

**Updated 11/27/07**

# **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, and f) any other certifications or Bid requirements listed in the Bid Documents as due by Bid opening.

#### **For an Electronic Bid:**

a) a completed Bid using Expedite® software and submitted via the Bid Express™ web-based service, b) a Bid Guaranty (as described below) 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 required items in the Schedule of Items. (“Zero is not considered a Bid price.”)
4. Include a 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.
5. If a paper Bid is to be sent, Federal Express 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 in the proper amounts, and deliver to the Civil Rights Office, or fax to (207)624-3431 by 4:30 PM on bid opening day.

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, Revision of December 2002.

# 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 a planholders 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 provide an email address to Diane Barnes or Mike Babb at the MDOT Contracts mailbox at: [MDOT.contracts@maine.gov](mailto: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 Larry Childs at [Larry.Childs@maine.gov](mailto:Larry.Childs@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 faxing questions and comments concerning specific Contracts that have been Advertised for Bid. Include additional numbered pages as required. Questions are to be faxed to the number listed in the Notice to Contractors. This is the only allowable mechanism 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.



# NOTICE

## Disadvantaged Business Enterprise Proposed Utilization

The Apparent Low Bidder must submit the Disadvantaged Business Enterprise Proposed Utilization form by close of Business (4:30 P.M.) on Bid day.

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

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

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

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

MDOT's DBE Directory of Certified firms can also be obtained at [www.maine.gov/mdot/disadvantaged-business-enterprises/dbe-home.php](http://www.maine.gov/mdot/disadvantaged-business-enterprises/dbe-home.php)



# INSTRUCTIONS FOR PREPARING THE CONTRACTOR'S DISADVANTAGED BUSINESS ENTERPRISE UTILIZATION PLAN

## The Contractor Shall:

1. Submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan to the Contract's Engineer by 4:30 P.M. on the Bid day.
2. Extend equal opportunity to MDOT certified DBE firms (as listed in MDOT's DBE Directory of Certified Businesses) in the selection and utilization of Subcontractors and Suppliers.

## SPECIFIC INSTRUCTIONS FOR COMPLETING THE FORM:

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

Provide total Bid price, Federal Project Identification Number, and location of the Project work.

In the columns, name each DBE firm to be used, provide the Unit or Item cost of the Work/Product to be provided by the DBE firm, give a brief description of the Work, and the dollar value of the Work.

If no DBE firm is to be utilized, the Contractor must document the reason(s) why no DBE firms are being used. Specific supporting evidence of good faith efforts taken by Contractors to solicit DBE Bidders must be attached. This evidence, as a minimum, includes phone logs, e-mail and/or mail DBE solicitation records, and the documented results of these solicitations.

## 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 has established a DBE Program for disadvantaged business participation in the federal-aid construction program; MaineDOT contracts covered by the program include consulting, construction, supplies, manufacturing, and service contracts.

For FFY 2008 (October 1, 2007 through September 30, 2008), MaineDOT has established a DBE participation goal of 4.5% to be achieved through race/gender neutral and race/gender conscious means.

Interested parties may view MaineDOT's DBE goal setting methodology for the next 30 days during normal business hours (8-4, M-F) at the Maine Department of Transportation, Civil Rights Office, 16 State House Station, Augusta ME 04333-0016. Appointments may be scheduled by telephone at (207) 624-3519. The goal setting methodology is also available for viewing on the MaineDOT website: <http://www.maine.gov/mdot/disadvantaged-business-enterprises/dbe-home.php>.

Public comment will be accepted for 45 days following the last date of publication. The public comment period will be complete on August 28<sup>th</sup>, 2007. The goal will be submitted for approval to the FHWA on August 1<sup>st</sup>, 2007 with an update based upon public comment sent to FHWA on August 30<sup>th</sup>.

Comments on the goal will be accepted for 45 days from the date of this notice. Written comments should be addressed to Jackie LaPerriere, Maine Department of Transportation, Civil Rights Office, 16 State House Station, Augusta, Maine 04333-0016 or by e-mail at: [jackie.laperriere@maine.gov](mailto:jackie.laperriere@maine.gov).

Several interested stakeholders will be notified directly by e-mail of the goal publication, including Maine SBA, Associated Constructors of Maine, and ACEC, and Maine DBEs.

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

**Low Bidder must furnish this form to Contracts Section Bid Opening day.**

Contractor: \_\_\_\_\_ Telephone: \_\_\_\_\_ Ext. \_\_\_\_\_

Prepared by: \_\_\_\_\_ Fax: \_\_\_\_\_

BID PRICE: \$ \_\_\_\_\_ BID DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

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

TOTAL DBE \_\_\_\_\_ % PARTICIPATION FOR THIS SUBMISSION

W B E•	D B E•	Non DBE	Firm Name	Unit/Item Cost	Unit #	Description of Work & Item Number	Actual \$ Value
<b>Total &gt;</b>							

Contractors must make a good faith effort to include Certified DBE firms in all aspects of the project. If no DBE firms are to be part of this project, a detailed explanation is required. Attach supporting evidence to the maximum participation of DBEs on this project. This is a requirement. This evidence must include name of firm(s) contacted, date contacted, and outcome of solicitation.

