

Updated 9/6/2024

FEDERAL PROJECT

BIDDING INSTRUCTIONS

FOR ALL PROJECTS:

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

For a Paper Bid:

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

For an Electronic Bid:

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

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

IN ADDITION, FOR FEDERAL AID PROJECTS:

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

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

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

NOTICE

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

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

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

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

NOTICE

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

Bid Enclosed - Do Not Open

PIN:

Town:

Date of Bid Opening:

Name of Contractor with mailing address and telephone number:

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

Double Envelope: Bid Enclosed

PIN:

Town:

Date of Bid Opening:

Name of Contractor:

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

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

Bid Enclosed: Do Not Open

PIN:

Town:

Name of Contractor:

October 16, 2001

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

KNOW ALL MEN BY THESE PRESENTS THAT _____

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

as Principal, and _____ as Surety, a

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

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

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

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

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

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

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

_____ and if the Department shall accept said bid

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

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

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

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

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

force, and effect.

Signed and sealed this _____ day of _____ 20____

WITNESS:

WITNESS

PRINCIPAL:

By _____

By: _____

By: _____

SURETY:

By _____

By: _____

Name of Local Agency: _____

NOTICE

Bidders:

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

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

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

RFI No: _____

Date _____ **Time** _____

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

Question(s):_____

[illegible]

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

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

7

NOTICE

Disadvantaged Business Enterprise Commitment Confirmation

All Bidders must submit the Commitment Confirmation form with their bid.

The Commitment Confirmation form contains information required by USDOT.

The Commitment Confirmation form must be completed by each Prime Contractor.

A copy of the new Commitment Confirmation form and instructions for completing it are attached.

The DBE Directory can be found on the MaineDOT Website at: <https://www.maine.gov/mdot/civilrights/dbe/>

Questions about the Directory or this form should be sent to the Civil Rights Office at mary.bryant@maine.gov or by calling 207-624-3056.

INSTRUCTIONS FOR PREPARING THE MAINEDOT COMMITMENTCONFIRMATION FORM

The Contractor shall extend equal opportunity to MaineDOT certified DBE firms (as listed in MaineDOT's DBE Directory of Certified Businesses) in the selection and utilization of subcontractors and suppliers.

Each prime contractor submitting a bid on a federally funded project must complete each section of the Commitment Confirmation form in its entirety for itself and each subcontractor on that project.

SPECIFIC INSTRUCTIONS FOR COMPLETING THE FORM:

Section A:

1. Insert Contractor Name
2. Insert WIN for the Federal Project bidding on
3. Insert Bid Date
4. Insert Project Location
5. Insert Email address of Contact Person

Section B:

- A. Enter each Contractor's and Sub-Contractor's name and address (including zip code) – Prime Contractor's name should be listed in first box of this section; then each additional line would be proposed subcontractors – DBE or NonDBE
- B. Enter each Contractor's and Sub-Contractor's annual gross receipts bracket (see the legend on the form)
- C. Enter DBE status (DBE or non-DBE) for each contractor/sub-contractor
- D. Enter each Contractor's and Sub-Contractor's NAICS (North Amer. Industry Classification System) code (may be more than one) and Scope of Work
- E. For each Contractor and Sub-Contractor enter the Race and Gender of the firm's majority owner
- F. Enter the Age of each Contractor/Sub-Contractor
- G. Enter the Proposed amount of payment (Bid amount) for each Contractor/Sub-Contractor.

Maine Department of Transportation
COMMITMENT CONFIRMATION

Section A. Bidder/Prime Contractor Information.

This section must be completed by the Bidder/Prime Contractor.

1. Prime Contractor Name:		2. Federal Project WIN:		3. Bid Date:	
4. Project Location:		5. Email Address:			

Section B. Commitment Details - Prime Contractor and all Proposed Subcontractor Information is Required in This Section

A. Firm's Name & Address, Including Zip Code Prime must be listed first	B. Annual Gross Receipt Bracket Select 1 to 7*	C. Status DBE or Non-DBE	D. NAICS Code(s) and Scope of Work	E. Race & Gender of each Firm's Majority Owner	F. Age of Each Firm	G. Proposed Amount

*1) Less Than \$1M, 2) \$1 - \$3M, 3) \$3 - \$6M, 4) \$6 - \$10M, 5) \$10 - \$20M, 6) \$20 - \$50M, 7) Greater Than \$50M - More than 5 Subs use a new form

MaineDOT Use Only:

Form Received: _____	Verified by: _____
FHWA	FTA
	FAA

For a complete list of certified DBE firms please visit: <http://www.maine.gov/mdot/civilrights/>

DBE GOAL NOTICE
Maine Department of Transportation
Disadvantaged Business Enterprise Program

Notice is hereby given that in accordance with US DOT 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; MaineDOT contracts covered by the program include consulting, construction, supplies, manufacturing, and service contracts.

Beginning September 1, 2024, MaineDOT has established an annual DBE participation goal of **1.43%** to be achieved through race/gender neutral means. This goal has been approved by the Federal Highway Administration through August 31, 2027. MaineDOT 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 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 1.43% goal without the need to impose contract goals. DBE firms are listed on the MaineDOT website at:

<http://www.maine.gov/mdot/disadvantaged-business-enterprises/pdf/directory.pdf>

Interested parties may view MaineDOT's DBE goal setting methodology, also posted on this website. If you have questions regarding this goal or the DBE program you may contact Sherry Tompkins at the Maine Department of Transportation, Civil Rights Office by telephone at (207) 624-3066 or by e-mail at: sherry.tompkins@maine.gov

Maine Department of Transportation Civil Rights Office

Directory of Certified Disadvantaged Business Enterprises

Listing can be found at:

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

For additional information and guidance contact:

Civil Rights Office at (207) 624-3066

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

Vendor Registration

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

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

**STATE OF MAINE DEPARTMENT OF TRANSPORTATION
NOTICE TO CONTRACTORS**

Sealed bids from contractors addressed to the Maine Department of Transportation, Augusta, Maine 04333 and endorsed on the wrapper “**Bids for Highway Traffic Cameras on I-295 and I-95, Statewide**” will be received at the MaineDOT Building, Capitol Street, Augusta, Maine, until 11:00 a.m. (prevailing time) on **December 11, 2024** and at that time and place publicly opened and read. Bids will be accepted from all bidders. The lowest responsive bidder must have completed, or must successfully complete, a **Highway Prequalification** or a **Traffic Signals/Lighting Prequalification** to be considered for the award of this contract.

MaineDOT accepts electronic bids for bid packages posted on the [bids.com](https://www.bids.com) website. Electronic bids do not have to be accompanied by paper bids. MaineDOT will accept a facsimile of the bid bond, but **the MaineDOT Contracts Section must receive the original within 72 hours of the bid opening.** Until further notice, MaineDOT will accept dual bids (one paper, one electronic) – with the paper copy taking precedence.

Description: Maine Federal-Aid Project No. 2613000 / WIN: 026130.00

Location: In Cumberland County, project is located on I-295 in Falmouth, Cumberland and Freeport. In Kennebec County, project is located on I-95 in Augusta, Sidney and Waterville. In Somerset County, project is located on I-95 in Fairfield.

Outline of Work: Furnishing and installation of highway traffic cameras and associated equipment.

Project-specific questions using the electronic RFI form should be faxed to (207) 624-3431, attn.: **Project Manager Daniel Loring**. Questions may be emailed to RFI-Contracts.MDOT@maine.gov – with project name and identification number in the subject line. Questions received after 12:00 Noon of the Monday before bid date (or if the Monday is a holiday, the Friday before) will not be answered. For general information, call George Macdougall at (207) 624-3410. Bidders shall not contact any other MaineDOT staff for clarification of Contract provisions, and MaineDOT will not be responsible for interpretations so obtained. TTY users call Maine Relay 711.

Digital bid documents are available online free of charge: www.maine.gov/mdot/contractors/. Paper bid documents may be purchased from 7:00-3:30 M-F by cash, Visa/Mastercard or check payable to “Treasurer, State of Maine” sent to Maine Department of Transportation, **Attention: Mailroom**, 24 Child St., Augusta, ME 04333-0016. They also may be purchased by phone at (207) 624-3536 from 7:00-3:30, as follows: as follows: full-size plans are **\$25.00** (\$27.50 by mail); half-size plans are **\$12.50** (\$14.75 by mail); bid book is \$10 (\$13 by mail); single sheets are \$2 – payable in advance, all non-refundable.

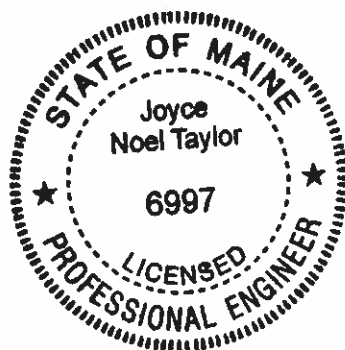
Each Bid must be made upon MaineDOT blank bid forms and accompanied by a bid bond for 5% of the bid amount or official bank check, cashier’s check, certified check, certificate of deposit, or U.S. postal money order for 5% of the bid amount, payable to “Treasurer, State of Maine” as a Bid guarantee. A Contract Performance Surety Bond and a Contract Payment Surety Bond, each for 100% of the Contract price, will be required of the successful Bidder.

This Contract is subject to all applicable Federal laws and to compliance with the Disadvantaged Business Enterprise Program requirements as set forth by MaineDOT.

All work shall be governed by *State of Maine Department of Transportation, Standard Specifications, March 2020*, price \$10 [\$15 by mail] and *Standard Details, March 2020 Edition*, price \$10 [\$15 by mail]. They may be purchased by phone at (207) 624-3536 from 7:00-3:30 M-F. Updates: www.maine.gov/mdot/contractors/publications/.

MaineDOT hereby reserves the right to reject any or all bids.

Augusta, Maine
November 20, 2024



JOYCE NOEL TAYLOR, P.E.
CHIEF ENGINEER

SPECIAL PROVISION 102.7.3
ACKNOWLEDGMENT OF BID AMENDMENTS

With this form, the Bidder acknowledges its responsibility to check for all Amendments to the Bid Package. For each project under advertisement, Amendments are posted at www.maine.gov/mdot/contractors/. It is the Bidder's responsibility to determine if there are Amendments, to download them, to incorporate them into the Bid Package, and to reference the Amendment number and the date in the table below. MaineDOT will not post Bid Amendments 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)

11/13/2024

Maine Department of Transportation

Proposal Schedule of Items

Page 1 of 5

Proposal ID: 026130.00

Project(s): 026130.00

SECTION: Not Assigned to a Section

Alt Set ID:

Alt Mbr ID:

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0010	527.33 TRUCK MOUNTED ATTENUATOR	1.000 EA	_____	_____	_____	_____
0020	626.102 MOLDED NETWORK BOX	1.000 EA	_____	_____	_____	_____
0030	626.11 PRECAST CONCRETE JUNCTION BOX	48.000 EA	_____	_____	_____	_____
0040	626.21 METALLIC CONDUIT	240.000 LF	_____	_____	_____	_____
0050	626.22 NON-METALLIC CONDUIT	11,100.000 LF	_____	_____	_____	_____
0060	626.251 NON-METALLIC UNDER PAVEMENT CONDUIT (SCHEDULE 80 OR GREATER RATING)	850.000 LF	_____	_____	_____	_____
0070	626.38 GROUND MOUNTED CABINET FOUNDATION	8.000 EA	_____	_____	_____	_____
0080	626.46 48 INCH DIAMETER FOUNDATION	11.000 LF	_____	_____	_____	_____
0090	629.05 HAND LABOR, STRAIGHT TIME	50.000 HR	_____	_____	_____	_____
0100	631.18 CHAIN SAW RENTAL (INCLUDING OPERATOR)	30.000 HR	_____	_____	_____	_____
0110	643.972 WOOD POLE	2.000 EA	_____	_____	_____	_____
0120	652.30 FLASHING ARROW BOARD	1.000 EA	_____	_____	_____	_____

11/13/2024

Maine Department of Transportation

Proposal Schedule of Items

Page 2 of 5

Proposal ID: 026130.00

Project(s): 026130.00

SECTION: Not Assigned to a Section

Alt Set ID: Alt Mbr ID:

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0130	652.33 DRUM	125.000 EA	_____	_____	_____	_____
0140	652.34 CONE	50.000 EA	_____	_____	_____	_____
0150	652.35 CONSTRUCTION SIGNS	615.000 SF	_____	_____	_____	_____
0160	652.361 MAINTENANCE OF TRAFFIC CONTROL DEVICES	LUMP SUM	LUMP SUM		_____	_____
0170	652.38 FLAGGER	250.000 HR	_____	_____	_____	_____
0180	652.381 TRAFFIC OFFICER	115.000 HR	_____	_____	_____	_____
0190	652.41 PORTABLE CHANGEABLE MESSAGE SIGN	2.000 EA	_____	_____	_____	_____
0200	654.10 HIGHWAY TRAFFIC CAMERA	8.000 EA	_____	_____	_____	_____
0210	654.101 CAMERA CONNECTION - MAST ARM	2.000 EA	_____	_____	_____	_____
0220	654.102 CAMERA CONNECTION - HIGH MAST LIGHT	5.000 EA	_____	_____	_____	_____
0230	654.103 CAMERA CONNECTION - OVERHEAD SIGN STRUCTURE	1.000 EA	_____	_____	_____	_____
0240	654.211 CLOSED CIRCUIT TELEVISION (CCTV) (CUMBERLAND)	1.000 LS	_____	_____	_____	_____

11/13/2024

Maine Department of Transportation

Proposal Schedule of Items

Page 3 of 5

Proposal ID: 026130.00

Project(s): 026130.00

SECTION: Not Assigned to a Section

Alt Set ID: Alt Mbr ID:

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0250	654.31 ITS EQUIPMENT CABINET	8.000 EA	_____	_____	_____	_____
0260	654.313 POE ETHERNET SWITCH	8.000 EA	_____	_____	_____	_____
0270	654.332 COMMUNICATIONS DROP (AUGUSTA, EXIT 109)	LUMP SUM	LUMP	SUM	_____	_____
0280	654.332 COMMUNICATIONS DROP (AUGUSTA, EXIT 112)	LUMP SUM	LUMP	SUM	_____	_____
0290	654.332 COMMUNICATIONS DROP (CUMBERLAND)	LUMP SUM	LUMP	SUM	_____	_____
0300	654.332 COMMUNICATIONS DROP (FAIRFIELD)	LUMP SUM	LUMP	SUM	_____	_____
0310	654.332 COMMUNICATIONS DROP (FALMOUTH)	LUMP SUM	LUMP	SUM	_____	_____
0320	654.332 COMMUNICATIONS DROP (FREEPORT)	LUMP SUM	LUMP	SUM	_____	_____
0330	654.332 COMMUNICATIONS DROP (SIDNEY)	LUMP SUM	LUMP	SUM	_____	_____
0340	654.332 COMMUNICATIONS DROP (WATERVILLE, EXIT 130)	LUMP SUM	LUMP	SUM	_____	_____
0350	654.3333 SINGLE MODE FIBER OPTIC CABLE TWO STRAND	520.000 LF	_____	_____	_____	_____

11/13/2024

Maine Department of Transportation

Proposal Schedule of Items

Page 4 of 5

Proposal ID: 026130.00

Project(s): 026130.00

SECTION: Not Assigned to a Section

Alt Set ID:

Alt Mbr ID:

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0360	654.51 ELECTRICAL SERVICE CONNECTION (AUGUSTA, EXIT 109)	LUMP SUM	LUMP	SUM	_____	_____
0370	654.51 ELECTRICAL SERVICE CONNECTION (AUGUSTA, EXIT 112)	LUMP SUM	LUMP	SUM	_____	_____
0380	654.51 ELECTRICAL SERVICE CONNECTION (CUMBERLAND)	LUMP SUM	LUMP	SUM	_____	_____
0390	654.51 ELECTRICAL SERVICE CONNECTION (FAIRFIELD)	LUMP SUM	LUMP	SUM	_____	_____
0400	654.51 ELECTRICAL SERVICE CONNECTION (FALMOUTH)	LUMP SUM	LUMP	SUM	_____	_____
0410	654.51 ELECTRICAL SERVICE CONNECTION (FREEPORT)	LUMP SUM	LUMP	SUM	_____	_____
0420	654.51 ELECTRICAL SERVICE CONNECTION (SIDNEY)	LUMP SUM	LUMP	SUM	_____	_____
0430	654.51 ELECTRICAL SERVICE CONNECTION (WATERVILLE, EXIT 127)	LUMP SUM	LUMP	SUM	_____	_____
0440	654.51 ELECTRICAL SERVICE CONNECTION (WATERVILLE, EXIT 130)	LUMP SUM	LUMP	SUM	_____	_____
0450	656.75 TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LUMP SUM	LUMP	SUM	_____	_____
0460	659.10 MOBILIZATION	LUMP SUM	LUMP	SUM	_____	_____

11/13/2024

Maine Department of Transportation

Proposal Schedule of Items

Page 5 of 5

Proposal ID: 026130.00

Project(s): 026130.00

Section:

Total:

SECTION: 1

PROJECT ITEMS

Alt Set ID:

Alt Mbr ID:

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
		Section: 1	Total:		_____	_____
			Total Bid:		_____	_____

CONTRACT AGREEMENT, OFFER & AWARD

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

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

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

A. The Work

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, **WIN 026130.00**, for the **purchase and installation of highway traffic cameras and equipment at a total of three sites on I-295** in the towns of **Falmouth, Cumberland and Freeport**, County of **Cumberland**, at a total of five sites on I-95 in **Augusta, Sidney and Waterville**, County of **Kennebec**, and at **one site on I-95 in Fairfield**, County of Somerset, **State of Maine**. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

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

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

B. Time.

The Contractor agrees to complete all Work, except for warranty work, on or before **October 30, 2025**. Furthermore, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the *State of Maine Department of Transportation Standard Specifications, March 2020 Edition* and related Special Provisions.

C. Price.

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

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

D. Contract.

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

E. Certifications.

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

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

F. Offer.

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

WIN 026130.00 – purchase and installation of highway traffic cameras and associated equipment at nine locations from Falmouth to Fairfield

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

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

As Offeror also agrees:

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

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

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

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

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

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

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

CONTRACTOR

Date

(Signature of Legally Authorized Representative
of the Contractor)

Witness

(Name and Title Printed)

G. Award.

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

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: Bruce A. Van Note, Commissioner

Witness

CONTRACT AGREEMENT, OFFER & AWARD

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

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

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

A. The Work

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, **WIN 026130.00**, for the **purchase and installation of highway traffic cameras and equipment at a total of three sites on I-295** in the towns of **Falmouth, Cumberland and Freeport**, County of **Cumberland**, at a total of five sites on I-95 in **Augusta, Sidney and Waterville**, County of **Kennebec**, and at **one site on I-95 in Fairfield**, County of Somerset, **State of Maine**. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

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

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

B. Time.

The Contractor agrees to complete all Work, except for warranty work, on or before **October 30, 2025**. Furthermore, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the *State of Maine Department of Transportation Standard Specifications, March 2020 Edition* and related Special Provisions.

C. Price.

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

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

D. Contract.

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

E. Certifications.

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

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

F. Offer.

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

WIN 026130.00 – purchase and installation of highway traffic cameras and associated equipment at nine locations from Falmouth to Fairfield

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

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

As Offeror also agrees:

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

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

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

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

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

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

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

CONTRACTOR

Date

(Signature of Legally Authorized Representative
of the Contractor)

Witness

(Name and Title Printed)

G. Award.

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

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: Bruce A. Van Note, Commissioner

Witness

CONTRACT AGREEMENT, OFFER & AWARD

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

(Name of the firm bidding the job)

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

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

A. The Work.

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

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

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

B. Time.

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

C. Price.

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

D. Contract.

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

E. Certifications.

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

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

F. Offer.

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

PIN 012345.00 South Nowhere, Hot Mix Asphalt Overlay,

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

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

As Offeror also agrees:

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

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

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

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

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

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

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

Date

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

(Witness Sign Here)
Witness

(Print Name Here)
(Name and Title Printed)

G. Award.

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

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: Bruce A. Van Note, Commissioner

(Witness)

BOND # _____

CONTRACT PERFORMANCE BOND
(Surety Company Form)

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

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

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

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

WITNESSES:

Signature.....
Print Name Legibly

Signature

Print Name Legibly

SURETY ADDRESS:

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

TELEPHONE.....

SIGNATURES:

CONTRACTOR:

.....
Print Name Legibly

SURETY:

.....
Print Name Legibly

NAME OF LOCAL AGENCY:

ADDRESS

.....
.....

BOND # _____

CONTRACT PAYMENT BOND
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That _____
_____ **in the State of** _____, as principal,
and.....
a corporation duly organized under the laws of the State of and having a
usual place of business in
as Surety, are held and firmly bound unto the Treasurer of the State of Maine for the use
and benefit of claimants as herein below defined, in the sum of
_____ **and 00/100 Dollars (\$** _____ **)**
for the payment whereof Principal and Surety bind themselves, their heirs, executors and
administrators, successors and assigns, jointly and severally by these presents.

The condition of this obligation is such that if the Principal designated as Contractor in
the Contract to construct Project Number _____ in the Municipality of
_____ promptly satisfies all claims and demands incurred for all
labor and material, used or required by him in connection with the work contemplated by
said Contract, and fully reimburses the obligee for all outlay and expense which the
obligee may incur in making good any default of said Principal, then this obligation shall
be null and void; otherwise it shall remain in full force and effect.

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

Signed and sealed this day of, 20

WITNESS:

SIGNATURES:

CONTRACTOR:

Signature.....

.....

Print Name Legibly

Print Name Legibly

SURETY:

Signature.....

.....

Print Name Legibly

Print Name Legibly

SURETY ADDRESS:

NAME OF LOCAL AGENCY:

.....

ADDRESS

.....

.....

TELEPHONE

.....

"General Decision Number: ME20240046 01/05/2024

Superseded General Decision Number: ME20230046

State: Maine

Construction Type: Highway

County: Cumberland 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)(1).

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:	<ul style="list-style-type: none"> . Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.20 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 2024.
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:	<ul style="list-style-type: none"> . Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$12.90 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 2024.

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 <http://www.dol.gov/whd/govcontracts>.

Modification Number Publication Date
0 01/05/2024

SUME2014-041 06/23/2017

	Rates	Fringes
CARPENTER, Includes Form Work....	\$ 18.95	3.23
CEMENT MASON/CONCRETE FINISHER...	\$ 19.27	1.13
ELECTRICIAN.....	\$ 26.40	6.66
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.....	\$ 17.44	2.07
LABORER: Common or General.....	\$ 15.29 **	2.08
LABORER: Epoxy Injector (Concrete).....	\$ 13.43 **	1.15
LABORER: Wheelman.....	\$ 20.34	3.43
OPERATOR:		
Backhoe/Excavator/Trackhoe.....	\$ 21.07	4.39
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 21.97	1.74
OPERATOR: Broom/Sweeper.....	\$ 19.02	0.00
OPERATOR: Bulldozer.....	\$ 21.71	5.67
OPERATOR: Grader/Blade.....	\$ 27.40	8.13
OPERATOR: Loader.....	\$ 19.95	2.86
OPERATOR: Mechanic.....	\$ 24.69	8.18
OPERATOR: Milling Machine.....	\$ 28.51	5.44
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 19.98	4.95
OPERATOR: Roller (Earth).....	\$ 18.57	2.50
OPERATOR: Roller Asphalt.....	\$ 19.30	4.09
TRAFFIC CONTROL: Flagger.....	\$ 9.00 **	0.00
TRAFFIC CONTROL:		
Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper.....	\$ 17.02 **	5.37
TRUCK DRIVER: Dump Truck.....	\$ 16.71 **	2.80

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 (\$17.20) or 13658 (\$12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

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) (iii)).

 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.

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 DECISION"

"General Decision Number: ME20240037 04/05/2024

Superseded General Decision Number: ME20230037

State: Maine

Construction Type: Highway

County: Kennebec 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)(1).

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:	<ul style="list-style-type: none"> . Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.20 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 2024.
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:	<ul style="list-style-type: none"> . Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$12.90 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 2024.

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 <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/05/2024
1	02/02/2024
2	04/05/2024

* ENGI0004-005 04/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR: Grader/Blade, Milling Machine, Paver (Asphalt, Aggregate, and Concrete), Roller Asphalt.....	\$ 28.60	13.80

* SUME2014-032 06/23/2017

	Rates	Fringes
CARPENTER, Includes Form Work....	\$ 18.34	2.84
HIGHWAY/PARKING LOT STRIPING: Laborer.....	\$ 14.80 **	1.27
IRONWORKER, REINFORCING.....	\$ 16.27 **	0.00
LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor.....	\$ 15.06 **	2.72
LABORER: Common or General.....	\$ 14.02 **	2.16
LABORER: Landscape.....	\$ 18.69	2.70
LABORER: Wheelman.....	\$ 15.64 **	4.29
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 19.52	5.15
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 21.98	4.85
OPERATOR: Broom/Sweeper.....	\$ 19.09	5.20
OPERATOR: Bulldozer.....	\$ 17.30	3.50
OPERATOR: Loader.....	\$ 18.59	5.53
OPERATOR: Mechanic.....	\$ 21.91	8.55
OPERATOR: Screed.....	\$ 19.43	4.90
OPERATOR: Roller (Earth).....	\$ 16.43 **	3.40
TRAFFIC CONTROL: Flagger.....	\$ 9.38 **	0.00
TRAFFIC CONTROL: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper.....	\$ 17.47	4.80
TRUCK DRIVER: Dump Truck.....	\$ 14.32 **	5.81
TRUCK DRIVER: TackTruck.....	\$ 20.18	7.75

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

** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.20) or 13658 (\$12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

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) (iii)).

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.

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

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END OF GENERAL DECISION"

"General Decision Number: ME20240042 04/05/2024

Superseded General Decision Number: ME20230042

State: Maine

Construction Type: Highway

County: Somerset 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)(1).

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:	<ul style="list-style-type: none"> . Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.20 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 2024.
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:	<ul style="list-style-type: none"> . Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$12.90 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 2024.

