

**Updated 10/21/2021**

# **FEDERAL PROJECT**

**FEDERALLY FUNDED PROJECT**  
**Updated October 2021**

**BIDDING INSTRUCTIONS**

1. Use pen and ink to complete all paper bids.
2. The following documents must be received before the time of the bid opening:
  - a) Copy of Notice to Contractors;
  - b) Completed Acknowledgement of Bid Amendments form;
  - c) Completed Schedule of Items;
  - d) Two copies of the completed and signed Contract Agreement, Offer & Award form;
  - e) Bid Guaranty (if required); and
  - f) Any other certifications or bid requirements listed in the bid documents that are 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) Completed and signed bid bond modeled after the sample in this package for 5% of the bid amount (the industry standard AIA form is acceptable); or
  - b) Official bank check, cashier's check, certified check, U.S. postal money order or negotiable certificate of deposit for 5% of the bid amount.
5. Complete and submit the enclosed DBE Proposed Utilization Form with your bid. This is a curable defect. (This requirement applies only to projects with federal-aid funds.)

*If you need more information about bid preparation, please call:*

**Tony Beaulieu at (207) 333 - 6601**

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

October 21, 2021

# NOTICE

For security and other reasons, all Bid Packages that 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:

*Note: This document is included as an example. In all cases, the industry standard AIA form is acceptable.*

EXAMPLE  
**BID GUARANTY / BID BOND FORM**

**KNOW ALL 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 Municipality of \_\_\_\_\_ in the sum of \_\_\_\_\_, for payment that Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally. The condition of this obligation is that the Principal has submitted to the Municipality of \_\_\_\_\_, hereafter Municipality, a certain bid, attached hereto and incorporated as a part herein, to enter into a written contract for the construction of \_\_\_\_\_, and if the Municipality 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: \_\_\_\_\_

# NOTICE

Bidders:

Please use the attached “Request for Information” form to submit questions about this advertised Project. Include additional numbered pages as required.

RFI’s may be faxed to \_\_\_\_\_ or submitted by email to \_\_\_\_\_.

These are the only allowable mechanisms for answering Project specific questions. The Municipality 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. In the subject line, include the word RFI, the Project name and Work Identification Number (WIN).

# REQUEST FOR INFORMATION

Date \_\_\_\_\_ Time \_\_\_\_\_

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**Information Requested for:**

**WIN:** \_\_\_\_\_ **Town(s):** \_\_\_\_\_ **Bid Date:** \_\_\_\_\_

**Question(s):** \_\_\_\_\_

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Request by:  
**Company Name:** \_\_\_\_\_ **Phone:**(\_\_\_\_\_) \_\_\_\_\_

**Email:** \_\_\_\_\_ **Fax:** (\_\_\_\_\_) \_\_\_\_\_

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*Complete this form and transmit to the number listed in the Notice to Contractors*

# NOTICE

## Disadvantaged Business Enterprise Proposed Utilization

The Apparent Low Bidder shall submit the Disadvantaged Business Enterprise Proposed Utilization form with their bid. This is a curable bid defect.

The Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan form contains additional information that is required by USDOT.

The Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan form should be used.

A copy of the new Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan and instructions for completing it are attached.

Note: Questions about DBE firms, or to obtain a printed copy of the DBE Directory, contact The Office of Civil Rights at (207) 624-3066.

MDOT's DBE Directory of Certified firms can also be obtained at <https://www.maine.gov/mdot/civilrights/dbe/>

## INSTRUCTIONS FOR PREPARING DBE UTILIZATION FORM

The Contractor shall extend equal opportunity to firms listed in MaineDOT's DBE Directory of Certified Businesses in the selection and utilization of Subcontractors and Suppliers.

### SPECIFIC INSTRUCTIONS FOR COMPLETING THE FORM:

Insert Contractor name, the name of the person(s) preparing the form, and that person(s) telephone, fax number and e-mail address.

Calculate and provide percentage of your bid that will be allocated to DBE firms, Federal Project Identification Number, and location of the Project work.

In the columns, name each subcontractor, DBE and non-DBE firm to be used, provide the Unit/Item cost of the work/product to be provided by the subcontractor, give a brief description and the dollar value of the work.

Revised 1/12



**DBE GOAL NOTICE FFY 2022-2024**  
**Maine Department of Transportation**  
**Disadvantaged Business Enterprise Program**

Notice is given that, in accordance with US Department of Transportation regulation 49 CFR Part 26, the Maine Department of Transportation (MaineDOT) has established a Disadvantaged Business Enterprise Program (DBE) for disadvantaged business participation in the federal-aid highway and bridge construction programs. Federally funded contracts covered by the DBE Program include consulting, construction, supplies, manufacturing, and related services.

For FFY 2022-2024 (October 1, 2021 through September 30, 2024) MaineDOT has established an annual DBE participation goal of **1.97%** to be achieved through race/gender neutral means. This will remain in effect through September 30, 2024. Maine DOT must meet this goal each federal fiscal year. If the goal is not met, MaineDOT must provide a justification for not meeting the goal and provide a plan to ensure the goal is met, which may include placing contract goals on certain projects that contractors will be required to meet.

MaineDOT asks all contractors, consultants and subcontractors to seek certified DBE firms for projects and to work to meet the determined 1.97% goal without the need to impose contract goals. DBE firms are listed on the MaineDOT website at: <https://www.maine.gov/mdot/civilrights/docs/dbe/WeeklyDBEVendorList.pdf>

Interested parties may view MaineDOT's DBE goal setting methodology, which is posted on this website: <https://www.maine.gov/mdot/civilrights/dbe/>

If you have questions, please contact Stacie Haskell, EEO Specialist in the MaineDOT's Civil Rights Office, by phone at (207) 624-3056 or by e-mail at: [Stacie.haskell@maine.gov](mailto:Stacie.haskell@maine.gov)

**MaineDOT CONTRACTOR'S DBE/SUBCONTRACTOR  
PROPOSED UTILIZATION FORM**

**All Bidders must furnish this form with their bid on Bid Opening day**

**Contractor:** \_\_\_\_\_ **Telephone:** \_\_\_\_\_ **Ext** \_\_\_\_\_

**Contact Person:** \_\_\_\_\_ **Fax:** \_\_\_\_\_

**E-mail:** \_\_\_\_\_

**BID DATE:** \_\_\_\_\_

**FEDERAL PROJECT PIN #** \_\_\_\_\_ **PROJECT LOCATION:** \_\_\_\_\_

TOTAL ANTICIPATED DBE \_\_\_% PARTICIPATION FOR THIS CONTRACT

W B E	D B E	Non DBE	Firm Name	Item Number & Description of Work	Quantity	Cost Per Unit/Item	Anticipated \$ Value
<b>Subcontractor Total &gt;</b>							
<b>DBE Total &gt;</b>							

**NOTE: THIS INFORMATION IS USED TO TRACK AND REPORT ANTICIPATED DBE PARTICIPATION IN ALL  
FEDERALLY FUNDED MAINE DOT CONTRACTS. THE ANTICIPATED DBE AMOUNT IS VOLUNTARY AND WILL  
NOT BECOME A PART OF THE CONTRACTUAL TERMS.**

Equal Opportunity Use:

Form received: \_\_\_/\_\_\_/\_\_\_ Verified by: \_\_\_\_\_

FHWA       FTA       FAA

**For a complete list of certified firms and company designation (WBE/DBE) go to  
<http://www.maine.gov/mdot/civilrights/>**

## **Maine Department of Transportation Civil Rights Office**

**Directory of Certified Disadvantaged Business  
Enterprises can be found at:**

<https://www.maine.gov/mdot/civilrights/dbe/>

**For guidance, contact: MaineDOT's  
Civil Rights Office at (207) 624-3066**

*It is the responsibility of the Contractor to access the DBE  
Directory in order to have the most current listing.*

## NOTICE TO CONTRACTORS

Sealed Bids addressed to the Municipality of AUBURN and endorsed on the wrapper “Bids for WIN 18651.00, Mill, Main and Broad Streets Intersection and Corridor Improvements in the Municipality of Auburn” will be received from contractors at the Auburn City Hall located at 60 Court Street Auburn at 2:00 o'clock PM (prevailing time) on August 11, 2022 and at that time will be publicly opened and read in the Community Room 206, Auburn City Hall. **A mandatory pre-bid meeting will be held on Tuesday, July 26 at 2:00 PM in the Community Room 206, Auburn City Hall.** Bids will only be accepted from bidders who have attended the mandatory pre-bid meeting.

The lowest responsive bidder must have completed, or successfully complete, a Highway or Project-Specific prequalification through the Maine Department of Transportation to be considered for the award of this contract.

Description: Federal Aid Project No. 1865(100), WIN 18651.00.

Location: In Androscoggin County, project is located along Mill, Main and Broad Streets from the Little Androscoggin River to the Intersection of Broad Street and River Road.

Outline of Work: This project includes the reconstruction of curbing, sidewalks, intersection geometric improvements, drainage improvements, pedestrian improvements, traffic signal improvements, landscaping, lighting, pavement overlay, shim and mill and other incidental work.

**THE BASIS OF AWARD WILL BE BASED UPON THE BASE BID AND EITHER ALTERNATE 1 OR 2 (SECTION 0002 OR SECTION 0003), WHICHEVER IS IN THE BEST INTEREST OF THE CITY.**

For general information about bidding and contracting procedures, please contact Derek Boulanger at (207) 333-6601. For project-specific information, please fill out and email the attached RFI Form to [abeaulieu@auburnmaine.gov](mailto:abeaulieu@auburnmaine.gov), with the project name and WIN in the subject line. Questions received after 12:00 noon on the Friday prior to bid opening will not be answered. Bidders shall not contact anyone else for clarification of Contract provisions; the Municipality will not be responsible for any interpretations so obtained.

Plans, specifications and bid forms can be obtained from the City of Auburn's website:  
<http://www.auburnmaine.gov/business/bid-notices>

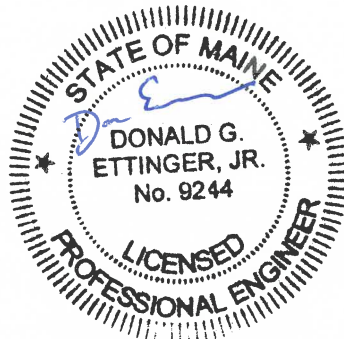
Each Bid must be made upon blank forms provided by the Municipality and must be accompanied by a bid bond of 5% of the bid amount or an official bank check, cashier's check, certified check, certificate of deposit, or United States postal money order in the amount of 5% of the bid amount, payable to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

This Contract is subject to all applicable federal and state laws, as well as the Disadvantaged Business Enterprise program requirements as set forth by the Maine Department of Transportation.

All work shall be governed by the Maine Department of Transportation's Standard Specifications (March 2020 Edition) and Standard Details (March 2020 Edition). They may be ordered by phone at (207) 624-3536 from 8:00 a.m. to 4:30 p.m., price \$10 [\$15 by mail]. These publications also are available online: <https://www.maine.gov/mdot/contractors/publications/>

The Municipality reserves the right to reject any or all bids.

Auburn, Maine  
July 14, 2022



Gorrill Palmer

*Federal Project – Revised May 2021*

**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.auburnmaine.gov/business/bid-notices> . It is the responsibility of the Bidder to determine if there are Amendments to the Project, to download them, to incorporate them into its Bid Package, and to reference the Amendment number and the date on the form below. The Municipality 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)

SCHEDULE OF ITEMS							
Mill, Main and Broad Streets Intersection and Corridor Improvements - WIN 18651.00							
BASE BID - BID SECTION 0001							
Pay Item Number	Item Description	Approx. Quantity	Unit of Measure	Unit Price		Bid Amount	
				Dollars	Cents	Dollars	Cents
201.23	REMOVING SINGLE TREE TOP ONLY	6	Each				
201.24	REMOVING STUMP	7	Each				
202.15	REMOVING EXISTING MANHOLE OR CATCH BASIN	2	Each				
202.202	REMOVING PAVEMENT SURFACE	1500	Square Yard				
202.203	PAVEMENT BUTT JOINTS	1200	Square Yard				
203.20	COMMON EXCAVATION	2700	Cubic Yard				
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	1750	Cubic Yard				
403.2081	HOT MIX ASPHALT, 12.5 MM NOMINAL MAXIMUM SIZE (POLYMER MODIFIED)	620	Ton				
403.209	HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (SIDEWALKS, DRIVES, ISLANDS & INCIDENTALS)	150	Ton				
403.211	HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (SHIMMING)	170	Ton				
403.213	HOT MIX ASPHALT, 12.5 MM NOMINAL MAXIMUM SIZE (BASE AND INTERMEDIATE COURSE)	420	Ton				
409.15	BITUMINOUS TACK COAT, APPLIED	480	Gallon				
430.25	COBBLESTONE PAVEMENT	360	Square Yard				
603.159	12-INCH CULVERT PIPE OPTION III	74	Linear Foot				
604.072	CATCH BASIN TYPE A1-C	6	Each				
604.16	ALTERING CATCH BASIN TO MANHOLE	5	Each				
604.164	REBUILDING CATCH BASIN	3	Each				
604.18	ADJUSTING MANHOLE OR CATCH BASIN TO GRADE	8	Each				
604.249	CATCH BASIN TYPE F6-C	1	Each				
604.252	CATCH BASIN TYPE A5-C	13	Each				

SCHEDULE OF ITEMS							
Mill, Main and Broad Streets Intersection and Corridor Improvements - WIN 18651.00							
604.262	CATCH BASIN TYPE B5-C	4	Each				
605.09	6-INCH UNDERDRAIN TYPE B	390	Linear Foot				
605.11	12-INCH UNDERDRAIN TYPE C	1040	Linear Foot				
607.24	REMOVE AND RESET FENCE	73	Linear Foot				
608.26	CURB RAMP DETECTABLE WARNING FIELD	462	Square Foot				
609.11	VERTICAL CURB TYPE 1	1700	Linear Foot				
609.12	VERTICAL CURB TYPE 1 - CIRCULAR	350	Linear Foot				
609.221	TERMINAL CURB TYPE 1	330	Linear Foot				
609.222	TERMINAL CURB TYPE 1 - CIRCULAR	170	Linear Foot				
609.34	CURB TYPE 5	140	Linear Foot				
609.35	CURB TYPE 5 - CIRCULAR	130	Linear Foot				
609.50	CONCRETE BASE FOR CURBING	2820	Linear Foot				
615.07	LOAM	100	Cubic Yard				
615.086	LOAM/COMPOST MIX	215	Cubic Yard				
618.13	SEEDING METHOD 1	8	Unit				
619.12	MULCH	8	Unit				
619.1301	BARK MULCH - PLAN QUANTITY	50	Cubic Yard				
621.138	SMALL DECIDUOUS TREE (1.5"-2" CAL) GRP A	5	Each				
621.273	LARGE DECIDUOUS TREE (2"-2.5" CAL) GRP A	19	Each				
621.71	GRASSES (PLUGS)	5400	Each				
626.11	PRECAST CONCRETE JUNCTION BOX	13	Each				
626.21	METALLIC CONDUIT	150	Linear Foot				
626.22	NON-METALLIC CONDUIT	710	Linear Foot				
626.22	1.5 INCH NON-METALLIC SCHEDULE 40 CONDUIT	1500	Linear Foot				

SCHEDULE OF ITEMS							
Mill, Main and Broad Streets Intersection and Corridor Improvements - WIN 18651.00							
626.23	1.5 INCH NON-METALLIC SCHEDULE 80 CONDUIT	700	Linear Foot				
626.34	2 INCH NON-METALLIC SCHEDULE 80 CONDUIT	150	Linear Foot				
626.371	FOUNDATION BASES	29	Each				
626.38	GROUND MOUNTED CABINET FOUNDATION	2	Each				
626.421	24 INCH DIAMETER FOUNDATION	91	Linear Foot				
626.44	36-INCH DIAMETER FOUNDATION	35.5	Linear Foot				
626.451	42-INCH DIAMETER FOUNDATION	31	Linear Foot				
626.47	54-INCH DIAMETER FOUNDATION	18	Linear Foot				
627.733	4-INCH WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	4300	Linear Foot				
627.75	WHITE OR YELLOW PAVEMENT AND CURB MARKING	4550	Square Foot				
629.05	HAND LABOR, STRAIGHT TIME	8	Hour				
631.10	AIR COMPRESSOR (INCLUDING OPERATOR)	8	Hour				
631.11	AIR TOOL (INCLUDING OPERATOR)	8	Hour				
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	8	Hour				
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	8	Hour				
631.18	CHAIN SAW RENTAL (INCLUDING OPERATOR)	8	Hour				
631.20	STUMP CHIPPER RENTAL (INCLUDING OPERATOR)	8	Hour				
634.042	#2 AWG CABLE INSTALLATION	450	Linear Foot				
634.043	#8 AWG CABLE INSTALLATION	15000	Linear Foot				
634.08	ELECTRICAL SERVICE BOXES	2	Each				
634.2101	CONVENTIONAL LIGHTING STANDARD	29	Each				
639.19	FIELD OFFICE, TYPE B	1	Each				
641.12	BENCH	5	Each				
641.34	TRASH RECEPTABLE	2	Each				



SCHEDULE OF ITEMS							
Mill, Main and Broad Streets Intersection and Corridor Improvements - WIN 18651.00							
643.63	RECTANGULAR RAPID FLASHING BEACON: MILL STREET	1	Lump Sum				
643.63	RECTANGULAR RAPID FLASHING BEACON: BROAD STREET	1	Lump Sum				
643.80	TRAFFIC SIGNALS AT MILL STREET/MAIN STREET	1	Lump Sum				
643.80	TRAFFIC SIGNALS AT MILL STREET/BROAD STREET	1	Lump Sum				
643.83	VIDEO DETECTION SYSTEM: MILL STREET/MAIN STREET	1	Lump Sum				
643.83	VIDEO DETECTION SYSTEM: MILL STREET/BROAD STREET.	1	Lump Sum				
643.92	PEDESTAL POLE	13	Each				
643.94	DUAL PURPOSE POLE - 30' MAST ARM	2	Each				
643.94	DUAL PURPOSE POLE - 35' MAST ARM	2	Each				
643.94	DUAL PURPOSE POLE - 40' MAST ARM	1	Each				
643.94	DUAL PURPOSE POLE - 55' MAST ARM	1	Each				
645.271	REGULATORY, WARNING, CONFIRMATION AND ROUTE ASSEMBLY SIGN, TYPE 1	180	Square Foot				
645.512	LED BLANK-OUT SIGN, OVERHEAD MOUNT	4	Each				
652.312	TYPE III BARRICADES	4	Each				
652.33	DRUM	75	Each				
652.34	CONE	75	Each				
652.35	CONSTRUCTION SIGNS	1050	Square Foot				
652.36	MAINTENANCE OF TRAFFIC CONTROL DEVICES	180	Calendar Day				
652.38	FLAGGERS	4300	Hour				
652.381	TRAFFIC OFFICERS	80	Hour				
652.41	PORTABLE CHANGEABLE MESSAGE SIGN	4	Each				
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	Lump Sum				
659.10	MOBILIZATION	1	Lump Sum				
803.01	TEST PITS	2	Each				

SCHEDULE OF ITEMS								
Mill, Main and Broad Streets Intersection and Corridor Improvements - WIN 18651.00								
841.48	BOLLARDS	5	Each					
890.07	BIKE RACK	1	Each					
TOTAL AMOUNT OF SECTION 0001, WRITTEN AND IN FIGURES BASED ON ESTIMATE OF QUANTITIES:								
_____								
(written)								

<b>SCHEDULE OF ITEMS</b> Mill, Main and Broad Streets Intersection and Corridor Improvements - WIN 18651.00							
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ALTERNATE 1 - BID SECTION 0002							
Pay Item Number	Item Description	Approx. Quantity	Unit of Measure	Unit Price		Bid Amount	
				Dollars	Cents	Dollars	Cents
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	710	Cubic Yard				
403.209	HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (SIDEWALKS, DRIVES, ISLANDS & INCIDENTALS)	240	Ton				
<b>TOTAL AMOUNT OF SECTION 0002, WRITTEN AND IN FIGURES BASED ON ESTIMATE OF QUANTITIES:</b> _____ (written)							

ALTERNATE 2 - BID SECTION 0003							
Pay Item Number	Item Description	Approx. Quantity	Unit of Measure	Unit Price		Bid Amount	
				Dollars	Cents	Dollars	Cents
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	600	Cubic Yard				
608.08	REINFORCED CONCRETE SIDEWALK	2100	Square Yard				
<b>TOTAL AMOUNT OF SECTION 0003, WRITTEN AND IN FIGURES BASED ON ESTIMATE OF QUANTITIES:</b> _____ (written)							

<b>THE BASIS OF AWARD WILL BE BASED UPON THE BASE BID AND EITHER BID ALTERNATE 1 OR 2 (SECTION 0002 OR SECTION 0003), WHICHEVER IS IN THE BEST INTEREST OF THE CITY.</b>		
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## **CONTRACT AGREEMENT, OFFER & AWARD**

AGREEMENT made on the date last signed below, by and between the Municipality of Auburn, a municipal corporation with its principal administrative offices located at 60 Court Street, Auburn ME 04210 (the Municipality), with a mailing address of 60 Court Street, Auburn ME 04210, and

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

The Municipality 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 18651.00 for Intersection and Corridor Improvements in the Municipality of Auburn, County of Androscoggin Maine.** The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall furnish all supervision, labor, equipment, tools, supplies, and materials required to perform the Work. The Contractor further shall be responsible for 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 Municipality 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 **October 31, 2023**. Furthermore, the Municipality may deduct from money otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with sections 107.7 and 107.8 of the *Maine Department of Transportation (MaineDOT) 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, *MaineDOT Standard Specifications (March 2020 Edition)* and *Standard Details (March 2020 Edition)*, as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

**E. Certifications.**

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

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

**F. Offer.**

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

**WIN 18651.00 – Mill, Main and Broad Streets Intersection and Corridor Improvements in Auburn,**

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 Municipality in writing.

The Offeror also agrees:

First: To do any extra work, not covered by the attached “Schedule of Items,” which may be ordered by the Project Resident, and to accept as full compensation the amount determined upon a “Force Account” basis as provided in the *MaineDOT 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 Municipality of Auburn 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 *MaineDOT Standard Specifications (March 2020 Edition)* and complete the Work within the time limits given in the Special Provisions of this Contract.

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

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

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

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.

MUNICIPALITY OF AUBURN

\_\_\_\_\_  
Date

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

\_\_\_\_\_  
Witness

BOND # \_\_\_\_\_

**SAMPLE**  
**CONTRACT PERFORMANCE BOND**

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

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

The Surety hereby waives notice of any alteration or extension of time made by the Municipality  
of \_\_\_\_\_, Maine.

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

WITNESSES:

SIGNATURES:

CONTRACTOR:

Signature.....

Printed Name.....

SURETY:

Signature .....

Printed Name.....

SURETY ADDRESS:

MUNICIPALITY:

ADDRESS .....

.....

.....

.....

TELEPHONE.....



BOND # \_\_\_\_\_

**SAMPLE**  
**CONTRACT PAYMENT BOND**

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

The condition of this obligation is such that if the Principal designated as Contractor in the  
Contract to construct Project Number \_\_\_\_\_ in the Municipality of  
\_\_\_\_\_ promptly 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 that 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 ... .

**WITNESSES:**

Signature.....  
Printed Name.....

Signature .....  
Printed Name.....

**SURETY ADDRESS:**

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

TELEPHONE.....

**SIGNATURES:**

**CONTRACTOR:**

.....  
Printed Name.....

**SURETY:**

.....  
Printed Name.....

**MUNICIPALITY:**

**ADDRESS** .....  
.....  
.....

"General Decision Number: ME20220045 02/25/2022

Superseded General Decision Number: ME20210045

State: Maine

Construction Type: Highway

County: Androscoggin County in Maine.

#### HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2022.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the

Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Modification Number	Publication Date
0	01/07/2022
1	02/25/2022

\* SUME2014-040 06/23/2017

	Rates	Fringes
CARPENTER, Includes Form Work....	\$ 18.95	3.23
CEMENT MASON/CONCRETE FINISHER...	\$ 19.27	1.13
ELECTRICIAN.....	\$ 25.21	5.63
HIGHWAY/PARKING LOT STRIPING:		
Laborer.....	\$ 15.53	2.04
INSTALLER - GUARDRAIL.....	\$ 19.98	2.55
IRONWORKER, REINFORCING.....	\$ 21.85	0.00
IRONWORKER, STRUCTURAL.....	\$ 22.33	4.50
LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor.....	\$ 16.71	0.63
LABORER: Common or General.....	\$ 14.65 **	1.64
LABORER: Epoxy Injector (Concrete).....	\$ 13.43 **	1.15
LABORER: Wheelman.....	\$ 22.87	3.79
OPERATOR:		
Backhoe/Excavator/Trackhoe.....	\$ 20.09	3.20
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 21.03	3.43

OPERATOR: Broom/Sweeper.....	\$ 19.52	0.00
OPERATOR: Bulldozer.....	\$ 21.71	5.67
OPERATOR: Grader/Blade.....	\$ 27.40	8.13
OPERATOR: Loader.....	\$ 19.52	3.19
OPERATOR: Mechanic.....	\$ 24.69	8.18
OPERATOR: Milling Machine.....	\$ 28.51	5.44
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 20.86	3.73
OPERATOR: Roller (Earth).....	\$ 14.74 **	1.29
OPERATOR: Roller Asphalt.....	\$ 19.14	3.43
TRAFFIC CONTROL: Flagger.....	\$ 9.06 **	0.00
TRAFFIC CONTROL: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper.....	\$ 17.02	5.37
TRUCK DRIVER: Dump Truck.....	\$ 15.60	1.38

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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\*\* Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$15.00) or 13658 (\$11.25). Please see the Note at the top of the wage determination for more information.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other

health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and

the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour

National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"

**SPECIAL PROVISION  
SECTION 101  
CONTRACT INTERPRETATION**

The provisions of Section 101 of the Standard Specifications, “Contract Interpretation,” shall apply with the following modifications:

**101.2 Definitions.**

Chief Engineer.

REPLACE: “The Chief Engineer of the Department.”

With: “The Engineer of Record for the Project, Donald Ettinger.”

Commissioner.

REPLACE: “The Commissioner of Transportation established by 23 MRSA §4205.”

With: “City Engineer”

Department.

REPLACE: “The Department of Transportation of the State of Maine, as established by 23 MRSA §4205 et. seq. for the administration of Highway, Bridge, and other Public Works ...”

With: “The Municipality of Auburn, Maine,” acting through its City Engineer and this person’s duly authorized representatives.”

Project Manager.

REPLACE: “The Department’s duly authorized representative for overall coordination of the Project.”

With: “The Municipality of Auburn’s duly authorized representative for overall coordination of the Project.”

Resident.

REPLACE: “The Department’s on-site representative.”

With: “Resident.”



**SPECIAL PROVISION**  
**SECTION 104**  
**GENERAL RIGHTS AND RESPONSIBILITIES**  
**(Cooperation with Other Contractors)**

It is hereby brought to the Contractor's attention that the MaineDOT - Region 1 – Bridge Maintenance Program has a bridge concrete wearing surface replacement project. Project information is as follows:

- WIN 028047.00 Replacing wearing surface and sidewalks on Iron Bridge (#3895) in Auburn, which carries Main Street over the Little Androscoggin River. The bridge is located 210 feet north of Route 136. Contractor name and additional project information may be found at the following MaineDOT website:  
<https://www.maine.gov/mdot/contractors/awarded/>

The Contractor shall cooperate with the Contractor on the Iron Bridge project at all times. The Contractor shall coordinate all activities including traffic control to ensure safe travel for motorists. This shall be specifically addressed within the Contractors Traffic Control Plan.

**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 have been notified and will be furnished a project specification.

**Overview:**

<b>Utility/Railroad</b>	<b>Aerial</b>	<b>Underground</b>	<b>Railroad</b>
AT&T (Portland Office)	X	X	
Auburn Water & Sewerage District		X	
City of Auburn		X	
Central Maine Power Company	X	X	
Charter Communications (Spectrum)	X		
Consolidated Communications of Northern New England Company LLC	X	X	
Oxford Networks/Revolution Networks (AKA NECAP) (FirstLight)	X		
Until Corp.		X	

<b>Utility Contact Information</b>		
<b>Utility/Railroad</b>	<b>Contact Person</b>	<b>Contact Phone</b>
AT&T (Portland Office)	Alice Coughlan	879-5050
Auburn Water & Sewerage District	Mike Broadbent	784-6469 office

City of Auburn	Charlie DeAngelis	333-6601 office
Central Maine Power Company	Brent Brooks	<a href="mailto:Brent.Brooks@cmpco.com">Brent.Brooks@cmpco.com</a>
Charter Communications (Spectrum)	Paul Ouellette	738-9902 office
Consolidated Communications of Northern New England Company LLC	Marty Pease	535-4208 office
Oxford Networks/Revolution Networks (AKA NECAP) (FirstLight)	Michael Ellingwood	3333471
Until Corp.	Derek Giroux	251-2533

Temporary utility adjustments are **not** anticipated.

Unless otherwise specified, any underground utility facilities shown on the project plans represent approximate locations gathered from available information. The Department cannot certify the level of accuracy of this data. Underground facilities indicated on the topographic sheets (plan views) have been collected from historical records and/or on-site designations provided by the respective utility companies. Underground facilities indicated on the cross-sections have been carried over from the plan view data and may also include further approximations of the elevations (depths) based upon straight-line interpolation from the nearest manholes, gate valves, or test pits.

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.

All clearing and tree removal in areas where utilities are involved must be completed before the utilities are able to relocate their facilities.

It is the responsibility of the Contractor with the Utility Pole owner, to layout all of the proposed pole locations in the field prior to the start of utility relocations. Should any adjustments be needed, the Utility will document adjustments and inform the Department prior to utility relocations.

The Contractor shall provide the utilities access to the new pole locations. Construction of any spot cuts or fills in excess of 2 feet must be completed prior to utility relocations. The Contractor shall prepare a plan for how access and the spot cuts and fills will be accomplished and what the schedule will be for performing the work. This plan will be discussed at the pre-construction utility meeting.

***\*\* Specific information regarding the line voltage can be requested from Central Maine Power Company\*\****

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. The Contractor shall have no claim against the Department if they are exceeded.

**BUY AMERICA**

Utility construction work performed as part this federal-aid project is subject to the requirements of Buy America in accordance with Federal Regulation 23 CFR 635.410 Section 1518. Specific requirements are presented in MaineDOT Standard Specification Section 100, Appendix A, Section 3.A., Buy America.

**AERIAL**

Aerial utility adjustments **are** anticipated as part of this project. If any unexpected utility relocations become necessary, they shall be scheduled in compliance with Section 104 of the Standard Specifications and shall be done by the utilities in conjunction with the work by the Contractor.

The aerial utilities have existing service lines crossing the roadway corridor at several locations within the project limits. Each existing service line shall be maintained.

The Contractor shall coordinate with the utility representative for the horizontal alignment/offset of the new pole set locations within the project limits. The Contractor and the utility representative shall document the changes to the new pole set locations from the attached pole list and discuss the changes with the Resident prior to proceeding with the new pole set installations.

The Contractor is responsible for providing acceptable access to the new pole set locations within the project limits. The Contractor shall preform necessary cut/fill work (plus/minus 2 feet) and provide a schedule for sequencing the install for new pole sets. This schedule/sequencing needs to be provided prior to the pre-utility meeting.

***Summary:***

Utility	Pole Set	New Wires/ Cables	Trans. Wires/ Cables	Remove Poles	Estimated Working Days
AT & T (Portland Office)			X		10
Central Maine Power Company	X		X	X	3
Charter Communications (Spectrum)			X		10
Consolidated Communications of Northern New England Company LLC			X		10
Oxford Networks/Revolution Networks (AKA			X		10

NECAP) (FirstLight)					
<b>Total:</b>					43

***Utility Specific Issues:***

**AT&T (Portland Office)**

AT&T has aerial lines within the project limits. The aerial lines shall be permanently transferred to the new pole sets identified in the pole list. AT&T will require **ten (10) working days** notification to schedule their work. See above table for AT&T estimated working days.

**Central Maine Power Company**

Central Maine Power Company has aerial power lines (single and three phase) within the project limits. Aerial power lines shall be permanently transferred to new pole sets within the project limits as identified in the pole list. CMP shall perform new pole sets (7 total) and removing the existing poles (11 total). The contractor is responsible for coordinating the locations of the new pole sets with the CMP representative. See pole list table below for specific stationing and offset locations for new pole sets. CMP shall require **ten (10) working days** notification to schedule their work. CMP is responsible for removing the poles (and associated anchors) noted in the pole list once all transfers have been completed. See above table for CMP estimated working days.

**Charter Communications (Spectrum)**

Charter has aerial lines within the project limits. The aerial lines shall be permanently transferred to the new pole sets identified in the pole list. Charter will require **ten (10) working days** notification to schedule their work. See above table for Charter estimated working days.

**Consolidated Communications of Northern New England Company LLC**

Consolidated has aerial lines within the project limits. The aerial lines shall be permanently transferred to the new pole sets identified in the pole list. Consolidated will require **ten (10) working days** notification to schedule their work. See above table for Consolidated estimated working days.

**Oxford Networks / Revolution Networks (AKA NECAP) (FirstLight)**

FirstLight has aerial lines within the project limits. The aerial lines shall be permanently transferred to the new pole sets identified in the pole list. FirstLight will require **ten (10) working days** notification to schedule their work. See above table for FirstLight estimated working days.

***Pole List:***

Existing Pole #	Existing Station	Left/Right		Existing Offset	Proposed Station	Left/Right		Proposed Offset	Comments
		LT	RT			LT	RT		
CMP #	102+35	X		23.0	102+37	X		33.5	Install new pole. Remove existing pole.
CMP #	102+39		X	23.7					Pole to remain.
CMP#	103+76		X	19.9	103+85		X	23.3	Install new pole. Remove existing pole.
CMP#	104+87		X	22.4					Pole to remain.
CMP#	203+40	X		31.9	203+38	X		33.5	Install new pole. Remove existing pole.
CMP#	204+43	X		40.8	204+42	X		42.4	Install new pole. Remove existing pole.
CMP#	205+40		X	26.8					Pole to remain.
CMP#	206+42		X	26.0	206+40		X	25.3	Install new pole. Remove existing pole.
CMP#	207+39		X	26.7	207+39		X	27.5	Install new pole. Remove existing pole.
CMP#	208+11		X	23.4					Transfer facilities to new pole previously installed adjacent to existing pole. Remove existing pole.
CMP#	303+61	X		33.1					Transfer facilities to new pole previously installed adjacent to existing pole. Remove existing pole.

CMP#	304+33	X		33.1				Transfer facilities to new pole previously installed adjacent to existing pole. Remove existing pole.
CMP#8	305+15	X		28.1				Transfer facilities to new pole previously installed adjacent to existing pole. Remove existing pole.
CMP #17	306+15	X		29.7	306+06	X	29.0	Install new pole. Remove existing pole.

**SUBSURFACE**

Subsurface utility adjustments **are** anticipated as part of this project. If any unexpected utility relocations become necessary, they shall be scheduled in compliance with Section 104 of the Standard Specifications and shall be done by the utilities in conjunction with the work by the Contractor.

***Summary:***

Utility	Summary of Work	Estimated Working Days
Auburn Water & Sewerage District	Relocate existing water main and hydrants. Adjustments to existing water valve covers. Adjusting/Modifying existing sewer rims/frames.	10
Unitil	Potential relocation of gas mains within the project limits.	4*
<b>Total:</b>		14

\* Unitil noted that if relocations are required during construction, 2 working days, per location, would be required. Working day estimate assumes 2 relocations are needed.

***Utility Specific Issues:***

### **Auburn Water & Sewerage District**

Auburn Water & Sewerage District owns and operates the existing subsurface water and sewer facilities within the project limits. At several locations within the project limits, AWSD has existing water valve covers and manhole rims/frames needing adjustment. AWSD has one (1) fire hydrant to be relocated. One section of water main located near station 205+50 RT is also required to be relocated. This subsurface utility scope shall be self-performed/coordinated by AWSD during the construction phase of this project. The Contractor is responsible for confirming with the AWSD representative the existing subsurface facility locations prior to performing any excavation/milling activities. AWSD shall require **ten (10) working days** prior notice to schedule their work. See the above table for AWSD estimated working days.

### **Unitil**

Unitil owns and operates the existing subsurface natural gas distribution facilities within the project limits. At several locations within the project limits, Unitil has existing gas valve covers needing adjustment. This subsurface utility scope shall be self-performed/coordinated by Unitil during the construction phase of this project. Unitil noted during the Utility Pre-coordination meeting that any relocations required can be coordinated during the construction phase. The Contractor is responsible for confirming with the Unitil representative the existing subsurface facility locations prior to performing any excavation/milling activities. Unitil shall require **ten (10) working days** prior notice to schedule their work. See the above table for Unitil estimated working days.

### **Central Maine Power Company**

No subsurface work is anticipated for CMP. It is noted that an existing CMP duct bank is present along the northern side of Mill and Broad Streets. The size and depth of this duct bank is unknown.

### **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.



**SPECIAL PROVISION**  
**SECTION 104**  
**GENERAL RIGHTS AND RESPONSIBILITIES**  
(Electronic Payroll Submission)  
(Payment Tracking)

104.3.8.1 Electronic Payroll Submission The prime contractor and all subcontractors and lower-tier subcontractors will submit their certified payrolls electronically on this contract utilizing the Elation System web based reporting. There is no charge to the contracting community for the use of this service. The submission of paper payrolls will not be allowed or accepted. Additional information can be found at <http://www.maine.gov/mdot/contractors/> under the first “Notice”.

104.3.8.2 Payment Tracking The prime contractor and all subcontractors and lower-tier subcontractors will track and confirm the delivery and receipt of all payments through the Elation System

## Section 105 GENERAL SCOPE OF WORK

The Buy America rule shall apply to this project as there have been federal funding used in its development.

### Buy America

If the cost of products purchased for permanent use in this project which are manufactured of steel, iron or the application of any coating to products of these materials exceeds 0.1 percent of the contract amount, or \$2,500.00, whichever is greater, the products shall have been manufactured and the coating applied in the United States. The coating materials are not subject to this clause, only the application of the coating. In computing that amount, only the cost of the product and coating application cost will be included.

Ore, for the manufacture of steel or iron, may be from outside the United States; however, all other manufacturing processes of steel or iron must be in the United States to qualify as having been manufactured in the United States.

United States includes the 50 United States and any place subject to the jurisdiction thereof.

Products of steel include, but are not limited to, such products as structural steel, piles, guardrail, steel culverts, reinforcing steel, structural plate and steel supports for signs, luminaries and signals.

Products of iron include, but are not limited to, such products as cast iron grates.

Application of coatings include, but are not limited to, such applications as epoxy, galvanized and paint.

To assure compliance with this section, the Contractor shall submit a certification letter on its letterhead to the Department stating the following:

“This is to certify that products made of steel, iron or the application of any coating to products of these materials whose costs are in excess of \$2,500.00 or 0.1 percent of the original contract amount, whichever is greater, were manufactured and the coating, if one was required, was applied in the United States.”

Also see 105.11, Other Federal Requirements, in the Standard Specification Book

SPECIAL PROVISION  
SECTION 105  
GENERAL SCOPE OF WORK  
(Limitations of Operations)

1. The current number of full lane widths must be maintained between the hours of 7:00 a.m. and 9:00 a.m. and 4:00 p.m. and 6:00 p.m. Monday through Friday. Daytime construction activities between 9:00 a.m. and 4:00 p.m. will require that a minimum of two lanes of traffic (one in each direction) be maintained with appropriate traffic control devices.
2. The milling and paving of the travelway must be completed between the hours of 6:00 p.m. and 6:00 am.
3. Access to businesses will remain open at all times.
4. Only one paving operation will be allowed, excluding hand placed paving and milling, unless otherwise approved by the resident.

Auburn  
18651.00  
Intersection and Corridor Improvements  
July 12, 2022

**SPECIAL PROVISION**  
**SECTION 107**  
**CONTRACT TIME**

The specified contract completion date is October 31, 2023.

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

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

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

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

The Contractor shall locate and remove all objects in the pavement through the work area that would be detrimental to the milling or grinding machine. Any structures or obstructions left within the travel lane or shoulders shall have tapers installed according to Standard Detail 202(01). The finished milled surface will be inspected before being accepted, and any deviations in the profile exceeding  $\frac{1}{2}$  inch under a 16 foot string line or straightedge placed parallel to the centerline will be corrected. Any deviations in the cross-slope that exceed  $\frac{3}{8}$  inch under a 10 foot string line or straightedge placed transversely to centerline will be corrected. All corrections will be made with approved methods and materials. Any areas that require corrective measures will be subject to the same acceptance tolerances. Excess material that becomes bonded to the milled surface will be removed to the Resident's satisfaction before the area is accepted.

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

TABLE 1: MILLING CONDITIONS FOR ADJOINING LANES

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

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

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

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

TABLE 2: MILLING CONDITIONS FOR THE EDGE OF TRAVELED WAY

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

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

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

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

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

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

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

Basis of Payment

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

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

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

Pay Item

Pay Unit

202.202 Removing Pavement Surface  
202.20201 Removing Pavement Surface (Hourly)

S.Y.  
Hour



## 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 antistripping 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 <sub>mm</sub> )			Voids in the Mineral Aggregate (VMA) (Minimum Percent)					Voids Filled with Binder (VFB) (Minimum %)	Fines/Eff. Binder Ratio
				Nominal Maximum Aggregate Size (mm)						
	N <sub>initial</sub>	N <sub>design</sub>	N <sub>max</sub>	25.0	19.0	12.5	9.5	4.75		
< 3.0	≤90.5	96.0	≤98.0						65-80*	0.6-1.2
3 to <10	≤89.0			13.0	14.0	15.0	16.0	16.0		
≥ 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

<b>PGAB Grade(s)</b>	<b>Temperature Range (°F)</b>
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 weights of each batch are recorded on weight tickets and certified by a Licensed Public Weighmaster.

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

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

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

TABLE 4: PAVER REQUIREMENTS

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

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

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

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

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

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

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

- a.) Longitudinally: The pavement surface profile shall be free of deviations in excess of +/- 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
<b>Vertical Longitudinal Joint</b>	
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.
<b>Notched-Wedge Longitudinal Joint</b>	
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 4<sup>th</sup>, Labor Day, paving suspensions exceeding three days, or other dates as specified by special provision.

The Contractor shall install additional warning signage that clearly defines the centerline elevation differential hazard. Unless otherwise addressed in the contract, the Contractor shall install additional centerline delineation such as a double application of raised pavement markers at 100 foot intervals, or temporary painted line. For any exposed vertical edge between the shoulder and traveled way, at a minimum, the use of temporary painted line, or RPMs placed along the edge of traveled way at 200 foot intervals is required. The Traffic Control Plan shall be amended to include this option and the additional requirements. All signs and traffic control devices will conform to Section 719.01, and Section 652, and will be installed prior to the work, at a maximum spacing of 0.50 mile for the entire length of effected roadway section. If this option is utilized, all additional signing, labor, traffic control devices, or incidentals will not be paid for directly, will be considered incidental to the appropriate 652 items.

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

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

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

The Contractor shall roll the surface when the mixture is in the proper condition and when the rolling does not cause undue displacement, cracking, or shoving. The Contractor shall prevent adhesion of the HMA to the rollers or vibrating compactors without the use of fuel oil or other petroleum-based

release agents. Solvents designed to strip asphalt binders from aggregates will not be permitted as release agents on equipment, tools, or pavement surfaces.

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

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

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

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

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

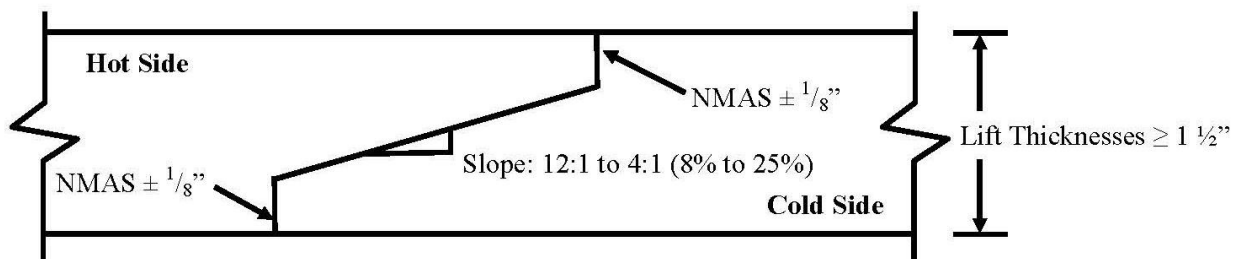
There shall be no pay adjustment for density on shoulders unless otherwise noted in Section 403 - Hot Mix Asphalt Pavement. Density for shoulders shall be obtained by the same rolling train and methods as used on mainline travelway, unless otherwise directed by the Department. Efforts to obtain optimum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

401.16 Joints The Contractor shall construct wearing course transverse and longitudinal joints in such a manner that minimum tolerances shown in Section 401.11 - Surface Tolerances are met when measured with a straightedge. The paver screed shall maintain a uniform head of HMA during transverse and longitudinal joint construction. The HMA shall be free of segregation and meet temperature requirements outlined in Section 401.04. Transverse joints of the wearing course shall

be straight and neatly trimmed. The Contractor may form a vertical face exposing the full depth of the course by inserting a header, by breaking the bond with the underlying course, or by cutting back with hand tools. The Contractor shall apply a coating of emulsified asphalt immediately before paving all joints to the vertical face and 3 in of the adjacent portion of any pavement being overlaid except those formed by pavers operating in echelon. The Contractor shall use an approved spray apparatus designed for covering a narrow surface. The Department may approve application by a brush for small surfaces, or in the event of a malfunction of the spray apparatus, but for a period of not more than one working day.

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

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



**FIGURE 1: Notched Wedge Joint**

Notes

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

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

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

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

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

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

401.18 Prepave Meeting Prior to placing any mix, the Department and the Contractor shall hold a Pre-paving conference to discuss the paving schedule, source of mix, type and amount of equipment to be used, sequence of paving pattern, rate of mix supply, random sampling, project lots and sublots and traffic control. A copy of the density QC random numbers to be used on the project shall be provided to the Resident. The Departments' random numbers for Acceptance testing shall be generated and on file with the Resident and the Project Manager. All personnel of the Department and the Contractor who have significant information relevant to the paving items shall attend, including the responsible onsite paving supervisor for the Contractor. The Resident will prepare minutes of the conference and distribute them to all attendees. Any requests to revise the minutes must be made to the Resident within 7 Days of Receipt. These minutes will constitute the final record of the Pre-paving conference. On the first day of paving and whenever there is a change in the onsite paving foreman or paving inspector, the Department and the Contractor shall hold an informal onsite meeting to review the minutes of the Pre-paving conference, Project Specific QCP, Plans, Typical, Special Provisions and communication process. This meeting shall be held prior to placing any mix. 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 subplot on a statistically random basis, test, and evaluate in accordance with the Acceptance Properties as outlined in Table 8:

TABLE 8: ACCEPTANCE PROPERTIES – METHOD A & C

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

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

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

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

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

Lot Size*	Entire production per item per contract 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 subplot remaining at the end, then it shall be combined with the previous subplot. If there is more than one-half subplot remaining at the end, then it shall constitute the last subplot

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

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

TABLE 10: ACCEPTANCE LIMITS – METHOD A & C

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

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

TABLE 11: CEASE PRODUCTION – METHOD A & C

Property	Percent Within Limits (PWL)	
	Method A	Method C
Percent Passing 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 <sub>design</sub>		N/A
Fines to Effective Binder*		
VMA at N <sub>design</sub>		
VFB		
% TMD (In-place Density)		

\*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<sub>design</sub>, and Voids at N<sub>design</sub> fall below 0.80 for Method A, then the composite pay factor for PGAB Content, VMA at N<sub>design</sub>, and Voids at N<sub>design</sub> shall be 0.50.