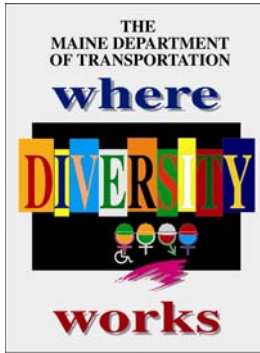
Equal Opportunity Use:

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

\_\_\_\_ Accepted      \_\_\_\_ Rejected \_\_\_\_\_

cc:  Contracts  Other \_\_\_\_\_

- WBEs are non-minority women owned firms certified by MaineDOT
  - DBEs are male and minority owned firms certified by MaineDOT
- For a complete list of certified firms go to <http://www.maine.gov/mdot>



# MaineDOT's CIVIL RIGHTS OFFICE

**To search for a specific work item, click on the binoculars, type in the word you want to search for and click on find. To go to the next selected item, click on the binoculars with the arrow.**

## MAINE DEPARTMENT OF TRANSPORTATION

### CERTIFIED DISADVANTAGED AND WOMEN BUSINESS ENTERPRISE

**DECEMBER 2005**

Information is updated on an ongoing basis and  
can be retrieved by visiting our Website:

[www.maine.gov/mdot/disadvantaged-business-enterprises/dbe-home.php](http://www.maine.gov/mdot/disadvantaged-business-enterprises/dbe-home.php)

## **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/vendorinfo/vss.htm>

**STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION**



**ROCKLAND  
KNOX COUNTY**

**PROJECT NO. STP-1022(300)X  
PIN 10223.00**

**HISTORIC RESTORATION  
ROCKLAND RAIL STATION**

**March 2008**

Allied Project No. 04-035

**ROCKLAND RAIL STATION  
HISTORIC RENOVATION  
PIN 010223.00**

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May 2008

ROCKLAND RAIL STATION  
HISTORIC RESTORATION

ROCKLAND-KNOX COUNTY  
PIN 010223.00

SECTION 1



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

Sealed Bids addressed to the Maine Department of Transportation, Augusta, Maine 04333 and endorsed on the wrapper "Bid for Historic Restoration of the **Rockland Rail Station**, City of Rockland" will be received from contractors at the Reception Desk, Maine DOT Building, Child Street, Augusta, Maine, until 11:00 o'clock A.M. (prevailing time) on July 9, 2008 and at that time and place publicly opened and read. Bids will be accepted from contractors prequalified by the Department of Transportation for Building projects. All other Bids may be rejected. **MDOT provides the option of electronic bidding. We accept electronic bids for those bid packages posted on the bidx.com website. Electronic bids do not have to be accompanied by paper bids. Please note: the Department will accept a facsimile of the bid bond; however, the original bid bond must then be received at the MDOT Contract Section within 72 hours of the bid opening. During this transition, dual bids (one paper, one electronic) will be accepted, with the paper copy taking precedence.**

Description: Federal Project No. STP-1022(300)X, PIN 010223.00

Location: In Knox County, project is located on Union Street in Rockland.

Outline of Work: Historic Restoration of the Rail Station to include masonry restoration, wood trim repair/replacement, gutter system upgrades/replacement, slate roof repair/replacements, flashing replacement, minor electrical, maintenance of traffic and building access during construction and other incidental work.

**THE BASIS OF AWARD WILL BE SECTION 0001 ONLY**

For general information regarding Bidding and Contracting procedures, contact Scott Bickford at (207)624-3410. Our webpage at <http://www.state.me.us/mdot/project/design/homepg.htm> contains a copy of the schedule of items, Plan Holders List, written portions of bid amendments (not drawings), and bid results. For Project-specific information fax all questions to **Project Manager** Paul Pottle at (207)624-3431. Questions received after 12:00 noon of Monday prior to bid date will not be answered. Bidders shall not contact any other Departmental staff for clarification of Contract provisions, and the Department will not be responsible for any interpretations so obtained. Hearing impaired persons may call the Telecommunication Device for the Deaf at 888-516-9364.

Plans, specifications and bid forms may be seen at the Maine DOT Building in Augusta, Maine. They may be purchased from the Department between the hours of 8:00 a.m. to 4:30 p.m. by cash, credit card (Visa/Mastercard) or check payable to Treasurer, State of Maine sent to Maine Department of Transportation, Attn.: Mailroom, 16 State House Station, Augusta, Maine 04333-0016. They also may be purchased by telephone at (207)624-3536 between the hours of 8:00 a.m. to 4:30 p.m. Bid Book \$10 (\$13 by mail), Full size plans \$6.00 (\$10.00 by mail). Half size plans \$3.00 (\$6.00 by mail) Single Sheets \$2.00 payment in advance, all non-refundable.