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 <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/05/2024
1	02/02/2024
2	04/05/2024

* ENGI0004-022 04/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR: Grader/Blade, Milling Machine.....	\$ 28.60	13.80

* SUME2014-037 06/23/2017

	Rates	Fringes
CARPENTER, Includes Form Work....	\$ 18.34	2.84
HIGHWAY/PARKING LOT STRIPING: Laborer.....	\$ 14.80 **	1.27
IRONWORKER, REINFORCING.....	\$ 16.27 **	0.00
LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor.....	\$ 15.40 **	2.69
LABORER: Common or General.....	\$ 14.42 **	2.68
LABORER: Landscape.....	\$ 18.69	2.70
LABORER: Wheelman.....	\$ 15.64 **	4.29
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 18.80	4.16
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 21.66	4.91
OPERATOR: Broom/Sweeper.....	\$ 19.09	5.20
OPERATOR: Bulldozer.....	\$ 17.30	3.50
OPERATOR: Loader.....	\$ 18.59	5.53
OPERATOR: Mechanic.....	\$ 22.07	8.73
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 20.92	6.19
OPERATOR: Screed.....	\$ 19.02	4.82
OPERATOR: Roller (Earth).....	\$ 16.43 **	3.40
OPERATOR: Roller Asphalt.....	\$ 21.56	5.42
TRAFFIC CONTROL: Flagger.....	\$ 9.38 **	0.00
TRAFFIC CONTROL: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper.....	\$ 17.47	4.80
TRUCK DRIVER: Dump Truck.....	\$ 15.07 **	5.15
TRUCK DRIVER: TackTruck.....	\$ 20.18	7.75

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

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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>.

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

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END OF GENERAL DECISION"

SPECIAL PROVISION
SECTION 103
AWARD AND CONTRACTING
(Post-Bid, Pre-Award Qualifications)

After Bid Opening and as a condition for Award of the Contract, the lowest responsive bidder must establish they are qualified to conduct the work included in this Contract. A bidder may establish their qualifications in one of the ways listed below.

1. Bidder shall be prequalified by the Maine Department of Transportation under the Highway and/or Traffic Signals/Lighting category.
2. Bidder shall submit documentation to demonstrate to the Department's satisfaction that the Bidder has recent experience with the installation of Closed Circuit Television (CCTV) equipment and with maintenance of traffic along an expressway corridor. Additionally, the Bidder shall submit documentation to demonstrate experience with the operation of High Mast Lighting lowering equipment.

The Department will provide the Bidder with written Notice of Post-Bid Qualifications requiring the Bidder to provide written documentation presenting evidence of qualifications.

Contractor Requirements

In order to be considered for the award of this contract, the Bidder and key employees that will be assigned to the Work in this Contract shall demonstrate to the Department's satisfaction that the Bidder has completed at least one project in the previous five years that included at least three of the critical components of this Work as listed below.

- Installation of CCTV equipment and hardware.
- Work performed in live traffic in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).
- Development and execution of intelligent transportation systems (ITS) test plans.
- Integration of CCTV system equipment and system data into Axis Camera Station.
- Construction and/or maintenance of high mast lighting systems that involve lowering devices.

The Contractor shall maintain current licenses, authorizations, ratings and registrations for the duration of the contract.

The Bidder shall be able to comply with the Contract Requirements, be able to deliver according to the contract schedule, and have a history of satisfactory performance.

The Bidder must have a current, applicable Safety Plan on file with the Department or must submit, prior to Contract award, an acceptable, current Safety Plan or Project and Site Specific Safety Plan to the Department which identifies and addresses job hazards of the expected contract work and complies with all applicable federal, State, and local laws governing safety including all applicable laws and regulations of Occupational Safety and Health Administration (OSHA).

The Bidder may be required to provide any information requested in the “Contractor’s Prequalification Application” form adopted by the Department.

Post-bid Qualification Submittals

The Department will notify the Apparent Successful Bidder of the requirements for post-bid, pre-award qualifications and the Bidder shall provide all of the items within seven (7) days of the notice. The Contractor shall submit two copies or an electronic copy of all required submittals to the Department.

The Bidder may be required to submit evidence of compliance with all Contractor Requirements set forth in this Contract.

The Bidder shall be required to submit written documentation setting forth the experience of the Bidder and subcontractor(s) who will be performing the Work specified in the contract documents, including a description of similar construction projects completed in the last five (5) years that highlight the Bidder’s and subcontractors’ related experience. Such information shall include:

1. the Company’s history and experience of work related specifically to the Scope of Work in this contract;
2. the name of the owner for whom the work was performed;
3. the name and telephone number of a contact person;
4. a description of the work performed by the Bidder or their subcontractor; and
5. the total construction cost of each project, and the value of work performed by the Bidder or their subcontractor.

The Bidder may be required to submit the relevant experience of the key personnel and supervisors who will be performing Work under this contract, their experience and number of years performing work related specifically to the Scope of Work in this contract.

The Bidder’s submittal may be required to include a statement describing the personnel and equipment available for the Work and demonstrating that the Bidder is able to deliver according to the contract schedule.

If a Bidder has not previously submitted Traffic Control Plans (TCP) and Soil Erosion and Water Pollution Control Plans (SEWPCP) for other Department projects, the Contractor

must submit, prior to Contract award, a substantially complete, acceptable, project specific Traffic Control Plan and Soil Erosion and Water Pollution Control Plan.

If the Department has comments regarding the Contractor's TCP or SEWPCP submittal, the Contractor shall implement and address these prior to beginning Work. No review or comment by the Department, or any failure to review or comment, shall absolve the Contractor of its responsibility to develop and implement the safety plan in accordance with the Contract, or to shift any responsibility to the Department.

If the Bidder is to provide any information requested in the "Contractor's Prequalification Application" form adopted by the Department, the Notice of Post-Bid Qualifications shall so state.

If a current, applicable copy of the Contractor's Safety Plan is not on file with the Department, the Contractor must submit, an acceptable, current Contractor's Safety Plan or Project and Site Specific Safety Plan to the Department in accordance with Special Provision Section 105 Safety Plan. The plan shall identify and addresses job hazards of the expected contract work and comply with all applicable federal, State, and local laws governing safety including all applicable laws and regulations of Occupational Safety and Health Administration (OSHA).

Using the Bidder's OSHA 200 & 300 Log and statements provided by applicable insurance, the Bidder may be required to provide its workers' compensation Experience Modification Rate.

Upon receipt of the pre-award submittals, the Department will review the submissions and determine if the submitted evidence or information satisfies the Department requirement that the bidder is qualified to properly carry out the terms of the Contract.

The qualifications submitted will be checked for general conformance with the concept of the project and compliance with the requirements set out in the Contract Documents. This review does not modify the Contractor's duty to comply with the Contract documents.

Bidders shall ensure that all information required herein is submitted. Provision of inaccurate information or failure to provide all completed and required information may result in the Bidder being determined to be "Not Qualified" or disqualified as non-responsive. Within 14 days, the Department will review the project specific safety plan, the Traffic Control Plan and the SEWPCP for completeness, conformity with Federal and State requirements, Contract provisions, applicable laws and regulations of Occupational Safety and Health Administration (OSHA), the current edition of the MUTCD, and Department policy and procedures. The Department reserves the right to communicate in writing with Bidders, if needed, to obtain additions to and/or clarification of information contained in the submittals received. No review or comment by the Department, or any failure to review or comment, shall absolve the Contractor of its responsibility to develop and implement the safety plan, TCP or SEWPCP in accordance with the Contract, or to shift any responsibility to the Department. The Bidder shall have 3 days to submit

additions and clarifications. The Bidder will have no additional opportunity to submit or clarify information. The Department will not provide an opportunity for the Bidder to meet to present evidence.

Based on these submissions, the Department will make one of the following determinations:

1. Qualified - The Contractor has satisfied the post-bid, pre-award qualification requirements and demonstrated to the Department's satisfaction that it is responsible, can meet the Contractor Requirements set forth in this contract, and is qualified to perform this type of work.
2. Not Qualified - Bidder is not qualified to properly carry out the terms of the Contract and/or the submission does not meet specifications and accepted standards and is not acceptable, as determined by the Department.

There is no Appeal process and the determination of "Not Qualified" is final. The Department will reject the bid as non-responsive, and the Award process will proceed without the unqualified Bidder.

The Department will notify the Bidder of its determination in writing. If a determination of "Not Qualified" is rendered, the notice will set forth reasons to the extent practical. Such reasons may include the following:

- A. Not meeting contract Contractor Requirements
- B. Insufficient experience with the critical components of the work listed above
- C. Insufficient qualifications for the designated System Integrator
- D. No Safety Plan or Project and Site-Specific Safety Plan or an unacceptable Safety Plan or Project and Site-Specific Safety Plan
- E. Default(s) or termination(s) on past or current Contracts.
- F. Failure to pay or settle all bills for labor, materials or services on past or current Contracts.
- G. Failure to provide Closeout Documentation on past or current Contracts.
- H. Failure to fulfill warranty obligations on past or current Contracts.
- I. Failure to comply with directives of the Department on past or current Contracts.
- J. "Below Standard" performance as determined from the Department's Contractor's Performance Rating process.

- K. Inability of the Contractor to obtain or retain performance or Payment Bonds meeting MDOT requirements.
- L. Failure to accept an Award of a Contract made by the Department to the Contractor.
- M. Making materially false, deceptive, or misleading Statements or omissions, whether or not under oath, regarding a claim on prior Contracts or on the Contractor's Prequalification Application or the Post-Bid Qualifications submittals.
- N. Failure to provide information requested by the Department pursuant to this Special Provision.
- O. Any of the reasons contained in Section 102.02 of the "Rules Regarding Debarment of Contractors", Maine Department of Transportation Register 17-229, Chapter 102 (October 2, 1985).
- P. Debarment or suspension by any federal, State, or local governmental procurement agency or the Contractor's Agreement to refrain from Bidding as part of the settlement with any such agencies.
- Q. Other serious misconduct that the Department reasonably determines will substantially and adversely affect the cost, quality or timeliness of Work, or the safety of Workers or the public.

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 must submit certified payrolls electronically using the Elation System web-based reporting. There is no charge for the use of this service. Paper payrolls will not be accepted. Additional information can be found at <https://www.maine.gov/mdot/contractors/bidderinfo/>.

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

SPECIAL PROVISIONS
SECTION 104
Utilities

UTILITY COORDINATION

The contractor has primary responsibility for coordinating their work with utilities after the 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 pre-utility meeting, as defined in Subsection 104.4.6 of the Standard Specifications **is** required.

GENERAL INFORMATION

This Special Provisions outline the coordination that has been performed by the Department for utility work to be undertaken in conjunction with this project. The below table identifies all known subsurface utilities having facilities presently located within the limits of each specified site.

Utility Overview/Contact Information				
Utility	Aerial	Subsurface	Contact Person	Contact Phone
Freeport – Maine Water Company		X	Peter Vasapolli	706-6836
Greater Augusat Utility District		X	Michael Morey	485-2134
Kennebec Water District		X	Jeff Longfellow Jared Bragdon	692-4835 861-4360
Waterville Sewerage District		X	Tyler Mitchell	263-5486
Maine Natural Gas		X	Joe Gauthier Roger Lockhart	751-3094 841-7391
Summit Natural Gas of Maine		X	Bryan Foster Bryan Haberman	465-6400 331-6574
MaineDOT Electrical	-----	-----	Harold Tower	592-0763

Temporary utility adjustments **are not** 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 performed by the appropriate utility company in conjunction with the work by the Contractor. Should the contractor choose to have any poles temporarily relocated, all work shall be done at the Contractor's request and expense, with no additional cost or schedule impacts to the Department.

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

AERIAL

Aerial utility adjustments **are not** 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.

If new electric service accounts are required for this MaineDOT project, the contractor shall contact Harold Tower (MaineDOT representative) for establishing these new accounts with the appropriate power company. The contractor shall provide the following information for the new account: electrician name performing the work; the voltage and amperage; the municipality (town/city), street name and existing pole set number; the distance from the existing pole to the new control cabinet; and the existing meter number. The contractor shall allow a twenty-eight (28) day minimum duration for establishment of a new account.

Now aerial utilities (power/communication) do exist along the highway corridor adjacent to each site location receiving new CCTV equipment/structure. The representatives for each aerial utility company (power/communication) were not listed in this special provision because aerial impacts shall be limited to new power and communication service connections. These new service connections are typically assigned/facilitated through field planners after the new accounts are established by MaineDOT.

SUBSURFACE

Subsurface utility adjustments **are not** 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.

Town of Falmouth (Exit #10_I-295):

Existing water/sewer facilities do exist along the Buckman Road corridor but outside the site-specific limits. No adjustments/impacts are anticipated.

Town of Cumberland/Yarmouth (Exit #15_I-295):

Existing water/sewer facilities do exist along the Route #1 corridor but outside the site-specific limits. No adjustments/impacts are anticipated.

Town of Freeport (Exit #22_I-295):

Freeport_Maine Water Company :

Freeport_Maine Water Company has subsurface facilities existing along the Route #125/136 (Mallett Road). The contractor is responsible for confirming with the Maine Water representative the existing location prior to performing excavation activities. No adjustments/impacts are anticipated for the Freeport water facilities.

Maine Natural Gas (MNG):

Maine Natural Gas has subsurface facilities existing near the project site along Routes #125/#136 (Mallett Road). The contractor is responsible for still confirming with the MNG representative the existing location prior to performing excavation activities. No adjustments/impacts are anticipated from MNG facilities.

City of Augusta (Exits #109/#112_I-95):

Greater Augusta Utility District (GAUD):

Greater Augusta Utility District has subsurface water/sewer facilities existing along Route #17/#202 (Western Ave) corridor but outside the site-specific limits. Now the site-specific location along the Route #27 (Civic Center Drive) corridor, GAUD has water/sewer facilities existing, and the contractor is responsible for confirming the location with the GAUD representative prior to performing excavation activities. No adjustments/impacts are anticipated for GAUD facilities.

Maine Natural Gas (MNG):

Maine Natural Gas has subsurface facilities existing along Route #17/#202 (Western Ave) and Route #27 (Civic Center Drive) corridors. The contractor is responsible for confirming with the MNG representative the existing locations prior to performing excavation activities. No adjustments/impacts are anticipated from MNG facilities.

Summit Natural Gas (MNG):

Summit Natural Gas has subsurface facilities existing along Route #27 (Civic Center Drive) corridor. The contractor is responsible for confirming with the SNG representative the existing location prior to performing excavation activities. No adjustments/impacts are anticipated from SNG facilities.

Town of Sidney (Exit #120_I-95):

No impacts from subsurface utilities.

City of Waterville (Exits #127/#130_I-95):

Kennebec Water District (KWD):

Kennebec Water District has subsurface facilities existing along Route #11/#137 (Kennedy Memorial Drive) and Route #104 (Main Street) corridors. The contractor is responsible for confirming with the KWD representative their existing locations prior to performing excavation activities. No adjustments/impacts are anticipated for the KWD facilities.

Waterville Sewerage District (WSD):

Waterville Sewerage District has subsurface facilities existing along Route #11/#137 (Kennedy Memorial Drive) and Route #104 (Main Street) corridors but outside the site-specific limits at both locations. No adjustments/impacts are anticipated for WSD facilities.

Summit Natural Gas (MNG):

Summit Natural Gas has subsurface facilities existing along Route #11/#137 (Kennedy Memorial Drive) corridor. The contractor is responsible for confirming with the SNG representative the existing location prior to performing excavation activities. No adjustments/impacts are anticipated from SNG facilities.

Town of Fairfield (Exit #133_I-95):

Kennebec Water District (KWD):

Kennebec Water District has subsurface facilities existing along Route #201 (Skowhegan Road) corridor. The contractor is responsible for confirming with the KWD representative the existing location prior to performing excavation activities. No adjustments/impacts are anticipated for the KWD facilities.

MAINTAINING UTILITY LOCATION MARKINGS

The Contractor shall 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 105
GENERAL SCOPE OF WORK
(Build America, Buy America)

105.11 Other Federal Requirements Amend this section by adding the following:

This special provision was created for the Build America, Buy America Act (BABA) to expand the list of construction materials required to be manufactured in the United States beyond what is currently only required for steel/iron products. The Infrastructure Investment and Jobs Act (IIJA), Public Law No. 117-58 includes the Build America, Buy America Act. The Office of Management and Budget issued memorandum M-22-11 to provide guidance on the law which can be found here:

<https://www.whitehouse.gov/wp-content/uploads/2022/04/M-22-11.pdf>

All iron/steel, including the iron/steel in construction materials and manufactured products, must satisfy Buy America 23 CFR 635.410 requirements.

All construction materials, as defined in the following, that are permanently incorporated into federal-aid projects shall meet Build America, Buy America requirements.

For the purpose of this Specification, construction materials shall include an article, material, or supply that is or consists primarily of the following.

- Non-ferrous metals,
- Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables),
- Glass (including optic glass),
- Lumber, or
- Drywall.

All manufacturing processes for construction materials shall occur within the United States. The category of construction materials excludes cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives.

Due to a nationwide waiver, BABA requirements do not apply to manufactured products for FHWA funded projects. Manufactured products are items that consist of two or more of the listed construction materials that have been combined through a manufacturing process, and items that include at least one of the listed materials combined with a material that is not listed (including steel/iron) through a manufacturing process.

The Contractor shall certify in writing that all permanently incorporated Construction Materials for this contract meet the BABA requirements.

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

- I. To protect migratory birds pursuant to the Migratory Bird Treaty Act of 1918:
 - A. If the Contractor observes an active bird nest within the project limits, any activities that may disturb the nest or injure nesting adults, chicks, or eggs must cease immediately, and the Contractor shall contact the MaineDOT ENV Office for further coordination.

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

1. This work consists of furnishing, installing, configuring, integration and testing for nine new Closed Circuit Television Cameras (CCTVs) at the following locations:
 - a. Falmouth (I-295 Exit 10)
 - b. Cumberland (I-295 Exit 15)
 - c. Freeport (I-295 Exit 22)
 - d. Augusta (I-95 Exit 109)
 - e. Augusta (I-95 Exit 112)
 - f. Sidney (I-95 Exit 120)
 - g. Waterville (I-95 Exit 127)
 - h. Waterville (I-95 Exit 130)
 - i. Fairfield (I-95 Exit 133)
2. The Contractor shall provide a work schedule and plan operations so that the Resident will have sufficient advance notification to provide the necessary inspection and oversight. Sufficient notification will be considered 48 hours prior to a work day. Schedule changes shall require a 48-hour notice.
3. Any work within 6 feet of the edge of pavement or that requires access from the edge of interstate pavement or interstate ramp pavement shall require a shoulder closure.
4. Any work occurring within 6 feet of the edge of the traveled way of the interstate or an interstate ramp and that is not behind guardrail shall require an adjacent lane closure.
5. No lane closures or shoulder closures are permitted on Interstate 295 from 6:00 AM to 8:00 PM. Work zones on approach ramps and adjacent roads shall follow the same time restriction.
6. No lane closures or shoulder closures are permitted on Interstate 95 from 7:00 AM to 7:00 PM. Work zones on approach ramps and adjacent roads shall follow the same time restriction.
7. The Contractor at a minimum shall maintain one 11-foot wide lane of traffic.
8. All lane closures shall be limited to 1,000 feet in length.

SPECIAL PROVISION
SECTION 107
TIME
(Contract Time)

The Contractor will be allowed to commence work on this project as long as all applicable plans required under this Contract have been submitted and approved, and following a pre-construction meeting.

The completion date for this contract is **October 30, 2025**.

All work schedule changes must be submitted for approval to the Department a minimum of 48 hours prior to the requested change.

SPECIAL PROVISION
SECTION 527
 ENERGY ABSORBING UNIT
 (Truck Mounted Attenuator)

Description: This work consists of furnishing, maintaining and deploying a truck mounted attenuator (TMA) and a shadow or barrier truck in accordance with this specification and as directed. A Truck Mounted Attenuator must comply with NCHRP Report 350.

Materials: The energy absorbing system shall be from the Department's Qualified Product List (QPL). The TMA shall be mounted in accordance with the manufactures specifications to a truck with a gross vehicle weight of at least 10,000 pounds.

Installation: The chart below identifies the distance from the work zone or hazard where the TMA shall be deployed. If the work zone is within a marked lane closure, the barrier truck distances shall apply and if the work is mobile, then shadow truck distances shall apply. When used as a barrier, the barrier truck shall be parked in low gear with brakes applied and the front wheels turned away from the work zone and the adjacent traffic lane. For placement details, reference the Manual of Uniform Traffic Control Devices (MUTCD).

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

Note - On Interstate and Control of Access roadways the minimum weight of the truck shall be 24,000 lbs.

Method of Measurement: Truck mounted attenuator will be measured by the unit furnished.

Basis of Payment: The accepted quantity of truck mounted attenuator will be paid for at the contract unit price each which includes furnishing and all costs of attaching to and retrofitting of a truck on which The TMA will be deployed. Daily maintenance and deployment of the TMA, including the cost of the truck, shall be considered incidental.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
527.33 Truck Mounted Attenuator	Each

SPECIAL PROVISION
SECTION 626
FOUNDATIONS, CONDUIT, AND JUNCTION BOXES FOR HIGHWAY SIGNING,
LIGHTING, AND SIGNALS
(Molded Network Box)

Standard Provision 626 FOUNDATIONS, CONDUIT, AND JUNCTION BOXES FOR HIGHWAY SIGNING, LIGHTING, AND SIGNALS is amended as follows.

626.01 Description

The following paragraph is added:

This item shall consist of furnishing and installing a Molded Network Box attached to an existing High Mast Lighting Steel Pole, with the power supplies, communication supplies, and all associated equipment necessary to provide a power-over-Ethernet connection to power and control a highway traffic camera. This work shall consist of furnishing, installing, and wiring a Molded Network Box with all other hardware and ancillary equipment necessary to provide a complete working system as shown on the Plans or as ordered.

626.021 Materials

The following sections are added:

626.022 Molded Network Box

1. Molded Network Box shall be sized by the Contractor. The Contractor shall propose a box size to MaineDOT that will be of sufficient size to house all applicable equipment and have spare room for slack cabling.
2. The Molded Network Box shall have one locking door and shall be capable of being strapped to the high mast lighting steel pole. The strapping shall not interfere with the function of the door.
3. The Molded Network Box shall be weatherproof with the top of the enclosure crowned or slanted to prevent standing water. The Molded Network Box shall be supplied and installed with Corbin 1548-1 locks for access by #2 keys.
4. All conduits terminating in the cabinet shall be sealed with duct sealant. Use of tape to permanently seal conduits shall be prohibited.
 - a. Conduits less than 1 inch diameter shall be sealed with a silicone sealant.
 - b. Conduits greater than 1 inch diameter shall be filled with steel wool in addition to being sealed with duct sealant.

626.023 Power and Communications

1. All equipment shall be installed using the Manufacturer's recommended cables.

2. The Molded Network Box shall contain a duplex outlet rated to 15 amperes with at least one outlet being a GFCI outlet.
3. All exposed, high voltage electrical terminals shall be insulated with non-conducting material such as rubber boots or silicone/rubber caulking.
4. The Contractor shall furnish, install, connect, and test all Category 6 (Cat6) cables, of the types required for the application, at locations shown in the Plans or as required to construct a complete, functional system.
5. The Cat6 cables shall not exceed 325 feet in length.
 - a. All cables shall be installed in a continuous run. Splicing will not be allowed.
 - b. Cables installed on the high mast lighting support pole shall be wrapped helically around the pole in accordance with the Plans.
6. The Cat6 cable shall exit the network box from the bottom of the box to not allow water intrusion into the network box. The cable shall include a drip loop below the bottom of the network box.
7. The Contractor shall furnish, install, and connect fiber optic pigtails to provide termination on the incoming fiber optic cable. See Special Provision 654 (Fiber Optic Cable) for additional details.
8. The Contractor shall furnish and install a fiber optic splice tray capable of holding at least four splices. The splice tray shall meet the following requirements:
 - a. The splice trays shall incorporate a system to retain and provide strain relief to the fiber optic buffer tube.
 - b. The splice trays shall incorporate grooves where the fiber optic splice can be held in place.
 - c. Each splice tray shall incorporate a clear snap-on lid.
9. The Contractor shall furnish and install an integrated midspan media converter with POE. The midspan should support POE+.
10. The midspan shall provide SFP input and RJ45 output.
11. The Contractor shall furnish, install, and connect all other hardware and equipment necessary to connect the incoming fiber optic cable to the SFP ports on the midspan device.

654.07 Method of Measurement

The following paragraphs are added:

Molded Network Box shall be measured by each box installed in place.

654.08 Basis of Payment

The accepted quantities of Molded Network Box will be paid for at the contract unit price each complete in place. Payment shall be full compensation for the box enclosure, box enclosure mounting hardware, electrical outlets, POE+ midspan device, splice trays, splices, electrical service connection, communications connection, grounding, bonding, locks, cables, installation and testing and for all labor, materials, equipment, tools, and incidentals necessary to provide an enclosure that converts incoming power and communications to a POE output to control the connected ITS equipment.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
626.102	Molded Network Box	Each

SPECIAL PROVISION
SECTION 643
TRAFFIC SIGNALS
(Wood Pole)

Section 643 of the Standard Specifications - TRAFFIC SIGNALS is amended as follows.

643.01 Description

The following paragraph is added:

This work shall consist of the installation of a new wood pole for highway traffic camera installation.

643.024 Miscellaneous Materials

The following paragraph is added:

Wood poles shall be a minimum of 50-foot in length and shall be Class 1 or Class H-1 in accordance with ANSI 05.1-2022 for Wood Poles and corresponding to Section 720.10 of MaineDOT's 2020 Standard Specifications.

643.04 Poles

The following sentence is added:

Wood poles shall not include guys or anchors.

643.18 Method of Measurement

The following paragraph is added:

Wood Pole will be measured by each pole installed and accepted of the height and class indicated in the Plans or these specifications.

643.19 Basis of Payment

The following paragraph is added:

The accepted quantity of wood pole will be paid for at the contract unit price for each pole. Payment shall be full compensation for furnishing and installing the poles, excavation, backfill, and for all other labor, equipment, tools, transportation, and incidentals necessary to install wood poles.

CLOSED CIRCUIT TELEVISION (CCTV)
Interstate CCTV Installations
Statewide, Maine

WIN: 026130.00
November 4, 2024

Payment will be made under:

<u>Pay Item</u>	<u>Description</u>	<u>Pay Unit</u>
643.972	Wood Pole	Each

SPECIAL PROVISION
SECTION 654
INTELLIGENT TRANSPORTATION SYSTEMS
(ITS Base Specification)

Section 654 of the Standard Specifications – Intelligent Transportation Systems is amended as follows:

654.01 Description

This work shall consist of the furnishing, configuring, integration and testing of intelligent transportation systems (ITS) devices, equipment, and associated materials. This specification includes materials, integration, and warranty requirements for all ITS systems. Each specific ITS system or device will include its own specification that supplements the requirements of this specification.

654.02 General

All ITS equipment shall be new unless otherwise specified. Requests for substitution of any specified material shall be submitted in writing with all documentation (specifications, mill certifications, catalog cuts, shop drawings, etc.) in order to enable the Department to evaluate the equivalency of the substitution. Substitutes shall give equal or better service than the specified material or equipment.

