUIREMENTS FOR CONTRACTORS WORKING ON RAILWAY PROPERTY"** and in CP's current safety handbook. One free copy of the current safety handbook will be provided to Licensee by the CP contact person. Additional copies will be provided at Licensee's expense. Licensee shall be responsible for ensuring that any person performing any of the Work for or on behalf of Licensee shall comply with the CP safety requirements that would apply to a CP employee performing similar work.

b. Prior to any entry onto the Property, Licensee and every employee, agent or subcontractor who carries out any part of the Work on the Property shall successfully complete the safety training available through the e-railsafe program at www.e-railsafe.com in respect to requirements for Canadian Pacific operations.
<if *applicable*>

c. Licensee and every employee, agent or subcontractor who carries out any part of the Work on the Property shall at all times wear and visibly display the identification badge issued to them following successful completion of the e-railsafe safety training together with whatever additional identification materials that CP may reasonable require.

7.3 Work In Close Proximity To Railroad Operations; Drainage

7.3.1 ***Interference with Railroad Operations***

Licensee shall keep CP fully apprised of its proposed activities on the Property so as to prevent any interference with the operations of CP's trains or equipment (or trains or equipment of others) operating on or near the Property.

7.3.2 ***Clearance***

No work shall be done or any equipment or other obstruction placed over or within 25 feet laterally of the centerline of any track without advance notification to CP prior to performing such work or placing such equipment or obstruction.

7.3.3 ***Flagging***

Licensee must make arrangements with CP for such flagging or watchman service as CP deems necessary for the protection of railroad traffic. All such flagging and watchman service shall be provided by CP at Licensee's expense. The fact that CP provides such service shall not relieve Licensee from any liability under this Agreement. CP's labor and material additives are subject to change without notice to Licensee, and CP shall be reimbursed based upon its labor and material additives actually in effect as of the date of such service.

7.3.4 ***Certain Work Close To Track Not Permitted; Lateral Support***

a. Unless otherwise agreed to in writing by CP, excavations, borings, wells, pits, test holes, probe sites, and the like shall not be located closer than 25 feet from the centerline of the nearest railroad track on or adjacent to the Property nor shall it take or allow any action upon the Property that would materially impair the lateral or subadjacent support of adjacent lands or railroad tracks.;

b. Unless otherwise agreed to in writing by CP, drilling and excavating equipment and related equipment shall not be located closer than 25 feet from the nearest rail of any such track;

c. In the event that CP permits excavations, borings, wells, pits, test holes, probe sites, or the like in close proximity to tracks, embankments or other features providing lateral or subadjacent support to land or tracks, then notwithstanding anything to the contrary in this license, Licensee shall be responsible for designing and constructing at no cost to CP any measure that is required to prevent the collapse, erosion or impairment to said land or tracks.

7.3.5 ***Storm Water***

Licensee shall not, without the advance written approval of CP, make any changes to the Property that would either increase the historic flow rate of storm water from the Property or create an impediment to the historic flow of storm water to the Property. Unless otherwise agreed in writing, as between CP and Licensee it is understood and agreed that Licensee shall, at Licensee's cost and expense, be responsible for the construction, maintenance, repair and replacement upon the real property or other land not belonging to CP such storm sewer lines, manholes, mains, rip rap, boulders, wing walls, ditches and related to improvements required for Licensee's compliance with this section.

7.3.6. **Fencing** *<If applicable>*

Licensee shall, at no cost to CP, construct and maintain during the term hereof a fence acceptable to CP in the location(s) designated on Exhibit A. Following completion of the Work, the Licensee shall remove the fencing, remove any post footings or concrete, and fill and tamp any post holes with clean fill material.

7.4 Conduct

7.4.1 *Property clean, safe and free from nuisances*

Licensee shall not permit the existence of any nuisance upon the Property and shall at all times keep the Property in a proper, clean, safe and sanitary condition, and free from accumulations of waste materials, debris or refuse.

7.4.2 *Release of Hazardous Substances*

Licensee shall not cause or allow the Release or threat of Release of any Hazardous Substance on, to, or from the Property.

7.4.3 *Response Actions*

Licensee shall promptly take all necessary action in Response to any Release or Use of a Hazardous Substance at the Property caused by, or attributable to, any act or omission of Licensee (or Licensee's employees, agents, representatives or invitees) that could:

a. give rise to any Claim under any Environmental Law,
b. cause a public health or workplace hazard, or
c. create a nuisance.

7.5 Required Notices/Disclosures

7.5.1 *Transportation and Disposal Contracts*

Licensee shall, upon written request by CP, provide CP with copies of transportation and disposal contracts and manifests for Hazardous Waste, any permits issued under any Environmental Laws, and any other documents demonstrating that Licensee has complied with all Environmental Laws relating to the Property

7.5.2 *Releases or Suspected Releases*

Licensee shall promptly notify CP of any actual or suspected Release of any Hazardous Substance on, to, or from the Property, regardless of the cause of the Release.

7.5.3 *Notices, summons citations, etc.*

Licensee shall promptly provide CP with copies of all summons, citations, directives, information inquiries or requests, notices of potential responsibility, notices of violation or deficiency, orders or decrees, claims, causes of action, complaints, investigations, judgments, letters, notices of environmental liens or Response actions in progress, and other communications, written or oral, actual or threatened, from the United States Environmental Protection Agency, the United States Occupational Safety and Health Administration, or other federal, state or local agency or authority, or any other entity or individual, concerning:

a. any Release of a Hazardous Substance on, to or from the Property,
b. the imposition of any lien on the Property, or
c. any alleged violation of or responsibility under any Environmental Law relating to the Property.

7.5.4 *Other Reports*

Licensee shall, at CP's option, provide CP, at no cost to CP, a copy of any other report, summary or written test results, collectively "**Report**," pertaining to the Work. If any such Report is to be filed or made available to any governmental agency, other than Licensee, acting in a regulatory capacity, other than Licensee, then Licensee shall also give CP a reasonable time (not less than 5 working days) to review and comment on a draft of such Report and when preparing any such final Report pertaining to the Work, Licensee or its contractor shall give due consideration to CP's comments with respect to the draft of that Report. Licensee will promptly provide CP with a copy of any final Report.

7.6 CP's right to Participate in Response Actions

Following receipt of any notice, order, claim, investigation, information request, letter, summons, citation, directive, or other communication identified in section 7.5.3 in connection with any action taken pursuant to section 7.4.3, Licensee shall notify CP of any and all investigations, telephone conferences, settlement discussions, remediation plans and all other interactions, direct or indirect, with governmental or regulatory officials, and Licensee shall take all action necessary to ensure that any indemnification, release, waiver, covenant not to sue, or hold harmless agreement benefiting Licensee and arising out of such activities, whether from a governmental or regulatory entity or from a private entity, also benefits CP to at least the same extent as Licensee.

7.7 Restoration of Property

Upon completion of the Work or expiration or early termination of this Agreement, whichever occurs first, Licensee shall remove any debris resulting therefrom and shall restore the Property to the condition it was in prior to the commencement of the Work (or such other condition as is satisfactory to CP). All excavations are to be backfilled and tamped. All borings shall be backfilled with grout. Drill cuttings shall not be used as backfill. Licensee shall dispose of all drill cuttings, soil and sediment samples, purge water, dewatering effluent, and water samples and all excess excavation material in a manner acceptable to CP and in accordance with all applicable laws, all at no expense to CP.

8. LIABILITY

8.1 Damage to CP Tracks, Facilities, and Equipment

If any tracks, facilities, or equipment owned, used, or maintained by CP are damaged in connection with the Work, CP shall repair (or arrange for the repair of) such damage and Licensee shall pay the full cost of such repair within 30 days after CP shall tender a bill therefor.

8.2 Assumption of Risk

Licensee is fully aware of the dangers of working on and about railroad property and railroad operations and knowingly and willingly assumes the risk of harm (e.g., injury to or death of persons and damage to or destruction of property) that may occur while on and about the Property. Without in any way limiting the scope of the preceding sentence, Licensee assumes the risk that monitoring wells, elevation bench marks, reference points, and other installations located on the Property may be disturbed, damaged, or destroyed by CP or third persons, and Licensee shall not make any claim against CP on account of same, even if such disturbance, damage, or destruction arises from the negligence of CP or its employees, agents, or invitees. Licensee assumes full responsibility for protecting its installations and personal property from theft and vandalism while such installations and personal property are on the Property.

8.3 Indemnity

To the maximum extent permitted by applicable law, Licensee shall indemnify and defend the Indemnified Parties (as defined below) against all claims, demands, actions, suits, judgments, losses, damages, penalties, fines, and sanctions (collectively, "Claims") arising out of or relating to any destruction of (or damage to) any property or natural resource, any injury to (or death of) any person, or any environmental pollution or contamination whatsoever, where such destruction, damage, injury, death, pollution, or contamination actually arises in whole or in part from the Work, any action or omission of Licensee while on or about the Property pursuant to this Agreement, or the exercise by Licensee of the license granted by this Agreement. As used in this Agreement, Indemnified Parties means the following businesses and their officers, directors, employees, and agents: Soo Line Corporation, Soo Line Railroad Company, Delaware and Hudson Railroad Corporation, Dakota, Minnesota and Eastern Railroad Corporation, Soo Line Corporation, Wyoming, Dakota Railroad Properties, Inc., Central Maine & Quebec Railway, The Milwaukee Motor Transportation Company, Hiawatha Transfer Company, and Canadian and Pacific Railway Company, and their respective parent companies, subsidiaries, and affiliated companies, and any railway company or contractor operating trains or rail equipment upon railway tracks in close proximity to the Property, together with the parent companies, subsidiaries, and affiliated companies of all of the foregoing.

9. INSURANCE

Licensee shall, at its own expense, obtain and maintain during the Term and prior to entering the Property, in a form and with an insurance company satisfactory to CP, policies of:

(a) **Commercial General Liability** (C.G.L.) insurance with a limit of not less than Ten Million Dollars ($10,000,000) for any one loss or occurrence for personal injury, bodily injury, or damage to property including loss of use thereof. This policy shall by its wording or endorsement include without limitation the following: NOTE – For large projects that are high risk, please confirm with Risk Management whether $10M CGL is sufficient or if a higher limit and/or additional requirements are necessary.

(i) CP and its associated or affiliated subsidiaries (and the Directors, Officers, employees, agents and trustees of all of the foregoing) as an additional insured with respect to obligations of the Licensee in this Agreement;

(ii) "cross liability" or "severability of interest" clause which shall have the effect of insuring each entity named in the policy as an insured in the same manner and to the same extent as if a separate policy had been issued to each;

(iii) blanket contractual liability, including the insurable liabilities assumed by the Licensee in this Agreement;

(iv) broad form products and completed operations;

(v) sudden and accidental pollution liability, if applicable;

(vi) shall not exclude property damage due to explosion, collapse, and underground hazards; and

(vii) shall not exclude operations on or in the vicinity of the railway right of way.

(b) **Automobile Liability** insurance covering bodily injury and property damage in an amount not less than Two Million Dollars ($2,000,000) per accident, covering the ownership, use and operation of any motor vehicles and trailers which are owned, non-owned, leased or controlled by the Licensee and used in regards to this Agreement.

(c) **Workers Compensation** insurance which shall be in strict accordance with the requirements of the most current and applicable state Workers Compensation insurance laws, and Employers' Liability insurance including Occupational Disease insurance with limits of not less than One Million Dollars ($1,000,000) each accident/each employee, and where appropriate coverage under said policies to be extended for liability under the FELA, USL&H Act, and the Jones Act. The Licensee shall, before any services are commenced under this License submit written evidence that it has obtained full Workers Compensation insurance coverage for persons whom it employs or may employ in carrying out the services under this License. CP and its associated or affiliated companies (and the Directors, Officers, employees, agents and trustees of all of the foregoing) shall be waived of any and all subrogation in the event of injury, death, losses, incidents, claims and potential claims.