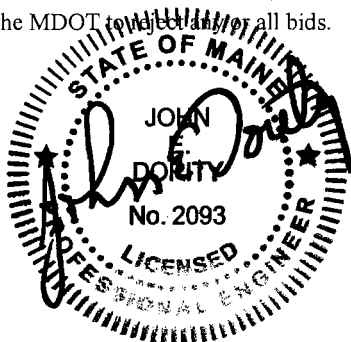
Each Bid must be made upon blank forms provided by the Department and must be accompanied by a bid bond at 5% of the bid amount or an official bank check, cashier's check, certified check, certificate of deposit, or United States postal money order in the amount of \$12,000.00 payable to Treasurer, State of Maine as a Bid guarantee. A Contract Performance Surety Bond and a Contract Payment Surety Bond, each in the amount of 100 percent of the Contract price, will be required of the successful Bidder.

This Contract is subject to all applicable Federal Laws. This contract is subject to compliance with the Disadvantaged Business Enterprise program requirements as set forth by the Maine Department of Transportation.

All work shall be governed by "State of Maine, Department of Transportation, Standard Specifications, Revision of December 2002", price \$10 [\$13 by mail], and Standard Details, Revision of December 2002, price \$20 [\$25 by mail]. Standard Detail updates can be found at <http://www.state.me.us/mdot/project/design/homepg.htm>

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

Augusta, Maine  
June 11, 2008



JOHN E. DORITY  
CHIEF ENGINEER

**SPECIAL PROVISION 102.7.3  
ACKNOWLEDGMENT OF BID AMENDMENTS**

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

Amendment Number	Date

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

**CONTRACTOR**

\_\_\_\_\_ Date

\_\_\_\_\_ Signature of authorized representative

\_\_\_\_\_ (Name and Title Printed)

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 010223.00

PROJECT(S): STP-1022(300)X

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
SECTION 0001 PROJECT ITEMS						
0010	DIV. 2 SITE CONSTRUCTION	LUMP	LUMP			
0020	DIV. 4 MASONRY	LUMP	LUMP			
0030	DIV. 5 METALS	LUMP	LUMP			
0040	DIV. 6 WOOD & PLASTIC CARPENTRY	LUMP	LUMP			
0050	DIV. 7 THERMAL & MOISTURE PROTECTION	LUMP	LUMP			
0060	DIV. 8 DOORS & WINDOWS	LUMP	LUMP			
0070	DIV. 9 FINISHES	LUMP	LUMP			
0080	DIV. 15 MECHANICAL	LUMP	LUMP			
0090	DIV. 16 ELECTRICAL	LUMP	LUMP			
0100	659.10 MOBILIZATION	LUMP	LUMP			
	SECTION 0001 TOTAL					

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 010223.00

PROJECT(S): STP-1022(300)X

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
SECTION 0002 MASONRY - ADDITIONAL WORK ALT GROUP OP1						
0110	DIV. 4.1 MASONRY RESTORATION ADDITIONAL REMOVAL & RESTORATION OF BRICK MASONRY	300.000 SF				
0120	DIV. 4.1 MASONRY RESTORATION ADDITIONAL SPOT REPOINTING	300.000 SF				
	SECTION 0002 TOTAL					
	TOTAL BID BOTH SECTIONS					

## **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, PIN No. **10223.00**, for the **Historic Restoration of the Rockland Rail Station** in the city of **Rockland**, County of **Knox**, 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 **December 19, 2008**. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002 and related Special Provisions.

**C. Price.**

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

**Section 0001 \$** \_\_\_\_\_

**Section 0002 \$** \_\_\_\_\_

Performance Bond and Payment Bond each being 100% of the amount awarded under this Contract (see award amount in Section G below).

**D. Contract.**

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002 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 Appendix A to Division 100 of the Standard Specifications Revision of December 2002 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.
2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.
3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

**F. Offer.**

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of: **PIN 10223.00 – Restoration of the Historic Rockland Rail Station - in the city of Rockland**, State of Maine, on which bids will be received until the time specified in the “Notice to Contractors” do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached “Schedule of Items”.

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

As Offeror also agrees:

First: To do any extra work, not covered by the attached “Schedule of Items”, which may be ordered by the Resident, and to accept as full compensation the amount determined upon a “Force Account” basis as provided in the Standard Specifications, Revision of December 2002, and as addressed in the contract documents.

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

Third: To begin the Work as stated in Section 107.2 of the Standard Specifications Revision of December 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor’s Disadvantaged Business Enterprise Utilization Plan by 4:30pm on the day of bid opening to the Contracts Engineer.