654.021 Materials

The Contractor shall provide a complete Technical Submittal as outlined below for all ITS systems, devices, and equipment. The requirements for the ITS Technical Submittal shall meet the following requirements and additional requirements as indicated by the specific ITS system, device, or equipment specifications:

1. This specification includes the universal requirements for all ITS Technical Submittals; additional requirements for specific ITS systems, devices, and equipment may be found in other specifications.
2. The Contractor shall not proceed with manufacture or fabrication until the Resident has approved the submittals in accordance with Section 105.7.
 - a. The Contractor shall provide drawings, manufacturer's specifications, and applicable catalog cuts for all materials and components for this work, submitted in accordance with Section 105.7.
 - b. The Technical Submittal shall list all proposed equipment to be provided, including mounting hardware as applicable.
 - c. The Contractor shall provide cabinet diagrams for all equipment cabinets showing installed hardware and wiring connections.
 - d. The Contractor shall provide electric load calculations required for all power supply equipment to be installed.
 - i. Where solar powered systems are required, the Contractor shall provide solar power calculations to indicate the size, quantity, and capacity of the solar panels and batteries to meet the required autonomy standards.

- ii. Where uninterruptable power supply (UPS) is specified, the Contractor shall provide calculations to indicate that the proposed power requirements of the system can be accommodated by the UPS equipment in accordance with the specifications.
 - e. All specification documentation shall be clearly marked to identify the exact proposed model and all options to be supplied.
 - f. MaineDOT will give no guarantee as to the completeness of the Plan details and the Contractor shall be required to furnish, install, and test any other equipment and materials required to provide a complete and operational ITS device system.
3. Support Pole Submittals. The submittal for device support poles shall include the following for approval in accordance with Section 105.7.:
- a. Design computations (AASHTO LRFD) for support structures or poles, for the wind speeds defined in ITS system or device specifications. All calculations shall be signed and stamped by a Professional Engineer licensed in the State of Maine. The submittal for above grade components shall be in accordance with Section 626.034
 - b. Complete sets of shop drawings for the pole signed and stamped by a Professional Engineer licensed in Maine.
 - c. Manufacturer's specifications and applicable catalog cuts for all materials and components.
 - d. If not provided with the Contract Documents, the Contractor shall submit elevation and plan views showing the device support locations, foundations, and the proposed slopes plotted on cross-sections showing no interference with utilities, drainage pipes or structures and showing support of excavation if needed for construction of the foundation.
 - e. The submittal shall include the foundation system that is selected for each pole location in accordance with Section 626.034.
 - f. When more than one Engineer is responsible for the design of separate components (i.e. pole, attachment information), the Contractor shall make one submittal containing all of the components unless otherwise allowed by MaineDOT.
4. Training Materials. When a training requirement is included in an ITS specification, the Contractor shall furnish and provide a separate Training submittal. This training submittal shall include the following:
- a. Samples of all training materials including student handouts, presentation materials, and training agendas.
 - b. The proposed date, time, and location for the training program.
 - c. Resumes for the proposed qualified instructors.
5. Ethernet Cable. Where Ethernet cable is specified in the Contract Document, it shall be interpreted to mean shielded, weatherproof Category 6 (Cat6) cable of the length required for the application. The maximum length for a single Cat6 cable shall be 325 feet. Cat6 cable shall not be spliced. If any Cat6 cable will be exposed to the sun, the cable shall be UV protected.

654.03 Construction

1. ITS Device Documentation Requirements.
 - a. A minimum of 15 working days prior to configuration of the IP-addressable equipment, the Contractor shall formally request the assigned IP addresses from the MaineDOT ITS Traffic Engineer.
 - b. All ITS Device documentation shall identify the specific manufacturer and model number as approved in the Technical Submittal.
 - c. IP addresses and login credentials will be assigned for each device by MaineDOT and returned to the Contractor.
 - d. The Contractor shall configure all devices with the correct IP addresses and login credentials assigned by MaineDOT.
 - e. The Contractor shall properly label all ports and outlets within device interfaces with the correct component connected to the port or outlet.
2. Software and Integration
 - a. Where applicable, ITS devices and equipment shall be fully compatible and integrated with specific equipment software (for example, Axis Camera Station software).
 - b. Additional software and integration requirements are included in each of the specific ITS systems or device specifications.

654.04 Software and Integration Requirements

1. General Software and Integration
 - a. Where applicable, ITS devices furnished and integrated shall be fully compatible with the MaineDOT TMC's Advanced Transportation Management System (ATMS) known as New England Compass (Compass). This software was developed by the Southwest Research Institute and is used by the TMC's in Maine, New Hampshire, and Vermont. The device specific special provision(s) will indicate which devices are required to be integrated and compatible with the Compass ATMS.
 - b. Where applicable, ITS devices and equipment shall also be fully compatible and integrated with specific equipment software (for example Axis Camera Station software).
 - c. Any data integration shall be accomplished with minimal interruption to the existing MaineDOT Traffic Management Center (TMC) operations. Any required downtime of the Compass ATMS shall be approved by the Resident at least seven (7) days in advance.
2. New England Compass ATMS Integration
 - a. Where applicable, closed circuit television (CCTV) cameras provided for this project shall be integrated into Compass ATMS. New equipment shall operate in the same manner as existing equipment in the ATMS. Integration shall be completed by Southwest Research Institute, who are the developers of the ATMS.
 - b. SwRI integration work will be consistently priced for Bidders providing equipment types that are all currently integrated into Compass. Additional cost will be applied for models that are not currently integrated and supported by

SwRI based on the complexity of development. Where integration with Compass ATMS is required, each Bidder shall get a price quote from SwRI for this integration work. SwRI and the Contractor will not be responsible for any Compass integration work needed beyond the original estimated budget and schedule. Any time required above and beyond that schedule may be negotiated between the Contractor, SwRI, and MaineDOT and will be paid for by MaineDOT if all parties are in agreement.

- c. Compass configuration shall be deemed complete when the following is true in the ATMS production environment: Camera images are showing properly which can be demonstrated with 30 minutes of continuous video streaming through Compass ATMS. At acceptance, the integrated device(s) will fall under the separate ATMS project contract, 2022-097-ATMS-NE Compass.
 - d. Compass configuration is not included in any warranty for this project.
 - e. If there are any issues with device performance in the ATMS that are caused by a data feed change or other non-Compass deficiencies as determined by MaineDOT, the Contractor shall be fully responsible for correcting those issues.
3. CCTV-Specific Integration
- a. CCTVs provided for this project shall be compatible with Axis Camera Station.
 - b. The Contractor shall supply Axis Camera Station licenses for each CCTV.
 - c. The Contractor shall configure each CCTV so that they can be integrated into Axis Camera station by MaineDOT.

654.05 Testing Requirements

1. ITS Device and System Testing
- a. In addition to the requirements of this specification, all installations of ITS devices and equipment, fiber optic cable, and wireless communication equipment will be subjected to rigorous testing before the work will be accepted by MaineDOT.
 - b. The Contractor shall submit testing plans to MaineDOT for review and acceptance. Successful completion of device testing shall be considered a requirement of the Contract. The Contractor shall provide all equipment, materials and labor required to perform each test, including laptop computers, internet connections, software, and Maintenance of Traffic.
 - c. The Contractor shall coordinate with the MaineDOT ITS Traffic Engineer no less than 7 days prior to scheduling any equipment or systems testing.
 - d. MaineDOT reserves the right to examine and test or retest any or all materials furnished by the Contractor for the project to determine if they meet the requirements specified within the Contract Documents.
 - e. If MaineDOT decides that any material used in the construction of this project is defective or otherwise unsuitable, the workmanship does not conform to the requirements of the contract, and/or the equipment does not meet the performance specifications required in the Contract Document, the Contractor shall replace such defective parts and material at no cost to MaineDOT.
 - f. The Contractor shall conduct all tests in the presence of the Resident. Testing shall be scheduled only on weekdays, and subject to approval of MaineDOT.

- g. Completed test results shall be packaged and submitted to MaineDOT within 14 calendar days of test completion. No test phase shall begin until all prior test phases have been completed, and test results have been approved by MaineDOT.
 - h. As part of the system and device testing, the Contractor shall provide to MaineDOT a complete set of maintenance and user manuals along with all wiring and assembly schematics and diagrams. This shall include any material safety data sheets (MSDS), prepared by the manufacturer and any toxic substances (coatings, liquids, or other) used. Maintenance information shall include troubleshooting directions, maintenance schedule recommendations, and calibration recommendations/directions. All necessary equipment to complete calibrations shall be included.
 - i. The Contractor shall provide any test specific software required to complete the test.
- 2. Testing Step 1 – Standalone and Subsystem Testing
 - a. Standalone testing and Subsystem testing can be completed together for this project.
 - b. Standalone testing shall be performed on site at the ITS device or system. The purpose of the Standalone tests is to exercise all in-field functional operations of the equipment or device as installed. The Contractor shall demonstrate compliance with the requirements for the equipment defined in the specifications during this testing period. If a unit fails to pass the stand-alone test, the Contractor shall correct the problem or replace the part/device/system and retest until satisfactory results are achieved.
 - c. Subsystem testing shall be performed for ITS devices and systems that are connected to a communication network other than a cellular modem. The purpose of the Subsystem test is to exercise the ITS device or system over the communication network locally, before making a final connection to the required software. If a unit fails to pass the subsystem test, the Contractor shall correct the problem, troubleshoot the communication system, or replace the part/device/system and retest until satisfactory results are achieved.
- 3. Testing Step 2 – Central Control Testing
 - a. Central Control Testing shall be conducted after Standalone and Subsystem testing are deemed to be complete.
 - b. Central Control Testing shall be performed at the TMC in Augusta and on non-Compass software. The purpose of the Central Control Test is to exercise all remote functionality and control of all ITS components at a TMC workstation, simulating normal use.
 - c. The Contractor shall have a representative at each device location to provide on-site validation of device functionality during Central Control Testing, as required by the Resident or the MaineDOT TMC.
 - d. If a device within the system fails to pass the central control test, the Contractor shall correct the problem or replace the part/device/equipment/system and retest until satisfactory results are achieved.

- i. Upon successful completion of the Central Control Test, the Contractor shall request in writing the initiation of the Operational Acceptance Test Period.
4. Testing Step 3 – Operational Acceptance Test Period
 - a. An Operational Acceptance Test Period will be required for all ITS components. This test period shall commence upon successful completion of the Central Control Test. The purpose of the Operational Testing Period is to validate consistent system performance during real-life operations.
 - b. During the Operational Testing Period, the ITS shall perform as expected by MaineDOT at all times. Any system errors will suspend the testing period.
 - c. The Operational Acceptance Test Period shall be 45 days. In the event that there is a single failure associated with any ITS component or data transmission, the test shall be suspended while the Contractor resolves the failure (either by fixing the sensor or replacing the sensor). Upon successful repair/replacement, the test shall continue to the end of the 45 days, or a minimum of ten days, whichever is longer. Upon the failure of any second sensor or equipment, the Operational Test period shall be restarted for an additional 30 days upon each repair/replacement.
5. The completion of the Operational Test period and the submission of all test reports shall be documented as the date of Final System Acceptance, provided all other work has been completed to the satisfaction of the Resident.

654.06 Guarantees and Warranties

1. The Contractor shall unconditionally guarantee all system and subsystem modules including all cabinets, equipment, hardware, and software installed to be free of defects.
2. It shall be the Contractor's responsibility to secure all guarantees that are customarily issued by the equipment manufacturers for the specific equipment included in the Contract. The form in which such guarantees are delivered to the Contractor shall include the provision that they are subject to transfer to MaineDOT and shall be accompanied by proper validation of such fact. Transfer of guarantees shall coincide with the Guarantee Period specified below.
3. The length of warranty shall be one (1) year from the completion date of the Operational Testing Period unless extended in accordance with the Supplemental Warranty requirements. The Contractor shall guarantee the availability of compatible replacement equipment for a five-year period from the same date.
 - a. There is no Supplemental Warranty requirement for this project.
4. The warranty shall cover all parts, labor, transportation, shipping, tools, equipment mobilization, maintenance of traffic, and incidentals necessary to repair or replace any system component, device, equipment or sensor that fails to perform as required by the Contract Documents.
5. The warranty shall include technical support available via telephone and email 24 hours per day, 7 days per week, 365 days per year for the warranty period.
6. The terms of any equipment warranties stipulated by the equipment manufacturers shall be provided with product data included in the Technical Submittal, specified in

- Section 654.021. The terms of any equipment manufacturer's warranties will not relieve the Contractor from any of the guarantee requirements of this contract.
7. The Contractor shall be responsible for repair or replacement during the guaranty/warranty period. Repair is defined as all activities that shall be performed for the system to remain in, or return to, operation as observed at the time of installation (by others). Replacement is defined as providing the same or better model of the equipment or device under warranty. The work consists of the repair of defective devices that fail during the normal course of operation, and does not include repairs or replacements made necessary due to damage resulting from vandalism, traffic accidents, or acts of God.
 8. The Contractor shall provide on-site warranty service of the equipment within 48-hours of notification by MaineDOT. If the Contractor is unable to affect a repair to the equipment within seven (7) calendar days of notification, temporary equipment meeting all the original equipment specifications may be requested by MaineDOT and shall be provided and installed at no cost to MaineDOT. The Contractor shall then either fix or replace the broken device or equipment at their discretion.
 9. A log of all guarantee work performed by the Contractor during the Guarantee Period shall be maintained by the Contractor. The log shall include, as a minimum, the following information:
 - a. Date and time defect reported
 - b. Entity reporting the defect
 - c. Description of the reported defect
 - d. Technician responding to reported defect
 - e. Arrival time at the site of the technician
 - f. Technician performing defect repair or replacement
 - g. Description of observed defect
 - h. Corrective actions taken
 - i. Model and serial number of any module repaired or replaced
 - j. Date and time defect rectified
 10. The Contractor shall maintain records, which show the itemized material and equipment cost incurred to provide response maintenance during the guarantee period. These records shall be provided to the TMC within 15 working days of the warranty work. These records will not be used as a Basis of Payment to the Contractor. The Contractor shall assure that these cost records are as complete and accurate as practicable. MaineDOT may perform an audit to verify the accuracy of the cost records.
 11. When a guarantee is available on repaired or replacement components, a written and signed guarantee shall accompany the manufacturer's billing invoice. The TMC representative or inspecting agent will sign and retain the original and provide a copy to the maintaining agency and a copy to the manufacturer.
 12. If the same component requires repair more than twice during the warranty period, the Contractor shall replace the component rather than provide a third repair at no additional cost to the Department.

654.07 Method of Measurement

The development and submission of ITS Technical Submittals will not be measured, but shall be considered incidental to the ITS system, device or equipment installed.

Guarantees/Warranties will not be measured, but shall be considered incidental to the ITS system, device or equipment provided.

Configuration and integration of ITS equipment and devices will not be measured but shall be considered incidental to the equipment being provided.

SPECIAL PROVISION
SECTION 654
INTELLIGENT TRANSPORTATION SYSTEMS
(ITS Equipment Cabinet)

Section 654 of the Standard Specifications – Intelligent Transportation Systems – is amended as follows:

654.01 Description

The following paragraph is added:

This item shall consist of furnishing and installing ITS equipment cabinets, related network equipment, power supplies, power service, and all associated equipment necessary to provide a working ITS device site. This work shall consist of furnishing, installing, wiring and testing, ITS Equipment Cabinets with all other cabinet hardware and ancillary equipment necessary to provide a complete working system as shown on the plans or as ordered.

654.021 Materials

The following sections are added:

654.026 Ground Mounted ITS Cabinet

1. Ground Mounted ITS Equipment Cabinets shall be 66”H x 24”W x 30”D. The cabinets shall have two locking doors located on opposite sides of the cabinet. All equipment housed in the cabinet shall be rack mountable.
2. Each cabinet shall contain a full-height standard EIA 19-inch rack. The rack shall be secured within the cabinet by mounts at the top and bottom.
3. Concrete work pad for cabinets shall meet the requirements of Section 626 – Foundations, Conduit, and Junction Boxes for Highway Lighting, Traffic Signals, and Highway Lighting.
4. The cabinets shall protect all equipment against sustained winds of 90 miles per hour (MPH), with 120 MPH wind gusts, blowing sand and dust, roadside pollutants from vehicle exhausts, blowing rain and snow, and heavy ice accumulations.
5. The cabinets shall be weatherproof with the top of the enclosure crowned or slanted to prevent standing water. The field cabinet shall also provide protection against vandalism and theft of equipment. Each cabinet door shall be supplied and installed with Corbin 1548-1 locks for access by #2 keys.
6. The cabinets and doors shall be constructed from sheet aluminum, which has a minimum thickness of 0.125 inches. All welds shall be neatly formatted and free of cracks, blowholes and other irregularities.
7. The cabinets shall be supplied with a captive door restraint bar. The bar shall allow the door to be kept open at a minimum of two different angles, with one at 90 degrees

and the other in the fully open position. The door restraint bar shall be supplied and installed such that the door is held in place during a 40 MPH wind without the restraint bar being bent. The door restraint bar shall be provided to prevent door movement when open in windy conditions

8. Door hinges shall be continuous and bolted to the cabinet and door utilizing steel carriage bolts and nylock nuts. The hinges shall be made of a minimum 0.083-inch thick aluminum and shall have a minimum 0.250-inch diameter stainless steel hinge pin. The hinge pin shall be capped at the top and bottom by a weld to prevent removal.
9. The top and bottom of the latching pushrods shall contain nylon rollers to promote secure door closure.
10. The door handles shall be stainless steel. The latching handles shall have provisions for padlocking in the closed position.
11. The cabinets shall contain a power panel, sized for the required current and the required number of circuit breakers. The panel shall also contain a single phase filtering surge protector, designed for use within traffic equipment cabinets, to absorb power line noise and switching transients. The cabinet shall also be supplied with electrical neutral and ground terminal busses.
12. The cabinets shall be equipped with a slide out metal drawer, constructed and installed such that it is capable of holding a 15-pound notebook computer, and mounted at a suitable height for a technician to use as a computer workstation.
13. The cabinets shall be supplied with a 120 VAC, 200 watt radiant heater. The radiant heater shall be a self-contained device designed to provide heat for an outdoor metal enclosure. The heater shall have an on/off switch, along with an adjustable thermostat with a minimum turn on range of 10°F to 60°F.
14. The air filters shall have an average rated efficiency of 30% and an arrestance of 90% when tested in accordance with ASHRAE 52.1-1992 Test Standard. The filter shall be listed and rated Class 2 by the Underwriters Laboratories. Filters shall have a metal structure; paper or paper-based filters shall be prohibited.
15. All intake and exhaust vents shall meet NEMA 3R requirements with and without powering the air venting arrangements.
16. Ground mounted cabinets shall be mounted and secured on concrete foundations as shown in the plans.
17. A 3'0" x 3'0" x 4" concrete work pad shall be installed in front of each cabinet door. The pad shall be placed on a minimum of 4-inches of compacted granular material, and the pad shall be set with at least 1 percent grade sloping away from the cabinet. Where the work pad is installed on a slope, the depth of the pad shall be increased such that there is at least two inches of the concrete pad below grade.
18. All conduits terminating in the cabinet shall be sealed with duct sealant. Use of tape to permanently seal conduits shall be prohibited.
 - a. Conduits less than 1 inch diameter shall be sealed with a silicone sealant.

- b. Conduits greater than 1 inch diameter shall be filled with steel wool in addition to being sealed with duct sealant.
- 19. Prior to placing the ITS cabinet on the concrete foundation, silicone sealant shall be applied to the area of contact. A two-inch gap shall be left without sealant on the side of the cabinet.
- 20. Where indicated, spare sweeps shall be provided in the cabinet foundations for future use. If no spare sweeps are identified in the Plans, the Contractor shall supply one 3-inch PVC conduit sweep as a spare.
- 21. All ground-mounted cabinets shall include grounding as described in Grounding, Bonding and Surge Suppression below.
- 22. Ground mounted cabinets shall be installed with doors opening parallel to adjacent traffic.
- 23. All cabinet electrical wiring and communication cables shall be of diameters and colors as required by the device Manufacturers.
 - a. Wire connections shall be made without excessively long exposed conductors, or unraveled strands extending beyond connections, to prevent shock hazards.
 - b. Cabinet wiring shall be secured with appropriate cable ties to maintain a neat appearance.
- 24. Each cabinet shall contain a power panel containing a primary circuit breaker, which will accept the incoming 120 VAC, single-phase power. This primary circuit breaker shall serve as the electrical disconnect for the cabinet and shall shut off all cabinet power when in the "off" position.
- 25. The primary circuit breaker shall be a single pole, 30-amp breaker. Two additional single pole, 20 amp circuit breakers shall be supplied, installed and be fed from the primary circuit breaker.
 - a. One of the 20 amp circuit breakers shall feed the four 15 amp, electrical outlets to be installed in the cabinet.
 - b. The other 20 amp circuit breaker shall feed a power distribution buss, providing hard wired electrical feed for the lamps, the cabinet heater, the electric fan, and all other integrated electrical equipment.
- 26. The power panel shall also contain a single phase filtering surge protector.
- 27. The field cabinets shall be provided with a minimum of four utility electric power outlets to support electrical equipment. The utility power outlets shall be installed within the field cabinet and not on the cabinet doors.
- 28. The current rating of all utility outlets shall be 15 amperes, with at least one being a GFCI outlet.
- 29. The field cabinets shall include a thermostatically controlled electric cooling fan, capable of maintaining temperatures inside the cabinet to that recommended by the equipment Manufacturers for outside installations, or as specified in these Special Provisions.

30. Thermostats for controlling electric cooling fans shall have the capability of being field adjusted from 50°F to 120°F.
31. All exposed, high voltage electrical terminals shall be insulated with non-conducting material such as rubber boots or silicone/rubber caulking.
32. The cabinets shall be electrically bonded to all associated metallic ITS Device support structure grounding systems, as described below or shown on the Plans.
33. All air venting arrangements shall contain air filters. All fans shall be located above the air filters at the top of the cabinets. All exhaust vents shall be furnished with a screen to prevent insects from entering the field cabinet.
34. The cabinets shall be supplied and installed with two internal lights located in the top of each cabinet inside each door. These lights shall automatically turn on when the cabinet doors are open and shut off when the doors are closed. The lights shall be hardwire-connected to the cabinet's electrical power distribution buss. The lights shall be LED.
35. The Contractor shall furnish, in a watertight container, a control cabinet-wiring diagram. Three sets of identical wiring diagrams shall be furnished for each cabinet.
36. If tracer wire equipment connection points are installed inside ITS equipment cabinets, the tracer wire shall enter the cabinet through a conduit or conduit riser specifically installed for that purpose.
37. All equipment shall be installed using the Manufacturer's recommended cables.
38. The Contractor shall furnish, install, connect, and test all Category 6 (Cat6) cables, of the types required for the application, at locations shown in the Plans or as required to construct a complete, functional system.
39. The Cat6 cables shall not exceed 325 feet in length unless the Contractor is granted written permission from the Engineer.
 - a. All cables shall be installed in a continuous run. Splicing will not be allowed.

654.027 Grounding, Bonding and Surge Suppression:

The Contractor shall provide grounding and Transient Voltage Surge Suppression (TVSS) at all ITS cabinets. The Contractor shall provide grounding connections between each TVSS device and the main grounding terminus in the cabinet. Each TVSS device shall have a dedicated grounding connection, directly with the grounding terminus. Daisy-chaining of grounding connection is not permitted.

1. The Contractor shall furnish and install TVSS devices for all power and communications conductors leaving the ITS equipment cabinets, including but not limited to utility service, and power and communications for all ITS devices that are external to the cabinet.
2. The power panel of all ITS cabinets shall contain a single phase filtering surge protector, connected to the load side of the primary circuit breaker. The electrical

neutral buss, the ground buss, the cabinet shell, and the ground rod shall all be wired in conformance to the applicable electrical codes.

3. All grounding shall meet the requirements of the installed equipment Manufacturers. In the event that the Manufacturers' requirements are more stringent than those of the national, state, and local codes, then the Manufacturers' grounding requirements shall apply
4. Each ITS cabinet shall include at least one 3/4-inch by 10-foot ground rod made of solid copper or copper-clad steel rod. A #4 AWG copper ground wire shall be connected to the ground lug on the cabinet or support structure, and exothermically welded to the ground rod. Additional ground rods shall be furnished and installed to provide required grounding. Minimum resistance to ground shall be 25 ohms or in accordance with the cabinet component's equipment manufacturer's requirements, whichever is more stringent.
5. For grounding connections internal to the cabinets or support structure, a conduit shall be installed through the foundation specifically to provide the means to connect the ground wire to the ground rods. Ground wires shall not be mounted externally to any structure, and shall not be installed in conduit with any other power or communication wiring.
6. All ITS cabinets shall be electrically bonded to their associated ITS device support structure ground system using #4 AWG copper wires. The #4 AWG copper wires shall be installed between the support structures and the cabinets providing a common ground system for each terminus.

654.07 Method of Measurement

The following paragraph is added: Ground mounted ITS Equipment Cabinet shall be measured by each cabinet installed in place.

654.08 Basis of Payment

The accepted quantities of ITS Equipment Cabinet will be paid for at the contract unit price each complete in place. Payment shall be full compensation for the cabinet, cabinet components, foundation, platform and work pads, mounting hardware, grounding, TVSS, thermostats, fans, heater, power panel, electrical service connection, grounding, bonding, locks, cables, installation and testing.

If more than one ground rod is required to achieve the required earth grounding, all additional rod installations and wire connections will be subsidiary to the ITS Equipment Cabinet item.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
654.31 ITS Equipment Cabinet	Each

SPECIAL PROVISION
SECTION 654
INTELLIGENT TRANSPORTATION SYSTEMS
(Electrical Service Connection)

Section 654 of the Standard Specifications – INTELLIGENT TRANSPORTATION SYSTEMS is amended as follows:

654.01 Description

The following paragraphs are added:

This item of work shall conform to this specification. This item shall consist of coordinating, furnishing, installing, and wiring an electrical power service connection between the public utility power source and the ITS device cabinet to provide a complete power supply system for the connected ITS equipment. The electrical service connection shall be metered and shall include all necessary cables and equipment.