The following variables will be used for pay adjustment:

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

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

TABLE 12: PAY ADJUSTMENT CALCULATIONS – METHOD A & C

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

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

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

TABLE 13: 0.075 MM SIEVE PAY ADJUSTMENT

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

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

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

TABLE 14: ACCEPTANCE PROPERTIES – METHOD B &amp; 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 &amp; D

Lot Size*	Entire mix quantity per item per contract	
	(Lot size $\leq$ 1000 tons)	(Lot size $>$ 1000 tons)
Maximum Sublot Size – Mix	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 &amp; D

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

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

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

TABLE 17: PAY ADJUSTMENTS – METHOD B & D

Property	Method B		Method D	
Percent Passing 2.36 mm sieve	N/A		-2.0%	
Percent Passing 0.30 mm sieve	N/A		-1.0%	
Percent Passing 0.075 mm sieve	-2.0%		-2.0%	
PGAB Content	-5.0%		-5.0%	
Voids at N <sub>design</sub>	-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 NMA 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 subplot will consist of 50 lane-feet. Partial lots will be included in the previous lot if less than one-half the size of a normal lot. If equal to or greater than one-half the normal lot size, it will be tested as a separate lot.

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

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

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

TABLE 1: ACCEPTANCE LIMITS

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

Computation of Smoothness Pay Adjustment:

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

where:

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

PF = smoothness pay factor for the Lot

P = Contract unit price for surface pavement

PA = pay adjustment

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

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

Payment will be made under:

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

### SECTION 403 - HOT MIX ASPHALT PAVEMENT

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

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

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

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

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

Payment will be made under:

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

**SPECIAL PROVISION**  
**SECTION 403**  
**HOT MIX ASPHALT**

Desc. Of Course	Grad Design.	Item Number	Total Thickness	No. Of Layers	Comp. Notes
<b><u>1 ½” HMA Overlay - Mill &amp; Fill Areas</u></b>					
<b><u>Travelway &amp; Shoulders (As Indicated)</u></b>					
Wearing	12.5 mm	403.2081	1 ½”	1	2,4,10,24,40,42
Shim	9.5 mm	403.211	Variable	1/more	4,10,20,30
<b><u>6” HMA Overlay - Reconstruction Areas</u></b>					
<b><u>Travelway, Shoulders &amp; Side Roads (As Indicated)</u></b>					
Wearing	12.5 mm	403.2081	1 ½”	1	2,4,10,24,40,42,43
Shim	9.5 mm	403.211	Variable	1/more	4,10,20,30,43
Intermediate	12.5 mm	403.213	1 ½”	1	4,10,40,43
Base	12.5 mm	403.213	3”	1/more	4,10,40,43
<b><u>Median Removal Areas (As Indicated)</u></b>					
Wearing	12.5 mm	403.2081	1 ½”	1	2,4,10,24
Shim	9.5 mm	403.211	Variable	1/more	4,10,20,30
Intermediate	12.5 mm	403.213	1 ½”	1	4,10,30,34
Base	12.5 mm	403.213	3”	1/more	4,10,30,34
<b><u>Curb &amp; Median Island Installation Areas (As Indicated)</u></b>					
Wearing	12.5 mm	403.2081	1 ½”	1	2,4,10,24,53
Shim	9.5 mm	403.211	Variable	1/more	4,10,20,30,53
Intermediate	12.5 mm	403.213	1 ½”	1	4,10,31,32,53
Base	12.5 mm	403.213	3”	1/more	4,10,31,32,53
<b><u>Driveways, Sidewalks Misc. (As Indicated or As Directed)</u></b>					
Wearing	9.5 mm	403.209	2-3”	1/more	4,20,32,54

**COMPLEMENTARY NOTES**

2. The required PGAB shall be a storage-stable, homogeneous, polymer modified asphalt binder that meets **PG 64E-28** grading requirements in AASHTO M 332. All polymer modified asphalt grades utilized on the Project shall be treated with an approved liquid anti-strip. PG binders shall be treated either at the asphalt source terminal with the required dose rate on the delivery documentation, or at the hot mix asphalt plant utilizing a system integrated with the plants controls that will introduce a minimum 0.50 percent anti-strip by weight of asphalt binder used unless a rate is otherwise recommended by the anti-strip manufacturer. The PGAB and anti-strip blend shall meet the **PG 64E-28** requirements. The Contractor shall provide supporting test data showing the PGAB and anti-strip blend meet the required criteria.
4. The aggregate qualities shall meet the design traffic level of 3 to <10 million ESALS for mix placed under this contract. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **65 gyrations**.
10. Section 106.6 Acceptance, (2) **Method D** as specified Section 401.21 - Quality Assurance Methods B and D. The Contractor may request a contract modification to change to testing method “C” prior to work starting on this item.
20. The combined aggregate gradation required for this item shall be classified as a 9.5mm Thin Lift Mixture (TLM) mixture, using the Aggregate Gradation Control Points as defined in 703.09.

**Auburn**  
**Mill Street, Maine Street, Broad Street**  
**18651.00**  
**Intersection Improvements**  
**May 5, 2022**

24. See Special Provision 401 - HMA with Fine Micro-Deval Requirement for project specifics.
30. The incentive/disincentive provisions for density shall not apply. Rollers shall meet the requirements of this special provision. The use of an oscillating steel roller shall be required to compact all mixtures pavements placed on bridge decks.
31. For areas less than 2 feet in width, the incentive/disincentive provisions for density shall not apply. Rollers shall meet the requirements of this special provision.
32. Compaction of the new Hot Mix Asphalt Pavement will be obtained using a minimal roller train consisting of a **3-5 ton** vibratory roller. Areas less than 2 feet wide shall be compacted with a minimum of a **150 pound** plate compactor. An approved release agent is required to ensure the mixture does not adhere to hand tools, rollers, pavers, and truck bodies. The use of petroleum based fuel oils, or asphalt stripping solvents will not be permitted.
34. The Contractor shall saw cut the existing pavement to a width to match the maximum width as specified in the plans. The minimum sawcut width shall be 5 feet to accommodate a **3-5 ton** vibratory roller.
40. On street parking areas or bike lanes shall be considered mainline travelway for density testing purposes according to the specified testing method.
42. The Contractor shall plan its construction sequencing so that no longitudinal joints fall within the mainline travelway lanes (excluding center turn lanes)
43. The contractor shall mill a butted stepped joint into the existing pavement at both the beginning and end joints for each pavement layer excluding the bottom base layer. For each layer, the step joint shall be cut to the depth and width of the pavement layer being placed and extend 5 feet beyond the immediate underlying layer. The Resident may extend this length as determined by the condition of the match point. No additional payment will be made for the milling of the butt joints but will instead be considered incidental to associated paving items.
53. At the discretion of the Contractor, the use of concrete fill will be allowed in lieu of pavement and gravel to back fill around granite curbing (Type 1 & 5). When utilized, at least 3” of HMA shall be placed on top of the concrete fill for cover on the mainline edge of curb (face of curb). At minimum, the Concrete shall be a 3000 psi Class A concrete. **Flowable fill shall not be permitted**. Unless otherwise specified, there will not be additional compensation for the Concrete Fill but shall be considered incidental to the 609 items.
54. Placement of Item 403.209 over 2 inches of depth shall be placed in 2 or more lifts unless otherwise directed.

Tack Coat

A tack coat of emulsified asphalt, RS-1, RS-1h, CRS-1 or CRS-1h, Item 409.15 shall be applied to any existing pavement at a rate of approximately 0.030 gal/yd<sup>2</sup>, and on milled pavement approximately 0.05 gal/yd<sup>2</sup> prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim /base courses and surface course as well as to any bridge membrane prior to the placement of HMA layers at a rate not to exceed 0.030 gal/yd<sup>2</sup>. Tack used will be **paid for at the contract unit price** for Item 409.15 Bituminous Tack Coat.

SPECIAL PROVISION  
SECTION 430  
COBBLESTONE PAVEMENT

The provisions of Section 430 of the 2020 Standard Specifications with the following additions and modifications shall apply:

430.01 Description This work consists of constructing cobblestone pavement in accordance with the landscaping plans and in accordance with industry standards for constructing cobblestone surface for raised medians and walking surfaces. Work shall also include cobble edging at tree pits.

430.10 Basis of Payment

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
430.25	Cobblestone Pavement	Square Yard

**SPECIAL PROVISIONS**  
**SECTION 502**  
**STRUCTURAL CONCRETE**  
(QC/QA Acceptance Methods)

CLASS OF CONCRETE	ITEM NUMBER	DESCRIPTION	P	METHOD
A	608.08	Reinforced Concrete Sidewalk	-	C
A	608.26	Curb Ramp Detectable Warning Fields	-	C
S or Fill	609.50	Concrete Base for Curbing	-	C
LP	626.11	Precast Concrete Junction Box	-	C
LP	626.371	Foundation Bases	-	C
LP	626.38	Ground Mounted Cabinet Foundation	-	C
LP	626.421	24 Inch Diameter Foundation	-	C
LP	626.44	36-Inch Diameter Foundation	-	C
LP	626.451	42-Inch Diameter Foundation	-	C
LP	626.47	54-Inch Diameter Foundation	-	C

SPECIAL PROVISION  
SECTION 603  
PIPE CULVERTS AND STORM DRAINS

The provisions of Section 603 of the 2020 Standard Specifications with the following additions and modifications shall apply:

603.031 General      The Contractor shall furnish the following pipe under Option I and Option III:

High Density Polyethylene Pipe



**SPECIAL PROVISION**  
**SECTION 608**  
**DETECTABLE WARNINGS**  
(Cast Iron)

Description This work shall consist of furnishing and installing curb ramp detectable warning plates with truncated domes at the locations shown on the plans or as established by the Resident.

**MATERIALS**

Detectable Warnings The Contractor shall provide new cast iron detectable warning plates as manufactured by one of the manufacturers listed on Maine DOT's Qualified Products list of Cast Iron Detectable Warning Plates. This list can be found at:

<http://www.maine.gov/mdot/tr/qpl/>

Each field shall match the width of the ramp and shall have a natural finish.

Prior to starting this work, the Contractor shall submit for approval the name of the selected supplier, manufacturer's literature describing the product, installation procedures, and routine maintenance required.

Concrete Portland cement concrete shall meet the requirements of Section 502, Structural Concrete, Class A

**CONSTRUCTION REQUIREMENTS**

Existing Concrete Curb Ramps Existing Concrete shall be saw-cut to a dimension 100mm [4 in] larger than the detectable warning plates. New concrete shall be placed in the resulting opening and finished, and the new plates set into the wet concrete, according to manufacturer recommendations. New plates shall be set square with the curb edge and the base of the truncated domes shall be flush with adjacent surfaces to allow proper drainage.

New Concrete Curb Ramps New concrete shall be placed and finished for the ramp, and the new plates set into the wet concrete, according to manufacturer recommendations. New plates shall be set square with the curb edge and the base of the truncated domes shall be flush with adjacent surfaces to allow proper drainage

New Asphalt Ramps Asphalt shall be saw cut and removed to provide an opening that will allow for the dimensions of the cast iron plate surrounded by an additional 100mm [4 in] border on all sides of the plate. New concrete shall be placed in the resulting opening and finished, and the new plates set into the wet concrete, according to manufacturer

recommendations. New plates shall be set square with the curb edge and the base of the truncated domes shall be flush with adjacent surfaces to allow proper drainage.

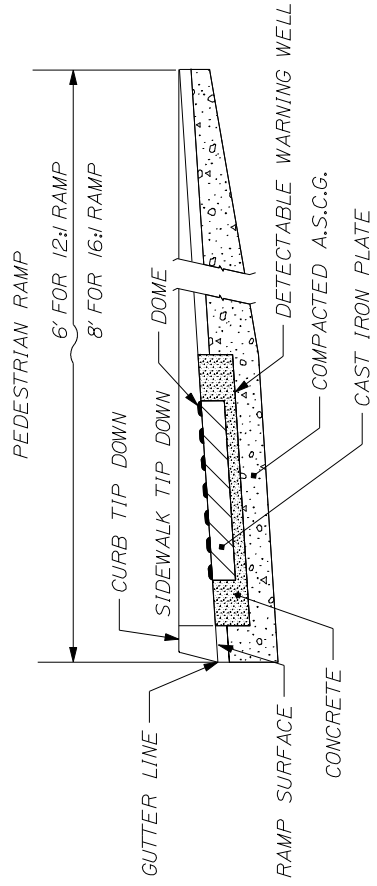
Method of Measurement Detectable warning fields properly placed and accepted shall be measured for payment by the square meter [ft<sup>2</sup>]. Measurement shall include actual plate area, not surrounding concrete.

Basis of Payment Payment will be full compensation at the contract unit price for all labor, materials, and equipment required to install the detectable warning fields. This shall include surface preparation and removal of concrete or asphalt, and necessary replacement concrete. On new concrete ramps, concrete shall be paid for under separate items

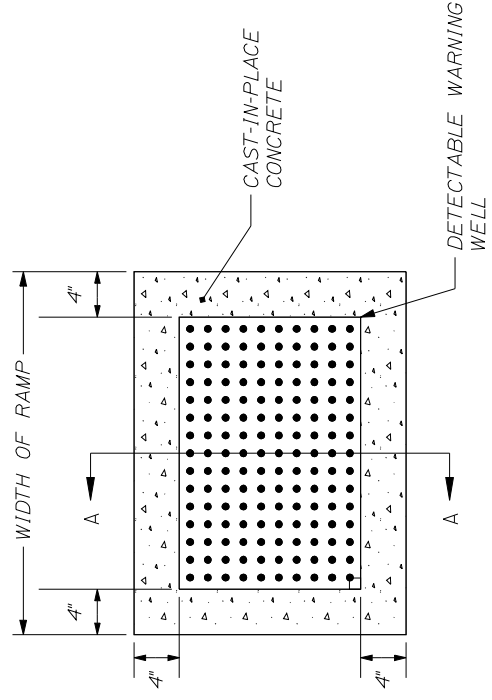
Pay Item	Pay Unit
608.26      Curb Ramp Detectable Warning Field	Square Meter [Square Foot]

VIEWS AND DETAILS OF THE DETECTABLE WARNING

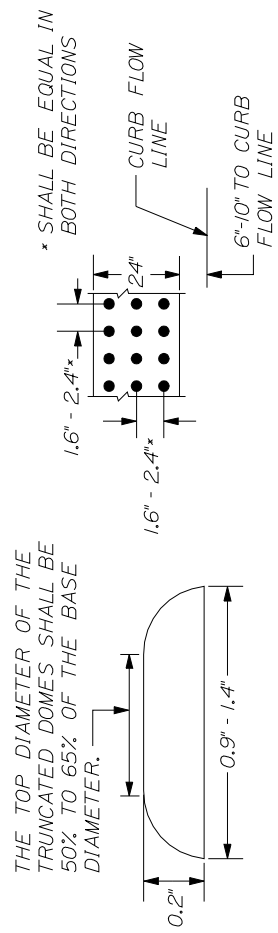
(NOT TO SCALE)



SIDE SECTION VIEW OF  
DETECTABLE WARNING, WELL, CURB AND GUTTER



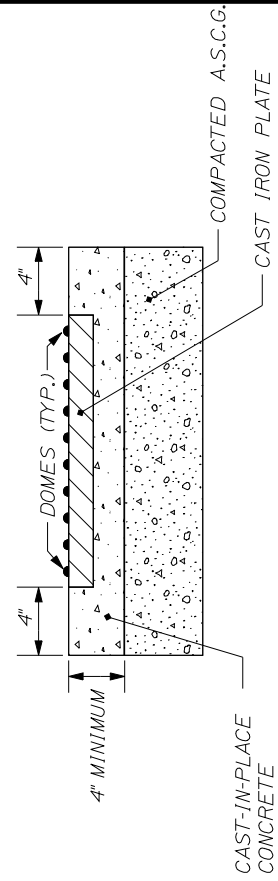
PLAN VIEW OF  
DETECTABLE WARNING AND WELL



ELEVATION VIEW

PLAN VIEW

DOMES AND DETECTABLE WARNING DETAILS



SECTION A-A

NOTE: ALL DETECTABLE WARNING AREAS SHALL START 6'-10" FROM THE FLOW LINE OF THE CURB, BE 24" IN DEPTH, AND COVER THE COMPLETE WIDTH OF THE RAMP AREA ONLY.

SPECIAL PROVISION  
SECTION 609  
CURB

The provisions of Section 609 of the 2020 Standard Specifications with the following additions and modifications shall apply:

609.01 Description This work consists of constructing curbing and terminal curbing in accordance with the requirements of Section 609 of the Standard Specifications and as shown in the Standard Details.

609.10 Basis of Payment

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
609.221	Terminal Curb Type 1	Linear Foot
609.222	Terminal Curb Type 1 – Circular	Linear Foot

SPECIAL PROVISION  
SECTION 609  
CURB

The provisions of Section 609 of the 2020 Standard Specifications with the following additions and modifications shall apply:

609.01 Description This subsection shall be amended by the addition of the following paragraph:

This work shall consist of providing and placing concrete base fill for the stabilization of granite curb, at curb locations shown on the plans, or as authorized by the Inspector.

609.02 Materials This subsection shall be amended by the addition of the following paragraph:

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

Portland Cement and Portland Pozzolan Cement	701.01
Water	701.02
Fine Aggregate for Concrete	703.01
Coarse Aggregate for Concrete	703.02

A mix design for the Portland Cement Concrete shall be submitted to the Inspector, with a minimum designed compressive strength of 3000 psi (Class S or Fill) for the concrete used for the concrete base for curb prior to any placement.

609.021 General This section shall be included with the addition of the following paragraph:

- a. Preparation of Base  
Prior to placing concrete base, the area being filled shall be thoroughly cleaned of all foreign and objectionable material. The Contractor shall not place the concrete base fill on or within a frozen base material.
- b. Placing  
Concrete fill shall be placed at to the pay limits shown on the plans, or as directed by the Inspector. Forms may be omitted at the Contractor's option. Vibration of concrete will not be required.
- c. Protection  
Concrete base fill must be adequately protected by traffic control devices as necessary after placement.

The concrete shall be allowed to cure for at least 72 hours.

During cold weather conditions, when temperatures drop below a temperature of 36°F (2.2°C) after placement, concrete base fill shall be protected by concrete blankets or a combination of plastic sheeting and straw.

d. Acceptance

Concrete base fill for curb shall be accepted in place by visual inspection. All rejected concrete fill shall be removed and replaced at the Contractor's expense.

609.09 Method of Measurement This subsection shall be amended by the addition of the following paragraph:

Concrete base for curbing will be measured for payment by the linear foot of concrete, in place, in accordance with the pay limits established, if such limits have been established. In the absence of pay limits, the Inspector may use discretion to accept the delivered quantity as the measurement for payment.

609.10 Basis of Payment This subsection shall be amended by the addition of the following paragraph:

Concrete base for curbing will be paid for at the contract unit price per linear foot, complete in place and accepted. This price shall include all materials, labor, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
609.50	Concrete Base for Curbing	Linear Foot

SPECIAL PROVISION  
SECTION 615  
LOAM

The provisions of Section 615 of the 2020 Standard Specifications with the following additions and modifications shall apply:

615.01 DESCRIPTION

Loam for lawn areas (not landscape areas) shall meet the requirements of the standard specification.

Information provided in this supplemental specification apply to proposed landscape areas, as identified on the landscape plans.

This work shall consist of furnishing and placing loam or dirty borrow for seeding or sodding, in reasonably close conformity with the thicknesses called for on the landscape plans or as authorized.

615.011 TESTING

Tests specified in this Section shall be paid for by the Contractor. Certifications required must be submitted to the Landscape Architect and or Owner's Representative for approval before use of materials on the site.

The Contractor shall be required to take representative soil samples of the topsoil to be provided from several locations (on-site) in the area(s) under consideration for testing. Imported topsoil shall also require test results prior to placement. Tests shall be made by a State Commercial Soil Testing Laboratory using methods approved by the Association of Official Agricultural Chemist or the State Agricultural Experiment Station, or by the University of Maine at Orono. Testing shall include chemical balance (pH) as well as organic content. The required pH level shall be between 6.6-7.3% and the organic content shall be between 6.5-8%.

The Contractor shall provide testing data for composted soil amendment if required to supplement the required minimum organic content.

615.02 MATERIALS

Materials shall conform to the requirements specified in the following Sections of Division 700 - Materials:

Common Borrow	703.18
Humus	717.09

Loam shall meet the following requirements:

<u>Organic Content</u>	<u>Percent by Volume</u>
Humus	5% - 10%, as determined by Ignition Test
pH	5.5 – 7.5

Mineral Content:

<u>Percent passing sieve</u>
85-100% #10
35-85% #40
10-35% #200

The loam shall be screened, loose, friable, and shall be free from admixture of subsoil, refuse, large stones, clods, roots, or other undesirable foreign matter. It shall be reasonably free of weeds, roots, or rhizomes.

Dirty Borrow shall meet the requirements of Section 703.18 Common Borrow with the following addition and deletions:

Dirty Borrow shall contain no particles or fragments with a maximum dimension in excess of the compacted thickness of the layer being placed.

Mineral Content:

<u>Percent passing sieve</u>
75-100% #10
5- 40% #200

Dirty Borrow must have an organic content of 3% to 8% as determined by ignition test.

The Contractor may elect to manufacture loam or dirty borrow from a combination of project materials that the Contractor is entitled to use, combined with other suitable materials furnished by the Contractor.

The Resident shall obtain a sample from loam stockpiles identified by the Contractor Samples will be submitted to MaineDOT testing facility. Only loam from passing stockpiles shall be used.

The Contractor may elect to manufacture loam from a combination of project materials that the Contractor is entitled to use, combined with other suitable materials furnished by the Contractor.



#### 615.021 ADDITIVES

Humus - Ground or shredded peat that has been stockpiled at least one year prior to use, or commercial bagged peat.

Manure - Well-rotted unleached stable manure with no more than 25% straw, shavings, or sawdust content. A mixture of one (1) cubic yard of peat humus or peat moss and 100 lbs. of commercial dehydrated-bagged manure such as Bovung or Spurigon may be used.

Mulch for Plants - Well-rotted (black) shredded pine bark as approved by the Landscape Architect.

Lime - Commercial ground lime with no less than 85% total carbonates, 50% passing a 100 mesh sieve and 90% passing a 200 mesh sieve as approved by the Landscape Architect. Coarser material will be accepted provided that specific rates of application increased proportionately.

Compost soil amendment – Acceptable compost for “compost manufactured topsoil” shall conform to EPA Chapter 40 CFR 503 (pathogen, metals and vector attraction reduction) as well as applicable state regulations.

#### 615.03 PREPARING AREAS

All slopes and other areas where loam or dirty borrow is to be placed shall be shaped to the required grade. Before placing the loam on hard or compacted soils, the areas under preparation shall be scarified and loosened to a depth of at least 2 inches.

#### 615.04 PLACEMENT OF LOAM

Loam shall be spread uniformly on prepared areas to the depth shown on the plans or as directed. Any remaining clods, roots, stones over 2 inches in its greatest diameter and all other foreign matter, shall be removed. On areas to be seeded under Method Number 1, all rocks over 1 inch in diameter shall be removed. All loam shall be brought to a true, even surface, meeting the required grade. The Contractor shall compact the loam with a 100 pound roller or other approved means. Loam thickness shall meet the specified depth after compaction.

Dirty Borrow shall be spread evenly and uniformly on prepared areas to the depth shown on the plans or as directed, and shall be brought to a true, even surface, meeting the required grade.