(d) **Contractor's Pollution Liability** insurance, including naming CP and its associated or affiliated subsidiaries (and the Directors, Officers, employees, agents and trustees of all the foregoing) as an additional insured, with a limit of not less than Two Million Dollars ($2,000,000) for any one loss or pollution event. Coverage shall include, but not be limited to, claims for bodily injury, death, damage to property including the loss of use thereof, clean-up costs and associated legal defense expenses arising from pollution conditions caused by, and/or exacerbated by, services performed by the Licensee on behalf of CP. The policy shall be endorsed to contain a blanket contractual liability endorsement. If this policy is written on a "claims-made" basis it shall remain in effect for no less than twenty-four (24) months after the expiry or termination of this Agreement. IF APPLICABLE – DEPENDS ON SCOPE OF WORK BEING PERFORMED – CONFIRM WITH RISK MANAGEMENT

(collectively, the "**Insurance Coverage**").

Licensee agrees that the insurance requirements set out herein shall not limit or restrict its liabilities pursuant to this Agreement.

The Insurance Coverage required to be maintained pursuant to this Agreement shall be primary and not excess of any other insurance that may be available. Unless otherwise provided above, all insurance coverage shall take place in the form of an occurrence basis policy and not a claims made policy.

Licensee shall waive any and all subrogation in the event of injury, death, losses, incidents, claims and potential claims where permissible under the insurance policies required under this Insurance Section.

Licensee shall provide CP with written notice and all reasonable particulars and documents related to any damages, losses, incidents, claims, and potential claims concerning this Agreement as soon as practicable after the damage, loss, incident, or claim has been discovered. Licensee is responsible for any deductible and excluded loss under any insurance policy. The deductible in any insurance policy shall not exceed such maximum amount that a reasonably prudent business person would consider reasonable.

The Insurance Coverage shall be endorsed to provide CP with not less than thirty (30) days written notice in advance of cancellation.

Before Licensee enters the Property, CP must receive and approve certificates of insurance evidencing the Insurance Coverage outlined in this Section. Licensee may be required to annually provide a copy of updated certificate(s) of insurance evidencing the renewal of the above Insurance Coverage. Such certificate(s) of insurance shall be sent via email to matthew_miller@cpr.ca. Upon request, Licensee shall provide CP with certified copies of the insurance policies.

CP shall have no obligation to examine such certificate(s) or to advise Licensee if its Insurance Coverage is not in compliance with this Agreement. Acceptance of any certificate(s) which are not compliant with the requirements set out herein shall in no way whatsoever imply that CP has waived its insurance requirements.

CP reserves the right to require Licensee to obtain additional insurance where, in CP's reasonable opinion, the circumstances so warrant. If the Licensee fails to maintain the Insurance Coverage required in this Agreement, CP may, at its option, terminate this Agreement without notice.

10. ENTIRE AGREEMENT

10.1 Survival of Indemnity Provisions

The indemnification provisions of this Agreement shall survive its expiration or termination.

10.2 Mere License

The permission encompassed by this Agreement is a mere license to use the Property for the specified purpose and does not create any estate or interest in the Property.

10.3 No Warranty of Title

CP does not warrant that it has good title to the Property.

10.4 Assignment; Binding Effect

This Agreement may not be assigned by Licensee without the advance written consent of CP. Subject to the preceding sentence, this Agreement shall be binding upon, and inure to the benefit of, the parties' respective successors and assigns.

10.5 Governing Law

This Agreement shall be construed in accordance with the laws of the state of Minnesota.

10.6 Entire Agreement

This Agreement is the full, complete, and entire Agreement of the parties with respect to the subject hereof, and any and all prior writings, representations, and negotiations with respect to those subjects are superseded by this Agreement.

10.7 Headings

The headings used in this Agreement are provided solely as a convenient means of reference. They are not intended to, and do not, limit or expand the purpose or effect of the paragraphs to which they are appended. The headings shall not be used to construe or interpret this Agreement.

10.8 Singular and Plural

As used in this Agreement, the singular form of a word includes the plural form of that word, and vice versa, and this Agreement shall be deemed to include such changes to the accompanying verbiage as may be necessary to conform to the change from singular to plural, or vice versa.

10.9 Duplicate Copies and Counterparts

This Agreement may be executed in counterparts, which together shall constitute one and the same document. The parties may execute more than one copy of this Agreement, each of which shall constitute an original.

11. SIGNATURES.

THE PARTIES HERETO have executed this Agreement as evidence of their agreement to the terms herein.

Your Company Name	**SOO LINE RAILROAD COMPANY** *doing business as* Canadian Pacific
By _____	By _____
Its Your Name	Its Charles Kretchman Supervisor- Public Works
Date	Date

EXHIBIT A
Map of the Property

An Example for your reference
Cut and Paste a Copy and ADD a map of the location of the project

EXHIBIT B
Minimum Safety Rules for Work on Railroad Property

Minimum Safety Requirements for Contractors Working on CP Property in the United States

Approval Authority:	Corporate Risk	**Effective Date:**	October 1, 2018
Version:	3.0	**Revision Date:**	October 1, 2021

Table of Contents

Introduction

At Canadian Pacific (CP), safety is an integral part of the way we do business. We expect everyone working on Canadian Pacific's property to be unconditionally committed to safety. Safety must be given top priority and will take precedence over deadlines, production schedules, and all other considerations.

1 Application

1.1 Application

1.1.1 These Minimum Safety Requirements are applicable to all who work on CP property (except as noted in 1.13 and 1.14 below) including Contractors and other persons performing Work or otherwise providing services to Canadian Pacific on CP Property in the United States.

1.1.2 These Minimum Safety Requirements cannot be waived or altered, in whole or in part, without a prior Risk Assessment specific to the Work being conducted, and written consent has been provided by Manager-in-Charge.

1.1.3 Notwithstanding the foregoing, these Minimum Safety Requirements do not apply to other railroad companies who only operate trains on CP Property under various trackage or interchange agreements.

1.1.4 Further notwithstanding the foregoing, these Minimum Safety Requirements may not apply to Work or services provided in CP office premises, in which case, CP's Minimum Safety Requirements for Contractors Working in CP Offices may apply.

2 Definitions and Interpretation

2.1 Definitions

2.1.1 In these Minimum Safety Requirements, the following capitalized terms shall have the ascribed meaning below:

(a) "**Applicable Legislation**" means all applicable legislation, regulations, by-laws, codes, rules, standards, policies, procedures, promulgated by any federal, state, and municipal governmental body, including those of its agencies, having authority over CP and, or a Contractor in relation to the Work in the matter of health and safety of the person, property and, or the environment;

(b) "**Canadian Pacific**" or "**CP**" means Canadian Pacific Railway Company Ltd., and its subsidiaries and affiliates, and includes each of their respective directors, officers, employees, agent, and representatives;

(c) "**CP Personnel**" means CP's employees, agents, and representatives;

(d) "**CP Property**" means any building, facility, yard, track, right of way or other property owned or controlled by CP;

(e) "**Contractor**" means the company or person, and their respective employees and authorized agents, representative and subcontractors who are providing goods or services to CP; or on behalf of a third party working on CP property.

(f) "**Contractor Personnel**" means the Contractor's employees, and authorized agents, representative and subcontractors;

(g) "Co-mingled Work" means Work where Contractor Personnel works directly with or, in close proximity (time or space) to CP Personnel;

(h) **"eTest"** an efficiency test. It is a planned procedure to evaluate compliance with rules, instructions and procedures, with or without the employee's knowledge.

(i) **"Foul of Track"** means the placement of an individual or equipment within 4' feet of the outside rail of a railway track that could be struck by a moving train or on- track work equipment (e.g. Hi-rail equipment).

(j) "**Hazardous Materials**" means any substance, which is hazardous to persons or property and includes, without limiting the generality of the foregoing:

(i) radioactive, explosive, poisonous, or toxic substances;
(ii) any substance that if added to any water, would degrade or alter the quality of the water to the extent that it is detrimental to its use by man or by any animal, or plant;
(iii) any solid, liquid, gas or odor or combination of any of them that, if emitted into the air, would create or contribute to the creation of a condition of the air that endangers the health, safety, or welfare of persons, or the health of animal life, or causes damage to plant life or to property; and
(iv) substances declared to be hazardous, toxic or dangerous under any law or regulation now or hereafter enacted by any governmental authority having jurisdiction.

(k) "**Manager-in-Charge**" means a CP manager as designated or otherwise identified by CP as being responsible for overseeing the Work to be performed, such Manager-in-Charge may include, but is not limited to Local CP Management, Superintendents, Chief Engineers, and Project Managers.

(l) "**Mobile Equipment**" means any motorized and self-propelled equipment, excluding railroad equipment and highway vehicles, but including, for example, forklifts, tractors, cranes, ATVs, mules, motorized scissor lifts, telescopic boom lifts, and similar equipment that are not designed to operate or move on railroad tracks;

(m) "**Office Premises**" means any building, facility, or portion thereof, or other premises, whether owned or controlled by CP, which is used solely for clerical or administrative purposes and which does not contain heavy equipment or machinery, as designated by CP from time to time;

(n) "**Qualified and Authorized**" means a status attained by a person who has successfully completed any required training and demonstrated proficiency in the duties of a particular position or function and who has been given the right to act.

(o) "**Railroad Equipment**" means trains, locomotives, railcars, on track equipment (track units), hi-rail vehicles and any other equipment designed to operate or move on railroad tracks;

(p) **"Site Safety Plan**" means a documented plan which set out how Work is to be conducted in a safe manner, as required by Applicable Legislation, see 3.15 c);

(q) **"Third Party Project"** means any work being performed on CP property that CP is not managing (i.e, road authority, utility company, commuter agency, or other similar entity, are on CP property for their own purposes, and not a project sponsored or managed by CP.

(r) "**Work**" means the provision of products and services and related activities;

(s) "**Work Site**" means any CP Property where CP Personnel or Contractor Personnel are present, or permitted to be present, while engaged in any Work, including any railroad equipment, mobile equipment and highway vehicles operated by or used to convey a person engaged in such Work. This applies also to work immediately adjacent to CP property which can pose a risk to safe railway operations (i.e., blasting, excavation next to ROW, etc).

2.2 Interpretation & Application

2.2.1 Where legislation is referred to in these Minimum Safety Requirements, it shall include all amendments and replacements thereto as promulgated from time to time.

2.2.2 Where standards, such as those of the American National Standards Institute (ANSI), are referred to in these Minimum Safety Requirements, they shall include all amendments and replacements thereof from time to time.

2.2.3 Where there is any ambiguity, inconsistencies, or omissions between or among any agreements with CP, expressed or implied; any Applicable Legislations; any applicable CP policies and practices; and any applicable industrial standards and practices, Contractor and Contractor Personnel shall adhere to that which is most stringent and current.

3 Contractor Compliance & Responsibilities

3.1 General Compliance

3.1.1 Contractor shall be fully and solely responsible for ensuring the health and safety of Contractor Personnel and for ensuring that its Work and other activities do not compromise the health and safety of CP Personnel or any other party, the protection of the environment, the protection of CP's property and those of any other party, and do not interfere with the safety of CP's railroad operations.

3.1.2 Contractor shall comply with and shall ensure all of Contractor Personnel are trained and qualified to safely perform the Work and that they comply with all Applicable Legislation pertaining to the protection against fire, safety, health, and environmental hazards, and with any license, permits, authorizations issued by the respective authority. Contractor shall provide CP with written certification that Contractor's safety program required by 49 CFR Part 243 has been approved by the Federal Railroad Administration (FRA) where applicable.