654.021 Materials

The following sections are added:

654.022 Electrical Service Connection – General

1. The materials for this work shall conform to the requirements of the local power utility company and other project specifications.
2. Electrical Service Connection shall consist of all materials required to establish a hard wire power connection to a public utility company that provides 120/240 Volt single phase, 100 ampere service.
3. The Contractor shall be responsible for furnishing and installing the required materials and equipment associated with establishing a power service connection. The materials and equipment shall conform to the power utility company's requirements for service connection.
4. The Contractor shall adhere to all applicable NEC, NESC, IEEE 1100-1992, UL 1459, and UL 1950 standards and practices.
5. Where the proposed electrical service connection requires an overhead connection, the Contractor shall furnish and install all span wire, cables, tensioning hardware, and grounding equipment and all other incidental equipment required by the public utility company supplying electrical service. All cables shall conform to Section 643 unless otherwise defined by the utility company.
6. Where the proposed electrical service connection requires an underground connection, the Contractor shall furnish and install conduit, cabling and all other incidental equipment required by the public utility company supplying electrical service. All conduit and cables shall conform to Section 626 and Section 643 unless otherwise defined by the utility company.
7. Where the plans call for a meter and disconnect pedestal, the Contractor shall furnish and install a metered service pedestal. This metered service pedestal shall be UL listed

“Suitable for Service Equipment” and shall be acceptable to the utility company for use as a service connection.

- a. Metered service pedestals shall consist of a galvanized steel post containing a 100 amp main circuit breaker for service disconnect, a minimum of two branch circuit breakers, and an integral meter socket.
 - b. Metered service pedestals shall include weatherproof arc flash labeling meeting the requirements of the National Fire Protection Association (NFPA) 70E Standard.
8. Where the plans call for a meter and disconnect to be mounted to an existing utility pole, the Contractor shall furnish and install a meter socket and 100 amp disconnect switch to the existing utility pole as shown on the Plans. The meter socket and disconnect shall be materials acceptable to the utility company.
 9. Where the plans call for a meter and disconnect to be installed on a new utility pole, the Contractor shall furnish and install a new Class II wood pole of the height above grade as indicated in the Plans. The new wood pole shall be placed in the ground to a depth of 20 percent of the overall length. The wood utility pole shall comply with Section 643 and Section 720.10. The cost of the new utility pole shall be subsidiary to Item 654.51 Electrical Service Connection.

654.023 Electrical Service Connection – Waterville Exit 127 Location

1. The Contractor shall be responsible for upgrading the required materials and equipment associated with re-establishing a power service connection. The materials and equipment shall conform to the power utility company’s requirements for service connection.
2. The Contractor shall be responsible for replacing the existing external load center attached to the existing signal cabinet at the intersection of Route 11 and southbound I-95 Exit 127 off ramp. The Contractor shall supply a new 100 amp main breaker, with three 30 amp breakers.

654.03 Construction

The following sections are added:

654.031 Electrical Service Equipment Installation - General

1. The Contractor shall arrange a meeting with the Resident and each proposed power utility company to establish a schedule for power service connections. This meeting shall be held before any equipment or material is ordered for the electrical service connection.
2. Power service shall be obtained on behalf of the Maine Department of Transportation.
3. The Contractor shall be responsible for payment of any connection and installation fees charged by the utility company for the provision of power service. The Contractor shall also be responsible for payment of the monthly service charges throughout the project and for a minimum of 90 days following operational testing of the project’s ITS equipment. After the 90 days, the Contractor shall transition the monthly service charges to MaineDOT at the direction of the Resident and the TMC.
4. The Contractor shall make the necessary arrangements with the utility companies to ensure utility service is available and connected at the time of equipment testing and

power-up. Any utility energization, connection, or disconnection delays will not be a valid reason for a time extension. Difficulties in securing utility company services are to be reported to the Resident at the earliest time possible.

5. Any equipment installed on the utility company's poles shall be installed as directed by the utility company's standards, including acceptable method for field drilling holes, equipment mounting heights and side-of-pole mounting surface.

654.032 Electrical Service Equipment Installation – Waterville Exit 127 Location

1. The Contractor shall disconnect and remove the existing external load center at the existing signal cabinet at the intersection of Route 11 and the southbound I-95 Exit 127 off-ramp.
2. The Contractor shall install a new 100 amp main breaker with three 30 amp breakers.
3. The Contractor shall use one new 30 amp breaker to power the CCTV equipment installed in the existing signal cabinet.
4. The Contractor shall reconnect power from the new 30 amp breakers to the traffic signals at First Park Drive and Exit 127 off ramp.

654.07 Method of Measurement

The following paragraphs are added:

Electrical Service Connection shall be measured for payment by the lump sum complete in place per site, satisfactorily installed, connected, energized, and accepted.

654.08 Basis of Payment

Electrical Service Connection will be paid for at the contract lump sum price complete in place for each location. Payment will be full compensation for coordination with the power utility company, for all equipment and materials required by the power utility company for an electrical service connection including but not limited to meter sockets, disconnect switches, meter and disconnect pedestals, wood utility poles, all connection fees, monthly service charges, and for any cables, span wire, hardware, connectorizing and installation to provide a complete electrical power connection at each ITS device location. Payment shall also include all labor, materials, tools, equipment, hardware, and incidentals necessary to provide a complete and functional electrical service connection.

The conduit risers and conduit installed for the connection from the power utility company source to the appropriate ITS equipment cabinet shall be paid for in accordance with Section 626.

Payment will be made under:

Pay Item

654.51 Electrical Service Connection: (Location)

Pay Unit

Lump Sum

SPECIAL PROVISION
SECTION 654
INTELLIGENT TRANSPORTATION SYSTEMS
(Camera Connection)

Section 654 of the Standard Specifications – Intelligent Transportation Systems is amended as follows:

654.01 Description

The following paragraph is added:

This item shall consist of furnishing and installing a mounting system with lowering device and conduit for a highway traffic camera (also referred to as a Closed-Circuit Television) to be mounted to infrastructure such as an existing high-mast light pole lowering ring, an existing overhead sign structure, or a new wooden pole. The Contractor is responsible for developing final connection details for extension arms with lowering devices.

654.021 Materials

The following section is added:

654.022 Camera Connection – CCTV Camera Mount

1. The CCTV camera mounting bracket and hardware shall be of the type recommended by the CCTV manufacturer, such that the CCTV camera can be securely affixed to the structure and resists movement from environmental forces that may shift the camera out of alignment.
 - a. When mounting to a pole or other rounded support structure, the mounting shall include a notched or curved baseplate such that the baseplate maintains a minimum of two points of contact to the curved surface.
2. The CCTV camera mount shall be manufactured of aluminum, or similar approved non-corrosive material, and powder coated white or light gray in color unless otherwise directed.
 - a. Pipe style mounts shall include an internal manufacturer recommended pipe seal to protect against insect, water, and dust intrusion.

654.023 Camera Connection – High Mast Light Lowering Ring Mounting - General

1. The Contractor shall furnish and install a stainless-steel junction box (highway traffic camera box).
 - a. The stainless-steel junction box material shall meet the requirements specified in Section of Division 700, Material Details, Metallic Junction and Fuse Box 715.05.
2. The Contractor shall furnish and install a counterweight to maintain the balance of the lowering ring after attachment of the CCTV camera on the lowering ring.
3. The Contractor shall furnish and install a weatherhead on the conduit stub at the base of the high mast light pole foundation as shown in the Plans.

654.024 Camera Connection – Overhead Sign Structure and Wood Pole Mounting - General

1. The Contractor shall furnish 2-inch diameter galvanized steel conduit. The conduit material shall meet the requirements specified in the following Sections of Division 700, Material Details, Steel Conduit 715.02.
2. The Contractor shall furnish 1-inch minimum stainless-steel strapping for supporting the conduit to the mounting structure.
3. The Contractor shall furnish a lightning dissipater attached to a #6 AWG stranded bare copper for grounding.
 - a. The lightning dissipater shall be attached using manufacturer's recommended clamps or banding that shall rigidly hold the lightning dissipater in winds up to 130 mph.
4. The Contractor shall furnish a camera lowering device mounting box (upper mounting box) and winch box as shown on the plans and as recommended by the lowering device manufacturer.
 - a. The upper mounting box and winch box shall be stainless steel and material shall meet the requirements specified in Section of Division 700, Material Details, Metallic Junction and Fuse Box 715.05.
 - b. The winch box shall be sized to support the winch and include space for a winch crank handle.
5. The Contractor shall furnish a lowering device system designed to support, lower and raise the CCTV camera without damage.
 - a. The lowering system shall consist of a winch box with a permanently mounted winch with crank, an upper mounting box, suspension contact unit, divided support arm, and camera connection box.
 - b. All external components of the lowering device shall be made of corrosion-resistant materials in accordance with manufacturer's specifications and procedures.
 - c. The lowering device shall have a locking mechanism between the fixed and moveable components.
 - d. The lowering device cable shall be stainless steel and contained in a conduit system that does not include the camera's power and communication cables.
 - e. The lowering device unit shall have a minimum temperature rating of -40°F to 160°F.
 - f. The camera lowering device shall be mounted within three feet of the top of a wood pole mounting structure.
 - g. The camera lowering device shall be mounted a minimum of 10 feet above the top chord of an overhead sign structure truss but not more than 18 feet above the bottom chord of the overhead sign structure truss.

654.025 Camera Connection – Structural

1. All camera connections (except camera connections mounted to wood poles) shall be designed and stamped by a Professional Engineer licensed in the State of Maine in accordance with the current edition of AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals and Standard Specifications 504 except as noted below:

- a. Basic Wind Speed: 1700-year Mean Recurrence Interval (MRI) basic wind speed of 130 mph (209 km/hr)

654.026 Camera Lowering Device System

1. The camera lowering system shall be designed to support, lower for access, and raise to mounting height an IP driven CCTV camera, lens, housing, pan-tilt-zoom (PTZ) mechanism, cabling, connectors, and other supporting field components without damage or causing degradation of the camera operations.
2. The lowering systems shall consist, at a minimum, of a suspension contact unit, divided support arm, and mounting hardware for attachment to the support structure identified in the plans.
3. The divided support arm and receiver brackets shall be designed to self-align the contact unit with the pole center line during installation and ensure the contact unit cannot twist under high wind conditions.
4. The support arms shall be designed such that the arm will be locked in place to withstand camera support arm rotation under high wind conditions by either geometry, through-bolt construction, or other means.
5. Suspension Contact Unit: The suspension contact unit shall have a load capacity of 600 pounds with a 4 to 1 safety factor. There shall be a locking mechanism between the fixed and moveable components of the lowering device. The movable assembly shall have a minimum of 2 latches. This latching mechanism shall securely hold the device and its mounted equipment. The contact unit housing shall be weatherproof with a gasket provided to seal the interior from dust and moisture.
6. The camera lowering device shall withstand wind forces of 130 mph with a 30 percent gust factor using 1.65 safety factor.
7. The prefabricated components of the lift unit support systems shall be designed to preclude the lifting cables from contacting the power or video cabling. The lowering device manufacturer shall provide conduit mount adapters for housing and isolating the lowering cables inside the pole.
8. The lowering device unit shall be equipped with multiple contact connector designed and tested for Ethernet Fed IP Cameras with or without POE. The Contact Connectors shall be designed for extreme environmental outdoor use.
9. The female and male socket contact halves of the ethernet connector block shall be made of a UL94, V-0 rated thermosetting synthetic rubber. Plastic ethernet contact blocks will not be permitted.
10. All electrical and communication connections between the fixed and lowerable portion of the contact block shall be protected from exposure to the weather by a waterproof seal to prevent moisture infiltration and degradation of the electrical contacts.
11. The electrical connections between the fixed and movable lowering device components shall be designed to conduct high frequency data bits and 1 volt peak-to-peak video signals as well as the power requirements for operation of dome camera environmental controls.
12. The interface and locking components shall be made of stainless steel and/or aluminum. All external components of the lowering device shall be made of corrosion resistant materials, powder coated, galvanized, or otherwise protected from the environment by industry-accepted coatings to withstand exposure to a corrosive

environment. The corrosion resistance materials shall be as per manufacturer's specifications and procedures.

13. Portable Lowering Tool: The manufacturer shall provide a variable speed, heavy-duty reversible drill motor and a lowering tool. The lowering tool shall be made of durable and corrosion resistant materials, powder coated, galvanized, or otherwise protected from the environment by industry-accepted coatings to withstand exposure to a corrosive environment. This tool shall be compatible with accessing the support cable through the hand hole of the pole. The tool shall support itself and the load assuring lowering operations and shall provide a means to prevent freewheeling when loaded. The lowering tool shall have a reduction gear to reduce the manual effort required to operate the lifting handle to raise and lower a capacity load.
14. The lowering tool shall be provided with an adapter for operating the lowering device by a portable drill using a clutch mechanism. The lowering tool shall be equipped with a positive breaking mechanism to secure the cable reel during raising and lowering operations and prevent freewheeling.

654.03 Construction

The following sections are added:

654.031 CCTV Camera Connection – High Mast Light – Camera Mounting

1. The CCTV Camera shall be mounted to the high mast light support arm or lowering ring.
2. The mounting of the CCTV camera shall not interfere with the lowering/raising of the high mast lighting lowering ring.
3. The Contractor shall attach a counterweight on the high mast light lowering ring that offsets the CCTV camera and mounting to provide balance to the lowering ring. Balance shall be demonstrated by lowering and raising the lowering ring with only incidental contact between the ring and the pole.

654.032 CCTV Camera Connection – High Mast Light – Cabling

1. All equipment shall be supplied with the manufacturer's recommended cables.
2. All free-hanging Ethernet cables shall be exterior grade suitable for wet environments and UV resistant.
3. All cables shall be installed in a continuous run. Splicing will not be permitted.
4. CCTV cables shall be wrapped helically around the high mast light pole with sufficient slack to allow the camera lowering ring to lower and raise freely.

654.033 CCTV Camera Connection – Overhead Sign Structure – Camera Mounting

1. Camera wiring shall be installed in a conduit system independent of the lowering support cable conduit. The conduit system shall provide a watertight installation and prevent moisture damage to the CCTV and to the ITS Equipment cabinet.
2. Contractor shall design, furnish, and install a support system for mounting the camera lowering device to the overhead sign structure. A sample of a potential system is shown in the Plans.

3. The mounting system shall permit the camera to be mounted at 45 degrees from parallel to the direction of the overhead sign structure truss. The Contractor shall ensure there is a clear vertical pathway for the camera to be lowered to ground that avoids having the camera come down directly above someone at the winch box.
4. The Contractor shall furnish and install U-bolt connections, or the manufacturer recommended connection to mount the lowering device vertical mounting post to the overhead sign structure. Field drilling the overhead sign structure is prohibited.
5. The Contractor shall supply two 2-inch rigid steel conduits pathways to the upper mounting box.
 - a. One 2-inch rigid steel conduit shall house the stainless steel lowering cable. This conduit shall be a direct connection between the upper mounting box and the winch box.
 - b. The 2-inch rigid steel conduit between the winch box and upper mounting box that contains the lowering stainless-steel cable shall be installed plumb and not have any bends or kinks.
 - c. The second 2-inch rigid steel conduit shall house the power and communications cable for the CCTV. This conduit shall enter the upper mounting box but shall not enter the winch box. This conduit shall be connected to the ITS Equipment cabinet.
6. Stainless steel banding straps shall be installed a maximum of 5-feet apart to support the conduit for the height of the overhead sign structure upright support.
7. The Contractor shall furnish and install stand off brackets for the two 2-inch rigid steel conduits that feed the upper mounting box.
8. When lowered the camera shall be a minimum of 4 feet behind guardrail.
9. The Contractor shall install the lightning dissipater to be above and offset from the camera to protect the installed equipment without interfering with the functionality of the equipment. The lightning dissipater shall be connected to the grounding system.

654.034 CCTV Camera Connection – Wood Pole Mounting

1. Camera wiring shall be installed in a conduit system independent of the lowering support cable conduit. The conduit system shall provide a watertight installation and prevent moisture damage to the CCTV and to the ITS Equipment cabinet.
2. Contractor shall design, furnish, and install a support system for mounting the camera lowering device to a wood pole. A sample of a potential system is shown in the Plans.
3. The Contractor shall supply two 2-inch rigid steel conduits pathways to the upper mounting box.
 - a. One 2-inch rigid steel conduit shall house the stainless steel lowering cable. This conduit shall be a direct connection between the upper mounting box and the winch box.
 - b. The 2-inch rigid steel conduit between the winch box and the upper mounting box that contains the lowering stainless-steel cable shall be installed plumb and not have any bends or kinks.
 - c. The second 2-inch rigid steel conduit shall house the communications cable for the CCTV. This conduit shall enter the upper mounting box. This conduit shall not enter the winch box. This conduit shall be connected to the ITS Equipment cabinet.

4. Stainless steel banding straps shall be installed a maximum of 5-feet apart to support the conduit for the height of the overhead sign structure upright support.
5. The Contractor shall furnish and install stand off brackets for the two 2-inch rigid steel conduits that feed the upper mounting box.
6. The Contractor shall ensure there is a clear vertical pathway for the camera to be lowered to ground that avoids having the camera come down directly above someone at the winch box.
7. The 2-inch rigid steel conduit between the winch box and the upper mounting box that contains the lowering stainless-steel cable shall be installed plumb and not have any bends or kinks.
8. The Contractor shall install the lightning dissipater to be above and offset from the camera to protect the installed equipment without interfering with the functionality of the equipment. The lightning dissipater shall be connected to the grounding system.
9. The Contractor shall install a collar between the banding straps and the wood pole at both points where the lowering device upper mounting box and the winch box are mounted to the wood pole to ensure the straps and/or junction boxes do not damage or become embedded into the wood pole.

654.035 Installation of the Camera Lowering System

1. The lowering system shall be provided and installed with all components as per manufacturer's specifications and procedures.
2. The Contractor shall arrange for the Manufacturer's factory representative to be present on site to assist with the assembly, installation and testing of the camera lowering system.
3. Camera lowering devices shall be installed to provide unobstructed camera views along the mainline roadway.
4. Weights and/or counterweights shall be provided by the Manufacturer as necessary to assure that the alignment of pins and connectors are proper for the camera support to be raised into position without binding. The lowering unit shall have sufficient weight to disengage the camera and its control components for lowering.
5. The Contractor shall provide a sealant between the lowering device and the camera assembly to assure water tightness of the camera assembly.

654.036 Grounding System

1. All camera sites shall be grounded to a minimum of 25 ohms to ground. If other national, state, or local grounding requirements are more stringent than those of the manufacturer, the applicable national, state, or local codes shall apply.
2. The Contractor shall install solid copper or copper-clad ground rods (minimum of four each at ¾-inch x 10-foot) along with #4 AWG ground wire and fittings at the base of the camera system. The Contractor shall install additional ground rods required to meet the minimum grounding requirements.
3. The ground wire shall be exothermically welded to each ground rod installed with all ground rods attached to every other ground rod via the ground wire.
4. The camera grounding system shall be bonded to the controller enclosure bus-bar and the support structure in accordance with National Electric Code (NEC) requirements.

5. The camera support shall be supplied with an air terminal that is bonded by an insulated wire to the earth terminal-wire attachment at the base.
6. The camera lowering systems shall be grounded to the same system as the camera system.

654.07 Method of Measurement

The following paragraphs are added:

Camera Connection – Mast Arm shall be measured by each mounting system furnished, installed, and accepted in place on a wood pole.

Camera Connection – High Mast Light shall be measured by each mounting system furnished, installed, and accepted in place on a high mast light pole lowering ring.

Camera Connection – Overhead Sign Structure shall be measured by each furnished, installed, and accepted in place on an existing overhead sign structure.

The following section is added:

654.08 Basis of Payment

The accepted quantities of Camera Connection – Mast Arm will be paid for at the contract unit price each complete in place. Payment shall be full compensation for furnishing and installing all mounting brackets, mounting hardware, camera lowering system with portable lowering tool, junction boxes, rigid steel conduits, flexible conduit, lightning dissipaters, grounding systems, cables, tools, materials, incidentals, and labor necessary to provide a complete mounting system.

The accepted quantities of Camera Connection – High Mast Light will be paid for at the contract unit price each complete in place. Payment shall be full compensation for designing, furnishing and installing all mounting brackets, mounting hardware, counterweights, junction boxes, conduits, flexible conduit, weatherhead, grounding systems, cables, tools, materials, incidentals, and labor necessary to provide a complete mounting system.

The accepted quantities of Camera Connection – Overhead Sign Structure will be paid for at the contract unit price each complete in place. Payment shall be full compensation for designing, furnishing and installing all mounting brackets, mounting hardware, camera lowering system with portable lowering tool, junction box, flexible conduit, rigid steel conduits, lightning dissipaters, grounding systems, cables, tools, materials, incidentals, and labor necessary to provide a complete mounting system.

Payment will be made under:

<u>Pay Item</u>	<u>Description</u>	<u>Pay Unit</u>
654.101	Camera Connection – Mast Arm	Each
654.102	Camera Connection – High Mast Light	Each
654.103	Camera Connection – Overhead Sign Structure	Each

SPECIAL PROVISION
SECTION 654
INTELLIGENT TRANSPORTATION SYSTEMS
(Closed Circuit Television Pole and System Equipment)

Section 654 of the Standard Specifications INTELLIGENT TRANSPORTATION SYSTEMS is amended as follows:

654.01 Description

The following paragraphs are added:

This work shall consist of furnishing, installing, integrating, and testing Highway Traffic Cameras, also referred to as Closed Circuit Television (CCTV), systems and equipment.

This specification also includes furnishing and installing new galvanized steel poles with steel reinforced concrete foundations. The work shall include furnishing and installing all camera equipment and accessories as defined in this specification onto new steel poles with a lowering device mount. The work shall include the testing of all equipment function, all software function, and camera capabilities.

This specification also includes the work necessary to integrate the camera image and video data obtained by the CCTV camera into the Maine Department of Transportation (MaineDOT) Advanced Transportation Management System (ATMS) called New England Compass (Compass). Compass was developed by the Southwest Research Institute (SwRI) and is used by Maine, New Hampshire and Vermont for their respective Transportation Management Centers. The CCTV shall be integrated into MaineDOT's Axis Camera Station software.

654.02 General

The following paragraphs are added:

If any of the following hardware-specific requirements listed in the following sections cannot be met by a willing Bidder, but the Contractor believes that strict conformance to the given requirement is unnecessary or may be accomplished differently, the Contractor shall provide a list of the requirements that cannot be strictly met along with a justification for how the Contractor's proposed CCTV System Equipment may be considered functionally equivalent in accordance with Special Provision 103.

If the Contractor proposes to provide a new CCTV software, the Contractor shall provide a licensed copy of the software to the MaineDOT Transportation Management Center (TMC) for review. MaineDOT reserves the sole authority to determine if the proposed software may be considered functionally equivalent in accordance with Special Provision 103.

CCTV System data integration shall be accomplished with minimal interruption to the existing MaineDOT TMC operations or the existing Axis Camera Station software in use at the TMC.

Any required downtime of Compass shall be approved by the Resident at least seven (7) days in advance.

654.021 Materials

The following sections are added:

654.022 CCTV System Equipment – General

1. The CCTV camera shall be compatible with the existing Axis Camera Station software at the MaineDOT TMC. Alternatively, the Contractor may provide a different camera control software; however, if the Contractor elects to provide an alternative software, the Contractor shall also provide software licenses for all existing MaineDOT CCTV cameras, re-integrate all existing CCTV cameras into Compass, and provide 24/7 technical software support for a period of two years following project approval.
2. The CCTV camera shall be Underwriter's Laboratory (UL) approved. UL certification shall be provided with the catalog cuts in the Technical Submittal.
3. The CCTV camera shall weigh no more than 10 pounds.
4. The CCTV camera shall be digital, IP addressable and Ethernet ready.
5. The CCTV interface shall be an RJ45 type connector for 10BASE-T/100BASE-TX, and shall include an IP66-rated RJ45 connector kit.
6. CCTV System Image Requirements:
 - a. The CCTV shall have the following image setting functionalities: Wide dynamic range (WDR), manual shutter time, compression, color, brightness, sharpness, white balance, exposure control, exposure zones, backlight compensation, fine tuning of behavior at low light, rotation, text and image overlay, 32 individual 3D privacy masks, image freeze on PTZ, electronic image stabilization and automatic defog.
 - b. The CCTV shall provide a camera imaging system that automatically shifts from daytime mode to nighttime mode, and shifts from color mode to a black-and-white mode under very low light conditions, in order to render a more detailed video image.
 - c. The CCTV shall provide automatic and manual control of camera imaging characteristics (such as exposure and contrast).
7. The CCTV shall return operational status and report system faults to Compass.
8. The CCTV shall receive and process camera positioning and camera configuration commands received from Compass.
9. The CCTV shall have the capability to be viewed, controlled, and tested locally at the camera site utilizing a laptop computer with OEM software. This shall include the capability to locally retrieve operational status and fault data for the CCTV.
10. The CCTV camera dome shall be constructed of clear polycarbonate with a sun shield.
11. The lower exterior dome shall be made of seamless polycarbonate, optically clear with no distortion, optical discontinuities, or anomalies of any type in any portion of the dome up to 20-degrees above horizontal.
12. The CCTV camera dome drive system shall consist of an integral camera pan-tilt assembly with a variable high speed drive unit with continuous 360-degree rotation, CCD camera, optical and digital zoom, auto focusing, motorized zoom lens and integral camera control receiver.

13. The CCTV shall have user-defined "pre-sets" for position, zoom, exposure and focus, to be defined by the TMC operators.
14. The CCTV shall have a minimum Pan/Tilt/Zoom functionality of: 100 preset positions, 360° endless pan at a speed of 0.05 - 450°/sec; Tilt - 220° at a speed of 0.05 - 450°/sec.
15. TMC control of CCTV PTZ features shall have a latency of no greater than one second.
16. The CCTV shall have an automatic variable pan-tilt speed adjustment operating as a function of degree of zoom.
17. The CCTV shall have a minimum 30x optical zoom and 12x digital zoom, total 360x zoom.
18. The CCTV shall have alarm triggers from multiple sources including intelligent video, PTZ position.
19. The CCTV shall have a minimum 1/3-inch progressive scan CCD image sensor.
20. The CCTV shall have a minimum illumination of: Color: 0.2 lux at 30 IRE; B/W: 0.04 lux at 30 IRE.
21. The CCTV shall have minimum resolution range of: HDTV 320x180 up to 1920x1080, 1080p.
22. The CCTV shall provide H.264 (MPEG-4 Part 10/AVC) and Motion JPEG video compression formats.
23. The CCTV shall have a minimum frame rate of: H.264 25/30 frames per second (fps) (50/60 Hz) in all resolutions, M-JPEG: up to 25/30 fps (50/60 Hz) in all resolutions.
24. The CCTV shall be capable of multi-streaming in H.264 and Motion JPEG formats: Multiple individually configured streams in maximum resolution at 30/25 (60 / 50 Hz) fps. The frame rate and bandwidth shall be controllable.
25. The CCTV shall have the following security features: password protection, IP address filtering, HTTPS encryption, IEEE 802.1X network access control, digest authentication, user access log.
26. The CCTV shall support the following protocols: IPv4/v6, HTTP, HTTPS, QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, SNMPv1/v2c/v3 (MIB-II), DNS, DynDNS, and NTCIP.
27. The CCTV shall conform to the ONVIF Profile S standard and have an open Application Programming Interface (API) for software integration.
28. The CCTV camera shall be able to process, at a minimum, the following alarm events:
 - a. File upload: FTP, HTTP, and network share.
 - b. Email notification: email, HTTP and TCP.
 - c. Data transmitted from CCTV camera: PTZ preset, guard tour, video recording to edge storage, auto-tracking, day/night mode, and pre- and post-alarm video buffering.
29. The CCTV installation shall include two (2) in-line transient voltage surge suppression (TVSS) to protect against transients and surges carried by the associated Ethernet cable. One unit shall be placed within 5 feet of the camera enclosure and the second internal to the ITS cabinet before the associated Ethernet switch port.
30. The CCTV shall be powered by an industrial grade Power Over Ethernet Injector (POEI).