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 for (see checked boxes):

Section 0001

Section 0002

**Contract Amount:** \_\_\_\_\_

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

MAINE DEPARTMENT OF TRANSPORTATION

\_\_\_\_\_

Date

\_\_\_\_\_  
By: David A. Cole, 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

\_\_\_\_\_ 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:

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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 **December 19, 2008**. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002 and related Special Provisions.

**C. Price.**

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

**Section 0001 \$** \_\_\_\_\_

**Section 0002 \$** \_\_\_\_\_

Performance Bond and Payment Bond each being 100% of the amount awarded under this Contract (see award amount in Section G below).

**D. Contract.**

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002 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 Appendix A to Division 100 of the Standard Specifications Revision of December 2002 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.
2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.
3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

**F. Offer.**

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of: **PIN 10223.00 – Restoration of the Historic Rockland Rail Station - in the city of Rockland**, State of Maine, on which bids will be received until the time specified in the “Notice to Contractors” do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached “Schedule of Items”.

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

As Offeror also agrees:

First: To do any extra work, not covered by the attached “Schedule of Items”, which may be ordered by the Resident, and to accept as full compensation the amount determined upon a “Force Account” basis as provided in the Standard Specifications, Revision of December 2002, and as addressed in the contract documents.

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

Third: To begin the Work as stated in Section 107.2 of the Standard Specifications Revision of December 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor’s Disadvantaged Business Enterprise Utilization Plan by 4:30pm on the day of bid opening to the Contracts Engineer.

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 for (see checked boxes):

Section 0001

Section 0002

**Contract Amount:** \_\_\_\_\_

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

MAINE DEPARTMENT OF TRANSPORTATION

\_\_\_\_\_  
Date

\_\_\_\_\_  
By: David A. Cole, Commissioner

\_\_\_\_\_  
Witness

## CONTRACT AGREEMENT, OFFER & AWARD

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

(Name of the firm bidding the job)

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

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

### A. **The Work.**

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, PIN No. 1224.00, for the Hot Mix Asphalt Overlay in the town/city of South Nowhere, County of Washington, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

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

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

### B. **Time.**

The Contractor agrees to complete all Work, except warranty work, on or before November 15, 2006. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002 and related Special Provisions.

**C. Price.**

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

**D. Contract.**

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

**E. Certifications.**

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

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of December 2002 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.
2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.
3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

**F. Offer.**

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

**PIN 1234.00 South Nowhere, Hot Mix Asphalt Overlay**,

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

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

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, Revision of December 2002, and as addressed in the contract documents.

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

Third: To begin the Work as stated in Section 107.2 of the Standard Specifications Revision of 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan by 4:30pm on the day of bid opening to the Contracts Engineer.

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

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

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

CONTRACTOR  
**(Sign Here)**  
\_\_\_\_\_  
(Signature of Legally Authorized Representative  
of the Contractor)

**(Print Name Here)**  
\_\_\_\_\_  
(Name and Title Printed)

Date \_\_\_\_\_

**(Witness Sign Here)**  
\_\_\_\_\_  
Witness

**G. Award.**

Your offer is hereby accepted.  
documents referenced herein.

This award consummates the Contract, and the

MAINE DEPARTMENT OF TRANSPORTATION

\_\_\_\_\_  
Date

\_\_\_\_\_  
By: David A. Cole, Commissioner

\_\_\_\_\_  
(Witness)



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

CONTRACT PERFORMANCE BOND  
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That \_\_\_\_\_  
\_\_\_\_\_ **and 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:

SIGNATURES:

CONTRACTOR:

Signature.....

.....

Print Name Legibly .....

Print Name Legibly .....

SURETY:

Signature .....

.....

Print Name Legibly .....

Print Name Legibly .....

SURETY ADDRESS:

NAME OF LOCAL AGENCY:

ADDRESS .....

.....

.....

.....

.....

TELEPHONE.....

.....

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

CONTRACT PAYMENT BOND  
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That \_\_\_\_\_  
\_\_\_\_\_ **and 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: ME080002 04/04/2008 ME2

Superseded General Decision Number: ME20070002

State: Maine

Construction Type: Building

Counties: Aroostook, Franklin, Hancock, Kennebec, Knox, Lincoln, Oxford, Piscataquis, Sagadahoc, Somerset, Waldo, Washington and York Counties in Maine.

Building Construction Projects (does not include single family homes and apartments up to and including 4 stories).