Loam - the Contractor shall furnish and place loam to give the specified depths. The Contractor shall furnish and place 18 inches of loam in all shrub beds and perennial beds, and 6 inches under all turf areas. Loam mix shall be placed in all tree and shrub pits as shown on the Drawings. Natural loam shall be of uniform quality, free from hard clods, still clay, hard pan sods, stones over 2 inches in planting beds and ¾ inches in lawn areas and undesirable inorganic materials. The Owner and/or Landscape Architect reserves the right to reject on or after delivery any materials which do not, in his or her opinion, meet these Specifications.

#### 615.05 METHOD OF MEASUREMENT

Loam or dirty borrow will be measured by the cubic yard complete in place after finishing to the required depths as shown on the plans or directed. Lateral measurements will be parallel with the slope of the ground.

Removal of existing topsoil salvaged from within the lines of improvement will be measured for payment in accordance with Section 203.18. The depth of the salvaged topsoil to be included for payment shall be the depth authorized. There will be no deduction from borrow quantities resulting from the authorized excavation of salvaged topsoil.

615.06 BASIS OF PAYMENT

The accepted quantities of loam or dirty borrow will be paid for at the contract unit price per cubic yard complete in place. Existing topsoil removed from within the lines of improvement and stockpiled for later use as dirty borrow will be paid for under Pay Item 203.20, Common Excavation, after removal and stockpiling, and will be paid for under Pay Item 615.086, when placed in its final position. Grading surplus topsoil, salvaged but not required for use on slopes as loam or dirty borrow, will be paid for under the appropriate items.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
615.086	Loam/Compost Mix	Cubic Yard

SPECIAL PROVISION  
SECTION 619  
MULCH

The provisions of Section 619 of the 2020 Standard Specifications with the following additions and modifications shall apply:

619.01 DESCRIPTION

Mulch for lawn areas (not landscape areas) shall meet the requirements of the standard specification.

Information provided in this supplemental specification apply to proposed landscape areas, as identified on the landscape plans.

This work shall consist of furnishing and applying hay, straw, bark, erosion control mix, or cellulose fiber for covering slopes and other areas with a mulch as shown on the landscape plans or authorized.

619.02 MULCH

Material shall conform to the requirements specified in the following Sections of Division 700 - Materials:

Mulch	717.04
Mulch Binder	717.05

619.03 GENERAL

Cellulose fiber mulch shall be used with Seeding Method 1 and may be used with Seeding Method 2 in approved areas, which may include, but are not limited to, lawns adjacent to developed property, areas subject to high air blasts created by moving vehicles, and areas where hay mulch would create a hazard.

619.04 APPLYING MULCH

- a. Hay or straw mulch for both seeded and unseeded areas shall be spread evenly and uniformly over the designated areas. Unless otherwise directed, mulch shall be applied at the rate of 70 to 90 lbs/unit. Too heavy an application of mulch shall be avoided. Lumps and thick mulch material shall be thinned.

Unless otherwise authorized, hay or straw mulch shall be anchored in place by uniformly applying an acceptable mulch binder. Mulch binder shall be applied as soon as the mulch is placed. Application of a concentrated stream of mulch binder will not be allowed. Mulch binder will be paper fiber mulch applied at 5 lbs/Unit or approved equal. Water spray may be used as a temporary binder.

Temporary mulching shall be applied as per the Contractor's SEWPCP, spread immediately to protect soil from erosion during all stages of construction throughout all seasons of the year.

- b. Cellulose Fiber Mulch shall be applied as a waterborne slurry. The cellulose fiber and water shall be thoroughly mixed and sprayed on the area to be covered so as to form a uniform mat of mulch at the rate of not less than 40 pounds of mulch material per 1000 ft<sup>2</sup> unit of area.

Cellulose fiber mulch may be mixed with the proper quantities of seed, fertilizer, and agricultural limestone as required under Section 618 - Seeding or may be applied separately the same day as seeding.

- c. Bark mulch not incidental to plantings and erosion control mix shall be placed to cover the slope with a 4 inch deep blanket or as called for on the Plans or by the Resident.

#### 619.05 MAINTENANCE

The Contractor shall maintain the hay, straw, or fiber mulch by repairing all damaged mulch and by correcting all shifting of the mulch due to wind, water, or other causes, until an acceptable growth of grass has been achieved.

If cellulose fiber mulch is used, any reseeded will require additional cellulose fiber mulch.

Bark mulch and erosion control mix will be accepted upon completion. Upon acceptance of each area, the Contractor will be relieved of further responsibility for maintaining that area or repairing damage except that resulting from their own or subcontractor's operations.

#### 619.06 METHOD OF MEASUREMENT

This subsection shall be amended by the addition of the following paragraph:

The quantity of bark mulch and erosion control mix measured and accepted for payment will be the number of cubic yards each, delivered and installed to the required depth as shown on the plans or as directed. Measurement will be parallel with the slope of the ground.

#### 619.07 BASIS OF PAYMENT

This subsection shall be amended by the addition of the following paragraph:

The accepted areas mulched will be paid for at the contract price per unit, which shall be full compensation for furnishing and spreading the hay or straw and mulch binder, cellulose fiber mulch, bark mulch or erosion control mix.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
619.1301	Bark Mulch – Plan Quantity	Cubic Yard

SPECIAL PROVISION  
SECTION 621  
LANDSCAPING

The provisions of Section 621 of the 2020 Standard Specifications with the following additions and modifications shall apply:

621.0001 DESCRIPTION

This work shall consist of the Contractor furnishing and planting trees, shrubs, vines, and other plants and shall include all planting operations and material as well as the care and replacement of the plants during the Maintenance Period, all in accordance with the specifications, Standard Details, landscape plans and schedules and the directions of the Inspector. Planting operations will be divided into two classes.

- a. Class A Planting will consist of planting into the existing soil that has been amended with organic humus, peat moss, compost, and/or other standard horticultural soil amendments as approved by the Inspector.
- b. Class B Planting will consists of planting into the existing soil without amendments.

Unless otherwise specified, all planting shall be Class A.

621.0002 MATERIALS – GENERAL

All non-plant material shall conform to the requirements specified in the following Sections of Division 700 - Materials.

Fertilizer	717.01
Mulch	717.04
Organic Humus	717.09

621.0003 MATERIALS – ALL CLASSES

- a. All plants shall conform to the current edition of the "American Standard for Nursery Stock" (ANSI Z60.1) unless otherwise indicated in the plans or specifications.
- b. All plants shall be first class representatives of their normal species or varieties, unless otherwise specified. All plants must have a good, healthy, well-formed upper growth and a large, fibrous, compact root system. Plants sheared into stiff or formal shapes will be rejected unless they have outgrown such shearing.

Large-growing, deciduous trees shall have straight trunks and a single leader or as may be characteristic of the species. Tops shall be thickly branched, densely foliated, well balanced and in good proportion to the height of the tree. Trees with weak trunks, thinly or irregularly branched or with unnatural shape of proportions due to undesirable pruning or for any other cause will be rejected. Trees with leaders or branches too severely cut back or with bottom limbs trimmed too high will be rejected.

Small-growing deciduous trees shall be thickly branched with a well-balanced, natural shape. Plants which are poorly furnished or have grown or been pruned into unnatural shapes will be rejected.

Tree "Clumps" shall have three or more main stems starting from the ground.

c. All plants shall have been grown under climatic conditions similar to those in the locality of the site of the project under construction or have been acclimated to such conditions for at least two years. All plants must have been grown in a latitude north of Washington, D.C. The Resident may require a sworn affidavit from the contractor stating the source where all plants were grown. Payment for plants may be withheld until this affidavit is received.

All plants shall be nursery grown unless otherwise stipulated. No plant will be considered nursery grown unless it has been transplanted at least once and has been growing in a nursery for at least 2 years. Where collected stock is allowed, all plants in addition to meeting all other requirements for nursery-grown stock, shall have a diameter of ball or root spread at least one-third greater than that required for nursery stock. Plants showing signs of lack of root pruning, cultivation or other proper nursery care will be classified as collected stock regardless of their source.

d. All plants must be healthy and vigorous; free from disease, injurious insects and their eggs or larva, mechanical wounds, broken branches, decay, or any other defects.

e. All plants shall be true to name. Each bundle or each plant when not tied in bundles shall be labeled legibly and securely. The current edition of "Standardized Plant Names" prepared by the Editorial Committee of the American Joint Committee on Horticultural Nomenclature shall be the authority for all plant names.

Care shall be taken throughout the operation to keep each plant species or variety segregated and labeled. The Resident will reject any plants concerning any doubt or confusion arising about nomenclature, either at the time of delivery or at any subsequent time.

f. The Contractor shall take all precautions that are customary in good trade practice to insure upon arrival at the planting site the plants are in good condition for successful growth. All plants must show appearance of normal health and vigor. Plants with loose or broken balls; dried out roots, twigs or needles; or plants which have become overheated in transit or are found not to comply with these specifications in any way will be rejected. The Resident will not assume responsibility for such rejected material.

The Resident reserves the right to plainly mark all rejected plants with paint or by other means to ensure that they are not used on the job. Rejected plants may not be used on the project, will not be paid for, and must be replaced by the contractor with approved plants. If plants with communicable diseases are not removed or destroyed immediately, upon discovery of the disease, all plants that were left in contact will also be rejected.

#### 621.0004 PLANT SIZE AND ROOT BALLS

Class A Plants The plant sizes specified in the "American Standards for Nursery Stock" are the minimum sizes acceptable. (ANSI Z60.1) Plants, which meet the sizes specified but do not have a normal shape and balance between height and spread, will be rejected. Thin, poorly branched, or sparsely rooted plants will be rejected, regardless of whether they meet the minimum technical requirements of the American Standard for Nursery Stock.

Where bare roots are irregular, the size of the root spread will be the average root spread considering all sides of the plant and not the maximum root spread. The Resident may allow moderate deviations from exact sizes of plants that normally have irregular root systems.

Coarse-rooted plants, which lack sufficient fibrous feeding roots, will be rejected.

Recently cut stubs of large roots on either balled or bare root stock will be considered evidence of lack of proper nursery care and root-pruning and will be sufficient grounds for rejecting such plants or classifying them as collected stock. Acceptable roots will retain sufficient fibrous feeding roots.

Where a size range with a maximum and minimum is given, an average size is required. At least 40 percent of the plants in a size range shall be at or above the average for this size range.

A solid ball is referred to as one encompassing the roots of a plant. A solid ball shall consist of the soil in which the plant was originally grown. The ball shall have been dug up in such a manner as not to disturb the roots. Where such a ball is required the designation B and B, Balled and Burlapped, will be used. No B and B stock will be accepted if this solid soil ball has disintegrated or if loose soil apparently has been packed around the roots.

Peat Balls and other fiber material will not be acceptable where B and B stock is called for, but said root balls may be furnished where bare root stock is called for if approved by the Resident.

Per ASNS Standards, the caliper of trees shall be the diameter of the trunk taken 6 inches above the root collar for up to and including four-inch caliper size. If the caliper at 6 inches exceeds 4 inches in diameter, the caliper will be measured at 12 inches above the ground.

Class B Plants Unless otherwise specified, plants used in Class B plantings shall be seedlings, plugs or lining out stock with heavy, fibrous, compact root systems. The



Comparative size of the plants shall be as stated under the heading "Seedling Trees and Shrubs" in the "American Standard for Nursery Stock". All conifers must have dormant buds and secondary needles. Where B and B plants are designated, ball sizes shall be the same as Class A plants.

#### 621.0006 INSPECTION

A preliminary check of the plants may be made at the time of delivery for condition of the plants and conformity to the specifications. The Contractor shall inform the Inspector at least 48 hours in advance, as to what plants are to be planted and in what location. Inspection will continue throughout the life of the contract up to the time of Final Acceptance. Plants which are not true to name, do not conform to the specifications, show evidence of improper handling or lack of proper care or which appear to be in a seriously unhealthy condition must be removed by the Contractor at once and replaced by acceptable plants as soon as the planting season allows. Any unacceptable plants when pointed out to the Contractor by the Inspector shall be removed at once. If this occurs during the planting season, these plants shall be replaced at once; if between planting seasons, they shall be replaced at the next subsequent planting season, unless conditionally directed by the Inspector for evergreens and other preferred spring planted items.

#### 621.0017 GENERAL CONSTRUCTION REQUIREMENTS

Planting operations shall be performed in accordance with the landscape plans and specifications and as directed by the Inspector.

#### 621.0018 LAYOUT

The location of plants as shown on the landscape plans shall be considered approximate only. The exact locations will be designated on the ground by the Inspector, making such changes as may be required to adjust the planting to local conditions. Plant quantities may, in some cases, be increased or decreased as provided in Section 109.1 - Changes in Quantities. Locations for trees and shrubs shall be staked out on the ground by the Inspector before herbicides are applied and any plant pits or beds are dug.

The Contractor shall furnish the stakes for use in marking plant locations. Stakes shall be wire survey flags at least 21 inches tall. Layout stakes shall be approved by the Inspector before the Contractor commences any work on the project.

The Contractor shall mark the stakes legibly with indelible marking material and may also be required to furnish personnel, capable of locating plants from plans, to carry out the staking under the direction of the Inspector.

Before actively starting work on the project, the Contractor shall provide the Inspector with a planting sequence schedule to be used in establishing priorities in staking plant locations. The Contractor shall give the Inspector at least four days advance notice of any deviations from this schedule. The Inspector will not be responsible for any delay or inconvenience caused by unfinished staking resulting from the Contractors failure to follow the above procedure.

All stakes used to locate plants shall be replaced in the correct plant pits after each operation and shall remain there until the Resident directs their removal. When plants are set out in wrong locations due to stakes being misplaced during digging and planting operations, the Contractor shall be required to move the misplaced plants to the proper location at their own risk and expense.

#### 621.0019 PLANT PITS AND BEDS

a. Plant Beds Areas designated as plant beds must have the entire surface cultivated, cleared of weeds and be completely covered with mulch. Actual mulch limit will extend 2½ feet out from the center of plant or to the pavement edge, bridge wall, and roadside face of guardrail. Cultivation must include complete removal of all weed and grass roots, loose stones over 3 inches maximum diameter and any other debris. Approved herbicides are permitted for weed control in place of sod removal.

b. Rock Excavation When ledge or boulders over ¼ yd<sup>3</sup> in size are encountered in digging plant pits, the Contractor shall notify the Resident who will change the location of the plants. No excavation of ledge or boulders over ¼ yd<sup>3</sup> in volume will be required and no extra payment will be made for rock excavation or for shifting of plant holes due to rock.

c. Class A Planting Size of plant pits shall bear the following relationship to the spread of roots or root ball diameter of the plants to be planted in them:

For all plant materials, the holes shall be 2 times the diameter of the ball or container size.

The plant pit shall be deep enough so that when installed the top of the root ball is even with to ½ inch higher than the existing ground. In all cases, the depth shall be sufficient to contain all the roots of the plant without crowding.

In certain areas of poor drainage or heavy soil, the Inspector may require raising the plant elevation. When required, the raising of the plants shall be included as a part of the cost of the plant.

Excavated soil mixed with organic humus and well-rotted stable manure shall be used as backfill around the roots. Stones larger than 2 inches in maximum diameter, large roots, roots or rhizomes of weeds or other injurious materials shall be removed and not used as backfill (Refer to Tree and Shrub Installation Detail). Any additional material needed to fill plant pits to the level of the surrounding ground shall be loam (Section 615) furnished by the Contractor at their own expense.

d. Class B Planting Class B plants will be planted in the existing soil. Plant holes must be deep enough to allow room, for the full depth of the root without doubling or folding and wide enough to allow room for its normal spread. Plants must be set straight and at the same depth at which they were previously growing. Soil must be firmly compacted about the roots leaving no

air pockets.

621.0020 PLANTING SEASONS

For planting, unless otherwise directed, shall be within the following dates:

Bare Root Plants	Spring	April 1 <sup>st</sup> to May 31 <sup>st</sup>
	Fall	Sept. 15 <sup>th</sup> to Oct. 15 <sup>th</sup>
Evergreens Container or Balled and Burlapped	Spring	April 1 <sup>st</sup> to June 15 <sup>th</sup>
	Fall	August 15 <sup>th</sup> to September 30 <sup>th</sup>
Potted & Container Grown Deciduous Plants	Spring	April 1 <sup>st</sup> to June 30 <sup>th</sup>
	Fall	August 15 <sup>th</sup> to Nov. 30 <sup>th</sup>
Balled & Burlapped Deciduous Plants	Spring	April 1 <sup>st</sup> to June 15 <sup>th</sup>
	Fall	August 15 <sup>th</sup> to Nov. 30 <sup>th</sup>

Plants will not be planted in frozen soil, soil that is excessively wet, or excessively dry.

Preparations for planting may begin earlier than the specified season and planting work may continue beyond the specified time limits if approved by the Inspector. However, the Inspector may require that all plants planted out-of-season shall receive special attention as directed. Any out-of-season planting shall be at the Contractor's risk and expense.

621.0023 SETTING PLANTS

- a. Placement Plants shall be set plumb and straight in the prepared pits and beds and at a level such as will result, after settlement, in the top of the root ball being level with or to within 1 inch above the surrounding ground surface.
- b. Staking If the Inspector or Landscape Architect determines a tree requires staking, the Landscape Contractor will provide staking incidental to the cost of the plant. Tree staking shall be done in accordance with horticultural industry standards; trees shall be staked to allow slight sway and movement all the way to the ground. Stakes shall not extend into tree branches. Stakes shall be driven into undisturbed soil and not permitted to penetrate root balls.

Staked trees shall remain in a plumb position throughout the Maintenance Period. Staking materials shall be removed after one growing season or if longer time is needed at the end of the Maintenance Period.

621.0024 BACKFILL CLASS A

For all Class A plants backfill shall consist of 3 parts of soil excavated from the plant pit thoroughly mixed with one part of organic humus and/or horticultural amendments as approved by the Inspector. Sods or clods may not be used as backfill. The backfill material shall be placed and compacted in the bottom of the planting pit and shall be worked around the roots and thoroughly compacted as the backfilling proceeds, leaving no air pockets. The backfill shall be filled in around the root ball to half the depth of the ball, and the remaining wire basket shall be removed and the remaining burlap around the ball shall be loosened and spread out away from the plant or if it is too bulky, cut away and removed. The backfilling shall then be completed, watered and tamped firm. Plastic film wraps shall be completely removed during planting. Nursery containers shall be completely removed before planting. The roots of bare root plant materials shall be placed in their natural arrangement with the backfilling carefully performed to prevent damage to the plant's root system. Broken or bruised roots shall be pruned immediately, making a clean cut. Shallow basins or saucers of earth will be required to be placed around each plant. However, when drainage conditions are poor, as in heavy clay soil, the Inspector may require that such saucers be omitted or used only temporarily. All plants shall be thoroughly watered and liquid fed the day they are planted and as often thereafter as necessary for the plants to become safely established.

#### 621.0025 FERTILIZING

a. Water Soluble Fertilizer the Contractor shall liquid feed all class A plantings as the first watering, unless otherwise directed by the Inspector.

Liquid fertilizer shall be completely dissolved and mixed in water at the rate of 6 pounds of the fertilizer concentrate to 100 gallons of water.

The resulting solution shall be poured around the plant in the plant saucer. The solution shall be applied at the following rates for each application:

Containerized plants shall receive watering-in fertilizer solution of volume equal to container size.

Plant materials including B&B shrubs and deciduous trees specified by height/spread shall receive one (1) gallon of water per each 1 foot (12 inches) of height/spread.

Plant materials specified by caliper shall receive one (1) gallon of water per each ¼ inch (one-quarter inch) of caliper measurement.

Evergreen plant materials shall receive two (2) gallons of water per each 1 foot (12 inches) of height.

b. Slow Release Fertilizer Tablets All Class A plantings shall be fertilized with slow release fertilizer tablets or equivalent as approved by the Inspector, at the time of planting, unless otherwise directed by the Inspector. Fertilizer tablets shall be placed equidistantly within the

planting pit adjacent to the ball or root mass, but not in direct contact with roots. Placement depth shall be 6 to 8 inches below ground level.

The application rates shall be as follows:

Deciduous and Evergreen Shrubs shall receive one (1) tablet per each 1 foot (12 inches) of size.

Deciduous Trees and Evergreen Trees specified by height shall receive one (1) tablet for two foot height, plus 1 additional tablet for each additional 1 foot (12 inches) of size.

Deciduous Trees specified by caliper shall receive one (1) tablets for each ½ inch (one-half inch) caliper.

Specification	Plant size	Tablets
Height/Spread	12" - 23"	1
Height/Spread	2' - 3'	2
Height/Spread	3' - 4'	3
Evergreen/Ht.	3' - 4'	3
Evergreen/Ht.	5' - 6'	5
Caliper	2" - 3"	4
Caliper	3" - 4"	6

Perennials, Vines and Ground Covers shall receive 1 tablet or appropriately proportioned equivalent.

### 621.0026 MULCHING

The disturbed surface area of plant beds and pits shall be evenly and uniformly covered to a depth 3 inches with well-rotted (Black) Pine bark mulch or as directed by the Resident. All plant pits and beds must be entirely free of weed or grass growth and free of live roots of all weeds and grasses prior to the time mulch is applied. Mulch shall be removed from or installed with no contact to trunk or bark surfaces.

Mulching will not be required on Class B plantings, unless otherwise specified on a project specific basis.

Measurement of the depth of mulch will be made after one heavy rain or after a three-week period without heavy rain.

All plant pits and beds must be entirely free of weed or grass growth and free of live roots of all weeds and grasses at the time mulch is applied.

When plant beds are installed near guardrails, or as stated in Section 621.0019(a), the space between the plants and the guardrail or the nearest pavement when it extends behind the guardrail, shall be treated as a part of the plant bed and shall be weeded and mulched.

Plants shall not be damaged when the mulch is applied. Smothered or otherwise damaged plants must be replaced. Mulch, in place, will not be permitted to be directly in contact with the base of plant trunks or stems. Plants shall be mulched at the time of installation.

#### 621.0027 CULTIVATION

All plant pits and beds shall be kept free of weeds and grass by the Contractor from the time the plants are planted until final acceptance. This shall be accomplished by manual weeding, cultivation, or use of approved herbicides. Application of herbicides to control weeds or grass shall be performed only by a Maine licensed pesticide applicator with an appropriate category as determined by the Board of Pesticide Control. There will be no payment for unsatisfactory work.

#### 621.0030 PRUNING

Shall be done to each plant individually in such a manner as to preserve the natural character of the plant and shall be done only after delivery and inspection. All pruning shall be done with sharp tools by experienced persons in accordance with the best horticultural practice. Plants pruned in such a manner as to seriously impair the appearance or character of the plant will be rejected. Bench pruning with knives or axes will not be permitted. Broken or badly bruised branches, soft wood, and sucker growth shall be removed with clean cuts.

Excessive pruning shall not be accepted as a means of disposing of dead wood or unhealthy plants. Plants in such poor condition that they can only be revived by pruning of more than 1/3 or more of the growth will be considered unsatisfactory and will be rejected. At the time of final acceptance, all plants must be at least the size called for in the specification.

#### 621.0033 PROTECTION OF PLANTS

It will be the responsibility of the Contractor to take necessary steps to protect all plants from rodents during the Maintenance Period. Protection from rodents will be included in the cost of the individual plants and the Contractor will receive no extra compensation for this work.

#### 621.0034 CLEANUP AND REPAIR

All excess excavated material and debris resulting from the planting operation shall be promptly disposed of outside of and out of sight of the project, unless otherwise directed by the Resident. Any areas disturbed by the Contractor showing bare earth, that do not require mulching, shall be seeded with approved grass seed, fertilized and mulched, as directed.

The Contractor shall be responsible for any damage caused by their operations and shall restore the disturbed areas to their original condition. Cost of cleanup and repair shall be incidental to the work.