- a. The POEI shall provide operating power and Ethernet data to the CCTV. The POEI power consumption shall not exceed 60 watts.
 - b. The POEI shall include integral TVSS to protect against transients and surges on the incoming power and data (Ethernet) connections to the POEI, as well as to protect against transients and surges on the outgoing data (Ethernet) connection to the camera. The TVSS shall be a product approved by the CCTV manufacturer for use with the camera.
31. The CCTV shall be housed in an environmentally hardened aluminum enclosure suitable for continuous outdoor use and shall feature an internal temperature regulation system. The CCTV shall be IP66-, NEMA 4X- and IK09-rated and shall have an operating temperature range of -40°F to +122°F, minimum.

654.023 CCTV Support Pole and Lowering Device

1. The CCTV support pole and all associated members shall be designed by a licensed Professional Engineer and designed and fabricated in accordance with the current edition of *AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals* and *MaineDOT Standard Specifications Section 504*, except as noted below:
 - Basic Wind Speed: 1700-year Mean Recurrence Interval (MRI) basic wind speed of 130 mph (209 km/hr)
 - Fatigue Importance Category: Cantilevered Category II (poles with distance to roadway > height of pole)
 - Fatigue Importance Category: Cantilevered Category I (poles with distance to roadway ≤ height of pole)
2. The pole shaft shall be one or two-piece construction and shall conform to ASTM A595 Grade A with a minimum yield strength of 55 ksi or ASTM A572 with a minimum yield strength of 55 ksi.
3. The pole shaft and all associated ancillary members shall be steel, galvanized in accordance with the current *AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals* and *MaineDOT Standard Specifications Section 720*.
4. The CCTV support pole shall be designed to support the CCTV camera, dual lowering devices (even if the proposed structure only requires one lowering device), and ancillary equipment in the quantities and locations indicated on the CCTV Detail plan sheets. If only one lowering device is shown on the CCTV Detail plan, the design calculations shall account for a second lowering device located at 90 degrees from the proposed device. Close consideration shall be given to the effective projected area of the complete lowering system and equipment to be mounted on the pole along with the weight of attached hardware when designing the pole to meet the specified deflection performance criteria, including consideration for all possible loading combinations; and the factored design forces and resistances for all components which comprise the proposed structure. The top of the pole total deflection shall not exceed the following:
 - a. 1 percent of pole height due to 90 MPH (non-gust) winds; and
 - b. 1 inch due to 30 MPH (non-gust) winds.
5. The calculations shall include a pole, base plate, and anchor rod analysis (embedded length shall be confirmed by the Engineer designing the foundation). The pole

calculations shall be analyzed at the pole base and at 5-foot pole intervals along the full height of the pole. At each of these locations, the following information shall be provided by the Contractor:

- a. The pole's diameter, thickness, section modulus, moment of inertia, and cross sectional area.
 - b. The centroid, weight, projected area, drag coefficient, velocity pressure, and wind force of each trapezoidal pole segment.
 - c. The factored axial force, shear force, primary moment, total moment, axial resistance, bending resistance, and capacity demand ratio (CDR) at each elevation.
 - d. The pole's angular and linear deflection at each location.
6. Hand Holes: The hand hole openings shall be reinforced with a minimum 2-inch wide hot rolled steel rim. The nominal outside dimension is 6 inches x 27 inches. The hand hole shall have a galvanized steel cover secured with a clip on lock and tamper proof bolts. The hand hole shall have a tapped hole for mounting a portable lowering tool. The hand holes shall be fully compatible with the portable lowering tool.
 7. Weatherhead: A two-inch galvanized steel weatherhead shall be factory installed in the camera pole for wire access near the top of the pole as shown on the support pole plan details. No field drilling will be permitted.
 8. Pole Top Tenon: The pole shall have a plate-mounted tenon that allows the field modification of the arms/camera orientation up to 360 degrees. The Engineer can then make slight orientation modifications to the camera mounts to allow optimum viewing in case of future road development; change in terrain or a change in the viewing needs priority. The tenon shall have mounting holes and slot for the mounting of the camera-lowering systems. The tenon shall be of dimensions necessary to facilitate dual camera lowering device component installations. Each slot shall be parallel to the pole centerline for mounting the lowering devices.
 9. Cable Supports / Wire Eyes and Park Stands: Two wire eyes and three park stands shall be located within the pole. One wire eye shall be positioned 2 inches below the hand hole and the other shall be positioned one inch directly below the top of tenon. Two park stands shall be positioned a maximum of 2.0 inches below the top of the hand hole and located at 90 and 270 degrees from the hand hole. A third park stand shall be located in the center of the upper inside edge of the hand hole as shown on the drawings. These park stands shall be a minimum of 1/4 inch O.D. and a max 3/8-inch O.D.
 10. Base Plate: Base plates shall conform to ASTM A36 or A572 Grade 42.
 11. Lightning Dissipater: The CCTV support pole shall be supplied with a lightning dissipater, consisting of a series of at least four spot dissipaters in a candelabra arrangement with a single mounting assembly. The lightning dissipater system shall include surge suppressor devices of the type recommended by the lightning dissipater manufacturer, and shall properly interface with the pole mounted dissipater, and the size and type of cables used for communication and control of any installed equipment.
 12. Camera Junction Boxes: The camera junction boxes shall be of clamshell design with one hinge side and one latch side to facilitate easy opening. The general shape of the box shall be cylindrical to minimize the EPA. The Camera Junction Boxes shall have

stabilizing weights on the outside of the box to increase room on the interior. The boxes shall be capable of having up to 40 pounds of stabilizing weights. The bottom of the Camera Junction Boxes shall be drilled and tapped to accept industry standard dome housings and be able to be modified to accept a wide variety of other camera mountings. The junction boxes shall be gasketed to prevent water intrusion. The bottom of the box shall incorporate a screened and vented hole to allow airflow and reduce internal condensation per the manufacturer's specifications.

13. Camera Lowering Systems: The camera lowering systems shall be designed to support and lower an IP driven CCTV camera, lens, housing, pan-tilt-zoom (PTZ) mechanism, cabling, connectors and other supporting field components without damage or causing degradation of camera operations. The lowering systems shall consist, at a minimum, of a pole, suspension contact unit, divided support arm, and a pole adapter for attachment to a pole top tenon, pole top junction box, and camera connection box. The divided support arm and receiver brackets shall be designed to self-align the contact unit with the pole center line during installation and ensure the contact unit cannot twist under high wind conditions. The support arms shall be designed such that the arm will be locked in place to withstand camera support arm rotation under high wind conditions by either geometry, through-bolt construction, or other means.
14. The camera-lowering devices shall withstand wind forces of 100 MPH with a 30 percent gust factor using a 1.65 safety factor.
15. Suspension Contact Unit: The suspension contact unit shall have a load capacity of 600 pounds with a 4 to 1 safety factor. There shall be a locking mechanism between the fixed and moveable components of the lowering device. The movable assembly shall have a minimum of 2 latches. This latching mechanism shall securely hold the device and its mounted equipment. The contact unit housing shall be weatherproof with a gasket provided to seal the interior from dust and moisture.
16. The prefabricated components of the lift unit support systems shall be designed to preclude the lifting cables from contacting the power or video cabling. The lowering device manufacturer shall provide conduit mount adapters for housing and isolating the lowering cables inside the pole.
17. The female and male socket contact halves of the connector block shall be made of a UL94, V-0 rated thermosetting synthetic rubber or approved equivalent. The female barrel contacts and the male pin contacts shall be encased into the connector block body.
18. All electrical and communication connections between the fixed and lowerable portion of the contact block shall be protected from exposure to the weather by a waterproof seal to prevent moisture infiltration and degradation of the electrical contacts.
19. The electrical connections between the fixed and movable lowering device components shall be designed to conduct high frequency data bits and 1 volt peak-to-peak video signals as well as the power requirements for operation of dome environmental controls.
20. The interface and locking components shall be made of stainless steel and/or aluminum. All external components of the lowering device shall be made of corrosion resistant materials, powder coated, galvanized, or otherwise protected from the environment by industry-accepted coatings to withstand exposure to a corrosive

environment. The corrosion resistance materials shall be as per manufacturer's specifications and procedures.

21. The camera assembly manufacturer shall provide the power and signal connectors for attachment to the bare leads in the pole top and camera junction boxes.
22. The camera assembly manufacturer shall provide a mounting flange sufficient for mounting their respective camera assembly to the bottom of the camera connection box.
23. Portable Lowering Tool: The manufacturer shall provide a variable speed, heavy-duty reversible drill motor and a lowering tool. The lowering tool shall be made of durable and corrosion resistant materials, powder coated, galvanized, or otherwise protected from the environment by industry-accepted coatings to withstand exposure to a corrosive environment. This tool shall be compatible with accessing the support cable through the hand hole of the pole. The tool shall support itself and the load assuring lowering operations and shall provide a means to prevent freewheeling when loaded. The lowering tool shall have a reduction gear to reduce the manual effort required to operate the lifting handle to raise and lower a capacity load.
24. The lowering tool shall be provided with an adapter for operating the lowering device by a portable drill using a clutch mechanism. The lowering tool shall be equipped with a positive breaking mechanism to secure the cable reel during raising and lowering operations and prevent freewheeling.

654.024 CCTV Foundation. The foundation for the CCTV pole shall be constructed in accordance with Section 626 for drilled shaft foundations.

654.025 CCTV Cables

1. All equipment shall be supplied with the Manufacturer's recommended cables.
2. All free-hanging Ethernet cable shall be plenum type.

654.03 Construction

The following sections are added:

654.031 CCTV System Construction Requirements

The Contractor shall install the CCTV system equipment in accordance with the Plans. The Contractor shall be responsible for all other work to provide a fully functional, operational, and integrated CCTV System at the locations identified in the Plans.

The Contractor shall install, configure, and test the CCTV image and video data in Compass and the MaineDOT Axis Camera Station software. The Contractor shall provide the first year software license for the new camera.

1. Power Requirements
 - a. Each CCTV location shall be supplied with adequate power to meet the site and sensor design loads. The power may be AC (public utility power as provided by others) or DC (solar power system) as required by the Plans.

- b. Where solar power is provided, the Contractor shall furnish, install, configure and test the solar power system equipment to provide the required power to the CCTV equipment.

2. Grounding, Bonding and Transient Voltage Surge Suppression System Requirements

- a. All CCTV sites shall be grounded to a minimum of 25 ohms to ground. If other national, state, or local grounding requirements are more stringent than those of the manufacturer, the applicable national, state, or local code shall apply.
- b. The Contractor shall install solid copper or copper clad ground rod (minimum of four each at ¾-inch x 10-foot) along with #4 AWG ground wire and fittings at the base of the CCTV equipment pole. The Contractor shall install additional ground rods required to meet the minimum grounding requirement.
- c. The ground wire shall be exothermically welded to each ground rod installed with all ground rods attached to every other ground rod via the ground wire.
- d. The CCTV grounding system shall be bonded to the controller enclosure bus-bar and the steel support structure in accordance with National Electric Code (NEC) requirements.
- e. The Contractor shall furnish and install Transient Voltage Surge Suppressor (TVSS) devices for all power and communications conductors installed.
 - i. The Contractor shall provide and install a TVSS between the AC power mains and all installed equipment.
 - ii. The CCTV shall include integral TVSS to protect against transients and surges on all incoming power and data connections to the CCTV. The TVSS shall be a product approved by the CCTV manufacturer for use with the CCTV.
- f. The CCTV support pole shall be supplied with an air terminal that is bonded by an insulated wire to the earth terminal-wire attachment at the base of the pole.
- g. The CCTV support pole shall be supplied with a lightning dissipater that is attached to a #6 AWG stranded bare copper wire bonded to the ground terminal.
- h. The lightning dissipater system shall include surge suppressor devices of the type recommended by the lightning dissipater manufacturer, and shall properly interface with the pole mounted dissipater, and the size and type of cables installed in the CCTV support pole.
 - i. The lightning dissipater shall be attached to the CCTV support pole using manufacturer-recommended clamps that are attached to the pole. These clamps shall rigidly hold the lightning dissipater to the CCTV support pole in winds up to 100 MPH.
 - ii. The lightning dissipater shall be offset from the CCTV support pole and provide protection for the site above any installed equipment without interfering with the functionality of any equipment or sensors.
- i. The CCTV lowering systems shall also be grounded to the same system as the CCTV support pole. The CCTV support pole shall also include provisions to allow for grounding connections of CCTV cameras through a lug located in the camera junction box. All installed CCTV cameras, lowering systems, and any other installed equipment shall be grounded.

3. Communications Requirements

- a. The CCTV system shall transmit image and video data to Compass and MaineDOT's Axis Camera Station software currently in operation.
- b. The Contractor shall provide all necessary equipment, cables, hardware, and ancillary equipment to capture the CCTV image and video data and transmit the data to Compass and to the Axis Camera Station software at the MaineDOT TMC.
- c. The communication system shall allow for configuration control and troubleshooting of the CCTV equipment through both a local onsite connection and through a remote connection to the controller.

4. CCTV Support Pole with Lowering Devices.

- a. The Contractor shall supply and install internal conduits inside the pole to isolate and separate the lowering cables from all other equipment cables. These conduits shall interface with the lowering device through Manufacturer supplied mounting adapters. Only the lowering cable shall be permitted to move within the pole or lowering device during lowering or raising operations.
- b. The lowering system shall be provided and installed with all components as per manufacturer's specifications and procedures. The Contractor shall arrange for the Manufacturer's factory representative to be present on site to assist with the assembly, installation and testing of the lowering system.
- c. Camera lowering devices shall be installed to provide unobstructed camera views along the mainline roadway.
- d. Weights and/or counterweights shall be provided by the Manufacturer as necessary to assure that the alignment of pins and connectors are proper for the camera support to be raised into position without binding. The lowering unit shall have sufficient weight to disengage the camera and its control components for lowering.
- e. The Contractor shall provide a sealant between the lowering device and the camera assembly to assure water tightness of the camera assembly.

5. ITS Cables

- a. All equipment shall be installed using the Manufacturer's recommended cables.
- b. All cables shall be installed in a continuous run. Splicing will not be allowed.

654.04 Software and Integration Requirements

The following paragraphs are added:

If the Contractor proposes to supply equipment that is not fully compatible with Compass or the current Axis Camera Station software, the Contractor shall be required to fully integrate the non-compatible equipment into Compass and the Axis Camera Station software so that the new equipment operates in the programs in the same manner as the existing CCTV cameras. All costs associated with software development, coordination with the SwRI, and for all integration services shall be the responsibility of the Contractor. After the first year license, Axis Camera Station Software licensing fees will be paid by MaineDOT.

The Contractor shall ensure that Compass and the Axis Camera Station software reporting functions include and incorporate the new CCTV sites installed on this project.

654.07 Method of Measurement

The following paragraphs are added:

Highway Traffic Camera shall be measured by each installed, tested, operational, and accepted.

Closed Circuit Television (CCTV) Systems will be measured for payment by the lump sum complete in place per site, satisfactorily installed, tested, operational, and accepted.

654.08 Basis of Payment.

The accepted quantities of Highway Traffic Camera will be paid for at the contract unit price each complete in place. Payment shall be full compensation for furnishing and installing all Highway Traffic Cameras, Ethernet cables and associated communication equipment, power over Ethernet injectors (POEI), grounding and TVSS equipment, integration and software modifications, software licensing, system testing, training, warranties and guaranties, and all appurtenances, labor, tools, materials, transportation and incidentals required for a complete and functional installation.

Closed Circuit Television (CCTV) Systems will be paid for at the contract lump sum price for each location. Such price will be full compensation for furnishing and installing all materials, including but not limited to the CCTV camera; CCTV controller; support poles and foundations; lowering device system; mounting brackets and hardware; flexible and internal conduits; Ethernet cables and associated communication equipment; power over Ethernet injectors (POEI); grounding and TVSS equipment; integration and software modifications; software licensing; system testing; training; warranties and guaranties; and all appurtenances, labor, tools, materials, transportation and incidentals required for a complete and functional installation. Payment shall include all design calculations, submittals, and shop drawings for the support pole.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
654.10	Highway Traffic Camera	Each
654.211	Closed Circuit Television (CCTV) System	Lump Sum

SPECIAL PROVISION
SECTION 654
INTELLIGENT TRANSPORTATION SYSTEMS
(POE Ethernet Switch)

Special Provision 654 ITS BASE SPECIFICATION is amended as follows:

654.01 Description

The following paragraph is added:

This item shall consist of furnishing and installing a 1 Gigabit per second (Gbps) Ethernet Switch, as well as all needed accessories required for a full and complete installation, including but not limited to power adapters and Ethernet patch cables.

654.021 Materials

The following section is added:

654.026 POE Ethernet Switch

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

1. The Ethernet Switch shall have a multi-speed 10/100/1000 Mbps Ethernet ports with RJ45 connectors. The Contractor shall determine the number of ports required for the project installation and provide a switch with the required number of ports, plus a minimum of two spare Ethernet ports with RJ45 connectors.
2. The switch shall be installed within the field cabinets as shown on the plans. The switch shall be designed for shelf mounting and rack-mounting in a standard 19-inch rack.
3. The switch specified herein shall be a self-contained unit capable of 24-hour per day unattended operation. The switch shall be supplied, assembled, configured, and tested by the Contractor.
4. The switch shall be of rugged design and suitable for reliable operation when mounted in the configuration as specified in these Specifications and the Plans. The switch shall be configured for minimum maintenance or adjustment after initial set-up.
5. The Contractor shall provide the switch with all required software. The software shall be web-based or the Contractor shall provide licensing for the software to be installed on a minimum of ten (10) computers to be determined by the TMC.
6. The switch shall have the following connections:

6.1 The Contractor shall determine the number of multi-speed 10/100/1000 Mbps Ethernet ports with RJ45 connectors required for the specific installation. The 10/100/1000 Mbps ports shall meet the following network standards:

- 6.1.1 IEEE.802.3 10 Base-T
- 6.1.2 IEEE.802.3u 100 Base-T
- 6.1.3 IEEE.802.3ab 1000 Base-T
- 6.1.4 IEEE 802.3at Power over Ethernet Plus (POE+)
- 6.1.5 IEEE.802.1d Spanning Tree
- 6.1.6 IEEE.802.1w Rapid Spanning Tree
- 6.1.7 IEEE.802.1q VLAN
- 6.1.8 IEEE.802.1p Class of service (CoS)

6.2 The Contractor shall supply, install, and test all Ethernet cables required to make all connections as shown in the Plans. Ethernet cables shall be weatherproof Category 6 (Cat6) suitable for exposed, outdoor installations. The cable outer jacket shall be UV resistant.

7. Ethernet Switch shall support the following protocols:

- 7.1 RTP/I
- 7.2 RCP/IP
- 7.3 DNS
- 7.4 DHCP

8. The Ethernet Switch shall support the following network management protocols and be interoperable and compatible with the following communication systems:

- 8.1 SNMP V2c
- 8.2 RMON for Ethernet agent
- 8.3 Telnet/TFTP
- 8.4 ICMP

9. The switch shall be UL listed.

10. The switch shall be a fully managed Ethernet layer 2 device.

11. The switch shall have a switching method of store and forward.

12. The switch shall have an operating temperature range of -28 to 150 degrees Fahrenheit.

13. The switch shall have a power usage of +12VDC to +24VDC at 1 amp or less. This shall be provided by an included plug-in type AC adapter.

654.07 Method of Measurement

The following paragraph is added:

POE Ethernet Switch shall be measured by each installed, connected, configured, tested and accepted in place.

The following section is added:

654.08 Basis of Payment

The accepted quantities of POE Ethernet Switch will be paid for at the contract unit price each complete in place. Payment shall be full compensation for furnishing and installing an Ethernet Switch, Ethernet cables, installation, configuration and testing.

Payment will be made under:

<u>Pay Item</u>	<u>Description</u>	<u>Pay Unit</u>
654.313	POE Ethernet Switch	Each

SPECIAL PROVISION
SECTION 654
INTELLIGENT TRANSPORTATION SYSTEMS
(Communications Service Connection)

Section 654 of the Standard Specifications INTELLIGENT TRANSPORTATION SYSTEMS is amended as follows:

654.01 Description

The following paragraph is added:

This item shall consist of furnishing and installing a hard wire communications connections at each CCTV site in order to provide high speed, high capacity communications to the Transportation Management Center in Augusta, Maine. It is anticipated that the backhaul will entail a fiber optic or Ethernet connection to an internet service provider (ISP) adjacent to each CCTV site, with all necessary cables and equipment.

654.03 Construction

The following sections are added:

654.031 Communications Connection

1. Communications Service Connection shall consist of all materials required to establish a hard wire connection to a public or private utility company that provides high speed, high bandwidth internet service.
2. A proposed communications connection has been identified in the Plans at the utility pole from which electric power service is also proposed. The Contractor shall be responsible for coordinating with the ISP to determine the final location of the preferred communications hand-off.
3. The proposed ISP is anticipated to be SWI/Biddeford Internet Corp., First Light Fiber, or Spectrum/Time Warner/Charter Communications.
4. The Contractor shall arrange a meeting with the Resident, a representative of the TMC, and the each of the proposed ISPs to establish a schedule for communications service connections for the connection to the TMC in Augusta, Maine. This meeting shall be held before any equipment or material is ordered for the service connection.
5. The Contractor shall be responsible for furnishing and installing the required materials and equipment associated with establishing a communications service connection. The materials and equipment shall conform to the ISP's requirements for service connection.
6. The Contractor shall establish a minimum of 10 Mbps upload and 10 Mbps download service at a location along the proposed fiber optic cable as directed by the Resident.
7. The communications service shall be robust and reliable, providing 99.99 percent uptime averaged over a year.
8. Communications service shall be obtained on behalf of the Maine Department of Transportation.

9. The Contractor shall be responsible for payment of any connection and installation fees charged by the ISP for the provision of communications service. The Contractor shall also be responsible for payment of the monthly service charges throughout the project and for a minimum of 90 days following operational testing of the project's ITS equipment. After the 90 days, the Contractor shall transition the monthly service charges to MaineDOT at the direction of the Resident and the TMC.

654.07 Method of Measurement

The following paragraph is added:

Communications Service Connection shall be measured for payment by the lump sum complete in place per site, satisfactorily installed, connected, tested, and accepted.

654.08 Basis of Payment

Communications Service Connection will be paid for at the contract lump sum price complete in place. Payment shall be full compensation for coordination with the ISP, for all equipment and materials required by the ISP and necessary for establishing the communications service connection, for all connection fees, for monthly service fees through 90 days following the completion of the ITS device operational test period, and for any cables, connectorizing, splicing and installation to make a connection between the CCTV site and the ISP point of demarcation. Payment shall also include all labor, materials, tools, equipment, and incidentals necessary to provide a complete and functional communications service connection.

Conduit installed for the connection from the ISP communication source to the appropriate ITS equipment cabinet shall be paid for in accordance with Section 626.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
654.332	Communications Service Connection	Lump Sum

SPECIAL PROVISION
SECTION 654
INTELLIGENT TRANSPORTATION SYSTEMS
(Fiber Optic Cable)

Section 654 of the Standard Specifications – Intelligent Transportation Systems – is amended as follows:

654.01 Description

The following paragraph is added:

This item of work shall conform to this specification, and with IMSA General Specification 70 for Single Mode Fiber Optic Cable. This item shall consist of furnishing and installing single mode fiber optic cable with the number of strands indicated in the Plans, with all necessary splices and appurtenances.

654.021 Materials

The following sections are added:

654.022 Fiber Optic Cable - General

All of the fiber optic cable for this project shall be from the same manufacturer and shall be 2-strand, single-mode. The Fiber Optic Cable shall meet the following requirements:

1. The fiber optic cable shall be designed for both aerial and underground (conduit) installations, and shall be suitable for these applications by the manufacturer.
2. The fiber optic cable shall operate over a temperature range of -40 to 74 degrees C at a relative humidity of 10% to 90% condensing.
3. All fiber optic cable materials shall be non-conductive to electricity.
4. The fiber optic cable shall meet or exceed the following performance characteristics when tested in accordance with the following fiber optic test procedures (FOTP) from EIA/TIA-455-B Series standards:
 - a. When tested in accordance with FOTP-3, "Procedure to Measure Temperature Cycling Effects on Optical Fibers, Optical Cable, and Other Passive Fiber Optic Components," the change in attenuation at extreme operational temperatures (-40⁰C and +70⁰C) shall not exceed 0.2 dB/km at 1550 nm.
 - b. When tested in accordance with FOTP-25, "Repeated Impact Testing of Fiber Optic Cables and Cable Assemblies," the cable shall withstand 25 impact cycles. The change in attenuation shall not exceed 0.2 dB at 1550 nm.
 - c. When tested in accordance with FOTP-33, "Fiber Optic Cable Tensile Loading and Bending Test," using a maximum mandrel and sheave diameter of 560 mm, the cable shall withstand a tensile load of 2700 N (608 lbs). The change in

attenuation shall not exceed 0.2 dB during loading and 0.1 dB after loading at 1550 nm.

- d. When tested in accordance with FOTP-37, "Low or High Temperature Bend Test for Fiber Optic Cable", the cable shall withstand four full turns around a mandrel of < 10 times the cable diameter for non-armored cables and < 20 times the cable diameter for armored cables after conditioning for four hours at test temperatures of -30⁰C and +60⁰C. Neither the inner or outer surfaces of the jacket shall exhibit visible cracks, splits, tears or other openings. Optical continuity shall be maintained throughout the test.
- e. When tested in accordance with FOTP-41, "Compressive Loading Resistance of Fiber Optic Cables," the cable shall withstand a minimum compressive load of 440 N/cm (250 lbf/in) for armored cables and 220 N/cm (125 lbf/in) for non-armored cables applied uniformly over the length of the sample. The load shall be applied at the rate of 3 mm to 20 mm per minute and maintained for ten minutes. The change in attenuation shall not exceed 0.4 dB during loading and 0.2 dB after loading at 1550 nm.
- f. When tested in accordance with FOTP-81, "Compound Flow (Drip) Test for Filled Fiber Optic Cable", the cable shall exhibit no flow (drip or leak) of filling and/or flooding material at 80°C.
- g. When tested in accordance with FOTP-85, "Fiber Optic Cable Twist Test," a length of cable no greater than 4 meters shall withstand 10 cycles of mechanical twisting. The change in attenuation shall not exceed 0.1 dB at 1550 nm.
- h. When tested in accordance with FOTP-104, "Fiber Optic Cable Cyclic Flexing Test," the cable shall withstand 25 mechanical flexing cycles around a sheave diameter not greater than 20 times the cable diameter. The change in attenuation shall not exceed 0.1 dB at 1550 nm.