Modification Number	Publication Date
0	02/08/2008
1	04/04/2008

BOIL0029-003 10/01/2007

	Rates	Fringes
BOILERMAKER.....	\$ 28.81	8.96+26.6%

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CARP1996-002 04/01/2007

	Rates	Fringes
Carpenters:		
Millwright.....	\$ 21.00	11.93

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ELEC0490-002 06/01/2005

YORK COUNTY (Townships of Alfred, Lebanon, Sanford, Wells and area south thereof)

	Rates	Fringes
ELECTRICIAN.....	\$ 24.90	12.40
Teledata System Installer.....	\$ 18.75	10.11

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ELEC0567-002 09/01/2007

AROOSTOOK COUNTY; FRANKLIN COUNTY: Entire County excluding Carthage, Perkins Plantation, Temple, Farmington, Industry Township and area south thereof; LINCOLN COUNTY: Townships of Boothbay, Bristol, Edgecomb, Newcastle, Westport, Wiscasset; OXFORD COUNTY; PISCATAQUIS COUNTY: Entire county excluding Bernard, Bowerbank, Brownville, Greenville, Elliotsville, Lake View, Squaw, Williamsburg Townships and areas south thereof; SAGADAHOC COUNTY: Entire county south of Bowdoin and Bowdoinham Townships; SOMERSET COUNTY: Entire county west of the Kennebec River and north of Starks Townships; YORK COUNTY: Entire county excluding Alfred, Lebanon, Sanford and Wells Township and area south thereof.

	Rates	Fringes
Electricians:.....	\$ 26.58	13.25
Teledata Technician.....	\$ 19.00	8.73

-----  
 ELEC1253-002 09/01/2006

FRANKLIN COUNTY: Townships of Carthage, Chesterville, Farmington, Industry, Jay, Perkins Pl., New Sharon, Temple, Washington Pl., Wilton; HANCOCK COUNTY; KENNEBEC COUNTY; KNOX COUNTY; LINCOLN COUNTY; PISCATAQUIS COUNTY: Townships of Abbott, Atkinson, Bernard, Blanchard, Bowerbank, Brownville, Dover/Foxcroft, Elliotsville, Greenfield, Guildford, Kingsbury, Little Squaw, Medford, Milo, Monson, Orneville, Parkman, Sangerville, Sebec, Shirley, Squaw, Wellington, Williamsburg, Willimantic; SAGADAHOC COUNTY: Townships of Bowdoin, Bowdoinham, Richmond; SOMERSET COUNTY: Townships of Athens, Bald Mt., Bingham, Brighton Place, Canaan, Carratunk, Cornville, East Moxie, Fairfield, Harmony, Hartland, Indian Pond, Madison, Mayfield, Mercer, Moxie Gore, Norridgewock, Palmyra, Pittsfield, Ripley, Skowhegan, Sonon, Squaretown, Starks, St. Albans, The Forks; WALDO COUNTY; WASHINGTON COUNTY

	Rates	Fringes
Electricians:.....	\$ 23.87	12.00
Teledata Technicians.....	\$ 19.00	8.73

-----  
 ENGI0004-006 12/01/2007

	Rates	Fringes
Power equipment operators:		
GROUP I.....	\$ 27.95	18.56
GROUP II.....	\$ 27.85	18.56

Group I: Backhoes, Cranes, Excavators, Loaders, Pile Drivers  
 Group II: Bulldozers, Rollers

-----  
 \* IRON0496-001 03/16/2008

	Rates	Fringes
Ironworkers:		
Structural and Reinforcing..	\$ 21.15	16.65

-----  
 PLUM0716-001 01/13/2008

	Rates	Fringes
PIPEFITTER (including HVAC work).....	\$ 23.30	12.66

-----  
 SHEE0017-009 07/01/2006

	Rates	Fringes
SHEETMETAL WORKER.....	\$ 18.965	16.49

-----  
 SUME2000-002 10/24/2000

	Rates	Fringes
BRICKLAYER.....	\$ 14.39	
Carpenters: (including acoustical ceiling installation, drywall hanging and batt insulation installation).....	\$ 14.09	3.47
Cement Mason/Finisher.....	\$ 12.24	1.48
DRYWALL FINISHER/TAPER.....	\$ 14.42	
Elevator Constructor.....	\$ 17.63	3.18
Laborers: (including general laborers and brick mason tenders).....	\$ 10.59	4.61
Painters: Brush, Roller.....	\$ 11.03	
PLASTERER.....	\$ 14.02	
PLUMBER.....	\$ 12.59	1.91
ROOFER, Including Built Up, Composition and Single Ply Roofs.....	\$ 11.97	1.32
SPRINKLER FITTER.....	\$ 13.56	2.65

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

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

-----  
 In the listing above, the "SU" designation means that rates  
 listed under the identifier do not reflect collectively  
 bargained wage and fringe benefit rates. Other designations  
 indicate unions whose rates have been determined to be  
 prevailing.  
 -----

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 Regional Office for the area in which the survey was conducted because those Regional Offices have 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.

=====

END OF GENERAL DECISION

ROCKLAND RAIL STATION  
HISTORIC RESTORATION

ROCKLAND-KNOX COUNTY  
PIN 010223.00

SECTION 2

**SPECIAL PROVISION  
SECTION 104  
SITE COORDINATION**

Description: The Rockland Rail station is a unique transportation facility and has several special requirements that must be met in order to work successfully on the site. Vehicle, pedestrian and train traffic is extremely important to the Railroad, the on site restaurant and the surrounding community and it can not be disrupted without a carefully developed and implemented Facility Control Plan. Security around the facility is also very important and an approved access plan must be followed by all construction personal.