3.1.3 Contractor shall comply with and shall ensure all of Contractor Personnel comply with all terms and conditions of all agreements, expressed or implied, between Contractor and CP, and all applicable CP policies and practices.

3.1.4 Subject to the requirements of CP's Access Control Procedures, the contractor shall provide CP eRailsafe training for each employee engaged in work on CP property. Where there is no agreement between CP and the Contractor, the Contractor is responsible for meeting the additional requirements outlines within CP's Access Control Procedures.

3.1.5 Contractor shall provide Contractor Personnel, at its own expense, any and all safety equipment required to protect against injuries during the performance of the Work and shall ensure that Contractor Personnel are knowledgeable of and utilize safe practices in performing the Work.

3.1.6 The Contractor shall have a copy of the following documents at the Work Site at all times, and shall produce them as and when requested by CP:

(a) These Minimum Safety Requirements for Contractors Working on CP Property;
(b) Licenses, certifications, permits, training records or other documents required by Applicable Legislation or these Minimum Safety Requirements;
(c) Contractor's Site Safety Plan;
(d) Contractor's Emergency Information Sheet (see Attachment A); and
(e) Any additional documents required by Contract or by agreement with Manager-in-Charge.
(f) Employee identification (eRailsafe badge – see 9.1.1).

3.2 Compliance Assurance

3.2.1 CP reserves the right to observe, inspect, test and audit Contractor and Contractor Personnel for compliance with all requirements herein, and to demand and receive all relevant records, documentation, and materials evidencing compliance, at any time, and from time to time.

3.2.2 Failure of the Contractor or Contractor Personnel to comply with any applicable provisions herein may be considered a material breach, and in addition to all other remedies available, CP may without prejudice:

(a) take over control of that Work or activity;

(b) order the Work to stop; and/or

(c) order Contractor Personnel to leave CP Property.

3.2.3 Upon the earlier of the completion of the Work, the expiration of the applicable agreement, or the request of a Manager-in-Charge, Contractor and Contractor Personnel shall return all identification, badges, access cards, and decals, issued or provided by CP to the Manager-in-Charge.

4 Site Safety Plans

4.1 General Requirements

4.1.1 Prior to starting any Work on CP Property, the Contractor must have a written Site Safety Plan that identifies:

(a) All applicable legislation, rules, policies and work practices in relation to the work being performed;

(b) Specific hazards that are associated with the Work being performed on CP property for CP, and Work being performed not for CP:

for example:

(i) Construction, maintenance or inspections of buildings;

(ii) Working on or adjacent to railroad tracks;

(iii) Maintenance or inspection or railroad tracks, crossings or signal systems;

(iv) Operating Railroad Equipment on CP tracks; or

(v) When/where Contractor Personnel work directly with or in proximity (time or space) to CP Personnel; and

(c) Methods of verifying compliance.

4.1.2 The Contractor will provide Manager-In-Charge with a copy of this Site Safety Plan on reasonable request.

4.1.3 The Contractor must be able to demonstrate an awareness of applicable legislation, rules, policies and work practices in relation to the work being performed.

5 Safety Training

5.1 Minimum Training & Qualifications

5.1.1 At its sole cost and expense, Contractor shall ensure that all Contractor Personnel be fully trained and qualified for the Work they will be performing. Contractors and Contractor Personnel shall meet, or exceed, all Applicable Legislation requirements relating to training and qualification, including but not limited to the requirements of 49 CFR Part 243.

5.1.2 Additionally, Contractor Personnel training and qualification shall meet or exceed all applicable industry standards.

5.2 Proof of Training & Qualification

5.2.1 Contractor Personnel shall at all times have proof of such training and qualifications and shall produce them as and when requested by the Manager-in-Charge.

5.2.2 CP reserves the right to inspect qualification certificates, licenses, training records and/or Work-history records for any Contractor Personnel, and, or to be provided with copies thereof, on reasonable request. In addition, CP reserves the right to perform eTests on contractor employees, and request discipline for non-conformance.

6 Safety Orientation

6.1 General Requirements

6.1.1 Prior to beginning Work, all Contractor Personnel shall participate in a CP authorized safety orientation, including on-site orientation presented by the Manager-in-Charge or designate.

6.1.2 Any time the scope of Work, location, condition or supervision changes, Contractor Personnel may be required to attend additional safety orientation sessions.

6.1.3 After successful completion of such safety orientation, Contractors must be able to produce company identification or an eRailsafe photo identification badge authorizing access to CP property unescorted for the purposes of conducting work. Managers have the ability to enter the tracking code into CM (Compliance management). Third parties who hire subcontractors must ensure required compliance while on CP property. The eRailsafe identification card shall be worn or be made visible at all times, or produced upon request and cannot be transferred under any circumstances.

7 Job Safety Briefing

7.1.1 Contractor Personnel shall attend all Job Safety Briefings as and when conducted. Contractor Personnel shall be solely and fully responsible for understanding the content of the Job Safety Briefing, and at a minimum shall:

(a) have an understanding of the scope of Work to be performed and an appreciation of the nature of the location, environment, and conditions where such Work is to be performed;

(b) be aware of specific or unusual hazardous condition, existing or potential and the control measures required to protect against, control, mitigate, or where possible, avoid said hazard; and

(c) have an emergency response plan/evacuation procedures.

7.1.2 Where Contractor Personnel are working directly with or in proximity (time or space) to CP Personnel, job safety briefings must include both CP Personnel and Contractor Personnel, and any other affected third parties. The job safety briefing shall identify nature and extent of the interaction between the Work being performed by Contractor Personnel, and those performed by CP Personnel or other third parties. Contractor Personnel shall inform CP Personnel, and any other third parties of known or potential unsafe conditions and hazards that may be created by, resulting from, or inherent in their Work and the corresponding preventative, mitigation, and/or control measures at all job briefings prior to commencing Work, or as soon as Contractor Personnel becomes aware of such conditions.

7.1.3 In all situations, all Contractor Personnel are expected to:

(a) continually identify hazards and assess risk of hazards and to continually and clearly communicate all hazards to the Manager-in-Charge and to all other parties that may be affected at job safety briefings, and at any other time as and when appropriate or necessary;

(b) take actions that are within their assigned responsibility to eliminate or control hazards and risks; and

(c) immediately notify their supervisor or the Manager-in-Charge of hazards that pose unacceptable risk that they are unable to eliminate or control.

7.1.4 Where Contractor Personnel are unable to eliminate or control a hazard, Contractor Personnel shall take interim measures to protect people, property, equipment and the environment until the hazard can be properly assessed and appropriate corrective actions taken.

8 Applicable Legislation

8.1 General Requirements

8.1.1 Contractor and Contractor Personnel shall be solely responsible for identifying and complying with all Applicable Legislation. At a minimum, Contractor and Contractor Personnel shall comply with the federal legislations set out below which list is intended solely for general guidance, and not as a comprehensive list of all Applicable Legislation.

8.1.2 Additionally, the Association of American Railroads (AAR) is an industry association which can provide support and guidance on matters related to railroad safety and the transportation of hazardous materials.

8.2 Transportation of Hazardous Materials

8.2.1 When Work involves the handling or transportation of hazardous materials (hazmat), that Work must comply with Hazardous Materials Transportation Act and regulations administered by the Pipeline and Hazardous Materials Safety Administration (PHMSA).

8.2.2 Contractors shall be solely responsible for ensuring that all Contractor Personnel who handles, offers for transport and/or transports hazmat by any transportation mode are trained and hold a valid training certificate or is working under the direct supervision of someone who is trained and holds a valid training certificate. That training must be based on the Work that the person is expected to perform and the hazmat that the person is expected to handle, offer for transport or transport.

8.2.3 All U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) regulations are published in Chapter I of title 49 of the Code of Federal Regulations (49 CFR).

8.3 Railroad Work

8.3.1 When Work involves the construction, alteration, operation, inspection and maintenance of any part of the general railroad system of transportation, that Work must comply with the Federal Railroad Safety Act and regulations administered by the Federal Railroad Administration (FRA).

8.3.2 Contractors shall be solely responsible for ensuring that all Contractor Personnel who perform railroad Work are trained and qualified in accordance with those regulations and hold valid certificates when required.

8.3.3 All FRA regulations are published in Chapter II of title 49 of the Code of Federal Regulations (49 CFR).

8.4 Occupational Safety & Health

8.4.1 Any Work being performed that may create a risk to the health and safety of any person, including CP Personnel and Contractor Personnel, when not covered by FRA regulations shall be governed by U.S. Department of Labor regulations administered by Occupational Safety and Health Administration (OSHA).

8.4.2 All OSHA regulations are published in Chapter XVII of title 29 of the Code of Federal Regulations (29 CFR).

8.5 Environmental Protection

8.5.1 Where Work is being performed that may impact the environment, that Work must comply with all applicable federal state, and local government legislation, regulations and standards.

8.5.2 Federal legislation is generally administered by the Environmental Protection Agency. A compilation of those laws and regulations can be accessed at http://www.epa.gov/lawsregs/

9 Security Access to CP Property

9.1.1 All Contractor Personnel must have personal identification and/or eRrailsafe credentials authorizing access and in their possession at all times while on CP Property, and present them for review to any Manager-in-Charge, other CP managers and employees, Police Officer, security guard, or regulatory officer upon request:

(a) photo identification (e.g. driver's license); and

(b) proof of employment, document or card; and

(c) CP safety orientation certificate; or

(d) building access pass issued by CP or third party having control over CP premises; or

(e) CP security photo ID card or badge; or

(f) other proof of safety orientation and access authorization issued by CP.

(g) Valid eRailsafe card

9.1.2 Where any Work requires Contractor Personnel to ride in locomotive or other non-passenger railroad equipment, the Contractor must also possess a CP ACCESS PASS for riding non-passenger railroad equipment, signed by the responsible operating manager. Such a signed pass must be presented to the train crew or operator when boarding the equipment. Failure to possess such a pass will result in the equipment not moving, removal from the equipment, and/or the filing of trespasser charges.

9.2 Security Awareness

9.2.1 Contractor shall conduct employee background checks as is necessary to ensure that Contractor Personnel do not pose a security risk to CP, such security risk includes the risk of the commission of terrorist activities, sabotage, vandalism, theft, and violence. CP reserves the right, at all times, to require that Contractors undertake certain security training and/or performs background checks on Contractor Personnel, prior to allowing such Contractor Personnel to enter onto CP Property.

9.2.2 On request CP can make available a copy of CP's Railway Security Awareness Program for use by Contractor Personnel.

9.3 Firearms & Explosives

9.3.1 Firearms (loaded or empty) are not permitted on CP Property, except for Police officers and other designated government officials when authorized to do so.

9.3.2 No explosives will be permitted on CP Property without written approval by the Manager-in-Charge.

9.4 Reporting

Contractor Personnel must report any security concern, security incident, criminal activity (known or suspected), suspicious happenings and/or suspicious persons on CP Property to the Manager-in-Charge or to CP Police Services in accordance with Section 18.