654.028 Fiber Optic Cable – Cable Construction

1. Anti-buckling central member which shall prevent the cable from buckling and stretching. The central member shall consist of a dielectric glass reinforced plastic rod. The central member expansion and contraction characteristics shall be similar to the optical fibers and the fiber tubes.
2. Loose Buffered Tubes in which multiple fibers strands are placed inside. Each Buffer Tube shall meet the following requirements:
 - a. Allowed buffered tube diameters shall be 2.0mm or 3.0 mm.
 - b. The number of fibers inside a Buffer Tube shall not exceed 12 strands.
 - c. Buffer Tube material shall prevent the fiber from adhering to the inside of the tube.
 - d. Buffer Tubes shall be colored in accordance with TIA/EIA-598-A, "Color Coding of Optical Fiber Cables".

3. Fiber Optic strands shall be placed loosely inside the Buffer Tube to allow for fiber expansion and contraction due to temperature changes.
4. Buffer Tube shall be filled with a water blocking material meeting the following requirements:
 - a. The filling shall prevent water intrusion, be nontoxic, and non-irritant to skin contact.
 - b. The filling shall be non-nutritive to fungus.
 - c. The filling shall be electrically non-conductive and readily removable with conventional non-toxic solvents.
5. Fiber Optic Strands, which shall consist of a doped-glass cylindrical core, surrounded by a concentric cladding. An acrylate coating shall cover the fiber to add protection and color. Each fiber optic strand shall meet the following requirements:
 - a. Core diameter shall be $8.3 \mu\text{m} \pm 0.5\mu\text{m}$.
 - b. Cladding diameter shall be $125 \mu\text{m} \pm 1.0 \mu\text{m}$.
 - c. Core to Cladding offset shall be less than $0.8 \mu\text{m}$.
 - d. Cladding Non-Circularity shall be less than 1.0 %.
 - e. Total coating diameter shall be $245 \pm 10 \mu\text{m}$ and shall be mechanically strippable.
 - f. Coating color shall be in accordance with TIA/EIA-598-A, "Optical Cable Color Coding".
 - g. No point discontinuity along the fiber shall have attenuation greater than 0.10 dB at either 1310 nm or 1550 nm.
 - h. Attenuation at the Water Peak shall not exceed 2.1 dB/km at $1383 \pm 3 \text{ nm}$.
 - i. Mode-Field Diameter shall be $9.30 \pm 0.50 \mu\text{m}$ at 1310 nm, and $10.5 \pm 1.0 \mu\text{m}$ at 1550 nm.
 - j. Zero Dispersion Wavelength shall be between 1301.5 nm and 1321.5 nm.
 - k. Zero Dispersion Slope shall be less than $0.092 \text{ ps}/(\text{nm}^2 * \text{km})$.
 - l. Cable loss shall not exceed 0.4dB/km when measured at a light wavelength of 1310nm.
 - m. Cable loss shall not exceed 0.3dB/km when measured at a light wavelength of 1550nm.
6. The cable casing shall be composed of a minimum of two protective layers. Each layer requirements are as follows:
 - a. The first casing layer shall be composed of high tensile strength dielectric yarns helically stranded evenly around the cable core.
 - b. The second and outer most layer shall be a polyethylene jacket. The jacket shall meet the following requirements:

- i. The jacket shall be black medium or high density polyethylene in accordance with ASTM D1248, Type II or Type III, Class C, Category 3, 4, or 5 and contain a suitable antioxidant.
 - ii. The jacket shall contain carbon black to provide ultraviolet light protection.
 - iii. The jacket shall have a minimum thickness of 1.4 mm.
 - iv. The jacket shall have permanent affixed markings every two feet or every one meter along the cable. These markings shall contain at a minimum the cable length (in feet if markings appear every two feet or in meters if markings appear every one meter) manufacturer's name, date of manufacturer, and fiber count.
- c. A ripcord shall be provided between the first and second layer.
- d. All casing layers shall be non-nutritive to fungus.

654.03 Construction

The following sections are added:

654.031 Fiber Optic Cable Installation Requirements

1. All fiber optic cables to be installed on aerial messenger wire or in a conduit or duct facility shall be pulled as a unit. The Contractor shall ensure the cable is not damaged during storage, delivery and installation.
2. The cable shall not be pulled along the ground or over or around obstructions. The cable shall not be stepped on by workmen, nor run over by vehicles or equipment. All cable shall be inspected and approved by the Engineer prior to installation.
3. All cables shall be lashed to or pulled on aerial messenger cable or in conduit with a cable grip designed to provide a firm hold on the exterior covering of the cable, with heat shrinkable end caps placed on the cable ends.
The maximum pulling tensions and minimum bending radius shall not be violated at any time during installation, and shall be monitored at all times during installation. Prior to any installation of cable, the Contractor shall clean existing conduit and aerial messengers (if applicable), per industry standards.
4. The Contractor shall establish adequate voice communications between the cable feeding location and the cable pulling equipment prior to commencing any pulling operation. The cable reels shall be placed on the same side of the pull box with the conduit where the cable is being installed. The reel shall be made level and brought into proper alignment with the conduit or messenger section, such that the cable will pass from the top of the reel. The cable shall be fed by manually rotating the reel.
5. For underground installations, the fiber optic cable shall not be pulled through an intermediate junction box, pull box, or any other opening in the conduit, unless approved by the Engineer. The necessary length of cable to be installed shall be pulled from pull box, or cabinet to the immediate next downstream pull box, or cabinet. The remaining

length of cable to be installed in the next conduit or along aerial messenger shall be carefully stacked or stored in a manner that allows that length of cable to be safely pulled into the next conduit.

6. An approved cable feeder guide shall be used between the cable reel or the storage stack and the face of the conduit to protect the cable, and to guide the cable installation. The dimensions and set-up of the feeder guide shall be such that the cable does not bend at any location to a radius less than the cable's minimum allowable bending radius. The cable shall not be pulled over edges or corners, over or around obstructions, or through unnecessary curves or bends. The cable shall be looped in and out to cabinets and pull boxes to provide adequate slack (as specified in 654.033.14 Cable Spare of this specification) and the least amount of stress on the fibers. The Contractor shall ensure that the cable is not damaged during storage or installation.
7. Fiber optic cable ends shall be kept sealed at all times during installation, using an approved cable end cap. Tape shall not be permitted to seal the cable end. The cable end shall remain sealed until the Contractor terminates the fiber cables. Cables that are not immediately terminated shall have a minimum of six feet of slack.
8. The allowable pulling tension shall be the lesser of either of the two values below:
 - a. The cable manufacturer's recommended pulling tension from the outer jacket for the cable.
 - b. Eighty percent of the cable manufacturer's maximum pulling tension from the outer jacket.
9. The Contractor shall monitor the tension on the fiber optic cable with the use of an approved tension gauge. The gauge shall be placed sufficient distance from the take up reel, such that the tension can be read throughout the entire pulling operation.
10. When using lubricants, the Contractor shall adhere to the cable manufacturer's requirements for the proper amount, application tools and method, and removal of the lubricant from the exposed cable.
11. All cable shall run continuously from termination point to termination point as indicated on the plans or the Engineer. The Contractor shall carefully determine the length of cable to reach from termination point to termination point. Cutting of fiber optic cables at any location other than those shown on the plans shall not be permitted.
12. The Contractor shall document the locations of all splices and connections for each strand of fiber optic cable. This documentation shall show the distance in feet of fiber optic cable from the end of the cable for every splice and connection, and shall also show the cable length marking as marked on the cable for every splice and connection. Four copies of the documentation shall be furnished to the Engineer prior to testing.
13. Cable Termination: The Contractor shall terminate fiber optic cables in the following manner:
 - a. All splice installations shall be performed using a fusion splicing technique. Splice insertion loss shall not exceed 0.1 dB.
 - b. The Contractor shall provide all equipment and consumable supplies necessary for performing the splices.

- c. Each spliced fiber shall be packaged in a protective, waterproof sleeve.
 - d. Bare fibers shall be completely re-coated with a protective room temperature vulcanizing (RTV) coating gel, or similar approved substance, prior to the application of the sleeve so as to protect the fiber from scoring, dirt, or microbending.
14. Cable Spare: The Contractor shall install spare cable as follows and as indicated by the engineer:
- a. A minimum 20 feet shall be stored at ITS equipment cabinets and pull boxes.
 - b. Cable storage shall be performed in an industry standard manner that does not violate the minimum bending radius specification of the cable.
 - c. All spare cable shall be hung on cable racks where provided.

654.07 Method of Measurement

The following paragraphs are added:

Fiber Optic Cable shall be measured by the number of linear feet installed, except that the Contractor will be paid for slack cable according to the minimum required and shall not be paid for excess slack cable provided.

654.08 Basis of Payment

Payment will be made for the total number of linear feet of Single Mode Fiber Optic Cable furnished, installed, tested, and accepted at the Contract price per linear foot, measured to the nearest 0.5 feet. The price shall include the cost of furnishing and installing the cable, furnishing and installing the messenger cable for aerial cable, lashings for aerial cable, splicing, and for all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
654.3333	Single Mode Fiber Optic Cable: 2 Strand	Linear Foot

2020 STANDARD DETAIL UPDATES

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

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

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

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

SECTION 101
CONTRACT INTERPRETATION

101.2 Definitions

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

Construction Limit Line Remove this definition in its entirety.

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

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

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

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

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

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

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

SECTION 102 BIDDING

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

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

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

SECTION 103 AWARD AND CONTRACTING

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

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

SECTION 104 GENERAL RIGHTS AND RESPONSIBILITIES

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

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

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

SECTION 105 GENERAL SCOPE OF WORK

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

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

SECTION 106 QUALITY

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

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

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

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

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

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

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

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

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

SECTION 107 TIME

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

SECTION 108 PAYMENT

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

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

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

Payment will be made at the following intervals:

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

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

“Upon Final Acceptance, and determination by the department that there are no claims either by or on the Contractor or Subcontractors; no over payments by the department; no LDs due; and no disincentives due, the Department will reduce Retent to 1% of the original Contract Award amount, or \$100,000, whichever is less, as it deems desirable and prudent.”

108.4.1 Price Adjustment for Hot Mix Asphalt Revise this section by removing it in its entirety and replacing it with the following:

“108.4.1 Price Adjustment for Hot Mix Asphalt: For each Contract, a price adjustment for performance graded binder will be made for the following pay items, when the total quantity of Hot Mix Asphalt included in these items is in excess of 500 tons, based on the estimated quantities of these items at the time of bid.

Item 403.102	Hot Mix Asphalt – Special Areas
Item 403.207	Hot Mix Asphalt - 19 mm
Item 403.2071	Hot Mix Asphalt - 19 mm (Polymer Modified)
Item 403.2072	Hot Mix Asphalt - 19 mm (Asphalt Rich Base)
Item 403.208	Hot Mix Asphalt - 12.5 mm
Item 403.2081	Hot Mix Asphalt - 12.5 mm (Polymer Modified)
Item 403.2084	Hot Mix Asphalt - 12.5 mm (Highly Modified HiMAP)
Item 403.209	Hot Mix Asphalt - 9.5 mm (sidewalks, drives, & incidentals)
Item 403.210	Hot Mix Asphalt - 9.5 mm
Item 403.2101	Hot Mix Asphalt - 9.5 mm (Polymer Modified)
Item 403.2104	Hot Mix Asphalt - 9.5 mm (Thin Lift Surface Treatment)
Item 403.21041	Hot Mix Asphalt - 9.5 mm (Polymer Modified Thin Lift Surface Treatment)
Item 403.211	Hot Mix Asphalt – Shim
Item 403.2111	Hot Mix Asphalt – Shim (Polymer Modified)
Item 403.212	Hot Mix Asphalt - 4.75 mm (Shim)
Item 403.213	Hot Mix Asphalt - 12.5 mm (base and intermediate course)
Item 403.2131	Hot Mix Asphalt - 12.5 mm (base and intermediate course Polymer Modified)
Item 403.2132	Hot Mix Asphalt - 12.5 mm (Asphalt Rich Base and intermediate course)
Item 403.301	Hot Mix Asphalt (Asphalt Rubber Gap-Graded)
Item 461.13	Light Capital Pavement
Item 461.210	9.5 mm HMA - Paver Placed Surface
Item 461.2101	Hot Mix Asphalt - 9.5 mm (Polymer Modified)
Item 461.216	Hot Mix Asphalt (Shim)
Item 462.30	Ultra-Thin Bonded Wearing Course
Item 462.301	Polymer Modified Ultra-Thin Bonded Wearing Course

Price adjustments will be based on the variance in costs for the performance graded binder component of hot mix asphalt. They will be determined as follows:

The quantity of hot mix asphalt for each pay item will be multiplied by the performance graded binder percentages given in the table below times the difference in price between the base price and the period price of asphalt cement. Adjustments will be made upward or downward, as prices increase or decrease.

Item 403.102–6.2%
Item 403.207–5.2%
Item 403.2071–5.2%
Item 403.2072–5.8%
Item 403.208–5.6%
Item 403.2081–5.6%
Item 403.2084 – 6.2%
Item 403.209–6.2%
Item 403.210–6.2%
Item 403.2101–6.2%
Item 403.2104–6.2%
Item 403.21041–6.2%
Item 403.211–6.2%
Item 403.2111–6.2%
Item 403.212–6.8%
Item 403.213–5.6%
Item 403.2131–5.6%
Item 403.2132–6.2%
Item 403.301–6.2%
Item 461.13–6.7%
Item 461.210 – 6.4%
Item 461.2101 – 6.4%
Item 461.216 – 6.7%
Item 462.30–0.0021 tons/SY
Item 462.301–0.0021 tons/SY”

SECTION 110 INDEMNIFICATION, BONDING, AND INSURANCE

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

SECTION 206 STRUCTURAL EXCAVATION

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

206.04 Method of Measurement – Drainage and Minor Structures Paragraph 1, sentence 2, delete the remainder of the sentence beginning with “....provided the maximum allowable...” And replace with: “**....in accordance with the following limits:**”

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

SECTION 401 HOT MIX ASPHALT PAVEMENT

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

SECTION 501 FOUNDATION PILES

501.05 Method of Measurement

c. Piles in Place Revise the third paragraph by replacing the “10” with “20” so that it reads:

Unused pile cutoffs **20** feet or more in length, except those required to accommodate the Contractor’s construction method, as discussed herein, will remain the property of the Department and will be stored at a bridge maintenance yard nearest the project. Hauling and unloading of piles will be done by the Contractor or by the Department, depending upon availability of services.

SECTION 502 STRUCTURAL CONCRETE

502.09 Forms and Falsework Amend this subsection by adding the subsection title “**502.10 Placing Concrete**” after section “D” Removal of Forms and False work” and after the paragraph beginning with “2. Forms and False work, including blocking...”. So that a new subsection starts and reads:

“502.10 Placing Concrete

A. **General** Concrete shall not be placed until forms”

502.1701 Quality Control, Method A and B Revise this Section so that the first paragraph and the first sentence of the second paragraph read:

“502.17 Quality Control The Contractor shall control the quality of the concrete through testing, inspection, and practices which shall be described in the QCP, sufficient to assure a product meeting the Contract requirements. The QCP shall meet the requirements of Section 106, Quality, and this specification. No work under this item shall proceed until the QCP is submitted to and approved by the Department. Failure to comply with the approved QCP will result in work suspension and pay reductions as outlined in Section 106.4.6. The Quality Control Plan Value shall be the total bid value for all cast-in-place items covered by the QCP, using the P value listed in Special Provision 502. If no P value is listed, a value of \$350, or bid value per cubic yard, whichever is less, shall be used.

502.1701 Quality Control, Method A and B The QCP shall address all elements that affect the quality of the structural concrete including, but not limited to, the following: “

Section 502.1701, Quality Control, Revise Table 4 of this Subsection by removing it in its entirety and replacing it with:

TABLE 4
METHOD A & B MINIMUM QUALITY CONTROL TESTING REQUIREMENTS *

TEST	TEST METHOD	SAMPLING LOCATION	FREQUENCY
Gradation	AASHTO T-27 & T-11	Stockpile	One set per proposed grading before production. One set every 100 yd ³ (Min. 1 set per month)
Organic Impurities	AASHTO T-21	Stockpile	Once per fine aggregate per year **
% Absorption	AASHTO T-84 & T-85	Stockpile	Once per aggregate per year
Specific Gravity	AASHTO T-84 & T-85	Stockpile	Once per aggregate per year
Total Moisture in Aggregate	AASHTO T-255	Stockpile	One set per day's production

Free Water and Aggregate Wt.	N/A		One per day's production
% Entrained Air	AASHTO T-152	On Project	On first two loads and every third load thereafter provided consistent results are achieved
Compressive Strength	AASHTO T-22	On Project	One set per subplot
Compressive Strength	AASHTO T-22 @ 7days	On Project	One set per subplot

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

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

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

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

(Also see 535.24 and 535.25 for related changes)

SECTION 503 REINFORCING STEEL

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

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

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

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

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

SECTION 506 SHOP APPLIED PROTECTIVE COATING – STEEL

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

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

SECTION 523 BEARINGS

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

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

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

SECTION 526 CONCRETE BARRIER

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

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

The types of concrete barrier are designated as follows:

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

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

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

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

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

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

526.02 Materials

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

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

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

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

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

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

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

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

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

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

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

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

526.03 Construction Requirements

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

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

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

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

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

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

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

- a. Cross-sectional dimensions shall not vary from design dimensions by more than $\frac{1}{4}$ 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

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

“Product dimensional tolerances shall be in conformance with the latest edition of PCI MNL-135, Tolerance Manual for Precast and Prestressed Concrete Construction, as applicable to the particular product (e.g., slab, I-girder, box beam), the Plans, and this Specification. Use Box Beam fabrication tolerances for voided or solid slab beams and use Double Tee tolerances for NEXT beams. In case of dispute, the Fabrication Engineer shall determine the allowable tolerance.”

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

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

SECTION 606 GUARDRAIL

Amend this section by replacing it with the following:

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

31" W-Beam Guardrail - Mid-Way Splice

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

Thrie Beam

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

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

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

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

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

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

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

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

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

Reflectorized Flexible Guardrail Markers shall be mounted on all guardrails. A marker shall be mounted onto guardrail posts at the flared guardrail terminal end point and tangent point, both at the leading and trailing ends of each run of guardrail. The marker’s flexible posts shall be gray with either silver-white or yellow reflectors (to match the edge line striping) at the tangents, red at leading ends, and green at trailing ends. Whenever the guardrail terminal is not flared, markers will only be required at the terminal end point. These shall be red or green as appropriate. Markers shall be installed on the protected side of guardrail posts unless otherwise approved by the Resident. Reflectorized flexible guardrail markers shall be from the Department’s Qualified Products List of Delineators. The marker shall be gray, flexible, durable, and of a non-discoloring material to which 3-inch by 9-inch reflectors shall be applied, and capable of recovering from repeated impacts and meeting MASH 16 requirements. Reflective material shall meet the requirements of Section 719.01 for ASTM D 4956 Type III reflective sheeting. The marker shall be secured to the guardrail post with two fasteners, as shown in the Standard Details.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
606.1301 31" W-Beam Guardrail - Mid-Way Splice – Single Faced	Linear Foot
606.1302 31" W-Beam Guardrail - Mid-Way Splice – Double Faced	Linear Foot
606.1303 31" W-Beam Guardrail - Mid-Way Splice, 15' Radius and Less	Linear Foot
606.1304 31" W-Beam Guardrail - Mid-Way Splice, Over 15' Radius	Linear Foot
606.1305 31" W-Beam Guardrail - Mid-Way Splice Flared Terminal	Each
606.1306 31" W-Beam Guardrail - Mid-Way Splice Tangent Terminal	Each
606.1307 Bridge Transition (Asymmetrical) – Type IA	Each
606.1721 Bridge Transition - Type I	Each
606.1722 Bridge Transition - Type II	Each
606.1731 Bridge Connection - Type I	Each
606.1732 Bridge Connection - Type II	Each
606.178 Guardrail Beam	Linear Foot
606.25 Terminal Connector	Each
606.257 Terminal Connector - Thrie Beam	Each
606.259 Anchorage Assembly	Each
606.265 Terminal End-Single Rail - Galvanized Steel	Each
606.266 Terminal End-Single Rail - Corrosion Resistant Steel	Each
606.275 Terminal End-Double Rail - Galvanized Steel	Each
606.276 Terminal End-Double Rail - Corrosion Resistant Steel	Each
606.352 Reflectorized Beam Guardrail Delineators ("Butterfly" type)	Each
606.3521 Linear Delineation System Panel	Each
606.353 Reflectorized Flexible Guardrail Marker	Each
606.354 Remove and Reset Reflectorized Flexible Guardrail Marker	Each
606.356 Underdrain Delineator Post	Each
606.358 Guardrail, Modify	Linear Foot
606.362 Guardrail, Adjust	Linear Foot
606.365 Guardrail, Remove, Modify, and Reset	Linear Foot
606.366 Guardrail, Remove and Reset	Linear Foot
606.367 Replace Unusable Existing Guardrail Posts	Each
606.3671 Replace Unusable Offset Blocks	Each
606.47 Single Wood Post	Each
606.48 Single Galvanized Steel Post	Each
606.50 Single Steel Pipe Post	Each
606.51 Multiple Mailbox Support	Each
606.568 Guardrail, Modify - Double Rail	Linear Foot
606.63 Thrie Beam Rail Beam	Linear Foot
606.64 Guardrail Thrie Beam - Double Rail	Linear Foot
606.65 Guardrail Thrie Beam - Single Rail	Linear Foot
606.66 Terminal End Thrie Beam	Each
606.70 Transition Section - Thrie Beam	Each
606.71 Guardrail Thrie Beam - 15 ft radius and less	Linear Foot
606.72 Guardrail Thrie Beam - over 15 ft radius	Linear Foot

606.73	Guardrail Thrie Beam - Single Rail Bridge Mounted	Linear Foot
606.74	Guardrail - Single Rail Bridge Mounted	Linear Foot
606.753	Widen Shoulder for Low Volume Guardrail End	Each
606.754	Widen Shoulder for Flared Guardrail Terminal	Each
606.78	Low Volume Guardrail End	Each
606.80	Buried-in-Slope Guardrail End	Each

SECTION 608 SIDEWALKS

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

SECTION 609 CURB

Remove this section in its entirety and replace with the following:

609.01 Description Construct or reset curb, gutter, or combination curb and gutter, paved ditch, and paved flume. The types of curb are designated as follows:

- Type 1 - Stone curbing of quarried granite stone
- Type 2 – Concrete Curbing
- Type 3 - Bituminous curbing
- Type 5 - Stone edging of quarried granite stone

609.02 Materials Except as provided below, the materials used shall meet the requirements of the following Sections of Division 700 - Materials:

Portland Cement and Portland Pozzolan Cement	701.01
Water	701.02
Air Entraining Chemical Admixture	701.03
Fine Aggregate for Concrete	703.01
Coarse Aggregate for Concrete	703.02
Joint Mortar	705.02
Reinforcing Steel	709.01
Stone Curbing and Edging	712.04
Epoxy Resin	712.35
Hot Mix Asphalt Curbing	712.36
Structural Precast Concrete Units (Concrete Curb)	712.061

The Contractor shall submit a concrete mix design for the Portland Cement Concrete to the Resident, for the uses specified below or in accordance with the Contract Documents.

Circular curb, terminal sections and transition sections shall be in reasonably close conformity with the shape and dimensions shown on the Plans and to the applicable material requirements herein for the type of curb specified.

Dowels shall be reinforcing steel deformed bars.

Concrete for Slipform Concrete Curb shall meet the requirements below:

- a. Class A, with the exception that permeability requirements shall be waived.
- b. Entrained air content of Slipform Concrete Curb shall be 4.0% to 7.0%
- c. Concrete temperature, prior to discharge, shall not exceed 90 F.
- d. Proposed mix designs may contain polypropylene fibers.
- e. Partially discharged loads may be retempered with water provided the maximum water to cement ratio is not exceeded.

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

a. Installation The curb stone shall be set on a compacted foundation so that the front top arris line conforms to the lines and grades required. The foundation shall be prepared in advance of setting the stone by grading the proper elevation and shaping to conform as closely as possible to the shape of the bottom of the stone. The required spacing between stones shall be assured by the use of an approved spacing device to provide an open joint between stones of at least $\frac{1}{4}$ inch and no greater than $\frac{5}{8}$ inch.

b. Backfilling All remaining spaces under the curb shall be filled with approved material and thoroughly hand tamped so the stones will have a firm uniform bearing on the foundation for the entire length and width. Any remaining excavated areas surrounding the curb shall be filled to the required grade with approved materials. This material shall be placed in layers not exceeding 8 inches in depth, loose measure and thoroughly tamped.

When backfill material infiltrates through the joints between the stones, small amounts of joint mortar or other approved material shall be placed in the back portion of the joint to prevent such infiltrating.

c. Protection The curb shall be protected and kept in good condition. All exposed surfaces smeared or discolored shall be cleaned and restored to a satisfactory condition or the curb stone removed and replaced.

d. Curb Inlets Curb placed adjacent to curb inlets shall be installed with steel dowels cemented into each stone with epoxy grout as shown in the Standard Details.

The epoxy grout shall be used in accordance with the manufacturer's instructions. The grout shall be forced into the hole, after which the dowel shall be coated with grout for one-half its length and inserted into the grout filled hole. The hole shall be completely filled with grout around the dowel. All tools and containers must be clean before using.

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 Departments Qualified Products list (QPL). Concrete backfill shall be completed in conformance with a Department supplied concrete backfill detail.