The following information outlines requirements for completing the work and access to and around the various work areas.

1. Railroad Operations – The Maine Eastern Railroad operates passenger rail service from the facility throughout the summer and fall months. This will place a train on the tracks in front of the station on a regular basis and will require the contractor to develop a staging plan that will allow for the train and support services to supply the train and will also allow for patrons to safely move to and from the station and the train. This will also include the need for the contractor to use way finding signs necessary to guide people around and through construction operations. The contractor's operations can not block access to the station or prevent train crews from conducting their business in support of the train service. The Facility Control Plan should be developed by the contractor and submitted to the Department and the Railroad for review and approval. The contractor will need to demonstrate in the submittal that the proposed plan can safely provide for access in and around the facility.

Current schedules can be obtained from Maine Eastern Railroad at 207-596-6770 or checked on line at [www.maineeasternrailroad.com](http://www.maineeasternrailroad.com). Schedules are subject to change.

2. Parking/Staging - Due to limited space at the facility, the contractor will need to make arrangements with the local municipalities or private land owners to meet their total parking/staging needs. There will be up to 4 parking spaces within the parking lot made available for material storage or for the parking of vehicles by the contractor's employees or subcontractors. The spaces will be together and the location will be determined by the Railroad. The use of additional space will be by agreement between the railroad and the contractor. The contractor will confine construction activity to this area and actual work areas and will coordinate traffic in and out of the area with the Railroad and include that arrangement in the Facility Control Plan. This area is also the location for all contractor desired field offices or storage trailers. The Department will not require a field office for this site.

All staging equipment required shall be erected or furnished by the Contractor and maintained in a safe condition for use of all trades. It shall be of an approved design, erected, maintained and removed by experienced tradesman and shall comply with the requirements of all federal, state and local laws, rules and regulations.

3. Restaurant Operations Maintained – The contractor is being made aware that the restaurant will remain in operation throughout the entire contract period. There are a number of areas that will need to be coordinated with the restaurant operator during



the progress of the work. The restaurant is open 7 days a week and opens for business at 11:00 AM until 10:00 PM. There will also be limitations on the amount of impact that construction can have on the operation. They are as follows:

4. No more than one window can be disrupted or removed at a time without prior permission being granted by the restaurant operator and the Department. The operator may be willing to allow more than one window at a time if the contractor can avoid windows being displaced during special event timeframes listed below.
  - Windows being removed/installed or covered/uncovered should have that work started and completed before 11:00 AM when the restaurant opens for business for the day. If this can not be accomplished, then the day of the week and time frames must be coordinated with the operator and the Department to minimize the impact.
  - Once a window is removed from the restaurant area, it will be continually worked on in order to have it re-installed at the earliest possible date.
  - No more than one entrance can be blocked by construction at a time. Even though closed to general traffic, the entrance should be kept available for emergency egress.
  - Staging or scaffolding shall be limited to no more than 50 % of a side of the building (long dimension) being covered at one time. The ends of the building may have 100 % coverage at a time. If the public will be allowed to move through a staged/scaffold area, then the contractor will use all safety precautions necessary to protect people from all potential hazards.
  - The contractor will maintain signage on the site to help guide/direct people through the work areas to the appropriate entrances of the building. The contractor will also place signs near the road indicating that the facility is open for business.
  - The contractor will maintain the satellite on the south side of the building by relocating it as may be necessary for the work to be done in such a way to keep the signal. The contractor may need to coordinate with Direct TV to keep the dish properly sited.
  - The contractor will need to evaluate the construction components and plan to do noisier operations before 11:00 AM whenever possible. After 11:00 AM, noise in the or above the restaurant area should be minimized. There may be lull times in the mid afternoon for business in the restaurant which would allow for some flexibility with construction operations.
  - Any disruption of any utility service to the restaurant must be coordinated and approved prior to the disruption.
  - The contractor is being asked to minimize or avoid special events as much as possible. They include the following dates/events:
    - North Atlantic Blues Festival – July 12<sup>th</sup> & 13<sup>th</sup>
    - Maine Lobster Festival – July 30<sup>th</sup> to August 3<sup>rd</sup>
    - Maine Boats and Harbor Show – August 8<sup>th</sup>, 9<sup>th</sup> & 10<sup>th</sup>
5. Use of facilities - Contractor should be aware that the Department will not make the restroom facilities or other amenities (with the exception of access to an outside water source) available to the contractor for use. The contractor will need to supply their own restroom facilities, drinking water, electricity and phone service. The contractor will use care when using the facility and will be required to restore any damage or wear and tear to the existing facility (including all paved areas) to a

condition equal to or better than when the work began. The contractor will also employ all methods necessary to control dust, mud, debris and garbage generated by construction work or construction traffic. This may include sweeping access ways on a regular basis and establishing methods of cleaning areas as construction moves around the building.