10 Personal Conduct

10.1 Drug and Alcohol Prohibition

CP recognizes the problem of alcohol and substance abuse in today's society. This problem poses particular concerns to an employer who is subject to governmental regulations and seeks to promote the safety of the general public. CP has a concern for the safety, health and well-being of its employees as well as an obligation to comply with the United States Department of Transportation (DOT) and Federal Railroad Administration (FRA) regulations. CP will comply with all statutes and regulations administered by the FRA in implementing the required 49 CFR §219 Drug and Alcohol Program. CP also expects employees of other railroads, visitors or contractors to comply with this regulation while on CP property, consistent with federal regulations. If subject to this regulation, Contractor shall be solely responsible for compliance with the 49 CFR Part 219. Contractor shall provide CP with proof of its compliance prior to performing services for CP and continued proof of compliance must be provided to CP immediately upon request. This proof of compliance will include, but will not be limited to, a copy of the 49 CFR §219 Drug and Alcohol Program Plan and FRA Approval Letter and Continued Certification of Compliance and Statistical Reporting. Periodic audits to ensure compliance with these regulations may be performed and cooperation and compliance is expected upon request.

If subject to other DOT modalities and regulations, such as the Federal Motor Carriers Safety Administration (FMCSA), compliance of that modality's drug and alcohol program guidelines will be required and periodic audits to ensure compliance with these regulations may be performed and cooperation and compliance is expected upon request.

10.1.1 Entry onto CP Property when in possession of, or under the influence of alcohol, intoxicants, narcotics, or controlled substances is strictly prohibited. Controlled substances include all Schedule 1 drugs (such as marijuana and "medical marijuana") and synthetic/designer drugs and/or any intoxicants or products labeled "not intended for human consumption".

10.1.2 The sale, trade, and/or offer for sale alcohol or controlled substances are prohibited.

10.1.3 Additionally, Contractor Personnel shall be free of any condition which may in any way adversely affect alertness, concentration, responsiveness, or the ability react calmly and responsibly to safety hazards.

10.1.4 CP reserves the right to request drug and/or alcohol tests for Contractor Personnel as and where required or permitted by law.

10.2 Inappropriate Behavior

10.2.1 CP is committed to maintaining a work environment that supports the dignity of all individuals. No person working at CP may be subjected to any form of discrimination or harassment, including sexual harassment.

10.2.2 Acts or threats of violence are unacceptable at all times on CP Property. Uttering of threats or committing acts of violence will result in the removal of the responsible Contractor Personnel from CP Property, termination of the Contract, and/or criminal charges.

10.2.3 Horseplay, practical jokes, fighting or any other activity that may create a safety hazard is not permitted.

10.3 Electronic Entertainment and Communication Devices

10.3.1 The use of personal entertainment devices, including portable audio and video devices such as compact DVD, CD, video game players, tablets, SMART watches and MP3 players, is prohibited:

(a) while Working on CP Property;

(b) while transporting CP Personnel, whether on and off CP Property; and

(c) while operating any CP highway vehicle, railroad equipment or mobile equipment, whether on and off CP Property.

10.3.2 The use of electronic communication devices, including cell phones, Smart Phones, Blackberries, walkie-talkies, PDAs, iPads, Tablets, GPS navigation units, portable computers, and similar devices, is prohibited:

(a) while operating any highway vehicle, unless it is stopped and parked in a safe location;

(b) while transporting CP Personnel, whether on and off CP Property;

(c) while operating or assisting in the operation of any railroad equipment or mobile equipment;

(d) while operating power tools, equipment or machinery;

(e) when Foul of Track for any reason;

(f) wherever use is prohibited by signage or by a CP manager; or

(g) whenever use of such a device creates an unsafe condition.

10.3.3 Notwithstanding the foregoing, company cell phones, radios, walkie-talkies, GPS units, iPads, tablets and other communication devices may be used solely for the conduct of business when authorized by the CP Manager-in-Charge and where not prohibited by state or municipal legislation. Any electronic communication device may be used when it is necessary to communicate an emergency condition.

10.4 Smoking

10.4.1 Smoking, including the use of e-cigarettes is prohibited on all CP Property, and in or on all highway vehicles, Railroad Equipment, and Mobile Equipment, except for CP designated outdoor smoking areas.

11 Personal Protection

11.1 Work Clothing

11.1.1 The Contractor must ensure that Contractor Personnel wear clothing that meets applicable legislation and is suitable to perform the work safely. This includes at minimum ankle length pants and waist length shirts with a minimum quarter-length sleeves at all times. Clothing must not interfere with vision, hearing or use of hands and feet.

11.2 Personal Protective Equipment (PPE)

11.2.1 The Contractor shall ensure that Contractor Personnel wear personal protective equipment required by applicable legislation, regulations, codes and industry standards as necessary to protect against personal injuries while on railroad property. All personal protective equipment shall meet applicable legislation and American National Standards Institute (ANSI) standards and shall be in good condition and be properly fitted.

11.2.2 The following mandatory personal protective equipment ("PPE") shall be supplied by the Contractor at its own expense, and shall be worn at all times by Contractor Personnel while on CP Property:

(a) safety hard hat, meeting ANSI 89.1 standards, except in office buildings or in enclosed vehicles or equipment;

(b) safety footwear with protective toe caps and puncture resistant soles, meeting ASTM F2413 standards.

(c) safety glasses with permanently attached side shields meeting ANSI Z87.1 standards in office buildings or enclosed highway vehicles. Note- transition lenses are not permitted;

(d) high visibility fluorescent outerwear with retro reflective striping meeting ANSI 107 Class 2 standards not covered by other clothing or equipment, except where necessary for safety reasons such as where fall protection or pole climbing equipment is being used; and

(e) any other PPE as required by applicable legislation or referenced standard, or as otherwise required to protect Contractor Personnel from injuries.

Type of Protection	Additional Recommendations
Hard Hats	Have hi-visibility characteristics which are not obscured by markings or decals
Safety Eyewear	Tinted safety eyewear must meet military standards for red signal recognition if operating railroad equipment (safety eyewear meeting this requirement is available from ORR Safety; ask for CP approved tinted safety eyewear) Transition lenses are discouraged and should be worn with caution when working in changing light conditions Personal sunglasses are discouraged and must not be worn when operating Railway Equipment Wear mesh face shields over top safety glasses when using any striking tool while performing on track maintenance work (e.g. spiking, snapping on/off anchors, etc.). If working alongside CP employees you will be required to comply with this practice.
Safety Footwear	Have defined heels Be laced and tied securely for ankle support When snow and ice conditions are present wear anti-slip winter footwear
High-Visibility Apparel	Lime-green is recommended when working on, or near tracks, or when performing Co-mingled Work

11.2.3 Contractor and Contractor Personnel shall be solely and fully responsible for assessing the risks related to the work and determining whether additional PPE may be required such as:

(a) Nomex or Proban fire-retardant protective gear when performing certain Transportation of Dangerous Goods (TDG) work and/or handling certain Hazardous Materials, or performing specialized work.

(b) hearing protection when working in any area where noise exposure levels:

(i) are consistently equal to or greater 85 dBA;

(ii) exceed 115 dBA at any time; and

(iii) any other work areas where posted, or so notified by CP management.

(c) respiratory protection where Contractor Personnel may be exposed to occupational dusts/particulates, fumes, mists, gases and vapors, in which case, in which case Contractors must have a written Respiratory Protection Program that meets or exceeds applicable legislation;

(d) additional eye and face protection meeting ANSI standard Z87.1 (i.e. face shields, impact/splash goggles, welding/cutting goggles and welding helmets); and

(e) fall protection systems and equipment meeting appropriate ANSI Z359 standards as required by applicable legislation and as appropriate for the related fall hazards.

(f) fall protection when working on an unguarded surface over water, where the water is deeper than 4 feet, or where there is a hazard of drowning due to terrain, winter conditions, water velocity or current; contractors must use a fall protection system or a personal floatation device (PFD) meeting approved standards.

12 Railroad Track Protection

12.1 Contractor's Responsibilities for the Protection of Railroad Traffic and Property

12.1.1 Where the Work Site is in close proximity to, or is located on, above, or below railroad tracks, special attention, care and precautions shall be taken to ensure the safety of all Contractor Personnel, CP Personnel, all other third parties and to protect CP's property and railroad operations.

12.1.2 Contractor shall ensure that Contractor Personnel is made aware of all unique and inherent hazards in working near, on, above or below railroad tracks and shall ensure that all Contractor Personnel are fully trained and equipped to work safely.

12.1.3 Contractors who perform inspection, maintenance or repair to railroad tracks or track structures must be trained in accordance with FRA On Track Safety Rules (FRA 49 CFR Part 214, Subpart C - Roadway Worker Protection Regulations).

12.1.4 Contractors will not be allowed to foul a track unless:

(a) They have been properly advised of the On Track Safety awareness procedures;

(b) A railroad employee who is qualified to provide protection is present at the work site, or.

(c) The Contractor has personnel present who are specifically trained, qualified and authorized to provide that protection.

12.1.5 All work shall be organized or executed in such a manner as to ensure no interference with the regularity and safety of railroad operations. No step or sequence of any Work that might directly

or indirectly affect the safe movement of railroad traffic shall be started without the approval of the Manager-in-Charge.

12.1.6 No temporary structure, materials, or equipment shall be permitted closer than 12 feet to the nearest rail of any track without prior approval in writing of the Manager-in-Charge.

Contractor Personnel shall at all times remain alert to the movement of trains, rolling stock and other railroad equipment.

12.1.7 Contractor Personnel shall be especially alert in yards and terminal areas as

(a) Railroad equipment that appears to be stationary may be moving;

(b) the rate of movement of railroad equipment may be faster than it appears;

(c) Railroad equipment change tracks often; and movements may be occurring simultaneously on adjacent tracks.

12.1.8 The Contractor shall, at all times, conduct its operations in a wholly responsible manner to avoid damage to the CP's tracks or property.

12.2 50 feet Clearance Requirement

12.2.1 All work shall be performed as far away from railroad tracks as possible.

12.2.2 Unless authorized by CP, Contractor Personnel, equipment, and vehicles are not permitted to be within 50 feet of the closest track centerline.

12.2.3 In the event work must be carried out within 50 feet of the closest track written authorization must be obtained from the Manager-in-Charge, and Contractor Personnel must still remain at the maximum practicable distance from all railroad tracks at all times.

12.2.4 When crossing tracks, Contractor Personnel shall ensure a minimum of 50 feet separation between standing railroad equipment, stay at least 15 feet away from the end of the nearest equipment, and look both ways before crossing tracks, and if clear, walk at a right angle to the tracks.

12.2.5 No work activities or processes are allowed within 50 feet of the track while trains are passing through the work site unless specifically authorized.

12.3 Flagging Protection

12.3.1 When the Work requires Contractor Personnel to be within 50 feet of any railroad tracks, Contractor or Contractor Personnel shall notify and obtain the written approval of the Manager-in-Charge in advance of the intended start date, and when approved, shall only perform Work strictly in accordance with all terms and conditions of that approval.

12.3.2 Unless otherwise indicated by the Manager-in-Charge, proper protection against the movement of trains, rolling stock and other railroad equipment shall be deemed required at all times whenever Work or Contractor Personnel must be within 50 feet of the closet track. Protection may be provided only by a qualified CP employee through use of a flag person.

12.3.3 Where CP determines that flagging is required, then Work must be strictly conducted under the direction of a CP flag person or such other person designated by the Manager-in-Charge.

12.3.4 Contractor Personnel shall ensure that there is clear communication at all times between Contractor Personnel and any CP flag person. Contractor Personnel shall ensure that they are aware of:

(a) flagging distance limits;

(b) time limits; and

(c) any adjacent tracks where movement of railroad equipment may still occur.

12.3.5 Contractor Personnel shall not assume that a train movement is being stopped or cleared unless clear communication is received directly from the CP flag person.

12.3.6 A job briefing between the CP flag person and all Contractor Personnel must occur before beginning any Work on or Foul of Track.