609.04 Bituminous Curb

a. Preparation of Base Before placing the curb, the foundation course shall be thoroughly cleaned of all foreign and objectionable material. String or chalk lines shall be positioned on the prepared base to provide guidelines. The foundation shall be uniformly painted with tack coat at a rate of 0.04 to 0.14 gal/yd².

b. Placing The curb shall be placed by an approved power operated extruding type machine using the shape mold called for. A tight bond shall be obtained between the base and the curb. The Resident may permit the placing of curbing by other than mechanical curb placing machines when short sections or sections with short radii are required. The resulting curbing shall conform in all respects to the curbing produced by the machine.

c. When required, the curb shall be painted and coated with glass beads in accordance with Section 627 - Pavement Marking. Curb designated to be painted shall not be sealed with bituminous sealing compound.

d. Acceptance Curb may be accepted or rejected based on appearance concerning texture, alignment, or both. All damaged curb shall be removed and replaced at the Contractor's expense.

e. Polyester fibers shall be uniformly incorporated into the dry mix at a rate of 0.25 percent of the total batch weight. Certification shall be provided from the supplier with each shipment meeting the following requirements:

Average Length	0.25 inches \pm 0.005
Average Diameter	0.0008 inches \pm 0.0001
Specific Gravity	1.32-1.40
Melting Temperature	480 °F Minimum

609.05 Slipform Concrete Curb

a. Preparation of Base Before placing the curb, the foundation course shall be thoroughly cleaned of all foreign and objectionable material. The Contractor shall not place Slipform Concrete Curb on a wet or frozen foundation. The foundation (HMA or concrete) may be in a Saturated Surface Dry condition, but no standing water shall be allowed. String or chalk lines shall be positioned on the prepared foundation to provide guidelines. Prior to placing the curb, the foundation shall be uniformly coated with an epoxy resin adhesive that meets the requirements of AASHTO M 235, Type I, II, III, IV or V and has been tested by AASHTO Product Evaluation & Audit Solutions. The Contractor shall submit the epoxy resin adhesive that they propose to utilize with the concrete mix design. The epoxy resin adhesive must be approved prior to placement and used in accordance with manufacturer's recommendations.

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

c. Curing and Sealing Proper curing shall be provided using either a combination curing/sealing compound spray that meets ASTM 1315 Type 1-Class A, or a curing compound spray that meets ASTM 309 Type 1-D – Class A. Curing may also be accomplished by the methods specified in Standard Specification Section 502.14, Curing Concrete.

If a combination curing/sealing compound spray is not used, a separate sealing compound from the MaineDOT Qualified Products List for a Type 1c sealer shall be applied after the concrete has cured.

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

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

f. Acceptance Curb shall be accepted or rejected based on finish, alignment, entrained air content, and compressive strength. Concrete Quality Control and Acceptance

shall be done in accordance with Standard Specification Section 502, Method C. All damaged curb shall be removed and replaced at the Contractor's expense.

609.06 Stone Edging The curb shall be installed, backfilled and protected in accordance with Section 609.03, except as follows:

a. Slope The edging shall be set on a slope as shown on the Plans or as directed.

b. Joints Joints shall be open and not greater than 1½ inch in width.

609.07 Stone Bridge Curb

a. Installation Each stone and the bed upon which it is to be placed shall be cleaned and thoroughly wetted with water before placing the mortar for bedding and setting the stone. The stone shall be set on a fresh bed of joint mortar and well bedded before the mortar has set so that the front top arris line conforms to the line and grade required. Whenever temporary supporting wedges or other devices are used in setting the stones, they shall be removed before the mortar in the bed has become set, and the holes left by them shall be filled with mortar. Concrete behind the stones shall not be placed until the stones have been in place at least two days. Bedding and pointing mortar for joints shall be cured as required under Section 502 - Structural Concrete.

b. Joints Vertical joints shall be ½ inch in width plus or minus ⅛ inch. Whenever possible, the face and top of the joint shall be pointed with joint mortar to a depth of 1½ inch, before the bedding mortar has set. Joints which cannot be so pointed, shall be prepared for pointing by raking them to a depth of 1½ inch before the mortar has set. Joints not pointed at the time the stone is laid shall be thoroughly wetted with clean water and filled with mortar. The mortar shall be well driven into the joint and finished with an approved pointing tool, flush with the pitch line of the stones.

609.08 Resetting Stone or Portland Cement Concrete Curb, Including Terminal Sections and Transitions

The curb shall be installed, backfilled and protected in accordance with Section 609.03, except as follows:

a. Removal of Curbing The Contractor shall carefully remove and store curb specified on the Plans or designated for resetting. Curb damaged or destroyed, because of the Contractor's operations or because of their failure to store and protect it in a manner that would prevent its loss or damage, shall be replaced with curbing of equal quality at the Contractor's expense.

b. Cutting and Fitting Cutting or fitting necessary in order to install the curbing at the locations directed shall be done by the Contractor.

609.09 Method of Measurement Curb, both new and reset, will be measured by the linear foot along the front face of the curb at the elevation of the finished pavement, complete in place and accepted. Curb inlets at catch basins, including doweling, will not be measured for payment but shall be considered included in the cost of the catch basin. New transition sections and terminal curb will be measured by the unit. Reset transition sections and terminal curb will be included in the measurement for resetting curb.

Concrete Slipform Curb and terminal ends will be measured by the linear foot along the front face of the curb at the elevation of the finished pavement, complete in place and accepted.

609.10 Basis of Payment The accepted quantities of curbing will be paid for at the contract unit price per linear foot for each kind and type of curbing as specified.

Payment for terminal curb shall include only that portion of the curbing modified for installation at ends of curb runs shown in the Standard Details. Curb adjacent to terminal ends shall be paid for at the contract unit price per linear foot for the type of curb installed.

Vertical Curb Type 1 is required to have a radius of 60 feet or less, will be paid for as Vertical Curb Type 1 - Circular.

Curb, Type 5 required to have a radius of 30 feet or less will be paid for as Curb Type 5 - Circular.

There will be no separate payment for concrete fill, mortar, reinforcing steel, anchors, tack coat, drilling for and grouting anchors, pointing and bedding of curbing, and for cutting and fitting, but these will be considered included in the work of the related curb.

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

Payment will be made under:

	<u>Pay Item</u>	<u>Pay Unit</u>
609.11	Vertical Curb Type 1	Linear Foot
609.12	Vertical Curb Type 1 - Circular	Linear Foot
609.13	Vertical Bridge Curb Type 1	Linear Foot
609.131	Vertical Bridge Curb Type 1A	Linear Foot
609.132	Vertical Bridge Curb Type 1B	Linear Foot
609.142	Vertical Bridge Curb Type 1B - Circular	Linear Foot
609.15	Sloped Curb Type 1	Linear Foot
609.151	Sloped Curb Type 1 - Circular	Linear Foot
609.161	Concrete Slipform Curb – Vertical Type 2	Linear Foot
609.21	Concrete Slipform Curb Type 2	Linear Foot

609.219	Concrete Slipform Terminal End Type 2	Linear Foot
609.23	Terminal Curb Type 1	Each
609.234	Terminal Curb Type 1 - 4 foot	Each
609.237	Terminal Curb Type 1 - 7 foot	Each
609.2371	Terminal Curb Type 1 - 7 foot – Circular	Each
609.238	Terminal Curb Type 1 - 8 foot	Each
609.26	Curb Transition Section B Type 1	Each
609.31	Curb Type 3	Linear Foot
609.34	Curb Type 5	Linear Foot
609.35	Curb-Type 5 - Circular	Linear Foot
609.38	Reset Curb Type 1	Linear Foot
609.39	Reset Curb Type 2	Linear Foot
609.40	Reset Curb Type 5	Linear Foot

SECTION 610

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

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

SECTION 618

SEEDING

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

SECTION 619

MULCH

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

SECTION 626

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

Section 626.021 Miscellaneous Materials Revise this section by removing the fourth paragraph beginning with “ All Concrete for concrete encasement...” and replace it with **“All concrete for concrete encasement of conduit shall be Class S or Class Fill concrete in accordance with the applicable requirements of Section 502 – Structural Concrete, or a Prepackaged Concrete Mix from the Department’s Qualified Products List (QPL).”**

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

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

Revise the 10th paragraph beginning with “Before placing concrete, the required elbows...” by removing “...in accordance with **Standard Specification 633.**”

626.036 Precast Foundations Revise the last sentence of paragraph one so that it reads: **“Construction of precast foundations shall conform to the Standard Details and all requirements of 712.061.”**

SECTION 627 **PAVEMENT MARKINGS**

627.02 Materials Amend this section by adding the following to the existing Specification:

“When pavement marking paint must be applied on pavement with an air temperature between 35 °F and 50 °F, a low temperature waterborne paint may be used upon the Department’s approval as noted below.

The Contractor shall submit the following information for Department review and approval at least 10 calendar days prior to application:

The manufacturer and product name of the low temperature waterborne paint

The manufacturer’s technical product data sheets

The product’s SDS sheets

All required and recommended application specifications for the product

The manufacturer’s requirements for temperature, surface preparation, paint thickness and the bead application shall be followed. No additional payment will be made for the use of low temperature waterborne paint. “

627.06 Application Revise this subsection by replacing the paragraph beginning with “ On other final pavement markings...” with the following:

“On other final pavement markings and on curb, where the paint is applied by hand painting or spraying, application shall be one uniform covering coat at least 16 mils thick. Before the paint has dried, the glass beads shall be applied by a pressure system that will force the glass beads onto the undried paint as uniformly as possible.

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

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

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

If, after repainting, analysis of the final reflectivity values results in the need for a second repainting, the Contractor will submit in writing a plan of action to meet the reflectivity minimums prior to continuing any work. Once the plan has been reviewed and approved by the Department, the Contractor shall reapply at no cost to the Department.

SECTION 637 DUST CONTROL

Revise this section by removing it in its entirety.

SECTION 643 TRAFFIC SIGNALS

643.021 Materials Amend this subsection by adding the following at the end:

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

Temporary Traffic Control Signals will be crash tested and/or evaluated to MASH2016 criteria by January 1, 2030. Current Category 4 devices in useful serviceable condition that are successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2029.”

643.023 Traffic Signal Structures Remove the third paragraph and replace it with the following:

“Traffic signal support structures shall be classified as Fatigue Category III if they are located on roads with a speed limit of 35 mph or less, Fatigue Category II if they are located on roads with a speed limit of greater than 35 mph, and Fatigue Category I if noted on the Contract Plans. Fatigue Importance Factors shall be as specified in Table 11.6-1 (Fatigue Importance Factors). Fatigue analyses are not required for span-wire (strain) pole traffic signal support structures with heights of 55 feet or less unless required by the current edition of AASHTO “LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals”.

643.09 Service Connection Revise this subsection by removing the paragraph that begins with “Traffic signal services shall have...”.

And by removing the paragraphs beginning with “ A service ground rod shall be installed...” and “A total of 4, 10’ service...” and replace them with **“A total of 4, 10’ service ground rods shall be installed and properly connected together on the outside of the cabinet foundation. One ground rod shall be located at each corner and shall be either flush or slightly below finished grade. The connection between the ground rod and the ground wire shall be an exothermic connection such as a Cadweld. The ground wire from the interconnected ground rods shall be routed through a conduit in the foundation and into the base of the cabinet”**.

SECTION 645 HIGHWAY SIGNING

Section 645.023 Sign Support Structures. Under letter “c.”, revise the fifth paragraph beginning with “In addition to the required details...” by removing the words **”and foundation”** from the 5th sentence.

Section 645.08 Method of Measurement. Revise the second paragraph beginning with “Bridge-type, cantilever and...” by removing the words **”including the foundation”** .

Section 645.09 Basis of Payment. Revise the third paragraph beginning with “The accepted bridge-type, cantilever and...” by removing the word **”foundation”** from the second sentence. Add the following sentence to the end of the paragraph **“Conduits, Junction Boxes, and Foundations will be paid for under Section 626.”**

SECTION 652 MAINTENANCE OF TRAFFIC

652.2.5 Portable Changeable Message Sign Revise the fifth paragraph so it reads:

“The control system shall include a display screen upon which messages can be reviewed before being displayed on the message sign. The control system shall be capable of maintaining memory when power is unavailable. Messages must be changeable with either a portable electronic device like a notebook computer or an on-board keypad. The controller shall have the capability to store a minimum of 200 user-defined and 200 pre-programmed messages. Controller and battery compartments shall be enclosed in lockable, weather-tight boxes. The cabinet shall be locked at all times that the Contractor is not actively changing the message. The Contractor shall change the password for the controller prior to stationing the PCMS and shall provide the password to the Resident. The password shall be unique per PCMS and secure and shall not be written anywhere in, on, around, or stored in the PCMS.”

Amend this Section by adding the following new subsection:

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

Category 1 (Cones, Drums, Tubular Markers, Flexible Delineators, and similar devices that have little chance of causing windshield penetration, tire damage, or other significant effect on the control or trajectory of a vehicle) – All Category 1 devices will be manufacturer self-certified as MASH2016 by January 1, 2025. Current Category 1 devices in useful serviceable condition that are not self-certified as MASH2016 compliant may be utilized through December 31, 2024.

Category 2 (Barricades, Portable Sign Supports, Category 1 devices with attachments, and similar devices that are not expected to produce significant vehicular velocity change but may be otherwise hazardous) – All Category 2 devices will be crash tested and/or evaluated to MASH2016 criteria by January 1, 2025. Current Category 2 devices in useful serviceable condition that are successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2024.

Category 3 (Portable Concrete Barrier, Portable Crash Cushions, Truck Mounted Attenuators, Category 2 devices weighing more than 100 pounds, and similar devices that are expected to produce significant vehicular velocity change or other harmful reactions) – All Category 3 devices will be crash tested and/or evaluated to MASH2016 criteria by January 1, 2030. Current Category 3 devices in useful serviceable condition that are successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2029. (See Standard Specification 526 for additional Portable Concrete Barrier information).

Category 4 (Trailer Mounted Devices: Arrow Boards, Temporary Traffic Control Signals, Area Lighting, Portable Changeable Message Sign, and other similar devices.) – All Category 4 devices will be crash tested and/or evaluated to MASH2016 criteria by January 1, 2030. Current Category 4 devices in useful serviceable condition that are successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2029.”

652.3.3 Submittal of Traffic Control Plan Amend this section by adding:

“n. A security plan for any PCMS shall be included. The Contractor shall provide a plan for secure access to the PCMS and protection from unauthorized users. The plan shall have details on securing the cabinets via a lock and password from unauthorized users, password changing protocols, and where the access information will be kept so it can be used in the event of emergency. The Contractor shall not identify or store passwords in the TCP.”

652.4 Flaggers Revise the first paragraph of this section so that it reads:

“The Contractor shall furnish flaggers as required by the TCP or as otherwise specified by the Resident. All flaggers must have successfully completed a flagger test approved by the Department and administered by a Department-approved Flagger-Certifier who is employing that flagger. All flaggers must carry an official certification card with them while flagging that has been issued by their employer.”

SECTION 681
PRECAST AGGREGATE-FILLED, CONCRETE BLOCK GRAVITY WALL

681.08 Basis of Payment Amend this section by adding the Item Number “**681.10**” in front of the item “Precast Aggregate-Filled Concrete Block Gravity Wall” at the end of the section.

SECTION 701
STRUCTURAL CONCRETE RELATED MATERIAL

701.01 Portland Cement and Portland Pozzolan Cement Amend the first sentence of Paragraph 3 by adding “**or Type 1L Portland Limestone cement**” so that it reads:

“A Type IP (MS) Portland-pozzolan cement (blended hydraulic cement with moderate sulfate resistance) or Type 1L Portland Limestone cement meeting the requirements of AASHTO M 240, may be used instead of Type II or where Type I Portland cement, meeting the requirements of AASHTO M 85, is allowed.”

SECTION 703
AGGREGATES

Add the following to Section 703 - Aggregates

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

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

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

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

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

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

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

703.02 Coarse Aggregate for Concrete Coarse aggregate for concrete shall consist of crushed stone or gravel having hard, strong, durable pieces, free from adherent coatings and of which the composite blend retained on the $\frac{3}{8}$ inch sieve shall contain no more than 15 percent, by weight of flat and elongated particles when performed in accordance with test method ASTM D 4791, Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate, using a dimensional ratio of 1:5.

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

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

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

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

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

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

As per AASHTO T 303 (ASTM C 1260): Use of a particular coarse or fine aggregate will be allowed with no restrictions when the mortar bars made with this aggregate expand less than or equal to 0.10 percent at 30 days from casting. Use of a particular coarse or fine aggregate will be classified as potentially reactive when the mortar bars made with this aggregate expand greater than 0.10 percent at 30 days from casting. Use of this aggregate will only be allowed with the use of cement-pozzolan blends and/or chemical admixtures that result in mortar bar expansion of less than 0.10 percent at 30 days from casting as tested under ASTM C 1567.

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

- Class F Coal Fly Ash meeting the requirements of AASHTO M 295
- Ground Granulated Blast Furnace Slag (Grade 100 or 120) meeting the requirements of AASHTO M 302
- Densified Silica Fume meeting the requirements of AASHTO M 307
- Lithium-based admixtures
- 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 inch sieve and is retained on the No. 10 sieve. If the material has a Washington Degradation value of less than 15, the material shall be rejected. The material used in Section (b.) below shall have a Micro-Deval value of 25.0 or less as determined by AASHTO T 327. If the Micro-Deval value exceeds 25.0 the material may be used if it does not exceed 25 percent loss on AASHTO T 96, Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.

Recycled Asphalt Pavement (RAP) shall not be used for or blended with aggregate base or subbase.

- a. Aggregate for base, Type A and B shall be crushed ledge or crushed gravel of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances. The gradation of the part that passes a 3 inch sieve shall meet the grading requirements of the following table:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
	Type A	Type B
1/2 inch	45-70	35-75
1/4 inch	30-55	25-60
No. 40	0-20	0-25
No. 200	0-6.0	0-6.0

At least 50 percent by weight of the material retained on the No. 4 sieve shall have at least one fractured face as tested by AASHTO T 335.

Type A aggregate for base shall only contain particles of rock that will pass the 2 inch square mesh sieve.

Type B aggregate for base shall only contain particles of rock that will pass the 4 inch square mesh sieve.

- b. Aggregate for base, Type C shall be crushed ledge or crushed gravel of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances. The material shall meet the grading requirements of the following table:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
	Type C
4 inches	100
3 inches	90-100
2 inches	75-100
1 inch	50-80
½ inch	30-60
No. 4	15-40
No. 200	0-6.0

At least 50 percent by weight of the material coarser than the No. 4 sieve shall have at least one fractured face as tested by AASHTO T 335.

- c. Aggregate for subbase shall be sand or gravel of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances. The gradation of the part that passes a 3 inch sieve shall meet the grading requirements of the following table:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
	Type D	Type E
½ in	35-80	
¼ inch	25-65	25-100
No. 40	0-30	0-50
No. 200	0-7.0	0-7.0

Type D aggregate for subbase gravel may contain up to 50 percent by weight Recycled Concrete Aggregate (RCA). When RCA is used, the portion of the resulting blend of gravel and RCA retained on a ½” square mesh sieve shall contain a total of no more than 5 percent by weight of other recycled materials such as brick, concrete masonry block, or asphalt pavement as determined by visual inspection.

RCA shall be substantially free of wood, metal, plaster, and gypsum board as defined in Note 9 in Section 7.4 of AASHTO M 319. RCA shall also be free of all substances that fall under the category of solid waste or hazardous materials.

Aggregate for subbase shall not contain particles of rock which will not pass the 6 inch square mesh sieve.

703.08 Recycled Asphalt Pavement Recycled asphalt pavement shall consist of salvaged asphalt materials from milled pavements or production waste that has been processed before use to meet the requirements of the job mix formula. It shall be free of winter sand, granular fill, construction debris, or other materials not generally considered asphalt pavement.

703.081 RAP for Asphalt Pavement Recycled Asphalt Pavement (RAP) may be introduced into hot-mix asphalt pavement at percentages approved by the Department according to the MaineDOT Policies and Procedures for HMA Sampling and Testing.

If approved by the Department, the Contractor shall provide documentation stating the source, test results for average residual asphalt content, and stockpile gradations showing RAP materials have been sized to meet the maximum aggregate size requirements of each mix designation. The Department will obtain samples for verification and approval prior to its use.

The maximum allowable percent of RAP shall be determined by the asphalt content, the percent passing the 0.075 mm sieve, the ratio between the percent passing the 0.075 mm sieve and the asphalt content, and Coarse Micro-Deval loss values as tested by the Department.

The maximum percentage of RAP allowable shall be the lowest percentage as determined according to Table 4 below:

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

Table 4: Maximum Percent RAP According to Test Results

The Department will monitor RAP asphalt content and gradation during production by testing samples from the stockpile at approximately 15,000 T intervals (in terms of mix production). The allowable variance limits (from the numerical average values used for mix designs) for this testing are determined based upon the maximum allowable RAP percentage and are shown below in Table 5.

Table 5: RAP Verification Limits

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

For specification purposes, RAP will be categorized as follows:

Class III – A maximum of 10.0 percent of Class III RAP may be used in any base, intermediate base, surface, or shim mixture. A maximum of 20.0 percent of Class III RAP may be used in hand-placed mixes for item 403.209.

Class II – A maximum of 20.0 percent Class II RAP in any base, binder, surface, or shim course.

Class I – A maximum of 20.0 percent Class I RAP may be used in any base, intermediate base, surface, or shim mixture without requiring a change to the specified asphalt binder. A maximum of 30.0 percent Class I RAP may be used in in any base or intermediate base mixture provided that a PG 58-28 or PG 58-34 asphalt binder is used. A maximum of 30.0 percent Class I RAP may be used in any surface or shim mixture provided that PG 58-34 asphalt binder is used. Mixtures exceeding 20.0 percent Class I RAP must be evaluated and approved by the Department.

The Contractor may use up to two different RAP sources in any one mix design. The total RAP percentage of the mix shall not exceed the maximum allowed for the highest classification RAP source used (i.e. if a Class I & Class III used, total RAP must not exceed 30.0%). The blended RAP material must meet all the requirements of the classification for which the RAP is entered (i.e. 10% Class III with 20% Class I, blend must meet Class I criteria). The Department may take belt cuts of the blended RAP to verify the material meets these requirements. If the Contractor elects to use more than one RAP source in a design, the Contractor shall provide an acceptable point of sampling blended RAP material from the feed belt.

In the event that RAP source or properties change, the Contractor shall notify the Department of the change and submit new documentation stating the new source or properties a minimum of 72 hours prior to the change to allow for obtaining new samples and approval.

SECTION 709 REINFORCING STEEL AND WELDED STEEL WIRE FABRIC

709.01 Reinforcing Steel Remove the second paragraph of Section 709.01 of the standard specification beginning with “Low-Carbon, Chromium,...” and replace with the following:

“ Low-carbon, chromium, reinforcing steel shall be deformed bars conforming to the requirements of ASTM A1035. Bars shall be Grade 100 and alloy Type CS unless otherwise specified on the Plans. “

SECTION 710 FENCE AND GUARDRAIL

710.06 Fence Posts and Braces Revise the first Paragraph so that it reads:

“Wood posts shall be of cedar, white oak, or tamarack or other AWP approved species, of the diameter or section and length shown on the plans.”

Remove the fourth paragraph which starts “ That portion of wood posts...”.

Revise the paragraph beginning with “Braces shall be of spruce, eastern hemlock ... so that it now reads:

“Braces shall be of spruce, eastern hemlock, Norway pine, pitch pine, or tamarack timbers or other AWP approved species, or spruce, cedar, tamarack or other AWP approved species round posts of sufficient length to make a diagonal brace between adjacent posts. All wood posts and braces shall be pressure-treated in accordance with AASHTO M 133 and AWP U1, UC4A Commodity Specification B: Posts. “

710.07 Guardrail Posts Revise this section so that the first sentence of section a. reads:

“a. Wood posts shall be of Norway pine, southern yellow pine, pitch pine, Douglas fir, red pine, white pine, or eastern hemlock or other AWP approved species.”

Revise the next paragraph so that it reads:

Wood posts and offset brackets shall be preservative treated in accordance with the requirements of AASHTO M 133 and AWP U1, UC4A Commodity Specification B: Posts.

710.08 Guardrail Hardware Revise this subsection by replacing “AASHTO M 298” with “ASTM B695”

SECTION 711 MISCELLANEOUS BRIDGE MATERIAL

711.06 Stud Shear Connector Anchors and Fasteners Amend this section by deleting it in its entirety and replacing it with:

“Shear connectors shall meet the dimensional tolerances of Figure 9.1 of the ANSI/AASHTO/AWS D1.5 Bridge Welding Code (D1.5 Code). Shear connectors, anchors and fasteners shall meet the material requirements of Section 9 of the D1.5 Code. Shear connectors shall meet the mechanical property requirements of Table 9.1, Type B of the D1.5 Code. Anchors and fasteners shall meet the mechanical property requirements of Table 9.1 of the D1.5 Code, Type A.”

SECTION 712 MISCELLANEOUS HIGHWAY MATERIAL

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

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

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

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

SECTION 713 STRUCTURAL STEEL AND RELATED MATERIAL

Section 713.02 High Strength Bolts

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

SECTION 718 TRAFFIC SIGNALS MATERIAL

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

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

A second door open status switch per door shall activate a controller input to log a report event that one of the doors was opened. All door open status switches shall be connected to the same controller input. For the ground mount cabinet, there shall be two switches on each of the four main doors. For the side-of-pole mount cabinet, there shall be two switches on each of the two main doors.”

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

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

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

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

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

Amend this Section by adding the following subsection:

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

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

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

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

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

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

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

3. Map Display FMU Management Software

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

- 3.3 The map display shall also include a list of intersections, with the number and priority of alarms indicated on the list. Intersections in high priority alarm shall be moved to the top of the list, followed by medium priority, low priority and then finally by intersections not in alarm.
- 3.4 The icons shall change to be able to clearly indicate if an intersection is offline.
- 3.5 Clicking on the icon on the map shall expose a box with the current parameters of the intersection shown.
- 3.6 The default map display position and zoom shall be configurable by user, so that the user's view will default to show the intersections that the user is responsible for managing.
- 3.7 The map view shall have the ability to show Google traffic overlays on the map.

4. Intersection Detail Display FMU Management Software

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

4.1.4 It shall be possible to view graphs of each of the value parameters in graphical form, over the recent two-week period. This includes real time graphs of:

4.1.4.1 The AC mains voltage

4.1.4.2 The battery back-up voltage

4.1.4.3 The cabinet temperature

4.1.4.4 The cabinet humidity

5. Diagnostics and Log Display FMU Management Software

5.1 From the device level detail within the FMU management software, it shall be possible to drill down to get the raw data; the error logs; and the communications logs to allow a technician to fault-find problems.

5.2 It shall be possible to filter the logs by Device; by Device Type and/or by Group as well as between dates.

5.3 It shall be possible to print these selected logs to a local printer or a PDF file.

5.4 It shall be possible to export these logs to Excel on the local computer for further analysis.

6. Alarms FMU Management Software

6.1 The FMU management software shall have a comprehensive alarm generation capability

6.2 It shall be possible to configure alarms to be generated on any parameter becoming out of tolerance, including analog values, digital values and enumerated values.