6. Traffic Control/Facility Control – The Contractor shall submit a Traffic Control Plan (TCP) in accordance with Section 652.33 – Submittal of Traffic Control Plan. This TCP shall meet, at a minimum, all items specified under Section 652 – Maintenance of Traffic. Along with the TCP, the contractor shall develop a Facility Control Plan which will establish how the contractor and sub-contractors/suppliers will conduct construction/delivery activities on the site and show how it will not impact the operation of the train service or the restaurant.
7. The contractor will develop an Access Plan, for review and approval by the Department which will be used during construction. There are three (3) primary entrances to the restaurant and at least two (2) of them must remain open to the public at all times. The third may be closed for general use, but should allow for emergency egress. When an entrance is closed due to construction operations, the contractor will provide an alternate route to the other entrances with appropriate signage clearly indicating where people should go. The contractor will also need to provide signage along the perimeter of the facility indicating that the restaurant and train offices are still open. All signs will be reviewed with the Department and Operators prior to fabrication and erection at the site.

Method of Measurement/Payment: Site Coordination shall be paid for as an incidental item and included in the lump sum price for Mobilization, complete in conformance with these specifications, the contract drawings or as directed and accepted by the Project Manager.

**Town:** Rockland  
**Project:** 10223.00  
**Date:** May 27, 2008

**SPECIAL PROVISIONS**  
**SECTION 104**  
**Utilities**

**SPECIAL NOTES TO CONTRACTOR**

The intent of this MDOT Special Provisions, Section 104 Specification *is to* indicate that the Department did not foresee that any special utility requirements would be necessary for this work. The contractor may need to coordinate with utility companies based on how they plan to perform the work. That coordination and any expenses associated with it is the responsibility of the contractor. Utilities need ample time to respond. It is the Contractors responsibility to provide adequate notification regarding coordination and inspections of utility related facilities as required.

**DIG SAFE**

The Contractor is responsible for determining the presence of underground utility facilities prior to any excavation work and shall notify the area utilities in accordance with State of Maine Title 23, MRSA 3360-A. Call 1-888-344-7233.

**SPECIAL PROVISION  
SECTION 104.4**

**Communications and Coordination  
(Progress Meetings)**

Progress meetings shall be held bi-weekly in the Railroads conference room within the station. A time shall be determined for the meetings, this time shall be agreeable to all parties; the Owner, the Contractor and the Operators. The current schedule will be discussed and updates will be given to the Owner and Operators on what the next three weeks activities are and their potential impact on the operation of both the restaurant and train service and their use of the facility.

**SPECIAL PROVISION**  
**SECTION 107.3**  
**ALLOWABLE WORK TIMES**  
**( Night Work )**

The following is in addition to the requirements of Section 107.3.2

The Contractor is being made aware of the close proximity of the local residences. The Contractor shall conduct operations so as not to generate loud noises between the hours of 8:00 PM and 6:30 AM unless otherwise approved. Local requirements concerning noise may impose additional restrictions and must be complied with by the Contractor.

**SPECIAL PROVISION**  
**SECTION 107.4**  
**SCHEDULING OF WORK**  
**(Schedule of Work Required)**

In addition to the Schedule of Work, the Contractor will provide a written day by day summary of the construction activities that will occur for the upcoming three (3) week period. This summary will also highlight activities that will have an impact on the use of the facilities in the construction and adjacent areas. The summary shall be provided to the Department and reviewed at the bi-weekly construction meetings.

Pin 10223.00  
Rockland  
May 22, 2008

**SPECIAL PROVISIONS**

**SECTION 107.9**

**TIME**

(Project Closeout)

The following is in addition to the requirements of Section 107.9.

The Contractor shall maintain, at the site, a set of Drawings, on which shall be recorded accurately as the work progresses, the actual dimensions and grades of all his work, indicating thereon all variations from the Contract Drawings. The record shall include the work of all Subcontractors. Record drawings shall be reviewed by the Resident, and the Contractor shall make all necessary changes according to the Resident's review.

Prior to final acceptance of the Work, all recorded data shall be transferred by the Contractor, to a complete set of reproducible record drawings, in ink or photolitho reproductions of the original of the Contract Drawings showing "As-Built" conditions.

Pin 10223.00  
Rockland  
May 22, 2008

**SPECIAL PROVISION**

**SECTION 107  
TIME  
(Contract Time)**

All work shall be completed by December 19, 2008, which is the specified completion date for this contract.