621.0035 PROSECUTION AND PROGRESS

It is essential that each portion of the planting work in any area be promptly followed by cleanup of subsoil and debris, fertilization, watering, cultivation, pruning, mulching, spraying as needed, repair and restoration of damage caused by the Contractor, etc. The Contractor shall provide sufficient labor and supervisory personnel to carry out this work without undue delay. Any delay in carrying out this phase of the work which, results either in danger to the health or growth of the plants or a poor appearance of the project from the point of view of the public will be considered due cause for withholding all or part of any payment due the Contractor for plants delivered and planted or for any other work done.

Partial payments on the contract do not constitute approval or acceptance of any specific plants or work operations. The right is reserved to reject any plants or work, which are discovered to be unsatisfactory at any time before the end of the Maintenance Period.

621.0036 MAINTENANCE PERIOD

The acceptability of the plant material furnished and planted under this contract shall be at the end of the Maintenance Period, during which the Contractor, as necessary, shall employ all possible means to preserve the plants in a healthy and vigorously growing condition and to insure their successful establishment. During this period, the Contractor shall water, cultivate and prune the plants, and do any other work necessary to maintain the plants in a healthy growing condition. This shall include seasonal spraying with approved insecticides or fungicides as may be required. The Contractor shall also be responsible for protecting the plants from rodents. All dead or rejected plants shall be promptly removed from the project and replaced by live healthy plants meeting the same specifications. If such plants are declared unacceptable during the planting season, they shall be replaced during this planting season, otherwise, they shall be replaced during the next subsequent planting season.

Such replacement plants are subject to the same requirements as the original plants and must be replaced in turn if they fail to meet the required standards. Plants designated for spring planting only, will be replaced only during the spring planting season unless otherwise directed.

The Maintenance Period shall commence after Physical Work is Completed but not before the Landscape Warranty Bond has been received by the Inspector if required by Special Provision and shall extend for two years after that date unless otherwise directed. Necessary replacements shall be made so that at the end of the Maintenance Period all plants shall be in a healthy, vigorous growing condition and free from sizable die-back.

Replacements will be required for plants lost, damaged, or rejected, whatever the cause. The Contractor will be considered responsible for the plants until the end of the Maintenance Period.

It shall be the sole responsibility of the Contractor to replace any unsatisfactory plants on the project regardless of whether they are specifically designated by the Inspector. In the case of individual doubtful plants, the Contractor may call upon the Resident to make a determination

as to their acceptability, but it shall not be incumbent on the Inspector to furnish the Contractor with exact lists of replacements.

All replacements of plants shall be completed by the end of the planting season before the end of the Maintenance Period. All replacement planting shall conform in every way to the requirements of the original planting. The Inspector may require that any replacement plants that are not dormant, or that are planted late in the season, be sprayed, as directed with an approved anti-desiccant.

621.0037 METHOD OF MEASUREMENT

The quantity of plants to be measured for payment will be the number of individual plants furnished and planted as required and accepted, excluding replacements.

621.0038 BASIS OF PAYMENT

Each item of "Planting" will be paid for at the contract unit price for each accepted plant furnished and planted. Payment shall constitute full compensation for; furnishing and placing plants, digging, delivering, rodent protection, preparing plant pits, beds and drains; planting, watering, fertilizing, mulching, pruning, and the cleanup of planting areas; for all, fertilizer, mulch and other necessary materials; all labor, equipment, tools, Maintenance Period work, Replacement and Bonding (if required by Special Provision) and any other incidentals necessary to complete the work.

When a bid item calls for a "Group" of trees, shrubs, vines or other plants, the Contractor shall furnish each individual species within this "Group" for the same unit bid price.

The name and estimated number of individual species within each "Group" will be shown on the estimated quantities sheet of the landscape plans.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
621.138	Small Deciduous Tree (1.5"-2" CAL) Group A	Each
621.273	Large Deciduous Tree (2"-2.5" CAL) Group A	Each
621.71	Grasses (Plugs)	Each



SPECIAL PROVISION  
SECTION 626  
FOUNDATIONS, CONDUIT, AND JUNCTION BOXES FOR HIGHWAY SIGNING, LIGHTING,  
AND SIGNALS  
(Controller Cabinet Foundation)

The provisions of Section 626 of the 2020 Standard Specifications with the following additions and modifications shall apply:

626.034 Concrete Foundations

The concrete foundation for the controller cabinet shall meet the size, dimensions and reinforcing requirements as shown in the Standard Details.

SPECIAL PROVISION  
SECTION 626  
FOUNDATIONS, CONDUIT, AND JUNCTION BOXES FOR HIGHWAY SIGNING,  
LIGHTING, AND SIGNALS  
(Controller Cabinet Foundation)

The provisions of Section 626 of the 2020 Standard Specifications with the following additions and modifications shall apply:

626.01 DESCRIPTION

This work shall consist of furnishing, installing concrete foundations and conduit for highway lighting in accordance with these specifications and plans.

626.02 GENERAL

Installation of electrical service conduit methods and locations shall be approved by the Central Maine Power Company.

626.021 MATERIALS

Materials shall meet the requirements specified in the following Subsection of Division 700 - Materials:

Reinforcing Steel	709.01
Steel Conduit	715.02
Non-Metallic Conduit	715.03

1-1/2" inch conduit underground shall be provided in light pole bases. Each light shall be fused individually at base. Fuse holder type shall be Buchanan 65 kit Cat # 65U.

626.022 EQUIPMENT LIST AND DRAWINGS

Provide scale drawings and details for anchor bolt installation methods for both new foundations as well as for modified existing foundations. For modified foundations, provide details showing adapter plates for accommodation of new lighting poles to existing anchor bolts.

626.03 CONSTRUCTION FOUNDATIONS

Coordinate excavation for foundations with existing underground utilities. Where conflicts are found with existing utilities, make all practical efforts to install new work to produce a minimum impact on existing conditions. Where relocation of existing utilities is deemed necessary, obtain approval from affected utility supplier in advance of commencing relocation work.

626.034 CONCRETE FOUNDATIONS

Anchor bolts for new lighting poles shall be of size and diameter as required and as detailed on the Contract Drawings.

626.04 METHOD OF MEASUREMENT

Provision of new foundations will be measured by the single unit, including concrete and steel reinforcing. Steel and non-metallic conduit will be measured per linear feet. Junction boxes will be measured by each unit.

626.05 BASIS OF PAYMENT

The accepted quantity of new foundations will be paid for at the contract unit price for each foundation. Payment shall be full compensation for the complete installed foundation.

Payment will be made for the total number of linear feet of each type of underground conduit actually furnished, installed and accepted at the contract unit price per linear foot. This price shall include the cost of furnishing and installing the conduit; pull wire; fittings; labor; equipment and incidentals necessary to complete the work including concrete encasement.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
626.22	1-1/2-inch Non-Metallic Sched 40 Conduit	Linear Feet
626.23	1-1/2-inch Non-Metallic Sched 80 Conduit	Linear Feet
626.24	2-inch Non-Metallic Sched 80 Conduit	Linear Feet
626.371	Foundation Bases	Each

## **SECTION 634 -HIGHWAY LIGHTING**

The provisions of Section 634 of the Standard Specifications shall apply with the following additions and modifications:

### 634.01 DESCRIPTION

This work shall consist of furnishing and installing new lighting poles with fixed luminaires.

### 634.02 GENERAL

Lighting poles shall be provided as detailed on the Contract Drawings. Power connection for new lighting poles shall be obtained by a new metered service contracted with the *Central Maine Power Company*. Installation of new poles shall be in full accordance with the details shown on the Contract Drawings. Luminaires shall be “Utility Washington Postlite” style decorative luminaires as manufactured by *Holophane Lighting*, rated to operate 47-watt LED lamps.

### 634.021 MATERIALS

Materials shall meet the requirements specified in the following Subsection of Division 700 - Materials:

Secondary Wiring	715.07
Luminaires, Lamps, and Ballasts	715.08
Photo-Electric Control	715.10
Aluminum Mast Arm and Bracket Arm	720.02
Anchor Bolts	720.07
Lighting Control Box	715.11

### 634.024 LIGHT STANDARDS

For the purposes of establishing the design weight and projected area of luminaires, the manufacturer’s actual data for the specified luminaires shall be used. Light standards shall be as furnished by the *Holophane Lighting* and shall be 12-foot tall, round aluminum, with polyester powder coat black paint finish, model WDA 12 F5J 17 P07 ABG BK R132A FGIUS\_S BK. Light Standards shall be equipped with a duplex GFIC weatherproof receptacle outlet mounted at 11’-0”.

### 634.04 CABLE INSTALLATION

All cable servicing lighting poles shall be furnished and installed under this contract. The Contractor shall furnish and install cable and shall make connections at the base of poles to underground service cables.

### 634.05 LIGHT STANDARD

Provide in-line fuse block and fuse for circuit wiring.

### 634.06 LUMINAIRES

Luminaires as furnished by *Holophane Lighting* and shall include polyester powder coat black paint finish. Luminaires shall be model WFCL2 P40 40K AS BK L3 S AO, with 4000K LED lamps and

driver. Luminaires shall provide an IESNA Type 3 optical distribution with field adjustable output connections.

#### 634.08 ELECTRICAL SERVICE

The utility service will be 120/240 volt, single phase, 3-wire.

A 30-inch wide by 36-inch tall by 8-inch deep 304 stainless steel NEMA 4X enclosure with a hinged, lockable handle shall be provided and installed at an existing traffic control box. The enclosure shall be as manufactured by *Hoffman* or approved equal. The enclosure shall include the following:

- A lighting photocell to be installed on the top of the enclosure. The photocell shall be wired to control two lighting contactors, and shall be a receptacle type as manufactured by *NSI Industries*.
- An open type multipole lighting contactor with six 30-ampere single poles and a 120-volt coil, connected to control the street lighting circuits. The contactor shall include an HOA control switch which shall be Type L as manufactured by *Schneider Electric*.
  - Hand Operation: By-pass the photocell control and energize the lighting circuits.
  - Auto Operation: Lighting circuits to operate according to the photocell.
  - Off Operation: Contactor to be de-energized.
- An open type multipole lighting contactor with six 30-ampere single poles and a 120-volt coil, connected to control the receptacle circuits. The contactor shall include an HOA control switch, and shall be Type L as manufactured by *Schneider Electric*.
  - Hand Operation: By-pass the photocell control and energize the receptacle circuits.
  - Auto Operation: Receptacle circuits to operate according to the photocell.
  - Off Operation: Contactor to be de-energized.
- Panel P2: 120/240 volt, 100 ampere panelboard with three 20-ampere/2-pole circuit breakers; six 20-ampere/1-pole circuit breakers; and wiring termination lugs. The lighting panelboard shall be as manufactured by *Schneider Electric*, model NQOD.

A 30-inch wide by 36-inch tall by 8-inch deep 304 stainless steel NEMA 4X enclosure with a hinged, lockable handle shall be provided and installed at a new traffic control box. The enclosure shall be as manufactured by *Hoffman* or approved equal. The enclosure shall include the following:

- A lighting photocell to be installed on the top of the enclosure. The photocell shall be wired to control two lighting contactors, and shall be a receptacle type as manufactured by *NSI Industries*.
- An open type multipole lighting contactor with six 30-ampere single poles and a 120-volt coil, connected to control the street lighting circuits. The contactor shall include an HOA control switch which shall be Type L as manufactured by *Schneider Electric*.
  - Hand Operation: By-pass the photocell control and energize the lighting circuits.
  - Auto Operation: Lighting circuits to operate according to the photocell.
  - Off Operation: Contactor to be de-energized.
- An open type multipole lighting contactor with six 30-ampere single poles and a 120-volt coil, connected to control the receptacle circuits. The contactor shall include an HOA control switch, and shall be Type L as manufactured by *Schneider Electric*.
  - Hand Operation: By-pass the photocell control and energize the lighting circuits.
  - Auto Operation: Receptacle circuits to operate according to the photocell.
  - Off Operation: Contactor to be de-energized.
- Panel P2: 120/240 volt, 100 ampere panelboard with three 20-ampere/2-pole circuit breakers; six 20-ampere/1-pole circuit breakers; and wiring termination lugs. The lighting panelboard shall be as manufactured by *Schneider Electric*, model NQOD.

#### 634.081 BONDING AND GROUNDING

A separate, green insulated ground conductor shall be provided to extend from the luminaires to a ground lug at the inside base of each pole. Provide grounding of new Panels P1 and P2 per NFPA 70 Article 250.

634.092 METHOD OF MEASUREMENT

New light standards will be measured by the single unit, complete in place and accepted, including luminaires, lamps, poles, internal wiring, and anchor bolts.

New electrical service boxes shall be measured as a single quantity, complete and accepted, including all interior components and grounding.

634.093 BASIS OF PAYMENT

The accepted quantity of light standards will be paid for at the contract unit price each for the number of standards by each type. Payment shall be full compensation for the light poles, pole bracket arms, pole wiring, luminaires including drivers and lamps, and all incidentals necessary to complete the work.

Payment will be made for the two service boxes as a lump sum. Payment shall be full compensation for the service wire, panelboards, lighting contactors, photocells, service meters, grounding, and all incidentals necessary to complete the work.

Payment will be made for the total number of linear feet of each type of wiring cables actually furnished, installed and accepted at the contract unit price per unit price. This price shall include the cost of furnishing and installing wiring conductors, terminations, labor, equipment and incidentals necessary to complete the work.

<u>Pay Item</u>		<u>Pay Unit</u>
634.042	#2 AWG Cable Installation	Linear Feet
634.043	#8 AWG Cable Installation	Linear Feet
634.08	Electrical Service Box	Lump Sum
634.2101	Conventional Lighting Standard	Each

SPECIAL PROVISION  
SECTION 641  
BENCH AND TRASH RECEPTACLES

The provisions of Section 641 of the 2020 Standard Specifications with the following additions and modifications shall apply:

641.01 Description This work consists of purchasing and installing benches and trash receptacles in accordance with the landscaping plans and in accordance with vendor instructions and requirements. The product and materials shall be match details provided on the landscaping plans or approved equal.

641.10 Basis of Payment

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
641.12	Bench	Each
641.34	Trach Receptacle	Each

**SPECIAL PROVISION  
SECTION 643  
TRAFFIC SIGNALS  
(Rectangular Rapid Flashing Beacon)**

The provisions of Section 643 of the Standard Specifications shall apply with the following additions and modifications.

Description

This subsection shall be amended by the addition of the following:

The Contractor shall furnish and install rectangular rapid flashing beacons including signage assemblies at pedestrian crossings where shown on the plans. Their installation shall be as described in this special provision.

Materials

This subsection shall be amended by the addition of the following:

The Rectangular Rapid Flashing Beacon (RRFB) installed on this project shall match the make and model of the RRFB installed at the mid-block crossing on Turner Street (approximately 300' south of its intersection with Gracelawn Road) or approved equal.

RRFB information from the Turner Street project is available below:

Product: TAPCO  
Serial Number: J-623745-1011  
SKU: 500111  
Binding Code:02374506  
FCC ID: 2ANWN-02ANWN  
Transmitter System 06: J-623745-1011

Each rectangular rapid flashing beacon (RRFB) assembly shall consist of two rectangular-shaped yellow indications (in both directions), each with an LED-array based light source. Each RRFB indication shall be a minimum of approximately 5 inches wide by approximately 2 inches high.

Each RRFB signage assembly shall be mounted on a 14-foot-long 4-inch I.D. non-tapered Schedule 40 galvanized steel pole with pole cap. Poles shall have a 0.75" minimum thickness galvanized ASTM A36 steel base plate circumferentially welded to the pole shaft. Anchor bolts for attachment of base plates to foundations shall be 0.75" x 17" (minimum) x 3" threaded. Four anchor bolts shall be provided for each support pole.

Where designated on the plans, poles for RRFB signage assemblies shall be installed with breakaway bases. Breakaway devices shall conform to the latest edition of "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals" and NCHRP 350. Breakaway devices shall be designed such that anchor bolts will not bend upon vehicle impact. A frangible coupling such as Transpo "Pole-Safe" series, Manitoba safety base with reaction plate, or other approved equal



meeting requirements of Section 721 shall be used. Electrical conductors at the pole base shall have a fusible breakaway device that will disconnect all ungrounded conductors simultaneously.

Each support pole shall be installed with a square aluminum pedestal base with grounding lug.

Signs for RRFB signage assemblies shall be sheet aluminum and meet requirements of Section 645 for Type II regulatory, warning and route marker assembly signage. The signage assemblies shall include a W11-2 pedestrian crossing sign, W16-7p diagonal arrow plaque, and R10-25 pedestrian push button signs.

Pedestrian push button assemblies for activating RRFB indications shall be installed on each RRFB support pole, mounted at 42 inches above sidewalk grade and within 10 inches of the edge of sidewalk. Push buttons shall meet Americans with Disabilities Act vibrotactile technical requirements for accessible pedestrian signals (APS). The pushbutton assembly shall include a raised directional arrow indicating the direction of crossing. Audible locator and percussive crossing tones are required (see details sheet in plan set for additional information).

#### Construction and Operation

This subsection shall be amended by the addition of the following:

The two RRFB indications in an assembly shall be aligned horizontally, with the longer dimension horizontal and with a minimum space between the two indications of approximately seven inches (7”), measured from inside edge of one indication to inside edge of the other indication.

The outside edges of the RRFB indications, including any housing, shall not project beyond the outside edges of the W11-2 sign in the beacon signage assembly.

As a specific exception to 2009 MUTCD Section 4L.01 guidance, the RRFB indications shall be located between the bottom of the W11-2 crossing warning sign and the top of the supplemental W16-7p downward diagonal arrow plaque, rather than 12 inches above or below the sign assembly.

When activated, the two yellow indications in each RRFB shall flash in a rapidly alternating "wig-wag" flashing sequence (left light on, then right light on). The flash rate of each individual yellow indication, as applied over the full on-off sequence of a flashing period of the indication, shall not be between 5 and 30 flashes per second, to avoid frequencies that might cause seizures.

The light intensity of the yellow indications shall meet the minimum specifications of Society of Automotive Engineers (SAE) standard J595 (Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles) dated March 2014.

The RRFBs, normally dark, shall initiate operation only upon pedestrian push button actuation, and shall cease operation at a predetermined time after the pedestrian actuation. For this project, the duration of operation of the RRFBs following each actuation shall be 25 seconds. All RRFBs associated with a given crosswalk shall, when activated, simultaneously commence operation of their alternating rapid flashing indications and shall cease operation simultaneously. Communication between the devices shall be by spread spectrum wireless. Power source for RRFB's shall be solar.

MUTCD R10-25 pedestrian instruction signage with the legend PUSH BUTTON TO TURN ON WARNING LIGHTS shall be mounted adjacent to or integral with each pedestrian pushbutton.

Method of Measurement

This subsection shall be amended by the addition of the following:

Rectangular Rapid Flashing Beacons (RRFB) shall be measured per lump sum and shall include all three (3) RRFBs required to complete a functioning system.

Basis of Payment

This subsection shall be amended by the addition of the following:

Rectangular Rapid Flashing Beacon will be paid for at the contract lump sum price, which payment will be full compensation for furnishing and installing all materials including, but not limited to, the RRFB LED arrays, flasher, timer, lockable controller cabinet, steel poles with base plate, anchor bolts and pedestal base, breakaway devices, wiring and solar power unit/service, pole risers, pedestrian push button assemblies, crosswalk signage, radio communication devices and all appurtenances and incidentals required for a complete and functioning installation. Foundations and conduit (if required) will be paid under applicable Section 626 pay items.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
643.63	Rectangular Rapid Flashing Beacon: Mill Street	Lump Sum
643.63	Rectangular Rapid Flashing Beacon: Broad Street	Lump Sum

SPECIAL PROVISION  
SECTION 643  
TRAFFIC SIGNALS

The provisions of Section 643 of the 2020 Standard and Supplemental Specifications with the following additions and modifications shall apply:

643.02 General The traffic signal requirements are further defined and noted on the construction plans, sheets 18-23 (signal plans, notes, and details).

643.19 Basis of Payment

Payment for traffic signal work will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
643.80	Traffic Signals at: Mill Street/Main Street	Lump Sum
643.80	Traffic Signals at: Mill Street/Broad Street	Lump Sum
643.83	Video Detection System at: Mill Street/Main Street	Lump Sum
643.83	Video Detection System at: Mill Street/Main Street	Lump Sum
643.94	Dual Purpose Pole – 30’ Mast Arm	Each
643.94	Dual Purpose Pole – 35’ Mast Arm	Each
643.94	Dual Purpose Pole – 40’ Mast Arm	Each
643.94	Dual Purpose Pole – 55’ Mast Arm	Each

SPECIAL PROVISION  
SECTION 645  
HIGHWAY SIGNING  
(LED Blank-Out Sign)

The provisions of Section 645 of the 2020 Standard Specifications with the following additions and modifications shall apply:

645.01 Description This work shall also consist of furnishing and installing new LED blank-out signs, overhead mounted in accordance with these specifications and in reasonably close conformity with the plans.

645.0212 Materials The LED blank-out signs shall be contained within an aluminum housing with a black powder coat finish. The housing shall be weatherproof conforming to NEMA 3R. Messages shall be MUTCD R10-11a (NO TURN ON RED) or R10-15 (Turning Vehicles Yield to Pedestrians) sign with arrows as shown on the Plans. Message legend and symbols shall be made up of discrete LEDs with a maximum pitch of 20 mm to cover the stroke width of the letters or symbol that simulate the static sign legend and symbols of the standard MUTCD sign. The LEDs shall be dimmable to adjust the LED brightness in accordance with ambient light conditions.

645.065 Installation of LED Blank-Out Signs LED blank-out signs shall be designed for overhead mounting on a horizontal mast arm. Signs shall be actuated in sequence from the control logic provided at the traffic signal controller. Actuations shall turn the sign on; absence of actuation shall cause the sign to remain unlit.

All exposed wiring shall be in accordance with section 715.11. All wiring shall be in accordance with section 718.01-c.

645.08 Method of Measurement LED Blank-Out Signs, Overhead Mounted will be measured by each unit sign complete in place and accepted.

645.09 Basis of Payment LED Blank-Out Sign, Overhead Mounted (Item 645.512) will be paid for at the contract unit price which payment shall be full compensation for furnishing and installing all materials, tools and labor necessary to erect and install the signs.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
645.512	LED Blank-Out Sign, Overhead Mounted	Each

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<sup>1</sup>.  
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 and milling 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.

<sup>1</sup> “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.

**SECTION 700 - MATERIAL DETAILS**

The following are revisions and additions to the Material Details Division of the Standard Specifications, Highways and Bridges, Revision of March 2020. Provisions contained herein shall be considered to supplement or supersede those portions of the Standard Specifications as they apply to the Contract.

The GENERAL STATEMENT of this Division is hereby revised to read as follows;

All materials which are to be used in the work for which there is no prescribed testing by the project inspectors or other certified laboratories, the Contractor shall, prior to final acceptance as specified in subsection 105.17(b), submit a Materials Certification Letter similar to:

Company Letterhead

Mr. \_\_\_\_\_ Resident      Date \_\_\_\_\_  
Address \_\_\_\_\_      Project No. \_\_\_\_\_  
\_\_\_\_\_      Town \_\_\_\_\_

"This is to certify that the below listed materials, which are incorporated into the above designated project, comply with the pertinent specified material requirements of the contract. Processing, project testing and inspection control of raw materials are in conformity with the applicable drawings and/or standards of all articles furnished. (List only those items used.)

- Electrical Conduit
- Electrical Cable
- Luminaires and Supports
- Electrical Service Box

All records and documents pertinent to this letter and not submitted herewith shall be maintained available by the undersigned for a period of not less than three (3) years from the date of completion of the project.

The Materials Certification letter shall be signed by a person having legal authority to bind the Contractor.

Materials for which the above Certificate is acceptable may be subject to random sampling and testing by the City. Certified materials which fail to meet specification requirements may not be accepted.

## SECTION 715-LIGHTING MATERIAL

### 715.04 PREWIRED CONDUIT:

The use of pre-wired conduit is not permitted.