12.3.7 Blue signal protection is used to indicate that CP or Contractor Personnel are working on, under or between railroad equipment and movement of trains or other railroad equipment is prohibited. Blue signals must not be tampered with or obstructed. Blue signals can only be removed by the person or group of persons who originally applied it. Application, use, and removal of blue signals, when appropriate, may only be done under the authorization and guidance of the Manager-in-Charge.

12.3.8 Red flag protection is used to indicate that CP or Contractor Personnel are working on or foul of track, or the track is out of service and movement of trains or other railroad equipment is prohibited. Red flags must not be tampered with or obstructed. Application, use, and removal of red flags, when appropriate, may only be done under the authorization and guidance of the Manager-in-Charge.

12.4 Working on or near Tracks

12.4.1 When authorized to perform Work foul of track or otherwise be near railroad tracks, Contractor Personnel shall ensure all Contractor Personnel, equipment, and vehicles are kept as far away from railroad tracks as practicable, and shall at all times:

(a) be alert to train movements and shall expect the movement of trains, engines, cars, or other mobile railroad equipment at any time, on any track, and in any direction, even if they appear to be stationary or in storage;

(b) not rely on others to protect them from train movement;

(c) stay at least 15 feet away from the ends of railroad equipment when crossing the track;

(d) ensure a minimum of 50 feet separation prior to crossing between Railroad Equipment;

(e) look both ways before crossing tracks, and if clear, walk at a right angle to them.

(f) never climb on, under or between railroad equipment;

(g) be aware of the location of structures or obstructions where track clearances are close;

(h) not stand on the track in front of an approaching engine, car or other equipment;

(i) stand at least 20 feet from the track(s) when there is a passing movement of trains, engines, cars, or other mobile railroad equipment, to prevent injury from flying debris or loose rigging and shall observe the train as it passes and be prepared to take evasive action in the event of an emergency;

(j) not stand on or between adjacent tracks in multiple track territory when a train is passing;

(k) not walk, stand or sit on the rails, between rails or on the end of ties, unless absolutely necessary. As the rail surface can be extremely slippery, personnel must step over the rails when crossing tracks. Personnel shall also be aware railroad ties can also be slippery and that railroad ballast can shift while walking on top of it. Situational awareness and use of proper footwear is important;

(l) not remain in a vehicle that is within 50 feet of a passing train unless specifically authorized, or where this is not possible.

(m) keep away from track switches as remotely operated switch points can move unexpectedly with enough force to crush ballast rock. Personnel shall stay away from any other railroad devices they are unsure of. Personnel shall not disturb or foul the ballast at any time.

(n) Third party work that has a potential to impact rail traffic must take into account machine swing radius, vertical grade differences, overhead work, etc to ensure it will not impact a passing train; work and equipment must maintain a distance of 50 feet of a passing train.

(o) When exiting on track machinery as trains are passing; exit on the opposite side.

(a) use 3-point contact when getting on/off any vehicle, equipment or track unit;
(b) face the vehicle or equipment/track unit when getting on/off
(c) place handheld items onto equipment/track unit or seek help prior to getting on/off
(d) get on/off on the operators side when possible

12.5 Equipment on or near tracks

12.5.1 Contractor Personnel shall not be Foul of Track with any piece of equipment without a CP flag person or other authorized track protection;

12.5.2 Contractor Personnel shall not move equipment across the tracks except at established road crossings, or unless under the protection and authorization of a CP flag person and only if the Work Site has been properly prepared for such a move. Tracked equipment will require a CP flag person any time railroad tracks are crossed.

12.5.3 Contractor Personnel shall not move equipment across railroad bridges or through tunnels, except as expressly authorized and only under such conditions as stipulated by the Manager-in-Charge.

12.5.4 When there is passing rail traffic, Contractor Personnel shall move equipment away from the tracks at least 50 feet, or where not possible, park the equipment as far away from the tracks as possible, exit to the side away from the track where the movement is taking place, and walk to a safe a distance.

12.5.5 When there is passing rail traffic, buckets, shovels, and loads on cranes must be lowered to the ground to rest, and cranes without a load must have their load line tightened or retracted to prevent movement.

12.6 Railroad Signs, Signals, Flags and other Communication Infrastructure

12.6.1 Signs, signals and flags shall not be obstructed, removed, relocated, disabled or altered in any way without proper authorization and qualification.

12.6.2 Only qualified Contractor Personnel who are authorized by CP are permitted to operate switches, derails, electric track mechanisms, signal and communication systems or other track control appliances.

12.6.3 Railroad pole lines carry electric power and should be treated as any other power lines.

12.6.4 The Contractor shall keep all Contractor Personnel informed of current weather conditions. Personnel shall stay alert for possible high water conditions, or flash floods. During severe weather conditions:

a) Personnel shall be prepared to take cover in the event of a tornado

b) Personnel shall not work while lightning is occurring

c) If storm conditions arise unexpectedly, Contractor Personnel shall ensure that equipment is in the clear of the tracks and secured before seeking cover. Contractor Personnel shall stay away from railroad tracks when visibility is poor, such as during fog or blizzard conditions.

Any Contractor personnel discovering a hazardous or potentially unsafe condition, which may affect the safe passage of railroad traffic, must advise CP Police immediately by calling the CP Police Communications Centre – 1-800-716-9132

12.7 Excavation

12.7.1 Before starting excavation operations, the Contractor shall ascertain that there are no underground wires, fiber optic cables, pipelines or other utilities which could be damaged or, if present, that such installations are properly protected. Fiber optic cables are present on most segments of the right-of-way. Prior to commencing any excavation, the Contractor shall contact the proper authority CP and/or public utility to obtain the necessary permit and to locate and protect such cables or other underground utilities.

12.7.2 Excavations shall not be left unattended unless they are properly protected; and the Manager-in-Charge shall be notified.

12.7.3 Contractors MUST obtain and maintain utility locates in accordance with applicable law.

13 HAZCOM

13.1 General Requirements

13.1.1 If at any time Contractor's Work involves the use, handling, storage, or disposal of Hazardous Materials ("Handling of Hazardous Materials"), Contractor Personnel must inform the Manager-in-Charge.

13.1.2 Contractors shall ensure that all Contractor Personnel are fully trained in the Handling of Hazardous Materials and that Contractor and Contractor Personnel are in full compliance with all Applicable Legislation, and as directed by the Manager-in-Charge.

13.1.3 Contractor Personnel shall have appropriate processes, systems and controls in place to prevent or otherwise mitigate potential environmental, health and safety risks associated with the Handling of Hazardous Materials.

13.2 Access to Safety Data Sheets (SDS)

13.2.1 Prior to beginning any Work that may expose CP Personnel to Hazardous Materials, Contractor or Contractor Personnel shall:

(a) provide a copy of the respective SDS to the Manager-in-Charge; and

(b) keep a copy of the SDS at the work site and ensure that it is readily available at all times.

13.3 Hazardous Material Incident or Spill

13.3.1 In the event of a hazardous material incident or spill, the Contractor must:

(a) ensure that no Contractor or CP Personnel have or will be exposed;

(b) take all reasonable actions to contain the spill;

(c) respond in accordance with its emergency response plan; and

(d) notify CP immediately in accordance with Section 18 below.

14 Operation of Highway Vehicles

14.1 Highway Vehicles

14.1.1 The following requirements apply to all highway vehicles, when operated on CP Property; or used to transport CP Personnel.

14.2 Regulations and Inspection

14.2.1 Before using a highway vehicle, Contractor Personnel shall:

(a) complete a pre-trip inspection;

(b) maintain an inspection log;

(c) ensure periodic inspections are completed at official testing locations as required;

(d) ensure the vehicle is maintained and in safe operating conditions at all times; and

(e) ensure the vehicle is in compliance with applicable motor vehicle regulations and license requirements.

14.2.2 Vehicle maintenance, inspection records and logs must be made available to the Manager-in-Charge on request.

14.3 Vehicle Operator Requirements

14.3.1 Operation of highway vehicles is restricted to those Contractor Personnel who are licensed, qualified and authorized to do so. Such Contractor Personnel shall be responsible for the safety of all passengers at all times. For greater certainty, such Contractor Personnel shall:

(a) hold a valid license for the class of vehicle being operated, in accordance with applicable local, state and federal requirements, and

(b) strictly comply with all posted traffic signs, signals, and all shall obey all applicable legislation; and

(c) maintain the required driver log, and make the log available to the Manager-in-Charge on request, and

(d) comply with the requirements on the use of electronic devices as set out in Section 10 above.

14.4 Driving on CP Property

14.4.1 In addition to the requirements set out above, while on CP Property, Contractor Personnel shall:

(a) travel only on designated roadways unless otherwise instructed;

(b) keep daytime running lights on (if so equipped);

(c) not exceed 15 mph unless otherwise posted;

(d) come to a full stop at all blind corners, rail and roadway crossings;

(e) yield the right of way to all Mobile Equipment and other non-highway equipment or service vehicles;

(f) not operate vehicles (or any internal combustion equipment) inside buildings or enclosed structures unless adequate ventilation is provided;

(g) not park Foul of Track unless on-track protection is provided;

(h) not leave vehicles running unnecessarily;

(i) park only in pre-determined or designated areas;

(j) always use the parking brake (or wheel chocks) when leaving an unoccupied vehicle running; and

(k) prior to operation of a vehicle the driver must conduct a walk around of the vehicle to identify any obstacles, clearance restrictions, or adjacent vehicles that may interfere with executing a safe movement.

(l) where safe and practicable, pull vehicles through or back into marked parking spaces to avoid reverse collisions when exiting.

(m) If a passenger is present, he exit the vehicle prior to a reverse movement to provide guidance and direction to the driver during the reverse movement and applies to commercial vehicles and vehicles with restricted rear views

14.4.2 All Contractor Personnel who will be operating a highway vehicle or Mobile Equipment in any CP intermodal facilities must complete a Driver Safety Orientation program prior to first entry, and from time to time thereafter as directed by the Manager-in-Charge.

14.5 Seat Belts

14.5.1 Seat belts must always be worn while operating or riding in any equipped vehicle unless Contractor personnel is actively engaged in inspections requiring said Contractor Personnel to be free of such restraint, and then only when the vehicle is operating at less than 15 mph.

14.6 Loads

14.6.1 Contractor Personnel shall ensure vehicles are loaded according to weight and dimensional requirements as authorized by state regulations and permits, and properly load and secure tools, material, equipment and freight to avoid shifting, falling, leaking or otherwise escaping from vehicles during operation.

14.7 Riding in CP Vehicles

14.7.1 Contractor Personnel are prohibited from operating or riding in any CP vehicles unless authorized to do so, or in case of emergency.

15 Tools, Equipment and Machinery

15.1 General Safety Requirements Respecting All Tools, Equipment and Machinery

15.1.1 Contractor Personnel shall ensure that all tools, equipment, and machinery used be:

(a) in compliance with all Applicable Legislation;
(b) in good working order, properly serviced and maintained;
(c) safe for their proposed use and used only for purposes specified by the manufacturer;
(d) operated and maintained only by persons properly trained and qualified for that duty;
(e) seat belts (if present on equipment) must be worn while operating or riding any such equipped mobile equipment;
(f) if mobile, equipped with appropriate safety devices (e.g. lights, horns, back-up alarms, safety beacons); and prevented from moving, through use of the hand brake, wheel blocking, wheel chocking and/or a derail, where applicable.

15.1.2 The Contractor shall provide adequate lighting when performing work between sunset and sunrise.

15.1.3 Use of CP tools, equipment and machinery by Contractor Personnel is prohibited unless specifically authorized by local CP management.

15.2 Hazardous Energy Control- Lockout

15.2.1 Contractor Personnel shall employ lockout/tagout procedures as required to eliminate the accidental or unexpected start-up, energizing, or release of stored (residual) energy during maintenance, repair and/or servicing activities.