6.3 Alarms shall be configurable to be of Low, High or Critical Priority.

6.4 The alarm priority shall be displayed throughout the FMU management software, on all displays, using color codes such as red-critical; yellow – high; and amber-low to indicate the priority of the alarm.

6.5 The current active alarms shall be accessible for view via an expandable window, to see which alarms are active and when the alarm occurred. The highest priority alarms shall rise to the top of the list.

7. Alerts FMU Management Software

7.1 The FMU management software shall have comprehensive alerting capability, to enable the response personnel to be notified when an abnormal situation has occurred.

- 7.2 It shall be possible to configure alerts to one or more personnel for each alarm. This will cause, as selected, an SMS and/or an email to be sent to the person when an alarm occurs.
- 7.3 The alert shall be configurable to optionally send via email and/or via SMS a message when an alarm clears.
- 7.4 The intention is that the FMU management software provides the alerts to the user in near real time. The SMS and email shall be issued within 30 seconds of the occurrence of event which results in an alert being issued.

8. Hosting and Connectivity and Service FMU / FMU Management Software

8.1 The contractor shall supply the FMU with the FMU manufacturers 10 year options for Connectivity and Service, as part of the purchase price. The Connectivity and Service agreement shall include at a minimum:

- 8.1.1 Cellular Connectivity
- 8.1.2 No cellular overage charges
- 8.1.3 Extended warranty on the hardware for the period of the Connectivity and Service Agreement
- 8.1.4 Over-the-air software updates
- 8.1.5 Over-the-air security updates
- 8.1.6 Future Connected Vehicles Service

SECTION 720 STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS

720.12 Wood Sign Posts Revise the first sentence so that it reads:

Wood sign posts shall be rectangular, straight and sound timber, cut from live growing native spruce, red pine, hemlock, cedar trees or other AWPAs approved species, free from loose knots or other structurally weakening defects of importance, such as shake or holes or heart rot.

Revise the third paragraph that starts with “When pressure treated...” so that it reads:

All sign posts shall be pressure-treated in accordance with AASHTO M 133 and AWPAs Standard U1, UC4A, Commodity Specification A: Sawn Products.

APPENDIX A TO DIVISION 100

SECTION 1 - BIDDING PROVISIONS

A. Federally Required Certifications By signing and delivering a Bid, the Bidder certifies as provided in all certifications set forth in this Appendix A - Federal Contract Provisions Supplement including:

- Certification Regarding No Kickbacks to Procure Contract as provided on this page 1 below.
- Certification Regarding Non-collusion as provided on page 1 below.
- Certification Regarding Non-segregated Facilities as provided by FHWA Form 1273, section III set forth on page 21 below.
- "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion" as provided by FHWA Form 1273, section XI set forth on page 32 below.
- "Certification Regarding Use of Contract Funds for Lobbying" as provided by FHWA Form 1273, section XII set forth on page 35 below.

Unless otherwise provided below, the term "Bidder", for the purposes of these certifications, includes the Bidder, its principals, and the person(s) signing the Bid. Upon execution of the Contract, the Bidder (then called the Contractor) will again make all the certifications indicated in this paragraph above.

CERTIFICATION REGARDING NO KICKBACKS TO PROCURE CONTRACT Except expressly stated by the Bidder on sheets submitted with the Bid (if any), the Bidder hereby certifies, to the best of its knowledge and belief, that it has not:

(A) employed or retained for a commission, percentage, brokerage, contingent fee, or other consideration, any firm or person (other than a bona fide employee working solely for me) to solicit or secure this contract;

(B) agreed, as an express or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out the contract, or;

(C) paid, or agreed to pay, to any firm, organization, or person (other than a bona fide employee working solely for me) any fee, contribution, donation, or consideration of any kind for, or in connection with, procuring or carrying out the contract;

By signing and submitting a Bid, the Bidder acknowledges that this certification is to be furnished to the Maine Department of Transportation and the Federal Highway Administration, U.S. Department of Transportation in connection with this contract in anticipation of federal aid highway funds and is subject to applicable state and federal laws, both criminal and civil.

CERTIFICATION REGARDING NONCOLLUSION Under penalty of perjury as provided by federal law (28 U.S.C. §1746), 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 the Contract.

For a related provisions, see Section 102.7.2 (C) of the Standard Specifications - "Effects of Signing and Delivery of Bids" - "Certifications", Section 3 of this Appendix A entitled "Other Federal Requirements" including section XI - "Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion" and section XII. - "Certification Regarding Use of Contract Funds for Lobbying."

B. Bid Rigging Hotline To report bid rigging activities call: **1-800-424-9071**

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

SECTION 2 - FEDERAL EEO AND CIVIL RIGHTS REQUIREMENTS

Unless expressly otherwise provided in the Bid Documents, the provisions contained in this Section 2 of this "Federal Contract Provisions Supplement" are hereby incorporated into the Bid Documents and Contract.

A. Nondiscrimination & Civil Rights - Title VI The Contractor and its subcontractors 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 Department deems appropriate. The Contractor and subcontractors shall comply with Title VI of the Civil Rights Act of 1964, as amended, and with all State of Maine and other Federal Civil Rights laws.

For related provisions, see Subsection B - "Nondiscrimination and Affirmative Action - Executive Order 11246" of this Section 2 and Section 3 - Other Federal Requirements of this "Federal Contract Provisions Supplement" including section II - "Nondiscrimination" of the "Required Contract Provisions, Federal Aid Construction Contracts", FHWA-1273.

B. Nondiscrimination and Affirmative Action - Executive Order 11246 Pursuant to Executive Order 11246, which was issued by President Johnson in 1965 and amended in 1967 and 1978, this Contract provides as follows.

The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be

based upon its efforts to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

Ensure and maintain a working environment free of harassment, intimidations, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all forepersons, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its union have employment opportunities available, and to maintain a record of the organization's responses.

Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.

Provide immediate written notification to the Department's Civil Rights Office when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Design-Builder's efforts to meet its obligations.

Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under B above.

Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligation; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring,

assignment, layoff, termination, or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Forepersons, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractor's and Subcontractors with whom the Contractor does or anticipates doing business.

Direct its recruitment efforts, both orally and written to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above describing the openings, screenings, procedures, and test to be used in the selection process.

Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth, both on the site and in other areas of a Contractor's workforce.

Validate all tests and other selection requirements.

Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

Ensure that all facilities and company activities are non segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractor's and suppliers, including circulation of solicitations to minority and female Contractor associations and other business associations.

Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

C. Goals for Employment of Women and Minorities Per Executive Order 11246, craft tradesperson goals are 6.9% women and .5% minorities employed. However, goals may be adjusted upward at the mutual agreement of the Contractor and the Department. Calculation of these percentages shall not include On-the-Job Training Program trainees, and shall not include clerical or field clerk position employees.

For a more complete presentation of requirements for such Goals, see the federally required document "Goals for Employment of Females and Minorities" set forth in the next 6 pages below.

Start of GOALS FOR EMPLOYMENT OF FEMALES AND MINORITIES
Federally Required Contract Document

§60-4.2 Solicitations

- (d) The following notice shall be included in, and shall be part of, all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts in excess of \$10,000 to be performed in geographical areas designated by the Director pursuant to §60-4.6 of this part (see 41 CFR 60-4.2(a)):

Notice of Requirement for Affirmative Action to Ensure Equal Opportunity (Executive Order 11246)

1. The Offeror's or bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

<u>Goals for female participation in each trade</u>	6.9%
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Goals for minority participation for each trade

Maine

001 Bangor, ME	0.8%
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Non-SMSA Counties (Aroostook, Hancock, Penobscot, Piscataquis, Waldo, Washington)

002 Portland-Lewiston, ME

SMSA Counties: 4243 Lewiston-Auburn, ME (Androscoggin)	0.5%
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6403 Portland, ME (Cumberland, Sagadahoc)	0.6%
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Non-SMSA Counties: (Franklin, Kennebec, Knox, Lincoln, Oxford, Somerset, York)	0.5%
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These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non federally involved construction.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be in violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor, estimated dollar amount of the subcontract; estimated started and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the Contract resulting from this solicitation, the "covered area" is (insert description of the geographical areas where the contract is to be performed giving the state, county and city, if any).

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:

- a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
- b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
- c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department form 941;
- d. "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

- (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of the North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
 3. If the contractor, is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors for Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
 4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a. through p. of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical areas where the work is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specific.
 5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant, thereto.
 6. In order for the non working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the

apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as expensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, when possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organization's responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment sources or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources complied under 7b above.
 - f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific

review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment, efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing prior to the date for the acceptance of applications for apprenticeship or the openings, screening procedures, and tests to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on site and in other areas of a Contractor's work force.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
- n. Ensure that all facilities and company activities are non segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
- o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of

solicitation to minority and female contractor associations and other business associations.

- p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7 a through p.). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7 a through p. of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program and reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions take on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, specific minority group of women is underutilized.)
10. The Contractor shall not use the goals and timetables or affirmative action even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementation regulations by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the

requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.6.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g. mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and location at which the work was performed. Records be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

End of GOALS FOR EMPLOYMENT OF FEMALES AND MINORITIES
Federally Required Contract Document

D. Section '**D Disadvantaged Business Enterprise (DBE) Requirements**' is removed in its entirety. The DBE material is in:

Section 105.10 EQUAL OPPORTUNITY AND CIVIL RIGHTS.

SECTION 3 - OTHER FEDERAL REQUIREMENTS

Unless expressly otherwise provided in the Bid Documents, the provisions contained in this Section 3 of this "Federal Contract Provisions Supplement" are hereby incorporated into the Bid Documents and Contract.

A. 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.”

B. Materials

a. Convict Produced Materials References: 23 U.S.C. 114(b)(2), 23 CFR 635.417

Applicability: FHWA's prohibition against the use of convict material only applies to Federal-aid highways. Materials produced after July 1, 1991, by convict labor may only be incorporated in a Federal-aid highway construction project if: 1) such materials have been produced by convicts who are on parole, supervised release, or probation from a prison; or 2) such material has been produced in a qualified prison facility, e.g., prison industry, with the amount produced during any 12-month period, for use in Federal-aid projects, not exceeding the amount produced, for such use, during the 12-month period ending July 1, 1987.

Materials obtained from prison facilities (e.g., prison industries) are subject to the same requirements for Federal-aid participation that are imposed upon materials acquired from other sources. Materials manufactured or produced by convict labor will be given no preferential treatment.

The preferred method of obtaining materials for a project is through normal contracting procedures which require the contractor to furnish all materials to be incorporated in the work. The contractor selects the source, public or private, from which the materials are to be obtained (23 CFR 635.407). Prison industries are prohibited from bidding on projects directly (23 CFR 635.112e), but may act as material supplier to construction contractors.

Prison materials may also be approved as State-furnished material. However, since public agencies may not bid in competition with private firms, direct acquisition of materials from a prison industry for use as State-furnished material is subject to a public interest finding with the Division Administrator's concurrence (23 CFR 635.407d). Selection of materials produced by convict labor as State-furnished materials for mandatory use should be cleared prior to the submittal of the Plans Specifications & Estimates (PS&E).

b. Patented/Proprietary Products References: 23 U.S.C. 112, 23 CFR 635.411

FHWA will not participate, directly or indirectly, in payment for any premium or royalty on any patented or proprietary material, specification, or process specifically set forth in the plans and specifications for a project, unless:

- the item is purchased or obtained through competitive bidding with equally suitable unpatented items,
- the STA certifies either that the proprietary or patented item is essential for synchronization with the existing highway facilities or that no equally suitable alternative exists, or
- the item is used for research or for a special type of construction on relatively short sections of road for experimental purposes. States should follow FHWA's procedures for "Construction Projects Incorporating Experimental Features" (expmmt.htm) for the submittal of work plans and evaluations.

The primary purpose of the policy is to have competition in selection of materials and allow for development of new materials and products. The policy further permits materials and products that are judged equal may be bid under generic specifications. If only patented or proprietary products are acceptable, they shall be bid as alternatives with all, or at least a reasonable number of, acceptable materials or products listed; and the Division Administrator may approve a single source if it can be found that its utilization is in the public interest.

Trade names are generally the key to identifying patented or proprietary materials. Trade name examples include 3M, Corten, etc. Generally, products identified by their brand or trade name are not to be specified without an "or equal" phrase, and, if trade names are used, all, or at least a reasonable number of acceptable "equal" materials or products should be listed. The licensing of several suppliers to produce a product does not change the fact that it is a single product and should not be specified to the exclusion of other equally suitable products.

c. State Preference References: 23 U.S.C. 112, 23 CFR 635.409

Materials produced within Maine shall not be favored to the exclusion of comparable materials produced outside of Maine. State preference clauses give particular advantage to the designated source and thus restrict competition. Therefore, State preference provisions shall not be used on any Federal-aid construction projects.

This policy also applies to State preference actions against materials of foreign origin, except as otherwise permitted by Federal law. Thus, States cannot give preference to in-State material sources over foreign material sources. Under the Buy America provisions, the States are permitted to expand the Buy America restrictions provided that the STA is legally authorized under State law to impose more stringent requirements.

d. State Owned/Furnished/Designated Materials References: 23 U.S.C. 112, 23 CFR 635.407

Current FHWA policy requires that the contractor must furnish all materials to be incorporated in the work, and the contractor shall be permitted to select the sources from which the materials are to be obtained. Exceptions to this requirement may be made when there is a definite finding, by MaineDOT and concurred in by Federal Highway Administration's (FHWA) Division Administrator, that it is in the public interest to require the contractor to use materials furnished by the MaineDOT or from sources designated by MaineDOT. The exception policy can best be understood by separating State-furnished materials into the categories of manufactured materials and local natural materials.

Manufactured Materials When the use of State-furnished manufactured materials is approved based on a public interest finding, such use must be made mandatory. The optional use of State-furnished manufactured materials is in violation of our policy prohibiting public agencies from competing with private firms. Manufactured materials to be furnished by MaineDOT must be acquired through competitive bidding, unless there is a public interest finding for another method, and concurred in by FHWA's Division Administrator.

Local Natural Materials When MaineDOT owns or controls a local natural materials source such as a borrow pit or a stockpile of salvaged pavement material, etc., the materials may be designated for either optional or mandatory use; however, mandatory use will require a public interest finding (PIF) and FHWA's Division Administrator's concurrence.

In order to permit prospective bidders to properly prepare their bids, the location, cost, and any conditions to be met for obtaining materials that are made available to the contractor shall be stated in the bidding documents.

Mandatory Disposal Sites Normally, the disposal site for surplus excavated materials is to be of the contractor's choosing; although, an optional site(s) may be shown in the contract provisions. A mandatory site shall be specified when there is a finding by MaineDOT, with the concurrence of the Division Administrator, that such placement is the most economical or that the environment would be substantially enhanced without excessive cost. Discussion of the mandatory use of a disposal site in the environmental document may serve as the basis for the public interest finding.

Summarizing FHWA policy for the mandatory use of borrow or disposal sites:

- mandatory use of either requires a public interest finding and FHWA's Division Administrator's concurrence,
- mandatory use of either may be based on environmental consideration where the environment will be substantially enhanced without excessive additional cost, and
- where the use is based on environmental considerations, the discussion in the environmental document may be used as the basis for the public interest finding.

Factors to justify a public interest finding should include such items as cost effectiveness, system integrity, and local shortages of material.

C. Standard FHWA Contract Provisions - FHWA 1273

Unless expressly otherwise provided in the Bid Documents, the following “Required Contract Provisions, Federal Aid Construction Contracts”, FHWA-1273, are hereby incorporated into the Bid Documents and Contract.

Cargo Preference Act : Contractor and Subcontractor Clauses. “Use of United States-flag vessels: The contractor 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.”(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 (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.”(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.”(Reorganization Plans No. 21 of 1950 (64 Stat. 1273) and No. 7 of 1961 (75 Stat. 840) as amended by Pub. L. 91-469 (84 Stat. 1036) and Department of Commerce Organization Order 10-8 (38 FR 19707, July 23, 1973)) [42 FR 57126, Nov. 1, 1977]

The Cargo Preference Act requirements apply to materials or equipment that are acquired for a specific Federal-aid highway project. In general, the requirements are not applicable to goods or materials that come into inventories independent of an FHWA funded-contract. For example, the requirements would not apply to shipments of Portland cement, asphalt cement, or aggregates, as industry suppliers and contractors use these materials to replenish existing inventories. In general, most of the materials used for highway construction originate from existing inventories and are not acquired solely for a specific Federal-aid project. However, if materials or equipment are acquired solely for a Federal-aid project, then the Cargo Preference Act requirements apply.”

Start of FHWA 1273 REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS (As revised through October 23, 2023)

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. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), 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 basic hourly 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. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act ([40 U.S.C. 3141\(2\)\(B\)](#)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. 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 must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. 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 classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH-1321) must 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. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in [29 CFR part 1](#), a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must 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 be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate 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 used 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) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) 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 will be sent by the contracting officer by email to DBAconformance@dol.gov. 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.

(4) 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 will, by email to DBAconformance@dol.gov, 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.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division

under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must 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.

d. *Fringe benefits not expressed as an hourly rate.* 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 may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* 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, in accordance with the criteria set forth in § 5.28, 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.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and 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.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

3. Records and certified payrolls (29 CFR 5.5)

a. Basic record requirements (1) Length of record retention. All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) Information required. Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; 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 [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) Additional records relating to fringe benefits. Whenever the Secretary of Labor has found under paragraph 1.e. of this section 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 [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act, the contractor must 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.

(4) Additional records relating to apprenticeship. Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. Certified payroll requirements (1) Frequency and method of submission. The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting

agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) Information required. The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WHDL/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) Statement of Compliance. Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working 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](#); and

(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(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) Use of Optional Form WH-347. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* 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. 3729](#).

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, 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, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under [29 CFR part 6](#) any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address

of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices (1) Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform 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 (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must 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, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must 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 this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and [29 CFR part 30](#).

c. 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 journeyworkers 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 must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 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. a. By entering into this contract, the contractor certifies that neither it 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 [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, [18 U.S.C. 1001](#).

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#); or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

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 watchpersons 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 and interest from the date of the underpayment. 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 watchpersons 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.

* \$31 as of January 15, 2023 (See 88 FR 88 FR 2210) 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

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, 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 that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

4. **Subcontracts.** The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the

event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. **Anti-retaliation.** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

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 long-standing 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 200.327.

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 200.327.

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.

* * * * *

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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4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) 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;

(2) 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

(3) 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)

b. 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.

The United States Department of Transportation (USDOT)

Standard Title VI/Non-Discrimination Assurances

DOT Order No. 1050.2A

The **Maine Department of Transportation** (herein referred to as the "Recipient"), **HEREBY AGREES THAT**, as a condition to receiving any Federal financial assistance from the U.S. Department of Transportation (DOT), through Federal Highway Administration (herein referred to as "FHWA" is subject to and will comply with the following:

Statutory/Regulatory Authorities

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
- 49 C.F.R. Part 21 (entitled *Non-discrimination In Federally-Assisted Programs Of The Department Of Transportation-Effectuation Of Title VI Of The Civil Rights Act Of 1964*);
- 28 C.F.R. section 50.3 (U.S. Department of Justice Guidelines for Enforcement of Title VI of the Civil Rights Act of 1964);

The preceding statutory and regulatory cites hereinafter are referred to as the "Acts" and "Regulations," respectively.

General Assurances

In accordance with the Acts, the Regulations, and other pertinent directives, circulars, policy, memoranda, and/or guidance, the Recipient hereby gives assurance that it will promptly take any measures necessary to ensure that:

"No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity, for which the Recipient receives Federal financial assistance from DOT, including the FHWA.

The Civil Rights Restoration Act of 1987 clarified the original intent of Congress, with respect to Title VI and other Non-discrimination requirements (The Age Discrimination Act of 1975, and Section 504 of the Rehabilitation Act of 1973), by restoring the broad, institutional-wide scope and coverage of these non- discrimination statutes and requirements to include all programs and activities of the Recipient, so long as any portion of the program is Federally assisted.

Specific Assurances

More specifically, and without limiting the above general Assurance, the Recipient agrees with and gives the following Assurances with respect to its Federally assisted **FHWA Program**.

1. The Recipient agrees that each "activity," "facility," or "program," as defined in §§ 21.23(b) and 21.2(e) of 49 C.F.R. § 21 will be (with regard to an "activity") facilitated, or will be (with regard to a "facility") operated, or will be (with regard to a "program") conducted in compliance with all requirements imposed by, or pursuant to the Acts and the Regulations.
2. The Recipient will insert the following notification in all solicitations for bids, Requests For Proposals for work, or material subject to the Acts and the Regulations made in connection with all **FHWA Programs** and, in adapted form, in all proposals for negotiated agreements regardless of funding source:

*"The **Maine Department of Transportation**, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award."*

3. The Recipient will insert the clauses of Appendix A and E of this Assurance in every contract or agreement subject to the Acts and the Regulations.
4. 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. That 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 with regard to any matter arising under the Acts, the Regulations, and this Assurance.

By signing this ASSURANCE, **Maine Department of Transportation** also agrees to comply (and require any sub-recipients, sub-grantees, contractors, successors, transferees, and/or assignees to comply) with all applicable provisions governing the **FHWA's** 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**. You must keep records, reports, and submit the material for review upon request to **FHWA** or its designee in a timely, complete, and accurate way. Additionally, you must comply with all other reporting, data collection, and evaluation requirements, as prescribed by law or detailed in program guidance.

Maine Department of Transportation gives this ASSURANCE in consideration of and for obtaining any Federal grants, loans, contracts, agreements, property, and/or discounts, or other Federal-aid and Federal financial assistance extended after the date hereof to the recipients by the U.S. Department of Transportation under the **FHWA Programs**. 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 **FHWA Programs**. The person(s) signing below is authorized to sign this ASSURANCE on behalf of the Recipient.

Maine Department of Transportation
Bruce Van Note, Commissioner
(Name of Recipient)

By: 
(Signature of Authorized Official)

Dated: 8/30/24

APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, **Federal Highway Administration (FHWA)**, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to 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 B

CLAUSES FOR DEEDS TRANSFERRING UNITED STATES PROPERTY

The following clauses will be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of Assurance 4:

NOW, THEREFORE, the U.S. Department of Transportation as authorized by law and upon the condition that the **Maine Department of Transportation** will accept title to the lands and maintain the project constructed thereon in accordance with all requirements imposed by Title 49, Code of Federal Regulations, Department of Transportation, subtitle A, Office of the Secretary, part 21, Non-discrimination in Federally-assisted Programs of the Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. § 2000d to 2000d-4), the Regulations for the Administration of **Federal Highway Administration (FHWA) Program**, and the policies and procedures prescribed by the **FHWA** of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. § 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the **Maine Department of Transportation** all the right, title and interest of the U.S. Department of Transportation in and to said lands described in Exhibit A attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto **Maine Department of Transportation** and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the **Maine Department of Transportation**, its successors and assigns.

The **Maine Department of Transportation**, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed [,] [and]* (2) that the **Maine Department of Transportation** will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non- discrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended[, and (3) that in the event of breach of any of the above-mentioned non-discrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation

and its assigns as such interest existed prior to this instruction].*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

APPENDIX C

CLAUSES FOR TRANSFER OF REAL PROPERTY ACQUIRED OR IMPROVED UNDER THE ACTIVITY, FACILITY, OR PROGRAM

The following clauses will be included in deeds, licenses, leases, permits, or similar instruments entered into by the **Maine Department of Transportation** pursuant to the provisions of Assurance 7(a):

- A. The (grantee, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that:
 - 1. In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Acts and Regulations (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.
- B. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Non-discrimination covenants, **Maine Department of Transportation** will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued.*
- C. With respect to a deed, in the event of breach of any of the above Non-discrimination covenants, the **Maine Department of Transportation** will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will there upon revert to and vest in and become the absolute property of the **Maine Department of Transportation** and its assigns.*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

APPENDIX D

CLAUSES FOR CONSTRUCTION/USE/ACCESS TO REAL PROPERTY ACQUIRED UNDER THE ACTIVITY, FACILITY OR PROGRAM

The following clauses will be included in deeds, licenses, permits, or similar instruments/agreements entered into by **Maine Department of Transportation** pursuant to the provisions of Assurance 7(b):

- A. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, "as a covenant running with the land") that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, set forth in this Assurance.
- B. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Non- discrimination covenants, **Maine Department of Transportation** will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued.*
- C. With respect to deeds, in the event of breach of any of the above Non-discrimination covenants, **Maine Department of Transportation** will there upon revert to and vest in and become the absolute property of **Maine Department of Transportation** and its assigns.*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

APPENDIX E

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 on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 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 on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure

compliance with Title VI, you must take reasonable steps to
-ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).



Environmental Summary Sheet

WIN: 26130.00

Date Submitted: 9/16/2024

Town: Statwide, multiple locations

CPD Team Leader: Danielle Tetreau

ENV Field Contact: Valerie Derosier

NEPA Complete: Programmatic Categorical Exclusion (CE) 23 CFR 771.117.c.22 issued on 9/10/2024

Section 106

Review Complete: PA-F Approved 10/25/2023

Section 106 Resources: not applicable

Section 4(f) and 6(f)

Section 4(f)

Review Complete - No use

Section 6(f)

Review Complete - No takes

Maine Department of Inland Fisheries and Wildlife

Not Applicable

Timing Window: Not Applicable

Section 7

Species of Concern: northern long-eared bat (endangered): No Effect

Atlantic salmon (endangered & critical habitat): No effect

Tricolored bat (proposed endangered): No effect, consultation TBD

Essential Fish Habitat

Species of Concern: Atlantic salmon No Effect - no in-water work proposed

Maine Department of Agriculture, Conservation, and Forestry

Public Lands, Submerged Land Lease: Not Applicable

Maine Land Use Planning Commission: Not Applicable

Maine Department of Environmental Protection

Not Applicable – no resource impacts

Army Corps of Engineers: Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act.

Not Applicable - no resource impacts

Stormwater Review

Review Complete

Hazardous Material Review

Review complete – no concerns



Special Provisions Required

Standard Specification 656-Erosion Control Plan

N/A ☐

Applicable ☒

Special Provision 105-Environmental Requirements

N/A ☐

Applicable ☒

Special Provision 203-Hazardous Waste

N/A ☒

Applicable ☐

Special Provision 656-Minor Soil Disturbance

N/A ☒

Applicable ☐

Special Provision 203-Dredge Spec

N/A ☒

Applicable ☐

General Note for Hazardous Waste

N/A ☒

Applicable ☐