### 715.07 SECONDARY WIRING:

Provide all secondary wiring.

### 715.08 LUMINAIRE, LAMP AND BALLAST:

Luminaires shall be manufactured by *Holophane Lighting* and shall be constructed of a die-cast aluminum housing. Luminaires shall mount by a slip-fitter manufactured by the luminaire manufacturer.

Luminaire lamps and drivers shall be tested according to LM79 and LM80 standards. LED drivers shall be:

- a. Designed to operate on voltage system to which they are connected.
- b. Constructed so that open circuit operation will not reduce the Ballast operating characteristics shall be as follows:

Lamps	4K LED
Nominal Primary Voltage	120-277V Auto-Sensing
Drive Current	700 mA
Input Wattage (Watts)	47
Power Factor	>90%
Initial Lumens	3879
Lamp Life (hours)	100,000 (25°C – 96% output)

### 715.11 SERVICE EQUIPMENT

Secondary service grounding in full accordance with NFPA 70 and *The Central Maine Power Company* shall be provided as part of the electrical service. Provide a #4 bare copper ground conductor and a 5/8" diameter by 8' – 0" long copper clad steel ground rod at the service connection.

**SPECIAL PROVISION**  
**SECTION 803**  
**UTILITY TEST PITS**

803.01 DESCRIPTION

This work shall consist of excavating and back filling test holes to locate existing utilities at locations shown on the plans or as directed by the Resident.

803.02 CONSTRUCTION REQUIREMENTS

The work shall be done in a manner that provides safe passage of the traveling public at all times. Coordination with the utilities is required prior and during the test pit activities. An authorized representative from the utility shall be present during the test pit activity. Test pits shall be completed in a manner that does not damage any utilities. Any damage to utilities or other roadway features by the test pit operations shall be repaired by the Contractor at no additional cost and shall be to the Resident's satisfaction.

The Contractor shall coordinate with the Department's surveyor on locating the utilities once exposed.

Once the location work is complete, the Contractor shall backfill the hole, place gravel and pavement over the test pits in a manner consistent with the existing conditions and in accordance with the standard specifications for backfilling.

803.03 METHOD OF MEASUREMENT

Test Pits will be measured for payment by each.

803.04 BASIS OF PAYMENT

The accepted quantity of Test Pits will be paid for at the contract unit price per each, which shall be full compensation for all labor, materials, tools, equipment, and incidentals necessary to the complete the work. Associated traffic control will not be paid for separately and is considered incidental to the test pit item.

Payment will be made under:

	<u>Pay Item</u>	<u>Pay Unit</u>
803.01	Test Pits	Each



SPECIAL PROVISION  
SECTION 841  
BOLLARDS

841.01 Description This work shall consist of furnishing and installing 6” diameter steel tube bollards with concrete cap and associated hardware necessary to complete the work. The bollard shall be 42” tall and be painted yellow. All earthwork, excavation and compacted backfill shall be incidental to the bollard.

The contractor shall submit shop drawings to the resident a minimum of 2 weeks prior to the placement of the bollards.

841.02 Construction Steel bollards shall be spaced and located as shown on the plans. Final locations shall be adjusted in the field and accepted by the Resident.

841.03 Method of Measurement Bollards and all necessary incidentals required to complete the work shall be measured by each bollard complete and in place.

841.06 Basis of Payment The quantity of bollards will be paid for by the contract unit price for each installation. Such payment will be full compensation for all labor, excavation, backfill, tools, associated hardware, and any other incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
841.48	Bollards	Each

SPECIAL PROVISION  
SECTION 890  
BIKE RACK

The provisions of Section 890 of the 2020 Standard Specifications with the following additions and modifications shall apply:

890.01 Description This work consists of purchasing and installing bike racks in accordance with the landscaping plans and in accordance with vendor instructions and requirements. The product and materials shall be match details provided on the landscaping plans or approved equal.

890.10 Basis of Payment

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
890.07	Bike Rack	Each

## 2020 STANDARD DETAIL UPDATES

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

<b><u>Detail #</u></b>	<b><u>Description</u></b>	<b><u>Revision Date</u></b>
502(19)	Bridge Drains	12/08/2021
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
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	6/10/2021
801(12)	Pedestrian Ramp Requirements	8/13/2021
801(13)	Ramp Length Table	6/10/2021

801(14)	Parallel Pedestrian Ramp	6/10/2021
801(15)	Perpendicular Pedestrian Ramp – Option 1	6/10/2021
801(16)	Parallel Pedestrian Ramp – Option 2A	6/10/2021
801(17)	Perpendicular Pedestrian Ramp – Option 2A	6/10/2021
801(18)	Parallel Pedestrian Ramp – Option 2B	6/10/2021
801(19)	Perpendicular Pedestrian Ramp – Option 2B	6/10/2021
801(20)	Parallel Pedestrian Ramp – Option 3	6/10/2021
801(21)	Perpendicular Pedestrian Ramp – Option 3	6/10/2021
801(22)	Side Street Pedestrian Ramp	6/10/2021
801(23)	Parallel Pedestrian Ramp – Esplanade	6/10/2021
801(24)	Perpendicular Pedestrian Ramp – Esplanade	6/10/2021
801(25)	Island Crossings	6/10/2021
801(26)	Blended Transition	6/10/2021
801(27)	Pedestrian Ramp Adjacent to Driveway or Entrance	6/10/2021
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

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

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 104  
GENERAL RIGHTS AND RESPONSIBILITIES

104.2.1 Furnishing of Right-of-Way Revise the last sentence in the first paragraph by removing “105.4.5 – Special Detours” and replacing it with “**105.4.5 – Maintenance of Existing Structures.**”.

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:  $PF = [70 + (\text{Quality Level} * 0.33)] * 0.01$ ”

## 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

108.4.1 Price Adjustment for Hot Mix Asphalt Revise the first paragraph of this section by replacing the first sentence with the following:

**“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.”**

SECTION 110  
INDEMNIFICATION, BONDING, AND INSURANCE

110.3.9 Administrative & General Provisions Amend this subsection by adding “**Automobile Liability**” under letter A) Additional Insured to the list of exceptions.

SECTION 206  
STRUCTURAL EXCAVATION

206.01 Description – *Structural Earth Excavation, Below Grade* delete the entire sentence and replace with “**shall consist of the removal of excavation required for unknown or unanticipated subsurface condition. See 206.04 – Method of Measurement for pay limits.**”

206.04 Method of Measurement – Drainage and Minor Structures Paragraph 1, sentence 2, delete the remainder of the sentence beginning with “...provided the maximum allowable...”

And replace with: “**...in accordance with the following limits:**”

- **Vertical pay limits:**
  - o **Below a plane parallel with and 12 inches below the bottom of the drainage or minor structure or**
  - o **Below the excavation limits shown in the Bid Documents; whichever is greater.**
  
- **Horizontal pay limits** – **The maximum allowable horizontal dimensions shall not exceed those bounded by vertical surfaces 18 inches outside the base, or extreme limits of, the structure, and to the vertical neat lines of underdrain trenches, as shown in the Contract Documents.**

SECTION 401  
HOT MIX ASPHALT PAVEMENT

401.19 Contractor Quality Control Amend this Section by adding the following to the end: “**Failure to comply with the approved QCP will result in work suspension and pay reductions as outlined in Section 106.4.6. The Quality Control Plan Value shall be the total bid value for all items covered by the QCP as identified in Special Provision 403.**”

SECTION 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 <sup>3</sup> (Min. 1 set per month)
Organic Impurities	AASHTO T-21	Stockpile	<b>Once per fine aggregate per year **</b>
% Absorption	AASHTO T-84 & T-85	Stockpile	Once per aggregate per year
Specific Gravity	AASHTO T-84 & T-85	Stockpile	Once per aggregate per year
Total Moisture in Aggregate	AASHTO T-255	Stockpile	One set per day's production
Free Water and Aggregate Wt.	N/A		One per day's production
% Entrained Air	AASHTO T-152	On Project	On first two loads and every third load thereafter provided consistent results are achieved
Compressive Strength	AASHTO T-22	On Project	One set per subplot
Compressive Strength	AASHTO T-22 @ 7days	On Project	One set per subplot

\* Additional QC testing will be required any time a process change occurs during a placement, including changes in type or dosage of admixture. Additional testing shall include, but is not limited to, entrained air testing.

**\*\* If the color produced is a laboratory designation Plate III, then the fine aggregate shall be tested once per month.**

502.18, Method of Measurement, Revise Subsection 'F' by removing the word 'transverse' so that it reads: **"Saw cut grooving of concrete wearing surfaces, complete and accepted, will be measured for payment as one lump sum."**

502.19, Basis of Payment, Revise the third paragraph by removing the word 'transverse' so that it reads: **"Saw cut grooving of concrete wearing surfaces will be paid for at the Contract Lump Sum Price, which shall be payment for furnishing all materials, labor, and equipment, including depth gauges and all incidentals, to satisfactorily complete the work."**

(Also see 535.24 and 535.25 for related changes)

**SECTION 503**  
**REINFORCING STEEL**

Section 503.07 Splicing Revise this section by removing the table and following footnote and replacing them with:

Minimum Lap Splice Length (inches)									
Bar Type	Bar Size								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
Plain or Galvanized	16	20	24	29	38	47	59	72	85
Epoxy or Dual Coated	17	24	36	43	56	71	88	107	128
Stainless	19	24	30	36	47	59	73	89	107
Low-carbon Chromium	24	32	39	47	63	78	97	119	142

**“The minimum lap splice lengths in the table above are based on the parameters below. When any of these parameters are altered, appropriate minimum lap splice lengths will be as shown on the Plans.**

- **Normal weight concrete**
- **Minimum 28-day concrete compressive strength from 4,000 psi to 10,000 psi**
- **Class B tension lap splice**
- **Minimum center-to-center spacing between bars of 6 inches**
- **Minimum clear cover of 2 inches**
- **Nominal reinforcing steel yield strengths**
  - **Low-carbon Chromium = 100 ksi**
  - **Stainless = 75 ksi**
  - **All others = 60 ksi**
- **Reinforcement with yield strengths greater than 75 ksi shall have beam transverse reinforcement and column ties provided over the required lap splice length in accordance with the current edition of the AASHTO LRFD Bridge Design Specifications**

**When lap splices are placed horizontally in an element where the concrete depth below the splice will be 12 inches, or more, the indicated lap splice lengths shall be multiplied by a factor of 1.3.”**

**SECTION 506**  
**SHOP APPLIED PROTECTIVE COATING – STEEL**

506.13 Surface Preparation Amend this section by adding this paragraph to the end:

**“Steel shall meet the requirements of SSPC SP8 Pickling prior to being immersed in the zinc tanks. Verification of the surface preparation shall be included in the QC documentation.”**

SECTION 523  
BEARINGS

523.051 Protective Coating Revise this subsection by removing the paragraph beginning with “Anchor rods shall be galvanized...” and replacing with:

**“Anchor rods shall be galvanized. When anchor rods are designated to secure bare unpainted steel or painted steel, a dielectric coating (epoxy or bituminous type coatings are acceptable) shall be applied to the anchor rod and/or adjacent steel to prevent contact between galvanized surfaces and painted or unpainted steel.”**

523.22 Fabrication Amend this subsection by adding the following: **“Elastomeric Bearings shall be fabricated in accordance with AASHTO M251.”**

SECTION 526  
CONCRETE BARRIER

Amend this section by deleting it in its entirety and replacing it with:

**“526.01 Description This work shall consist of the furnishing, constructing, erecting, setting, resetting, and removal of concrete barrier and associated elements in accordance with these specifications, the Standard Details, and the lines and grades shown on the Plans or established by the Resident.**

**The types of concrete barrier are designated as follows:**

**Portable Concrete Barrier Type I Double faced removable barrier in accordance with the Standard Details.**

**Permanent Concrete Barrier Type II Double faced barrier as shown on the Plans.**

**Permanent Concrete Barrier Type IIIa Single faced barrier 32 inches high in accordance with the Standard Details or as shown on the Plans.**

**Permanent Concrete Barrier Type IIIb Single faced barrier 42 inches high in accordance with the Standard Details or as shown on the Plans.**

**Permanent Concrete Transition Barrier Barrier of various heights joining steel bridge rail to steel guardrail in accordance with the Standard Details or as shown on the Plans.**

**Permanent Texas Classic Rail Barrier Traffic rail or sidewalk rail, in accordance with the Standard Details or as shown on the Plans.**

**526.02 Materials**

a. **Concrete** Concrete for barriers, both permanent and portable, shall have a design strength of 5,000 psi.

For cast-in-place barrier: The concrete shall be Class LP, in accordance with Standard Specification Section 502, Structural Concrete.

For precast barrier: The concrete shall meet the requirements of Standard Specification 712.061, Structural Precast Concrete Units, except that the stripping strength for precast barriers is 4,000 psi.

b. **Reinforcing Steel** Reinforcing steel shall meet the requirements of Section 503, Reinforcing Steel.

c. **Structural Steel** Plates and barrier connections shall meet the requirements specified in Standard Specification 504 - Structural Steel and shall be hot dip galvanized after fabrication in accordance with Standard Specification 506, Shop Applied Protective Coating – Steel

d. **Bolts** Bolts shall meet the requirements specified in Section 713.02, High Strength Bolts.

e. **Connecting Pins for Portable Concrete Barrier** Portable concrete barriers must be connected using a 1- inch diameter pin. The connecting pin must be smooth, not deformed, i.e., reinforcing bar may not be used, and shall meet the strength requirements of ASTM A449 steel. Materials with greater strength may be used with the approval of the Department.

f. **Anchor Pins for Portable Concrete Barrier** Anchoring to concrete or asphalt will be required when specified on the Plans. When required, portable concrete barriers must be anchored using a 1 ½ - inch diameter anchor pin. The anchor pin must be smooth, not deformed, i.e., reinforcing bar may not be used, and shall meet the strength requirements of ASTM A36 steel. Materials with greater strength may be used with the approval of the Department.

g. **Device Crashworthiness** MaineDOT is transitioning to MASH2016 criteria for Portable Concrete Barrier on the following schedule:

New Portable Concrete Barrier shall be crash tested and/or evaluated to MASH2016 criteria.

Current Portable Concrete Barrier in useful serviceable condition that is successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2029.

Other current Portable Concrete Barrier that is deemed acceptable by the Department may be utilized on projects off the National Highway System through December 31, 2024.

### **526.03 Construction Requirements**

Cast-in-place barriers shall be fabricated in accordance with Standard Specification Section 502, Structural Concrete. Precast barriers shall be fabricated in accordance with Standard Specification 534, Precast Structural Concrete.

Concrete finish for permanent barrier shall be rubbed as defined in Standard Specification Section 502, Structural Concrete, 502.13 D2 or an approved equal.

Portable concrete barrier shall be generally free from fins and porous areas and shall present a neat and uniform appearance.

Permanent barrier shall have a protective coating applied in accordance with Standard Specification Section 515, Protective Coating for Concrete Surfaces.

Reflective delineators for concrete median barrier shall meet the requirements of Special Provision 645, Highway Signing.

Preformed Joint Filler shall meet the requirements specified in Subsection 705.01, Preformed Expansion Joint Filler.

Permissible dimensional tolerances for all concrete barriers shall be as follows:

- a. Cross-sectional dimensions shall not vary from design dimensions by more than  $\frac{1}{4}$  inch. The vertical centerline shall not be out of plumb by more than  $\frac{1}{4}$  inch.
- b. Longitudinal dimensions shall not vary from the design dimensions by more than  $\frac{1}{4}$  inch per 10 feet of barrier section and shall not exceed  $\frac{3}{4}$  inches per section.
- c. Location of anchoring holes shall not vary by more than  $\frac{1}{2}$  inch from the dimensions shown in the concrete barrier details on the Plans.
- d. Surface straightness shall not vary more than  $\frac{1}{4}$  inch under a 10-foot straightedge.
- e. The barrier shall have no significant cracking. Significant cracking is defined as fractures or cracks passing through the section, or any continuous crack extending for a length of 12 inches or more, regardless of position in the section. **526.04 Method of Measurement** Permanent Concrete Barrier Type II, IIIa, IIIb, Texas Classic Rail, and Precast Median Barrier will be measured for payment by lump sum, complete in place.

Portable concrete barrier, both anchored and unanchored will be measured for payment by lump sum. Lump sum measurement will include verification of the installation and removal of all portable concrete at the completion of the Contractor's operations.

The Contractor shall replace sections of portable concrete barrier, including anchored barrier damaged by the traveling public when directed by the Resident. Replacement

sections will be measured for payment in accordance with Standard Specification 109.7, Equitable Adjustments to Compensation and Time.

Transition barrier will be measured by each, complete in place.

**526.05 Basis of Payment** The accepted quantities of Concrete Barrier Type II, IIIa, IIIb, Texas Classic Rail, and Precast Median Barrier will be paid for at the Contract lump sum price for the type specified, complete in place.

The accepted quantities of Portable Concrete Barrier Type I, both anchored and unanchored will be paid for at the Contract lump sum price. Such payment shall be full compensation for furnishing all materials, assembling, moving, resetting, transporting, temporarily storing, removing barrier, furnishing new parts as necessary, and all incidentals necessary to complete the work.

Portable barrier shall become the property of the Contractor upon completion of the use of the barrier on the project and shall be removed from the project site by the Contractor.

Transition barrier will be paid for at the Contract price each, complete in place.

The accepted quantity of all types of concrete barrier, whether portable or permanent, will be paid for at the lump sum or per each price, as applicable, which payment shall be full compensation for all materials, including reinforcing steel, protective coating, reflective delineators, steel plates and hardware, equipment, labor and incidentals required, as necessary, to complete the work.

Payment will be made under:

	<u>Pay Item</u>	<u>Pay Unit</u>
526.301	Portable Concrete Barrier, Type I	Lump Sum
526.304	Portable Concrete Barrier, Anchored Type I	Lump Sum
526.312	Permanent Concrete Barrier Type II	Lump Sum
526.321	Permanent Concrete Barrier Type IIIa	Lump Sum
526.323	Texas Classic Rail	Lump Sum
526.331	Permanent Concrete Barrier Type IIIb	Lump Sum
526.34	Permanent Concrete Transition Barrier	Each
526.502	Precast Concrete Median Barrier	Lump Sum”

SECTION 527  
ENERGY ABSORBING UNIT

527.02 Materials Amend this section by deleting it in its entirety and replacing it with:

**“MaineDOT is transitioning to MASH2016 criteria for Work Zone Traffic Control Devices on the following schedule:**

**Portable Crash Cushions will be crash tested and/or evaluated to MASH2016 criteria by January 1, 2030. Current Category 3 devices in useful serviceable condition that are successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2029.**

**Work Zone Crash Cushions shall be selected from the Department’s Qualified Products List of Crash Cushions/Impact Attenuators or approved equal.”**

SECTION 535  
PRECAST, PRESTRESSED CONCRETE SUPERSTRUCTURE

535.24, Installation of Slabs, Beams, and Girders Revise the 5<sup>th</sup> 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 2<sup>nd</sup> paragraph by replacing “6.0 and 9.0” to “5.0 and 8.0” so it reads: **“Ready mixed grout shall achieve a design compressive strength of 6,000 psi at 28 days, have an entrained air content of between 5.0 and 8.0 percent, be non-shrink, flowable, and contain a non-shrink additive listed on the Department QPL for expansive cements.”**

SECTION 606  
GUARDRAIL

Amend this section by replacing it with the following:

606.01 Description This work shall consist of furnishing and installing guardrail components in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans or as established. Guardrail is designated as:

31” W-Beam Guardrail - Mid-Way Splice

Galvanized steel w-beam, 8” wood or composite offset blocks, galvanized steel posts

Thrie Beam

Galvanized steel thrie beam, 8” wood or composite offset blocks, galvanized steel posts

Median guardrail shall consist of two beams of the above types, mounted on single posts.

Bridge mounted guardrail shall consist of furnishing all labor, materials, and equipment necessary to install guardrail as shown on the plans. This work shall also include drilling for and installation of offset blocks if specified, and incidental hardware necessary for satisfactory completion of the work.

Remove and Reset and Remove, Modify, and Reset guardrail shall consist of removing the existing designated guardrail and resetting in a new location as shown on the plans or directed by the Resident. Remove, Modify, and Reset guardrail and Modify guardrail include the following guardrail modifications: Removing plate washers at all posts, except at anchorage assemblies as noted on the Standard Details, adding offset blocks, and other modifications as listed in the Construction Notes or General Notes. Modifications shall conform to the guardrail Standard Details.

Bridge Connection shall consist of the installation and attachment of beam guardrail to the existing bridge. This work shall consist of constructing a concrete end post or modifying an existing end post as required, furnishing, and installing a terminal connector, necessary hardware, and incidentals required to complete the work as shown on the plans. Bridge Transition shall consist of a bridge connection and furnishing and installing guardrail components as shown in the Standard Details.

606.02 Materials Materials shall meet the requirements specified in the following Sections of Division 700 - Materials:

Timber Preservative	708.05
Metal Beam Rail	710.04
Guardrail Posts	710.07
Guardrail Hardware	710.08

Guardrail components shall meet the applicable standards of "A Guide to Standardized Highway Barrier Hardware" prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Task Force 13 Report.

Posts for underdrain delineators shall be "U" channel steel, 8 ft long, 2 ½ lb/ft minimum and have 3/8-inch round holes, 1-inch center to center for a minimum distance of 2 ft from the top of the post.

Reflectorized Flexible Guardrail Markers shall be mounted on all guardrails. A marker shall be mounted onto guardrail posts at the flared guardrail terminal end point and tangent point, both at the leading and trailing ends of each run of guardrail. The marker's flexible posts shall be gray with either silver-white or yellow reflectors (to match the edge line striping) at the tangents, red at leading ends, and green at trailing ends. Whenever the guardrail terminal is not flared, markers will only be required at the terminal end point. These shall be red or green as appropriate. Markers shall be installed on the protected side of guardrail posts unless otherwise approved by the Resident. Reflectorized flexible guardrail markers shall be from the Department's Qualified Products List of Delineators. The marker shall be gray, flexible, durable, and of a non-discoloring material to which 3-inch by 9-inch reflectors shall be applied, and capable of recovering from repeated impacts and meeting MASH 16 requirements. Reflective material shall meet the requirements of Section 719.01



for ASTM D 4956 Type III reflective sheeting. The marker shall be secured to the guardrail post with two fasteners, as shown in the Standard Details.

Reflectorized beam guardrail reflectors shall be mounted on all “w” beam guardrail and shall be either the “butterfly” type or linear delineation system panels. “Butterfly” or linear delineation panels shall be installed at approximately 62.5 foot intervals on tangents (after every tenth post) and 31.25 feet on curves (after every fifth post), and shall be centered on the guardrail beam. On Divided highways, the left-hand delineators shall be yellow and the right-hand delineators shall be silver/ white. On two-way directional highways, the right-hand side will have silver / white reflectors and no reflectorized delineator used on the left. Delineators shall have reflective sheeting that meets or exceeds the requirements of Section 719.01.

“Butterfly” reflectors shall be fabricated from high-impact, ultraviolet & weather resistant thermoplastic. Aluminum, galvanized metal or other materials shall not be used. Reflective sheeting will be applied to only one side of the delineator facing the direction of traffic and shall be centered vertically on the guardrail beam as shown in the Standard Detail 606(7).

Linear delineation system panels shall be 1.5 inches wide by approximately 11 inches nominal length, with a minimum of 5 raised lateral ridges spaced at approximately 2.25 inches. The height of each ridge shall be 0.34 inches with a 45 degree profile and a 0.28 inches radius at the top. Sheeting shall be laminated to thin gauge aluminum with a pre-applied adhesive tape on the back. Panels shall not be installed over seams or bolt heads and shall be centered horizontally on the guardrail beam; linear delineation panels shall be attached to only one guardrail beam. The guardrail beam surface shall be cleaned and prepared according to the manufacturer’s instructions. Air temperature and guardrail surface temperature must be a minimum of 50 degrees F (10 C) with rising temperature at the time of installation.