15.2.2 All tools, equipment and machinery must be made safe and isolated from all energy sources rendering the machine, equipment, or process inoperative prior to performing maintenance, repair or servicing related tasks.

15.2.3 No Contractor Personnel can remove any CP applied lock or tag, including bad-order tag.

15.2.4 Notwithstanding the foregoing, if Contractor's Work may create an energy hazard to any CP Personnel, then all affected parties must follow the requirements set forth in CP's Lockout – Hazardous Energy Control Policy and Code of Practice.

15.2.5 If CP Personnel and Contractors are jointly performing maintenance, repair or servicing activities on the same machine, equipment or using the same energy source, then a multi-lock hasp must be applied with individual locks and tags affixed (as per CP's Lockout – Hazardous Energy Control Policy and Code of Practice).

15.3 Electrical Safety Requirements

15.3.1 In addition to the hazardous energy control lockout requirements above, all electrical Work must comply with Applicable Legislation, National Electrical Code (NEC), and National Fire Protection Association (NFPA) requirements.

15.3.2 Contractor Personnel Working on electrical systems must:

(a) if in proximity to CP Personnel, inform them of:

(i) existing or potential electrical hazards;

(ii) any specific additional personal protective equipment that may be required;

(iii) applicable safe work practices;

(iv) applicable emergency and evacuation procedures; and

(v) apply lock out procedures as per section above on Hazardous Energy Control-Lockout

(b) have practices, procedures and training that comply with:

(i) Applicable sections of the NEC and NFPA electrical safety standards;

(ii) Any other Applicable Legislation; and

(c) not operate or allow cranes or other mobile equipment to approach closer to any live electrical power line than is permitted by OSHA regulations (29 CFR 1910.333).

15.4 Lifting Devices

15.4.1 All lifting devices, including but not limited to jacks, cranes, cables, slings, chains and hooks shall:

(a) meet Applicable Legislation governing design, inspection, maintenance and operation;
(b) be safety certified and labeled or tagged with load capacity limits where required;

(c) have sufficient capacity for the planned lift;
(d) have sufficient footing or support area to properly distribute the load during a lift.

15.5 Welding and Torch Cutting

15.5.1 When welding or torch cutting, Contractor Personnel shall:

(a) be properly trained and qualified;
(b) ensure that all closed containers have been properly purged;
(c) direct flame or sparks away from other Workers, equipment and flammable material;
(d) have a fire extinguisher readily available;
(e) keep compressed gas and oxygen cylinders stored in a secure, vertical position, with regulators removed and caps applied, labeled properly and located in vented cabinets or other designated locations.

15.6 Explosive Actuated Tools

15.6.1 Only Contractor Personnel who are qualified and licensed in accordance with Applicable Legislation, and authorized by CP, may use explosives or explosive actuated tools.

15.7 Unattended Equipment or Machinery

15.7.1 Tools, Equipment and Machinery shall not be left unattended at any time and shall not be stored on CP Property, unless expressly permitted pursuant to a written agreement with CP or by the Manager-in-Charge in writing, and where so permitted, Contractor shall ensure that:

(a) storage shall be restricted to the designated area, or as otherwise specified by CP.

(b) all such tools, equipment and machinery shall be secured in a safe position well clear of all tracks to prevent accidental contact with trains and moving equipment and to not restrict train crew sightlines;

(c) as much as possible, tools, equipment and machinery shall be stored in locations out of public view.

(d) Machines must be secured in accordance with on-track machinery rules.

16 Emergency Response

16.1 Emergency Response Plan

16.1.1 The Contractor must maintain a current emergency response plan and make it available to CP on request. Emergency response plans must include at a minimum:

(a) contractor reporting procedures in the event of an incident or spill;

(b) emergency response contacts and phone numbers, including phone numbers for CP incident reporting and local CP managers (See Attachment A); and

(c) containment measures to be taken in the event of an incident or spill.

16.2 Initial Response

16.2.1 Initial response to any emergency condition must follow the following sequence:

(a) Protect the safety and security of all individuals and communities
(b) Provide environmental protection and mitigation
(c) Conduct incident investigation and evidence preservation
(d) Restore railroad operations

16.3 First Aid

16.3.1 Contractor Personnel must have sufficient First Aid qualified personnel and the required First Aid kit and any other required First Aid equipment at the Work Site, suitable for the crew size, nature of Work being performed and location, all of which shall, at a minimum, comply with OSHA regulations (29 CFR 1910.266).

16.4 Fire Protection

16.4.1 The Contractor must have appropriate fire extinguishers suitable (i.e., type, size and quantity) for nature of the work being done, in compliance with applicable legislation, and be readily available at all times on:

(a) the work site; and
(b) all Contractor equipment, machinery and highway vehicles.

16.4.2 Contractor Personnel shall ensure that all necessary precautions are taken to prevent fires, including the following:

(a) storing flammable material (e.g., paper, rubbish, sawdust, oily or greasy rags, etc.) in proper containers;

(b) storing and transporting fuel, gasoline or other flammable liquids in approved containers. Use of unapproved containers is prohibited;

(c) proper disposal of flammable material daily;

(d) preventing static electricity when dispensing or transferring flammable liquids by using proper grounding and bonding techniques;

(e) avoid using cutting or welding torches during the last one-half hour of shifts, if possible;

(f) taking special precautions with fusees, including:

(i) store and transport in approved containers;
(ii) do not allow fusees to come in contact with any combustible material, including railroad ties or wooden timbers; and
(iii) fully extinguish fusees before leaving the location where used;

(g) promptly advise CP management of any fire on CP Property; and

(h) fully extinguish or provide protection for any fire prior to leaving the Work Site.

16.4.3 Contractors Working on the CP right-of-way where a high risk of fire exists (e.g., during rail grinding, rail welding) must have:

(a) appropriate fire prevention and suppression plans (including emergency numbers for CP, local firefighters and fire control districts); and

(b) additional firefighting equipment and trained Contractor Personnel on site, as required by Applicable Legislation or the Manage In Charge.

17 Confined Space

17.1 Confined Space

17.1.1 Qualified and authorized Contractor Personnel must follow all required confined space entry procedures in accordance with applicable legislation and standards prior to entering into a confined space.

17.1.2 Rescue procedures and equipment must readily available when required to enter a confined space.

18 Reportable Accidents, Incidents and Injuries

18.1 Reportable Injuries

18.1.1 Reportable injuries include any personal injury to:

(a) Contractor Personnel;
(b) any CP Personnel; or
(c) to any third party on CP Property.

18.2 Reportable Accidents

18.2.1 Reportable accidents include any occurrence that results in:

(a) damage to railroad tracks, right of way, buildings or other CP Property;
(b) damage to railroad equipment;
(c) damage to CP highway vehicles;
(d) release of hazardous material;
(e) spill or loss of transported commodities; and
(f) any threat to the environment.

18.3 Reportable Incidents

18.3.1 Reportable incidents include:

(a) unintended movement of railroad equipment;

(b) failure to provide track protection for Workers when required;

(c) movement of railroad equipment beyond authorized limits;

(d) operation of railroad equipment by an unqualified person;

(e) unauthorized handling of a track switch;

(f) damage, vandalism or tampering with any railroad signals, structures or railroad safety device;

(g) seepage, leakage, spills of, or other contamination from, Hazardous Materials;

(h) actual, threaten or suspected security related incidents;

(i) slides, washouts or other on-track obstructions; or

(j) any occurrence that may disrupt the movement of trains or affect safe rail operations.

19 Reporting

19.1 Emergency Reporting

19.1.1 In the case of an emergency, Contractor Personnel must call:

(a) 911, where this emergency response system exists, or
(b) the local police, fire or emergency department in all cases; and
(c) CP Police Services Communication Center- 1-800-716-9132.

19.2 Accident, Incident, Injury Reporting

19.2.1 When an accident, incident or injury occurs on CP Property, the Contractor must:

(a) immediately report it to the

(i) CP Police Services Communication Center 1-800-716-9132; and

(ii) CP Manager-in-Charge

(b) follow all instructions given to protect the scene.

19.2.2 CP is obligated to report Contractor Personnel injuries occurring on CP property to the Federal Railroad Administration (FRA). Any state or required regulatory reporting remains the Contractor's responsibility.

19.3 Information to Report

19.3.1 Information required with the initial report includes:

(a) type of incident;
(b) date and time of occurrence;
(c) location (mileage, subdivision, building, yard or other physical description);
(d) identity of person(s) involved or injured (company & name);
(e) description of any hazardous materials involved;
(f) type & unit number of any railroad equipment or vehicle involved;
(g) description of occurrence, damage and/or injury, and cause if known;
(h) description of any emergency response;
(i) name and contact information of person making the report; and
(j) any such other information that CP may require.

19.4 Environmental Incidents and Spills

19.4.1 In the event of an environmental incident or spill that could have a negative impact on the environment, the Contractor must immediately:

(a) report the incident to the Operations Center, the Manager-in-Charge, and the designated CP Contact as per the governing agreement relating to the Work;
(b) take all reasonable actions to contain the spill;
(c) respond in accordance with its emergency response plan; and

(d) provide CP with the following information;
   (i) description of location and surrounding area, including any sensitive environmental areas nearby (e.g., rivers, parks, sewers);
   (ii) type and quantity of substance released;
   (iii) cause of spill or deposit, if known; and
   (iv) details of any immediate action taken or action proposed to be taken to contain spill and recover substance.

19.5 Additional Contractor Requirements

19.5.1 Contractor and Contractor Personnel must:

(a) ensure an appropriate emergency response is initiated;
(b) protect any evidence until released by the CP Manager-in-Charge;
(c) cooperate fully with any CP investigation;
(d) cooperate fully with any investigating government agency; and
(e) notify CP if information is requested by any investigating government agency.

20 Contractor & Contractor Personnel Acknowledgement

Acknowledgement

20.1.1 Contractor and Contractor Personnel who Work on CP Property shall be deemed to have read and understood the content of these Minimum Safety Requirements for Contractors While Working on CP Property in the United States, as amended from time to time, and to agree to be bound by them.

20.1.2 These Minimum Safety Requirements for Contractors While Working on CP Property in the United States are subject to change without prior notice. The most current version of these Minimum Safety Requirements can be viewed at www.cpr.ca or by contacting the Manager-in-Charge.

Home Safe™ is a commitment to be vigilant about personal safety and the safety of co-workers.

NOTES:

21 Attachment A – Emergency Information Sheet

EMERGENCY CONTACT INFORMATION		
EMERGENCY CONTACTS	**PHONE**	**LOCATION**
CP Minneapolis Operations Center	1-800-766-4357	·
CP Police Services	1-800-716-9132	
CP Railroad Traffic Controller Radio Channel		
Manager-in-Charge		
Local Police Services		
Local Fire Services:		
Local EMS		
Hospital		
Physician		
Aircraft Service, (if applicable):		
Watercraft Service, (if applicable):		
Other Emergency Services		

Emergency Evacuation Route
(Describe nearest evacuation assembly location OR Provide sketch on back)

WORK SITE INFORMATION		
	PHONE	**LOCATION**
Work Site Location Name		
Railroad Subdivision & Mileage		
Address, Number and Street		
Nearest Town		
CP Manager-in-Charge		
Emergency Site Access Route (Describe route from nearest emergency services location in detail including access roads & physical landmarks OR provide sketch on back.)		
Contractor Supervisor		
Site Telephone		
Certified First Aid Attendant		
Location of First Aid Supplies at Site		
Location of Fire Extinguishing Equipment:		
Location of WHIMS data sheets		
UTILITY INFORMATION		
UTILITIES CONTACT	**PHONE**	**LOCATION**
Natural Gas:	( )	
Electrical:	( )	
Fiber Optic Line:	( )	
Water & Sewer:	( )	
Telephone:	( )	
Cable System:	( )	
Qualified employee(s) in:	( )	
Confined Space Entry, (if applicable):	( )	
Equipment requirements for Confined Space Entry, (if applicable):	( )	
Other:		

CANADIAN PACIFIC FLAGMAN REQUEST FORM

(All blanks below must be completely filled in before any flagman request will be processed)

Work Authorization

Right of Entry/Formal Agreement/Utility Permit No.: _____ Executed Date: _____

You must have an agreement with CP such as a Right of Entry or Utility Permit in addition to flagging before you may enter CP property

Prior to excavation on CP property or ROW you must contact the following CP CBYD number to (866) 291-0741 and the State-One call number

---

Project Information ***Submit a detailed map of the location where protection is being requested.***

Street Location/Intersection: _____ City/State: _____

Railroad Subdivision & Milepost: _____ GPS Lat/Long: _____ DOT Crossing # _____

Description of work, including type of equipment (Continued on page 2): _____

_____

Location for flagman to report: (Address):_____

Name of Site Contact: _____ Site Contact Phone: (___) ____-_____ 24/7 Emergency Contact: (___) _____-_____

Requested Dates/Times ***Minimum 15 business days advance notice required.***

Dates requested are subject to flagman availability Total Days of Flagging Needed to Complete Project: _____

Preferred Dates for Flagging Protection: _____to _____ or _____ to _____

Anticipated Starting time: _____ Anticipated Ending Time: _____ Anticipated # Hours per Day: _____

Flagmen start and end time may vary based on type of protection required

IMPORTANT: Amount of time to be clear of track (15' FROM TRACK) upon request: (Minutes) _____

NO TRACK OUTAGES ALLOWED

ROE/License/Utility Agreement fees MUST be received before Flagman Protection will be provided.

There is an 8 hours of flagging minimum per day. Please note that flagging charges are approximately $1200.00 per day for an 8 hour day. Invoices will be sent after the project is completed. Checks should be made payable to the railroad D/B/A listed on your Right of Entry/Permit/License or Formal Agreement.

Overtime will need to be authorized. Additional overtime hours will be paid at the appropriate rate. Weekends and Holidays will be billed at the overtime rate. Normal flagman hours are currently from 8:00 am to 4:00 pm.

Prior to ANY excavation on CP property or ROW you must contact the following CP CBYD number to (866)291-0741 and the State-One call number to ensure that all underground facilities are located. Prior to flagging contractor must provide State One Call Ticket Number and CP Call Before You Dig Ticket Number.

Billing Information ***All blanks spaces must be filled out***

Company Name: _____ Contact Name: _____

Billing Address: _____

City: _____ State: _____ Zip: _____

Company Phone: _____ Company Fax: _____ E-Mail:_____

THIS COMPLETED FORM MUST BE EMAILED WITH A MAP, AND COI TO: **Charles.Kretchman@cpkcr.com**
PAYMENT CHECK(S) must be mailed to Charles Kretchman - 120 South 6th St, Suite 700, Minneapolis, MN, 55402

I agree to pay for flagging services as requested: _____

Prior to any project being started, Canadian Pacific requires a "Flagman Request Form" to be completed and submitted. You must have an agreement with a CP railroad, such as but not limited to a Right of Entry, Utility Permit, License, Easement, or Formal Agreement in addition to any necessary flagging before you may enter CP property. All Right of Entry, Permit, License, or Utility Agreement fees MUST be received before Flagman Protection will be provided.

All Utilities or Third-Party Contractor's must follow the policies laid out in "Canadian Pacific's Minimum Safety Requirements for Contractors Working on CP Property in the United States." Please refer to the attachments of your ROE, Permit, or formal agreement for that document.

In Case of Emergency on or near CP property, please contact 1-800-716-9132.

Utility and Gas Line Locates on CP Property

A Utility locate on CP may be required prior to the start of any work based on disturbance of soil on CP property. The purpose of Utility locates is to identify and protect Signal & Communication cables that have been installed to provide power, signal control, and wayside communications. These cables are vital to a safe and reliable railroad operation. The Utility locate will be performed by a qualified CP Signal & Communications employee. A CP CBYD ticket number will last 14 days.

Prior to excavation on CP property or ROW you must contact the following CP CBYD number (866) 291-0741 and the appropriate State-One call number to ensure that all underground facilities are located and marked.

Work Description (Continued from Page 1)
Please provide a detailed description of work you are seeking to perform. Also, please submit a detailed map of the location where protection is being requested: _____

_____
_____
_____
_____
_____
_____

General Information

Outside contractors are prohibited from driving on, along, or across any track that does not have a CP installed crossing. They may utilize an existing public crossing. The practice of allowing rubber tired equipment to operate over track with no crossing is strictly prohibited. Exceptions to this rule will require the express approval from CP Engineering Department.

A utility or contractor shall not commence, or carry on, any work for installation, maintenance, repair, changing or renewal of any facility, under, over, on, or near railroad property at any United State CP location without giving notice to the CP Public Works Department at the railroad's office located at Minneapolis, MN.

A qualified CP flagman is required any time any work is performed; under or across any railroad track, regardless of whether a contractors work involves a physical presence on the surface of the railroad property; on the surface of the railroad property within fifty (50) feet horizontally of the centerline of any CP railroad track; or on, near, or over railroad property if the work may potentially encroach (intentionally or unintentionally) within fifty (50) feet from the centerline of any CP railroad track. Causes of potential encroachment include but are not limited to equipment that has the potential to SWING, pivot, extend or mechanically fail. Potential encroachment must also account for a distance of one-half the length of the largest load that any equipment may lift. Additionally, CP reserves the right to require a flagman for work on Railroad property not meeting the above criteria when there are other conditions or considerations that would indicate the need for a flagman to safeguard Railroad's operations, property, and safety of any person.

Best Regards,

Charles Kretchman
Supervisor-Public Works
120 South 6th St, Ste 700
Minneapolis, MN 554026
612-247-0706
Charles.Kretchman@cpkcr.com

SPECIAL PROVISION 105
CONSTRUCTION AREA

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

The section of highway under construction in Piscataquis County:

Project 28706.00 is located on Route 11 beginning in Milo at Route 6 and extending northwest 8.92 miles to Brownville.

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 Brownville and Milo 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.

THIS DOCUMENT MUST BE CLEARLY POSTED AT ALL CONSTRUCTION SITES FUNDED IN PART WITH STATE FUNDS

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 Piscataquis County

Occupational Title	Minimum Wage	Minimum Benefit	Total
Brickmasons And Blockmasons	$32.25	$4.33	$36.58
Bulldozer Operator	$28.00	$6.02	$34.02
Carpenter	$27.50	$6.02	$33.52
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	$22.71	$2.62	$25.33
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	$21.29	$2.53	$23.82
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	$25.42	$1.13	$26.55
Excavator Operator	$29.05	$5.85	$34.90
Fence Erectors	$20.00	$0.00	$20.00
Flaggers	$18.50	$0.36	$18.86
Floor Layers - Except Carpet/Wood/Hard Tiles	$27.00	$6.21	$33.21
Glaziers	$37.00	$6.60	$43.60
Grader/Scraper Operator	$22.61	$12.50	$35.11
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	$23.75	$4.67	$28.42
Highway Maintenance Workers	$19.00	$0.00	$19.00
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	$22.30	$8.71	$31.01
Operating Engineers And Other Equipment Operators	$22.00	$1.09	$23.09
Paver Operator	$27.03	$13.85	$40.88
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 Pumpers	$31.49	$32.08	$63.57
Radio Cellular And Tower Equipment Installers	$26.00	$3.77	$29.77
Reclaimer Operator	$22.61	$12.50	$35.11
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	$25.40	$3.65	$29.05
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

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

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

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

This Contract shall be completed within **25** working days. The Contractor may begin work anytime on or after **June 24, 2024,** 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 **July 12, 2024**, whichever occurs first. Work added to or deleted from the Contract will increase or decrease Working Days at a rate of 1 day per 750 tons. A revised schedule of work shall be submitted and approved for these changes.

At least 21 calendar days prior to the desired Begin Construction Date **and no later than June 15th**, 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 **Timothy.Pelotte@Maine.gov, Emory.Lovely@Maine.gov** and **Jared.Stanley@Maine.gov**. The approved Schedule of Work will detail the anticipated working days and show a completion within the allowable working times. Working days do not need to be continuous. 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. **A penalty in the amount of $500/day will be assessed for each calendar day or partial calendar day beyond June 15th that the schedule of work is not received.** 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 **Timothy.Pelotte@Maine.gov, Emory.Lovely@Maine.gov** and **Jared.Stanley@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.

The length of the lane closure will be restricted to 2,000’ from Elm Street to Pleasant Street.

No work is allowed on July 5th.

SPECIAL PROVISIONS
SECTION 108 PAYMENT
(Diesel fuel Adjustment)

108.4.2 Price Adjustment for Diesel Fuel: A price adjustment for diesel fuel will be made for all 461 items.

Price adjustments will be based on the variance in costs for diesel fuel. They will be determined as follows:

The quantity of hot mix asphalt, in tons, for each pay item will be multiplied by 2.75 times the difference in price in excess of 5 percent between the base price and the period price of diesel fuel. Adjustments will be made upward or downward, as prices increase or decrease.

Hot Mix Asphalt: The quantity of hot mix asphalt will be determined from the quantity shown on the progress estimate for each pay period.

Base Price: The base price of diesel fuel to be used is the price per gallon current with the **bid opening date**. This price is determined by using the weekly retail diesel price for the New England area, as listed on the Energy Information Administration's webpage.

Period Price: The period price of diesel fuel will be determined by the Department by using the weekly retail diesel price for the New England area, as listed on the Energy Information Administration's webpage current with the pay period ending date of the progress estimate.

SPECIAL PROVISION
SECTION 109
CHANGES

The Maine Department of Transportation reserves the right to increase or decrease the volume of work set forth in the Contract; including adding or removing segments. The Contractor shall not make any claim against the Department of Transportation should the work be increased or decreased by 50%. Also, the State reserves the right to increase or decrease the quantity per mile as shown in the description and computation sheets. The actual quantities placed in the field may range from 430 tons per mile to 1000 tons (+/-) per mile as field conditions warrant.

After actual roadwork has started, the Department or authorized representative will notify the Contractor 48 hours in advance of any changes, additions, or deletions that have occurred in the immediate areas to be paved.

By signing the Contract, the Contractor agrees to the following compensation for additional segments:

Bid Unit price per ton for Item #461.13 – Light Capital Paving.

Trucking at an agreed negotiated rate. If agreement cannot be made, trucking will be paid at the Bid Unit price per ton for Item #631.175 – Contractor Trucking

Mobilization at the rate of $1,000 per added segment.

Time at the rate of one Working Day per 750 tons added, rounded up; determined on a per added segment basis. Timing of the additional work will be negotiated.

The Contractor may elect to propose utilizing a different plant for the added segment if the new mix and haul total results in a savings to the Department.

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	

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 weight 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.

d. 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 eights 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 +/- ¼ 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 ¼ 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.