Exact locations of the either the “butterfly” type or the linear delineation panels shall be approved by the Resident prior to installation.

Single wood post shall be of cedar, white oak, or tamarack, well-seasoned, straight, and sound and have been cut from live trees. The outer and inner bark shall be removed, and all knots trimmed flush with the surface of the post. Posts shall be uniform taper and free of kinks and bends.

Single steel post shall conform to the requirements of Section 710.07 b.

Single steel pipe post shall be galvanized, seamless steel pipe conforming to the requirements of ASTM A120, Schedule No. 40, Standard Weight.

Acceptable multiple mailbox assemblies shall be listed on the Department’s Qualified Products List and shall be MASH 16 tested and approved.

Flared and Tangent w-beam guardrail terminals and guardrail offset blocks shall be from the Department’s Qualified Products List. Flared terminals shall be installed with a 4 ft offset as shown in the Manufacturer’s installation instructions.

Anchorage assemblies used to anchor trailing ends, radius guardrail, or other ends not exposed to traffic shall meet the applicable standards of "A Guide to Standardized Highway Barrier Hardware" prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Task Force 13 Report, Drawing SEW02a.

Existing materials damaged or lost during adjusting, removing and resetting, or removing, modifying, and resetting, shall be replaced by the Contractor without additional compensation. Existing guardrail posts and guardrail beams found to be unfit for reuse shall be replaced when directed by the Resident.

606.03 Posts Posts for guardrail shall be set plumb in holes or they may be driven if suitable driving equipment is used to prevent battering and distorting the post. When posts are driven through pavement, the damaged area around the post shall be repaired with approved bituminous patching. Damage to lighting and signal conduit and conductors shall be repaired by the Contractor.

When set in holes, posts shall be on a stable foundation and the space around the posts, backfilled in layers with suitable material, thoroughly tamped.

The reflectorized flexible guardrail markers shall be set plumb with the reflective surface facing the oncoming traffic. Markers shall be installed on the protected side of guardrail posts. Markers, which become bent or otherwise damaged, shall be removed and replaced with new markers.

Single wood posts shall be set plumb in holes and backfilled in layers with suitable material, thoroughly tamped. The Resident will designate the elevation and shape of the top. The posts, that are not pressure treated, shall be painted two coats of good quality oil base exterior house paint.

Single steel posts shall be set plumb in holes as specified for single wood posts or they may be driven if suitable driving equipment is used to prevent battering and distorting the post.

Additional bolt holes required in existing posts shall be drilled or punched, but the size of the holes shall not exceed the dimensions given in the Standard Details. Metal around the holes shall be thoroughly cleaned and painted with two coats of approved aluminum rust resistant paint. Holes shall not be burned.

606.04 Rails Brackets and fittings shall be placed and fastened as shown on the plans. Rail beams shall be erected and aligned to provide a smooth, continuous barrier. Beams shall be lapped with the exposed end away from approaching traffic.

End assemblies shall be installed as shown on the plans and shall be securely attached to the rail section and end post.

All bolts shall be of sufficient length to extend beyond the nuts but not more than ½ inch. Nuts shall be drawn tight.

Additional bolt holes required in existing beams shall be drilled or punched, but the size of the holes shall not exceed the dimensions given in the Standard Details. Metal around the holes shall be

thoroughly cleaned and painted with two coats of approved aluminum rust resistant paint. Holes shall not be burned.

606.045 Offset Blocks The same offset block material is to be provided for the entire project unless otherwise specified.

606.05 Shoulder Widening At designated locations the existing shoulder of the roadway shall be widened as shown on the plans. All grading, paving, seeding, and other necessary work shall be in accordance with the Specifications for the type work being done.

606.06 Mail Box Post Single wood post shall be installed at the designated location for the support of the mailbox. The multiple mailbox assemblies shall be installed at the designated location in accordance with the Standard Details and as recommended by the Manufacturer. Attachment of the mailbox to the post will be the responsibility of the home or business owner.

606.07 Abraded Surfaces All galvanized surfaces of new guardrail and posts, which have been abraded so that the base metal is exposed, and the threaded portions of all fittings and fasteners and cut ends of bolts shall be cleaned and painted with two coats of approved rust resistant paint.

606.08 Method of Measurement Guardrail will be measured by the linear foot from center to center of end posts along the gradient of the rail except where end connections are made to masonry or steel structures, in which case measurement will be as shown on the plans. When connected to radius rail, measurement will be to the end of the last tangent beam.

Guardrail terminal, reflectorized flexible guardrail marker, terminal end, anchorage assembly, bridge transition, bridge connection, multiple mailbox post, and single post will be measured by each unit of the kind specified and installed.

Widened shoulder will be measured as a unit of grading within the limits shown on the plans.

Excavation in solid rock for placement of posts will be paid under force account unless otherwise indicated in the Bid Documents.

Reflectorized beam guardrail reflectors (“butterfly” type or linear delineation system panels) when identified by pay item, will be measured for payment by each.

606.09 Basis of Payment The accepted quantities of guardrail will be paid for at the contract unit price per linear foot for the type specified, complete in place. Reflectorized beam guardrail (“butterfly”-type) delineators will not be paid for directly but will be considered incidental to guardrail items. Reflectorized flexible guardrail marker, terminal end, anchorage assembly, bridge transition, bridge connection, multiple mailbox post, and single post will be paid for at the contract unit price each for the kind specified complete in place.

Guardrail terminals will be paid for at the contract price each, complete in place which price shall be full payment for furnishing and installing all components including the terminal section, posts, offset blocks, "w" beam, cable foundation posts, plates and for all incidentals necessary to complete the installation within the limits as shown on the Standard Details or the Manufacturer’s installation

instructions. Pay limits for a flared terminal will be 37.5 feet. Pay limits for a tangent terminal will be 50 feet. Each guardrail terminal will be clearly marked with the Manufacturer's name and model number to facilitate any future needed repair. Such payment shall also be full compensation for furnishing all material, excavating, backfilling holes, assembling, and all incidentals necessary to complete the work, except that for excavation for posts or anchorages in solid ledge rock, payment will be made under 109.7.5 – Force Account. Type III Retroreflective Adhesive Sheeting shall be applied to the approach buffer end sections and sized to substantially cover the end section. On all roadways, the ends shall be marked with alternating black and retroreflective yellow stripes. The stripes shall be 3 in wide and sloped down at an angle of 45 degrees toward the side on which traffic is to pass the end section. Guardrail terminals shall also include a set of installation drawings supplied to the Resident.

Anchorage to bridge end posts will be part of the bridge work. Connections thereto will be considered included in the unit bid price for guardrail.

Guardrail to be placed on a radius of curvature of 150 ft or less will be paid for under the designated radius pay item for the type guardrail being placed.

Widened shoulder will be paid for at the contract unit price each complete in place and will be full compensation for furnishing and placing, grading and compaction of aggregate subbase and any required fill material.

Adjust guardrail will be paid for at the contract unit price per linear foot and will be full compensation for adjusting to grade. Payment shall also include adjusting guardrail terminals where required.

Modify guardrail will be paid for at the contract unit price per linear foot and will be full compensation for furnishing and installing offset blocks, additional posts, and other specified modifications; removing, modifying, installing, and adjusting to grade existing posts and beams; removing plate washers and backup plates, and all incidentals necessary to complete the work. Payment shall also include removing and resetting guardrail terminals where required.

Remove and Reset guardrail will be paid for at the contract unit price per linear foot and will be full compensation for removing, transporting, storing, reassembling all parts, necessary cutting, furnishing new parts when necessary, reinstalling at the new location, and all other incidentals necessary to complete the work. Payment shall also include removing and resetting guardrail terminals when required.

Remove, Modify, and Reset guardrail will be paid for at the contract unit price per foot and will be full compensation for the requirements listed in Modify guardrail and Remove and Reset guardrail.

Bridge Connections will be paid for at the contract unit price each. Payment shall include, attaching the connection to the endpost including furnishing and placing concrete and reinforcing steel necessary to construct new endposts if required, furnishing and installing the terminal connector, and all miscellaneous hardware, labor, equipment, and incidentals necessary to complete the work.

Bridge Transitions will be paid for at the contract unit price each. Payment shall include furnishing and installing the thrie beam or “w”-beam terminal connector, doubled beam section, and transition section, where called for, posts, hardware, precast concrete transition curb, and any other necessary materials and labor, including the bridge connection as stated in the previous paragraph.

No payment will be made for guardrail removed, but not reset and all costs for such removal shall be considered incidental to the various contract pay items.

Reflectorized beam guardrail reflectors ( “butterfly” type and the linear delineation panels ) will not be paid for directly but will be considered incidental to all new guardrail items. The Contractor shall furnish and install either the “butterfly” type or linear delineation panels, at its discretion, for new guardrail items.

Reflectorized beam guardrail reflectors ( either “butterfly” type or linear delineation system panels) will be paid for under the applicable pay items for installation in conjunction with Adjust, Modify, Remove and Reset, Remove Modify and Reset guardrail items. The accepted quantity of “butterfly” type or linear delineation system panels will be paid for at the contract unit price each for all work and materials furnished to install, complete in place, including all incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
606.1301 31” W-Beam Guardrail - Mid-Way Splice – Single Faced	Linear Foot
606.1302 31” W-Beam Guardrail - Mid-Way Splice – Double Faced	Linear Foot
606.1303 31” W-Beam Guardrail - Mid-Way Splice, 15’ Radius and Less	Linear Foot
606.1304 31” W-Beam Guardrail - Mid-Way Splice, Over 15’ Radius	Linear Foot
606.1305 31” W-Beam Guardrail - Mid-Way Splice Flared Terminal	Each
606.1306 31” W-Beam Guardrail - Mid-Way Splice Tangent Terminal	Each
606.1307 Bridge Transition (Asymmetrical) – Type IA	Each
606.1721 Bridge Transition - Type I	Each
606.1722 Bridge Transition - Type II	Each
606.1731 Bridge Connection - Type I	Each
606.1732 Bridge Connection - Type II	Each
606.178 Guardrail Beam	Linear Foot
606.25 Terminal Connector	Each
606.257 Terminal Connector - Thrie Beam	Each
606.259 Anchorage Assembly	Each
606.265 Terminal End-Single Rail - Galvanized Steel	Each
606.266 Terminal End-Single Rail - Corrosion Resistant Steel	Each
606.275 Terminal End-Double Rail - Galvanized Steel	Each
606.276 Terminal End-Double Rail - Corrosion Resistant Steel	Each
606.352 Reflectorized Beam Guardrail Delineators (“Butterfly” type)	Each
606.3521 Linear Delineation System Panel	Each
606.353 Reflectorized Flexible Guardrail Marker	Each
606.354 Remove and Reset Reflectorized Flexible Guardrail Marker	Each

606.356	Underdrain Delineator Post	Each
606.358	Guardrail, Modify	Linear Foot
606.362	Guardrail, Adjust	Linear Foot
606.365	Guardrail, Remove, Modify, and Reset	Linear Foot
606.366	Guardrail, Remove and Reset	Linear Foot
606.367	Replace Unusable Existing Guardrail Posts	Each
606.3671	Replace Unusable Offset Blocks	Each
606.47	Single Wood Post	Each
606.48	Single Galvanized Steel Post	Each
606.50	Single Steel Pipe Post	Each
606.51	Multiple Mailbox Support	Each
606.568	Guardrail, Modify - Double Rail	Linear Foot
606.63	Thrie Beam Rail Beam	Linear Foot
606.64	Guardrail Thrie Beam - Double Rail	Linear Foot
606.65	Guardrail Thrie Beam - Single Rail	Linear Foot
606.66	Terminal End Thrie Beam	Each
606.70	Transition Section - Thrie Beam	Each
606.71	Guardrail Thrie Beam - 15 ft radius and less	Linear Foot
606.72	Guardrail Thrie Beam - over 15 ft radius	Linear Foot
606.73	Guardrail Thrie Beam - Single Rail Bridge Mounted	Linear Foot
606.74	Guardrail - Single Rail Bridge Mounted	Linear Foot
606.753	Widen Shoulder for Low Volume Guardrail End	Each
606.754	Widen Shoulder for Flared Guardrail Terminal	Each
606.78	Low Volume Guardrail End	Each
606.80	Buried-in-Slope Guardrail End	Each

## SECTION 608 SIDEWALKS

Section 608.022 Detectable Warning Materials Standard Revise this section by removing the last sentence of this section beginning with “Concrete...” and replacing it with “**Concrete shall meet the requirements of Section 608.021, Sidewalk Materials, of this specification or may be a prepackaged concrete mix from the Department’s Qualified Products List (QPL).**”

## SECTION 609 CURB

609.02 Materials Revise the paragraph beginning “The Contractor shall submit a concrete mix...” so that it reads:

**“The Contractor shall submit a concrete mix design for the Portland Cement Concrete to the Resident, with a minimum designed compressive strength of 3000 psi concrete fill.”**

609.03 Vertical Stone Curb, Terminal Section and Transition Sections and Portland Cement Concrete Curb, Terminal Sections and Transition Sections Revise this section by underlining the section number and title so that it reads in the spec book as:

**“609.03 Vertical Stone Curb, Terminal Section and Transition Sections and Portland Cement Concrete Curb, Terminal Sections and Transition Sections”**

Revise the last paragraph beginning with “The Contractor may elect...” so that it reads:

**“The Contractor may elect to substitute concrete to backfill Stone Curbing or Stone Edging at their option. If the concrete backfill option is elected, the Concrete Fill shall meet the requirements of 609.02. The Contractor shall submit a concrete design for the Portland Cement Concrete, with a minimum designated compressive strength of 3000 PSI meeting the requirements of Class S or Class Fill Concrete. The Contractor may elect to choose a Prepackaged Concrete Mix from the Department’s Qualified Products list (QPL). Concrete backfill shall be completed in conformance with a Department supplied concrete backfill detail.”**

#### SECTION 610

#### STONE FILL, RIPRAP, STONE BLANKET, AND STONE DITCH PROTECTION

610.02 Materials Amend this subsection by adding the following to the end of the material list:  
**“Stone Ditch Protection                      703.29”**

#### SECTION 618

#### SEEDING

618.08 Mulching Revise this Section so that the third sentence reads: “Mulch for Seeding Method Number 1 shall only be cellulous fiber mulch Section 619.04 (b) or straw mulch Section 619.04 (a).”

#### SECTION 619

#### MULCH

619.03 General Amend this Section by adding the following sentence to the end: **“Straw mulch shall be used in all wetland areas.”**

#### SECTION 626

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

Section 626.021 Miscellaneous Materials Revise this section by removing the fourth paragraph beginning with “ All Concrete for concrete encasement...” and replace it with **“All concrete for concrete encasement of conduit shall be Class S or Class Fill concrete in accordance with the**

**applicable requirements of Section 502 – Structural Concrete, or a Prepackaged Concrete Mix from the Department’s Qualified Products List (QPL).”**

Section 626.031 Conduit Revise the fifth paragraph beginning with “After the trench has been...” by removing the last sentence beginning with “Where concrete encasement...” and replacing it with **“Where concrete encasement is required around the conduit, the concrete shall meet Class S, Class Fill in accordance with the applicable requirements of Section 502 – Structural Concrete, or a Prepackaged Concrete Mix from the Department’s Qualified Products List (QPL).”**

626.034 Concrete Foundations Revise this Section by changing ‘626.037’ to ‘**626.036**’ in the Second Paragraph which begins with “Foundations shall consist of cast-in-place...”.

Revise the 10<sup>th</sup> 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

627.06 Application Revise this subsection by replacing the paragraph beginning with “ On other final pavement markings...” with the following:  
**“On other final pavement markings and on curb, where the paint is applied by hand painting or spraying, application shall be one uniform covering coat at least 16 mils thick. Before the paint has dried, the glass beads shall be applied by a pressure system that will force the glass beads onto the undried paint as uniformly as possible.**

**Painted lines and markings shall be applied in accordance with the manufacturer’s published recommendations. These recommendations will be supplied to the Resident prior to installation.”**

Revise this subsection by replacing the paragraph beginning with “ If the final reflectivity values are less...” with the following:

**The final reflectivity will be acceptable if 90 percent or more of the painted pavement lines and markings meet the specified minimum value. If less than 90 percent of the painted pavement lines and markings meet the specified minimum final reflectivity values, the Contractor shall repaint those areas not meeting required reflectivity at no cost to the Department.**

**If, after repainting, analysis of the final reflectivity values results in the need for a second repainting, the Contractor will submit in writing a plan of action to meet the reflectivity**



**minimums prior to continuing any work. Once the plan has been reviewed and approved by the Department, the Contractor shall reapply at no cost to the Department.**

### SECTION 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.”**

643.09 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 5<sup>th</sup> 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

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.”**

652.4 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 703 AGGREGATES

Add the following to Section 703 - Aggregates

703.01 Fine Aggregate for Concrete Fine aggregate for concrete shall consist of natural sand or, when approved by the Resident, other inert materials with similar characteristics or combinations thereof, having strong, durable particles. Fine aggregate from different sources of supply shall not be mixed or stored in the same pile nor used alternately in the same class of construction or mix without permission of the Resident.

All fine aggregate shall be free from injurious amounts of organic impurities. Should the fine aggregate, when subjected to the colorimetric test for organic impurities, AASHTO T 21, produce a color darker than the reference standard color solution (laboratory designation Plate III), the fine aggregate shall be rejected.

Fine aggregate shall have a sand equivalent value of not less than 75 when tested in accordance with AASHTO T 176.

Fine aggregate sources shall meet the Alkali Silica Reactivity (ASR) requirements of Section 703.0201.

The fineness modulus shall not be less than 2.26 or more than 3.14. If this value is exceeded, the fine aggregate will be rejected unless suitable adjustments are made in proportions of coarse and fine aggregate. The fineness modulus of fine aggregate shall be determined by adding the cumulative percentages of material by weight retained on the following sieves: Nos. 4, 8, 16, 30, 50, 100 and dividing by 100.

Fine aggregate, from an individual source when tested for absorption as specified in AASHTO T 84, shall show an absorption of not more than 2.3 percent.

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
$\frac{3}{8}$ inch	100
No. 4	95-100
No. 8	80-100
No. 16	50-85
No. 30	25-60
No. 50	10-30
No. 100	2-10
No. 200	0-5.0

703.02 Coarse Aggregate for Concrete Coarse aggregate for concrete shall consist of crushed stone or gravel having hard, strong, durable pieces, free from adherent coatings and of which the

composite blend retained on the 3/8 inch sieve shall contain no more than 15 percent, by weight of flat and elongated particles when performed in accordance with test method ASTM D 4791, Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate, using a dimensional ratio of 1:5.

The coarse aggregate from an individual source shall have an absorption no greater than 2.0 percent by weight determined in accordance with AASHTO T 85 modified for weight of sample.

The composite blend shall have a Micro-Deval value of 18.0 percent or less as determined by AASHTO T 327 or not exceed 40 percent loss as determined by AASHTO T 96.

Coarse aggregate sources shall meet the Alkali Silica Reactivity (ASR) requirements of Section 703.0201.

Coarse aggregate shall conform to the requirements of the following table for the size or sizes designated and shall be well graded between the limits specified.

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves			
	A	AA	S	LATEX
Grading	A	AA	S	LATEX
Aggregate Size	1 inch	3/4 inch	1 1/2 inch	1/2 inch
2 inch			100	
1 1/2 inch	100		95-100	
1 inch	95-100	100	-	
3/4 inch	-	90-100	35-70	100
1/2 inch	25-60	-	-	90-100
3/8 inch	-	20-55	10-30	40-70
No. 4	0-10	0-10	0-5	0-15
No. 8	0-5	0-5	-	0-5
No. 16	-	-	-	-
No. 50	-	-	-	-
No. 200	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5

**703.0201 Alkali Silica Reactive Aggregates** All coarse and fine aggregates proposed for use in concrete shall be tested for Alkali Silica Reactivity (ASR) potential under AASHTO T 303 (ASTM C 1260), Accelerated Detection of Potentially Deleterious Expansion of Mortar Bars Due to Alkali-Silica Reaction, prior to being accepted for use. Acceptance will be based on testing performed by an accredited independent lab submitted to the Department. Aggregate submittals will be required on a 5-year cycle, unless the source or character of the aggregate in question has changed within 5 years from the last test date.

As per AASHTO T 303 (ASTM C 1260): Use of a particular coarse or fine aggregate will be allowed with no restrictions when the mortar bars made with this aggregate expand less than or equal to 0.10 percent at 30 days from casting. Use of a particular coarse or fine aggregate will be classified as potentially reactive when the mortar bars made with this aggregate expand greater than 0.10

percent at 30 days from casting. Use of this aggregate will only be allowed with the use of cement-pozzolan blends and/or chemical admixtures that result in mortar bar expansion of less than 0.10 percent at 30 days from casting as tested under ASTM C 1567.

Acceptable pozzolans and chemical admixtures that may be used when an aggregate is classified as potentially reactive include, but are not limited to the following:

- a. Class F Coal Fly Ash meeting the requirements of AASHTO M 295
- b. Ground Granulated Blast Furnace Slag (Grade 100 or 120) meeting the requirements of AASHTO M 302
- c. Densified Silica Fume meeting the requirements of AASHTO M 307
- d. Lithium-based admixtures
- e. Metakaolin

Pozzolans or chemical admixtures required to offset the effects of potentially reactive aggregates will be incorporated into the concrete at no additional cost to the Department.

703.05 Aggregate for Sand Leveling Aggregate for sand leveling shall be sand of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances. The aggregate shall meet the grading requirements of the following table.

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
3/8 inch	85-100
No. 200	0-5.0

703.06 Aggregate for Base and Subbase The following shall apply to Sections (a.) and (c.) below. The material shall have a Micro-Deval value of 25.0 or less as determined by AASHTO T 327. If the Micro-Deval value exceeds 25.0, the Washington State Degradation DOT Test Method T113, Method of Test for Determination of Degradation Value (January 2009 version) shall be performed, except that the test shall be performed on the portion of the sample that passes the 1/2 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:

<b>Classification</b>	<b>Maximum RAP Percentage Allowed</b>	<b>Asphalt content standard deviation</b>	<b>Percent passing 0.075 mm sieve standard deviation</b>	<b>Percent passing 0.075 mm sieve / asphalt content ratio</b>	<b>Residual aggregate M-D loss value</b>
<b>Class III</b>	<b>10%</b>	<b>≤ 1.0</b>	<b>N/A</b>	<b>≤ 4.0</b>	<b>≤ 18</b>
<b>Class II</b>	<b>20%</b>	<b>≤ 0.5</b>	<b>≤ 1.0</b>	<b>≤ 2.8</b>	
<b>Class I</b>	<b>30%</b>	<b>≤ 0.3</b>	<b>≤ 0.5</b>	<b>≤ 1.8</b>	

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

<b>Classification</b>	<b>Asphalt content (compared to aim)</b>	<b>Percent passing 0.075 mm sieve (compared to aim)</b>
<b>Class III</b>	<b>± 1.5</b>	<b>± 2.0</b>
<b>Class II</b>	<b>± 1.0</b>	<b>± 1.5</b>
<b>Class I</b>	<b>± 0.5</b>	<b>± 0.7</b>

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 AWPAs 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 AWPAs approved species, or spruce, cedar, tamarack or other AWPAs 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 AWPAs 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 AWPAs 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 AWPAs U1, UC4A Commodity Specification B: Posts.

710.08 Guardrail Hardware Revise this subsection by replacing “AASHTO M 298” with “ASTM B965”

## SECTION 712 MISCELLANEOUS HIGHWAY MATERIAL

712.061 Structural Precast Units Amend this section by adding the following sentence to the end of the first paragraph of the Construction subsection:

**“Facilities certified by NPCA or PCI shall provide to the Fabrication Engineer a copy of their annual audit to include deficiency reports and corrective actions.”**

Revise this section by changing the letter “b” of ASTM C1611 of the Concrete Testing subsection so that it reads:

**“b. Air content shall be 5.0% to 8.0%.”**

## SECTION 713 STRUCTURAL STEEL AND RELATED MATERIAL

### Section 713.02 High Strength Bolts

Revise the second sentence of this subsection so that it reads “Nuts shall meet the requirement of ASTM A563”. Revise the third sentence of this subsection so that it reads “Circular and beveled washers shall conform to the requirement of ASTM F436”.

SECTION 718  
TRAFFIC SIGNALS MATERIAL

718.03 Signal Mounting Amend the paragraph beginning with “All trunions, brackets and...” by adding **“For polycarbonate signal heads with more than 3 sections or requiring mounting extensions greater than 12 inches in length, reinforcing plates shall be used to reinforce the housings at the point of attachment.”** to the end of the paragraph.

718.08 Controller Cabinet Revise this subsection by replacing the paragraph beginning with “The cabinet shall be supplied with LED light panels...” on or about page 7-66 with **“The cabinet shall be supplied with white LED light panels which shall automatically illuminate via a door open switch whenever one of the four main cabinet doors are opened for the ground mount cabinet or two main doors for the side of pole cabinet. The ground mounted cabinet shall contain four LED light panels per side totaling eight panels for the cabinet; one panel each at the top and bottom portion of the front side and back side on the Control side and Power/Auxiliary side of the cabinet. Each light panel shall produce a minimum of 250 lumens for a total minimum lumen output of 2000 lumens with all eight panels illuminated. The minimum output per side would be 1000 lumens. The LED panels shall be protected by a clear shatterproof shield. The side of pole mounted cabinet shall contain four light panels; one at the top of the rack assembly and one at the bottom rack assembly on each side of the cabinet. A second door open status switch per door shall activate a controller input to log a report event that one of the doors was opened. All door open status switches shall be connected to the same controller input. For the ground mount cabinet, there shall be two switches on each of the four main doors. For the side-of-pole mount cabinet, there shall be two switches on each of the two main doors.”**

Revise this subsection by replacing the paragraph beginning with “The cabinet shall be supplied with a generator panel ...” on or about page 7-68 with:

**“The cabinet shall be supplied with a generator panel. The generator panel shall consist of a manual transfer switch and a twist-lock connector for generator hookup. The transfer switch knob and twist-lock connector shall be located inside a stainless steel enclosure with a separate lockable door accessed with a Corbin #2 key. The unit shall be mounted on the left, exterior of the control side wall of the ground mount cabinet a minimum of 36” above the surrounding grade and on the lower left side of the pole mounted cabinet. The generator transfer switch shall be a Reliance C30A1N Signa Series or approved equal. “**

Revise this subsection by removing the following from the paragraph beginning with “The ground mounted cabinet shall be supplied and installed with an electric service meter socket trim and electrical service disconnect switch ...” on or about page 7-69: **“(removed: thus preventing that space from being used either by equipment supplied as part of the project, or future equipment that would be installed in the rack system. Joe indicated that he would add this language to the detail so it is covered.)”**.

Revise this subsection by replacing the following in the paragraph beginning with “The Contractor shall reconfigure the default user name...” on or around page 7-70; “MaineDOT IT” with **“MaineDOT Traffic Division”**.

In the paragraph beginning with “Tests shall be conducted by the contractor...” on or around page 7-73, amend this subsection by removing “**in the state of Maine and**” after “The facility shall be”.

Amend this Section by adding the following subsection:

**718.13 Field Monitoring Unit (FMU)** This item of work shall conform to this specification. This item shall consist of furnishing and installing a Field Monitoring Unit (FMU) and software, as well as all needed accessories required for a full and complete installation, including but not limited to power adapters, Ethernet cables, and interface cables, as described herein.

Where applicable, communications from MaineDOT’s cloud-based Central Management System (CMS) to the on-street traffic signal controllers shall be made through fiber optic interconnect cable connected back to existing internet connections and/or the Field Monitoring Unit (FMU). The Contractor shall furnish and install all materials necessary for a complete and operational fiber optic interconnection to all project intersections as shown on the plans. All connections to the CMS cloud-based system shall be via a secure VPN network.

The FMU shall be the only remote connection device used by isolated intersections to connect to the cloud-based system. All connections shall be encrypted VPN tunnels. The Contractor shall coordinate all configuration settings with MaineDOT IT and the Engineer.

The FMU central web based interface shall be a separate element from the CMS.

MATERIALS: The materials for this work shall conform to the following requirements:

1. The work under this item specifies the requirements for the FMU. The FMU shall operate independent of the brand/type of intersection controller deployed in the ATC traffic cabinet.
2. The FMU shall conform to the following requirements:
  - 2.1 The FMU shall function correctly between -34 degrees C and +74 degrees C.
  - 2.2 The FMU shall be provided with appropriately rated connectors that allows the FMU to be exchanged by unplugging connectors, without tools.
  - 2.3 The FMU shall monitor and log all ATC Controller and ATC cabinet faults and or alarms.
  - 2.4 The FMU shall be wired directly to the ATC cabinet.
  - 2.5 The FMU shall have an internal cellular modem running at 4G LTE.
    - 2.5.1 The Cellular modem shall be designed to be replaced / upgraded to 5G service when available.
  - 2.6 The FMU shall incorporate an integrated GPS and cell modem.
  - 2.7 The configuration of the FMU shall be accomplished by accessing the internal web server with a browser. It shall be possible to configure the FMU without any special software.

- 2.8 The FMU shall be powered via a standard 120V input power.
- 2.9 The FMU shall allow for the routing of the controller configuration packets to and from the controller (either by Ethernet or serial communications) for any type of controller utilized by the MaineDOT. In this way it shall be possible to configure the controller and utilize the controller specific software to interrogate the controller, and the FMU shall provide the communications pipe which allows this to be accomplished.
- 2.10 The FMU shall, within the size limitations above, include a battery and battery charging/monitoring circuit, to allow the FMU to function correctly even when all power to the intersection has failed. The battery shall continue to power the FMU for a minimum of 5 hours after all power has failed to the intersection.
- 2.11 The FMU shall incorporate an integrated GPS which will allow the FMU to geo-locate itself on the FMU management software map, without configuration.
- 2.12 The FMU shall operate without requiring a static IP address. The only configuration required at the FMU is to enter the URL of where the FMU management software is hosted.
- 2.13 In the event that the cell service is interrupted or is not available, the FMU shall store any events that occur in internal memory and forward these events automatically to the FMU management software when the cell service is restored. In this way, a complete record of events at the device can be maintained even if cell service is interrupted for a period. The system will store 5000 events.
- 2.14 The FMU shall utilize HTTP and HTTPS protocols, and XML data structures, for communication with the FMU management software. In this way the data will be open for future expansion and competition. The use of secret proprietary protocols is not permitted.
- 2.15 The FMU shall include Ethernet communications via an Ethernet Port with RJ45 connector.
- 2.16 The FMU shall include weather proof antennas.

### **3. Map Display FMU Management Software**

- 3.1 The FMU shall include a scrollable, zoomable map display, with the intersections and other monitored devices shown as representative icons on the map. The map shall include the ability to see the intersections using Google Streetview.
- 3.2 The alarm status of the intersection shall be clearly indicated on the icon on the map, so that the user can see at a glance which intersections are in alarm.
- 3.3 The map display shall also include a list of intersections, with the number and priority of alarms indicated on the list. Intersections in high priority alarm shall be moved to the top

of the list, followed by medium priority, low priority and then finally by intersections not in alarm.

- 3.4 The icons shall change to be able to clearly indicate if an intersection is offline.
- 3.5 Clicking on the icon on the map shall expose a box with the current parameters of the intersection shown.
- 3.6 The default map display position and zoom shall be configurable by user, so that the user's view will default to show the intersections that the user is responsible for managing.
- 3.7 The map view shall have the ability to show Google traffic overlays on the map.

#### 4. **Intersection Detail Display FMU Management Software**

- 4.1 It shall be possible to drill down, either from the map icon or from the list, to a device level detail for the intersection, which as a minimum shall display the following parameters:
  - 4.1.1 The alarm status, with priority indicated, and a text description of the alarm (if an alarm is present for this device).
  - 4.1.2 The time since the last communication with the device
  - 4.1.3 The following parameters (real time now values, minimum for the day values, maximum for the day values, and average for the day values)
    - 4.1.3.1 The AC mains voltage (value)
    - 4.1.3.2 The battery back-up voltage (value)
    - 4.1.3.3 The cabinet temperature (value)
    - 4.1.3.4 The cabinet humidity (value)
    - 4.1.3.5 The presence of AC power (OK or Fail)
    - 4.1.3.6 The flashing status of the intersection (OK or Flashing)
    - 4.1.3.7 Stop Time status (OK or Stop Time Active)
    - 4.1.3.8 The cabinet door status (Open or Closed)
    - 4.1.3.9 The intersection fan status (Fan On or Fan off)
  - 4.1.4 It shall be possible to view graphs of each of the value parameters in graphical form, over the recent two-week period. This includes real time graphs of:
    - 4.1.4.1 The AC mains voltage
    - 4.1.4.2 The battery back-up voltage
    - 4.1.4.3 The cabinet temperature

#### 4.1.4.4 The cabinet humidity

### 5. **Diagnostics and Log Display FMU Management Software**

- 5.1 From the device level detail within the FMU management software, it shall be possible to drill down to get the raw data; the error logs; and the communications logs to allow a technician to fault-find problems.
- 5.2 It shall be possible to filter the logs by Device; by Device Type and/or by Group as well as between dates.
- 5.3 It shall be possible to print these selected logs to a local printer or a PDF file.
- 5.4 It shall be possible to export these logs to Excel on the local computer for further analysis.

### 6. **Alarms FMU Management Software**

- 6.1 The FMU management software shall have a comprehensive alarm generation capability
- 6.2 It shall be possible to configure alarms to be generated on any parameter becoming out of tolerance, including analog values, digital values and enumerated values.
- 6.3 Alarms shall be configurable to be of Low, High or Critical Priority.
- 6.4 The alarm priority shall be displayed throughout the FMU management software, on all displays, using color codes such as red-critical; yellow – high; and amber-low to indicate the priority of the alarm.
- 6.5 The current active alarms shall be accessible for view via an expandable window, to see which alarms are active and when the alarm occurred. The highest priority alarms shall rise to the top of the list.

### 7. **Alerts FMU Management Software**

- 7.1 The FMU management software shall have comprehensive alerting capability, to enable the response personnel to be notified when an abnormal situation has occurred.
- 7.2 It shall be possible to configure alerts to one or more personnel for each alarm. This will cause, as selected, an SMS and/or an email to be sent to the person when an alarm occurs.
- 7.3 The alert shall be configurable to optionally send via email and/or via SMS a message when an alarm clears.
- 7.4 The intention is that the FMU management software provides the alerts to the user in near real time. The SMS and email shall be issued within 30 seconds of the occurrence of event which results in an alert being issued.

## 8. **Hosting and Connectivity and Service FMU / FMU Management Software**

8.1 The contractor shall supply the FMU with the FMU manufacturers 10 year options for Connectivity and Service, as part of the purchase price. The Connectivity and Service agreement shall include at a minimum:

- 8.1.1 Cellular Connectivity
- 8.1.2 No cellular overage charges
- 8.1.3 Extended warranty on the hardware for the period of the Connectivity and Service Agreement
- 8.1.4 Over-the-air software updates
- 8.1.5 Over-the-air security updates
- 8.1.6 Future Connected Vehicles Service

## SECTION 720 STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS

720.12 Wood Sign Posts Revise the first sentence so that it reads:

Wood sign posts shall be rectangular, straight and sound timber, cut from live growing native spruce, red pine, hemlock, cedar trees or other AWWA 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 AWWA Standard U1, UC4A, Commodity Specification A: Sawn Products.



**REQUIRED CONTRACT PROVISIONS  
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

**ATTACHMENTS**

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

**I. GENERAL**

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

**II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)**

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

**1. Equal Employment Opportunity:** Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

**2. EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

**3. Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

**4. Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

**5. Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

#### **6. Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

**7. Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

**8. Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

**9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

#### **10. Assurances Required:**

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

**11. Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

### III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

### IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

#### 1. Minimum wages (29 CFR 5.5)

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

## 2. Withholding (29 CFR 5.5)

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics,

including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

## 3. Payrolls and basic records (29 CFR 5.5)

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or

subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

#### 4. Apprentices and trainees (29 CFR 5.5)

##### a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State

Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

##### b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the

corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

**5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

**6. Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

**7. Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8. Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

**9. Disputes concerning labor standards.** As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor

set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

#### **10. Certification of eligibility (29 CFR 5.5)**

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

#### **V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

**1. Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

**2. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph 1 of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph 1 of this section, in the sum currently provided in 29 CFR 5.5(b)(2)\* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1 of this section. 29 CFR 5.5.

\* \$27 as of January 23, 2019 (See 84 FR 213-01, 218) as may be adjusted annually by the Department of Labor; pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990).

### **3. Withholding for unpaid wages and liquidated damages.**

The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 of this section. 29 CFR 5.5.

**4. Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs 1 through 4 of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1 through 4 of this section. 29 CFR 5.5.

## **VI. SUBLETTING OR ASSIGNING THE CONTRACT**

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or

equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on longstanding interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

## **VII. SAFETY: ACCIDENT PREVENTION**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance



with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

### **VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

### **IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)**

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.326.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders

or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.326.

### **X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

#### **1. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant

who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

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## **2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:**

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

## **3. Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is

submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

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**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:**

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(a) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(b) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(c) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

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**XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier

subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

## **XII. USE OF UNITED STATES-FLAG VESSELS:**

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.
2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS  
PREFERENCE FOR APPALACHIAN DEVELOPMENT  
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS  
ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

# U.S. Department of Transportation (USDOT)

## Federal Highway Administration – Standard Title VI / Nondiscrimination Assurances

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### USDOT Order No. 1050.2A

The City of Auburn (the Recipient) HEREBY AGREES THAT, as a condition of receiving any Federal financial assistance from the U.S. Department of Transportation (USDOT) through the Federal Highway Administration (FHWA), it is subject to and will comply with the following:

### Statutory/Regulatory Authorities

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. §2000d et seq., 78 stat. 252), which prohibits discrimination based on race, color, national origin;
- 49 C.F.R. Part 21 (entitled Nondiscrimination in Federally-Assisted Programs of the Department of Transportation – Effectuation of Title VI of The Civil Rights Act of 1964);
- 28 C.F.R. section 50.3 (U.S. Department of Justice Guidelines for Enforcement of Title VI of the Civil Rights Act of 1964);

The preceding statutory and regulatory citations are referred to hereinafter as the "Acts" and "Regulations" respectively.

### General Assurances

In accordance with the Acts, the Regulations, and other pertinent directives, circulars, policy, memoranda, and/or guidance, the Recipient hereby gives assurance that it will promptly take any measures necessary to assure that:

*“No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Recipient receives Federal financial assistance from DOT, including the FHWA.”*

The Civil Rights Restoration Act of 1987 clarified the original intent of Congress, with respect to Title VI and other nondiscrimination requirements (the Age Discrimination Act of 1975, and Section 504 of the Rehabilitation Act of 1973) by restoring the broad, institutional-wide scope and coverage of these nondiscrimination statutes and requirements to include all programs and activities of the Recipient, so long as any portion of the program is Federally assisted.

### Specific Assurances

More specifically, and without limiting the above general Assurance, the Recipient agrees with and gives the following Assurances with respect to its federally assisted Federal-aid Highway Program:

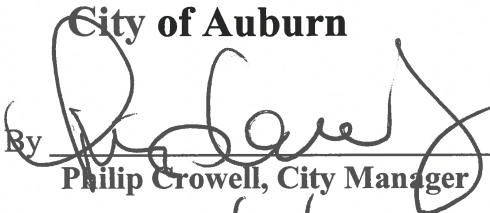
1. The Recipient agrees that each "activity," "facility," or "program," as defined in §§ 21.23 (b) and 21.23 (e) of 49 C.F.R. § 21 will be (regarding an "activity") facilitated, or will be (regarding a "facility") operated, or will be (regarding a "program") conducted in compliance with all requirements imposed by, or pursuant to the Acts and the Regulations.
2. The Recipient will insert the following notification in all solicitations for bids, Requests for Proposals for work, or material subject to the Acts and the Regulations made in connection with all **Federal-Aid Highway Program activities** and, in adapted form, in all proposals for negotiated agreements regardless of funding source:

“The **City of Auburn**, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively assure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.”

3. **The Recipient will insert the clauses of Appendix A and E of this Assurance in every contract or agreement subject to the Acts and the Regulations.**
4. If applicable, the Recipient will insert the clauses of Appendix B of this Assurance, as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a Recipient.
5. That where the Recipient receives Federal financial assistance to construct a facility, or part of a facility, the Assurance will extend to the entire facility and facilities operated in connection therewith.
6. That where the Recipient receives Federal financial assistance in the form, or for the acquisition of real property or an interest in real property, the Assurance will extend to rights to space on, over, or under such property.
7. If applicable, the Recipient will include the clauses set forth in Appendix C and Appendix D of this Assurance, as a covenant running with the land, in any future deeds, leases, licenses, permits, or similar instruments entered into by the Recipient with other parties:
  - a. for the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and
  - b. for the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.
8. That this Assurance obligates the Recipient for the period during which Federal financial assistance is extended to the program, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property, or interest therein, or structures or improvements thereon, in which case the Assurance obligates the Recipient, or any transferee for the longer of the following periods:
  - a. the period during which the property is used for a purpose for which the Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits; or
  - b. the period during which the Recipient retains ownership or possession of the property.
9. The Recipient will provide for such methods of administration for the program as are found by the Secretary of Transportation or the official to whom he/she delegates specific authority to give reasonable guarantee that it, other recipients, sub-recipients, sub-grantees, contractors, subcontractors, consultants, transferees, successors in interest, and other participants of Federal financial assistance under such program will comply with all requirements imposed or pursuant to the Acts, the Regulations, and this Assurance.
10. The Recipient agrees that the United States has a right to seek judicial enforcement regarding any matter arising under the Acts, the Regulations, and this Assurance.

By signing this ASSURANCE, the **City of Auburn** also agrees to comply (and require any sub-recipients, sub-grantees, contractors, successors, transferees, and/or assignees to comply) with all applicable provisions governing the FHWA and USDOT access to records, accounts, documents, information, facilities, and staff. You also recognize that you must comply with any program or compliance reviews, and/or complaint investigations conducted by the FHWA and USDOT. You must keep records, reports, and submit the material for review upon request to the FHWA and USDOT, or their designees, in a timely, complete, and accurate way. Additionally, you must comply with all other reporting, data collection, and evaluation requirements, as prescribed by law or detailed in program guidance.

The **City of Auburn** gives this ASSURANCE in consideration of and for obtaining any Federal grants, loans, contracts, agreements, property, and/or discounts, or other Federal and Federal financial assistance extended after the date hereof to the recipients by USDOT under the Federal-Aid Highway Program. This ASSURANCE is binding on the State of Maine, other recipients, sub-recipients, sub-grantees, contractors, subcontractors and their subcontractors', transferees, successors in interest, and any other participants in the Federal-Aid Highway Program. The person signing below is authorized to sign this ASSURANCE on behalf of the Recipient.

**City of Auburn**  
By   
Philip Crowell, City Manager  
DATED 6/13/22

Encl.: Appendices A and E



## APPENDIX A TO THE TITLE VI ASSURANCES

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During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation, **Federal Highway Administration (FHWA)**, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, regarding the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations as set forth in Appendix E, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor’s obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the **FHWA**, to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the **FHWA**, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor’s noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the **FHWA** may determine to be appropriate, including, but not limited to:
  - a. withholding payments to the contractor under the contract until the contractor complies; and/or
  - b. cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the **FHWA** may direct as a means of enforcing such provisions, including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

## APPENDIX E TO THE TITLE VI ASSURANCES

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During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees to comply with the following non-discrimination statutes and authorities, including but not limited to:

### **Pertinent Non-Discrimination Authorities:**

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. §2000d et seq., 78 stat. 252), (prohibits discrimination based on race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. §4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal programs and projects);
- Federal Highway Act of 1973, (23 U.S.C. §324 et seq.), (prohibits discrimination based on sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. §794 et seq.), as amended, (prohibits discrimination based on disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. §6101 et seq.), (prohibits discrimination based on age);
- Airport and Airway Improvement Act of 1982, (49 U.S.C. §471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination based on disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. Parts 37 and 38;
- The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. §47123) (prohibits discrimination based on race, color, national origin and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To assure compliance with Title VI, you must take reasonable steps to assure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating of sex in education programs or activities (20 U.S.C. 1681 et seq.).



LAP Environmental Summary Sheet

WIN: 18651.00

Date Submitted: 4/7/2021

Town: Auburn

ENV Team Leader: Danielle Tetreau

ENV Field Contact: **Locally Administered**

NEPA Complete: 8/16/2019

Letter 11 Submitted: 8/16/2019

Programmatic CE - CFR 771.117.c.23

**Section 106**  
SHPO Concurrence No Adverse Effect  
Special Conditions: none

**Section 4(f) and 6(f)**  
Section 4(f)  
Review Complete Temporary occupancy  
Section 6(f)  
Not Applicable

**Maine Department of Inland Fisheries and Wildlife Essential Habitat**  
Not Applicable Timing Window: Not Applicable

**Section 7**  
  
**Species of Concern: Atlantic salmon DPS/CH**  
**Comments/References: No effect**  
  
**Species of Concern: Northern long-eared bat**  
**Comments/References: May affect, 4(d) approved**

**Essential Fish Habitat**  
Review Complete – No effect

**Stormwater Review**  
Review Complete – Not Applicable

**Hazardous Waste Review**  
Complete General Note for Hazardous Waste

**State and Federal Permits**  
Letter 12 submitted 5/26/2020  
Copies of approvals submitted n/a

**NOTE: Local Town/Municipality is responsible for obtaining and providing copies of Maine Department of Environmental Protection and Army Corps of Engineers Permits.**

<input checked="" type="checkbox"/> <b>Special Provisions Required</b>		
Standard Specification 656-Erosion Control Plan	N/A <input type="checkbox"/>	Applicable <input checked="" type="checkbox"/>
General Note for Hazardous Waste	N/A <input type="checkbox"/>	Applicable <input checked="" type="checkbox"/>
Special Provision 105-Timing of Work Restriction	N/A <input checked="" type="checkbox"/>	Applicable <input type="checkbox"/>
Special Provision 656-Minor Soil Disturbance	N/A <input checked="" type="checkbox"/>	Applicable <input type="checkbox"/>
Special Provision 203-Dredge Spec	N/A <input checked="" type="checkbox"/>	Applicable <input type="checkbox"/>
Special Provision 203-Hazardous Waste	N/A <input checked="" type="checkbox"/>	Applicable <input type="checkbox"/>

Comments:

\*All approvals based on plans/scope as of: 4/29/2020

AUBURN  
MAIN STREET, MILL STREET AND BROAD STREET  
INTERSECTION IMPROVEMENTS  
WIN 18651.00

CONTRATOR GENERAL NOTE

A Maine Department of Transportation (MaineDOT) Environmental Office investigation specific with this project encountered data suggesting petroleum related contamination was potentially present at roughly Station 207+00 to roughly station 208+25 right of center in the vicinity of Evergreen Printing; and roughly station 207+50 to roughly station 209+00 left of center and roughly station 303+50 to roughly station 303+75 left of center in vicinity of a former retail gasoline station. In light of the available environmental data, the contractor shall employ appropriate health and safety measures to protect its workers against hazards associated with working near petroleum-impacted soils. Furthermore, the Contractor shall remain alert for any additionally evidence of contamination. If the Contractor encounters evidence of soil or groundwater contamination, the Contractor shall secure the excavation, stop work in the contaminated area, and immediately notify the Resident or City of Auburn Engineer. The Resident or City of Auburn Engineer shall contact the Maine Department of Environmental Protection (MDEP) at 800-482-0777. Work may only continue with authorization from the Resident or City of Auburn Engineer.