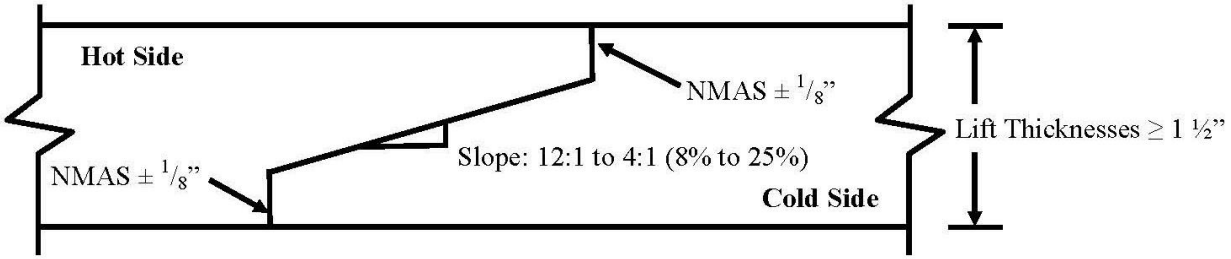


FIGURE 1: Notched Wedge Joint

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, Typicals, Special Provisions and communication process. This meeting shall be held prior to placing any mix. 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 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. 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 sublot 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 sublot 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 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

*Unless otherwise agreed upon at the Prepave Meeting

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

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 NMAS 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		
Voids at N_{design}		N/A
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 sublot 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 = (Voids @ N_d PF - 1.0)(Q)(P)x0.20 + (VMA @ N_d - 1.0)(Q)(P)x0.20 + (PGAB Content PF- 1.0)(Q)(P)x0.10	PA = (density PF- 1.0)(Q)(P)x0.50
Method C	PA = (% Passing Nom. Max PF-1.0)(Q)(P)x0.05+(% passing 2.36 mm PF-1.0)(Q)(P)x0.05+(%passing 0.30 mm PF-1.0)(Q)(P)x0.05+(%passing 0.075 mm PF-1.0)(Q)(P)x0.10+(PGAB Content PF-1.0)(Q)(P)x0.25	PA = (density PF- 1.0)(Q)(P)x0.50

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. The Department will sample once per sublot 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	
Maximum Sublot Size – Mix	(Lot size ≤ 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

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 sublot 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 sublot density is less than 88.5 percent or greater than 99.0 percent of the sublot 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 sublot TMD, the sublot shall be removed and replaced at no cost to the Department; otherwise, the average of the three cores will be used to determine the sublot 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	No	+/- 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

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 sublot 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:

Pay Item	Pay Unit
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:

Pay Item		Pay Unit
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 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 sublot 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 Contactor 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 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 Contactor 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 ¾" 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 ¾" will be matched up within ½ 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:

Pay Item		Pay Unit
461.13	Light Capital Paving	Ton

SPECIAL PROVISION
SECTION 461
(Light Capital Paving Preservation)

Description The Contractor shall furnish a uniformly blended, homogeneous mixture of Hot Mix Asphalt Pavement (HMA) meeting the requirements of one of the following Special Provisions with the modifications as outlined in this specification.

461 SP - Light Capital Paving
461 SP - 9.5mm Hot Mix Asphalt Mix Design

Pavement will be placed as one or more courses and shall be 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 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 unless otherwise specified in the contract documents.

Recycled Asphalt Materials The use of Recycled Asphalt Shingles (RAS) will **not be** permitted.

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.

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

Acceptance For Hot Mix Asphalt items designated as LCPP (Light Capital Paving Preservation), 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.

If the Contractor options to use a design meeting the requirements of Special Provision 461 - 9.5mm Hot Mix Asphalt Mix Design, sampling and testing will be completed under item 461.210, otherwise sampling and testing will be completed under 461.13.

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 2. Paving operations shall not resume until the Contactor and the Department determines that material meeting the Contract requirements will be produced.

TABLE 1: MIXTURE LIMITS

Square Mesh Sieve	**461.13 – LCP**	**461.210 – 9.5mm**
½"	100%	100%
#4 (4.75 mm)	75% - 90%	Target +/- 7%
#16 (1.18 mm)	30% - 60%	Target +/- 5%
#50 (0.30 mm)	10% - 30%	Target +/- 3%
#200 (0.075 mm)	0.0% - 8.0%	0.0% - 8.0%
PGAB Content	**6.7% +/- 0.4%**	**Target +/- 0.4%**

Each test result will represent the Lot, which will be evaluated for price adjustments based upon Table 2 below.

TABLE 2: 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.

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 Preservation between 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, the pavement surface temperature is above 40° F.

Temperature Requirements The temperature of the mixture shall conform to the tolerances in Table 3 as measured at the truck at the mixing plant and at the paver unless otherwise authorized by the Department.

TABLE 3: ALLOWABLE TEMPERATURE RANGES

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

Tack Coat A tack coat of RS-1, RS-1h, CRS-1 or CRS-1h emulsified asphalt shall be applied to any existing pavement or recycled layer at a rate of 0.03 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 0.03 gal/yd². HFMS-1 emulsified asphalts may be used with approval of the Department.

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 used for the wearing surface shall be equipped with automatic grade controls that automatically adjust the screed and increase or decrease the layer thickness to compensate for irregularities in the preceding course. 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.

d. 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.

The widths and breakpoints of existing lanes and shoulders will be matched and maintained, and will received a ¾" wearing surface at a minimum. The Contractor will plan their construction sequencing and paver setup so that there is no excessive overlap and paved aprons can be adequately matched during placement unless otherwise approved by the Department.

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.

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 shim and spot shim in locations as directed by the Department or as specified in the Contract.

Compaction As a minimum, compaction of the LCPP will be obtained using a roller train consisting of a 10 ton vibratory roller, 12 ton pneumatic roller, and a 10 ton finish roller for shim layers. For wearing surfaces, as a minimum, compaction of the LCPP will be obtained using a roller train consisting of a 10 ton vibratory roller, a 10 ton intermediate roller, and a 3-5 ton finish roller unless otherwise approved by the Department. Once the methods are established, rolling patterns, equipment, and methods will become part of the QCP. Failure to conform to these requirements will be treated as a second incident under 106.4.6 QCP Non-compliance.

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.

Joint Construction Longitudinal joints shall be generally straight to the line of travel, placed at existing centerline and shoulder joints, 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.

Paving sequencing will be planned so that longitudinal joints are parallel to the existing centerline and **do not** fall within the **mainline travelway lanes (excluding center turn lanes**). Lanes shall be shimmed and surfaced in a manner so that no crown is created within the traveled lanes (straight graded) with the exception of center turn lanes with existing crowns.

If the exposed centerline joint is ¾" 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 ¾" will be matched up within ½ 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 Preservation 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 Preservation 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 an emulsified tack coat 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:

Pay Item		Pay Unit
461.13	Light Capital Paving	Ton

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:

Pay Item		Pay Unit
631.175	Contractor Trucking	Ton

SPECIAL PROVISION
SECTION 631
EQUIPMENT RENTAL
EQUIPMENT REQUIREMENTS

Amend Section 631 by adding the following to the noted subsections:

631.03 General

Equipment shall be capable of grinding small areas of pavement up to 6” in depth in accordance with Section 202, per plans, or as directed by the Resident.

631.08 Basis of Payment

Payment will be made under:

Pay Item		Pay Unit
631.212	Small Pavement Grinder (Including Operator)	Hour

SPECIAL PROVISION
SECTION 652
TRAFFIC CONTROL
(Light Capital Paving Signage**)**

Description This work shall consist of providing two laborers, a broom capable of efficiently removing sand and debris from the roadway such as a tow behind broom, a pickup truck capable of hauling a tag along broom, and enough signage for two daily work zones. All work will be performed under the direction of a MaineDOT Supervisor. If the laborers are not certified flaggers, they will be certified by the Region.

General The two laborers will perform duties as assigned by the MaineDOT Supervisor; duties will include but not be limited to setting up and taking down work zone signage, roadway sweeping incidental to the project including and not limited to: winter sand clean up, sweeping alongside curb or as directed by the MaineDOT Supervisor, placing Temporary Object Marker's and highway delineators supplied by the MaineDOT, and spot flagging.

Equipment requirements A pickup truck capable of transporting two laborers, and all the signs needed for two daily work zones (26 signs) and able to tow a tag-a-long broom, a tag-a-long broom capable of sweeping the roadway surface, 2-hand brooms and shovels. Signs shall consist of 4 road work 2 miles ahead, 4 work area ahead signs, 6 one lane road ahead signs and 12 flagger ahead signs. All signs will be 350 compliant.

Method of Measurement The Department will measure the work by the ½ working day. A half working day will be considered starting time until 12:00 noon and 12:00 noon until the end of the day.

Basis of Payment Payment will be full compensation for all work specified, including furnishing all equipment and fuel, furnishing and installing daily work zone signage and sweeping as directed by M&O.

Pay Item		Pay Unit
652.352	LIGHT CAPITAL PAVING SIGNAGE	Working Day

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 XXXX[1].
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.

SPECIAL PROVISION SECTION 656
SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

Amend 656.3.1 Qualification of Preparer to "The preparer of the Spill Prevention Control and Countermeasure Plan (SPCCP) must be knowledgeable and experienced with the handling, use, or storage of petroleum products or the hazardous matter/substances utilized on the project including the onsite fueling of equipment."

Amend 656.3.4 Water Pollution Control Requirements to "This Work includes the handling, use, or storage of petroleum products or hazardous Matter/Substances including the onsite fueling of Equipment. At a minimum, the SPCCP must include:

a. The name and qualifications of the person preparing the SPCCP.

b. The name of the on-site person, responsible for spill prevention and response, who must be the Prime Contractor's Superintendent or other supervisory employee with the authority to immediately remedy any deficient controls, with their phone number and emergency number (personal cellular phone or pager).

c. General description and location of (1) handling, transfer, storage, and containment facilities of such products or hazardous Matter/Substances ("activities and facilities") and (2) potential receptors of such products or hazardous Matter/Substances including oceans, lakes, ponds, rivers, streams, wetlands, and sand and gravel aquifers ("sensitive resources") including the distances between said activities and facilities and said sensitive resources;

d. Description of preventative measures to be used to minimize the possibility of a spill including Equipment and/or Materials to be used to prevent discharges including containment and diversionary structures, inspections and personnel training;

e. A contingency response plan to be implemented if spill should occur including a list of emergency phone/pager numbers including the Contractor's representative, MDEP Spill Response, the National Response Center (if spill enters the water), the Resident, and local police and fire authorities, a list of emergency response equipment and locations and a description of the capabilities of the equipment, a description of the general response and clean up protocols by product or Matter/Substances and an overview of the verbal and written notification procedures for federal, state and local officials. For a related provision, see 105.2.2 - "Project Specific Emergency Planning".

For a related provision, see Section 105.8.3 - "Wetland and Waterbody Impacts"."

Amend 656.5.2 If No Pay Item to "Preparation of the SPCCP will be considered incidental to the contract."

2020 STANDARD DETAIL UPDATES

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

Detail #	Description	Revision Date
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 than15% 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.

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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:**
  - **Below a plane parallel with and 12 inches below the bottom of the drainage or minor structure or**
  - **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 sublot
Compressive Strength	AASHTO T-22 @ 7days	On Project	One set per sublot

***** 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 Size								
Bar Type	#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 accordancewith 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:

	Pay Item	Pay Unit
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.

Anchorages 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:

Pay Item		Pay Unit
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 608.022Detectable 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**."

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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 626.031Conduit 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 ºF and 50 ºF, 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 reflectivety 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 if 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
⅜ 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 ⅜ 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	¾ inch	1½ inch	½ inch
2 inch			100	
1½ inch	100		95-100	
1 inch	95-100	100	-	
¾ inch	-	90-100	35-70	100
½ inch	25-60	-	-	90-100
⅜ 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
⅜ 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 ½ in 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 ½" 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 AWPA 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 AWPA approved species, or spruce, cedar, tamarack or other AWPA 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 AWPA 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 AWPA 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 AWPA 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 ofASTM 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 AWPA 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 AWPA Standard U1, UC4A, Commodity Specification A: Sawn Products.