## STANDARD DETAIL UPDATES

Standard Details and Standard Detail updates are available at:

[http://www.maine.gov/mdot/contractor-consultant-information/ss\\_standard\\_details\\_updates.php](http://www.maine.gov/mdot/contractor-consultant-information/ss_standard_details_updates.php)

<b><u>Detail #</u></b>	<b><u>Description</u></b>	<b><u>Revision Date</u></b>
504(15)	Diaphragms	12/30/02
507(04)	Steel Bridge Railing	2/05/03
526(33)	Concrete Transition Barrier	8/18/03
645(06)	H-Beam Posts – Highway Signing	7/21/04
645(09)	Installation of Type II Signs	7/21/04
626(09)	Electrical Junction Box for Traffic Signals and Lighting	2/25/05
604(01)	Catch Basins	11/16/05
604(05)	Type “A” & “B” Catch Basin Tops	11/16/05
604(06)	Type “C” Catch Basin Tops	11/16/05
604(07)	Manhole Top “D”	11/16/05
604(09)	Catch Basin Type “E”	11/16/05
606(02)	Multiple Mailbox Support	11/16/05
606(07)	Reflectorized Beam Guardrail Delineator Details	11/16/05
609(06)	Vertical Bridge Curb	11/16/05
504(23)	Hand-Hold Details	12/08/05
609(03)	Curb Type 3	6/27/06
609(07)	Curb Type 1	6/27/06
535(01)	Precast Superstructure - Shear Key	10/12/06
535(02)	Precast Superstructure - Curb Key & Drip Notch	10/12/06
535(03)	Precast Superstructure - Shear Key	10/12/06
535(04)	Precast Superstructure - Shear Key	10/12/06

535(05)	Precast Superstructure - Post Tensioning	10/12/06
535(06)	Precast Superstructure - Sections	10/12/06
535(07)	Precast Superstructure - Precast Slab & Box	10/12/06
535(08)	Precast Superstructure - Sections	10/12/06
535(09)	Precast Superstructure - Sections	10/12/06
535(10)	Precast Superstructure - Sections	10/12/06
535(11)	Precast Superstructure - Sections	10/12/06
535(12)	Precast Superstructure - Sections	10/12/06
535(13)	Precast Superstructure - Sections	10/12/06
535(14)	Precast Superstructure - Stirrups	10/12/06
535(15)	Precast Superstructure - Plan	10/12/06
535(16)	Precast Superstructure - Reinforcing	10/12/06
535(17)	Precast Superstructure - Notes	10/12/06
801(01)	Drives on Sidewalk Sections	2/06/07
801(02)	Drives on Non-Sidewalk Sections	2/06/07
535(03)	Precast Superstructure - Shear Key	12/5/07
535(04)	Precast Superstructure - Shear Key	12/5/07
535(05)	Precast Superstructure - Post Tensioning	12/5/07
535(17)	Precast Superstructure - Notes	12/5/07
801(01)	Drives on Sidewalk Sections	1/04/08
801(02)	Drives on Non-Sidewalk Sections	1/04/08
203(03)	Backslope Rounding	1/29/08
535(02)	Precast Superstructure - Curb Key & Drip Notch	5/20/08
535(05)	Precast Superstructure - Post Tensioning	5/20/08

## SUPPLEMENTAL SPECIFICATION

(Corrections, Additions, & Revisions to Standard Specifications - Revision of December 2002)

### SECTION 101

#### CONTRACT INTERPRETATION

##### 101.2 Definitions

Closeout Documentation Replace the sentence “A letter stating the amount.... DBE goals.” with “DBE Goal Attainment Verification Form”

Add “Environmental Information Hazardous waste assessments, dredge material test results, boring logs, geophysical studies, and other records and reports of the environmental conditions. For a related provision, see Section 104.3.14 - Interpretation and Interpolation.”

Add “Fabrication Engineer The Department’s representative responsible for Quality Assurance of pre-fabricated products that are produced off-site.”

Geotechnical Information Replace with the following: “Boring logs, soil reports, geotechnical design reports, ground penetrating radar evaluations, seismic refraction studies, and other records of subsurface conditions. For a related provision, see Section 104.3.14 - Interpretation and Interpolation.”

### SECTION 102

#### DELIVERY OF BIDS

102.7.1 Location and Time Add the following sentence “As a minimum, the Bidder will submit a Bid Package consisting of the Notice to Contractors, the completed Acknowledgement of Bid Amendments form, the completed Schedule of Items, 2 copies of the completed Agreement, Offer, & Award form, a Bid Bond or Bid Guarantee, and any other Certifications or Bid Requirements listed in the Bid Book.”

102.11.1 Non-curable Bid Defects Replace E. with “E. The unit price and bid amount is not provided or a lump sum price is not provided or is illegible as determined by the Department.”

### SECTION 103

#### AWARD AND CONTRACTING

103.3.1 Notice and Information Gathering Change the first paragraph to read as follows: “After Bid Opening and as a condition for Award of a Contract, the Department may require an Apparent Successful Bidder to demonstrate to the Department’s satisfaction that the Bidder is responsible and qualified to perform the Work.”

### SECTION 104

#### GENERAL RIGHTS AND RESPONSIBILITIES

104.3.14 Interpretation and Interpolation In the first sentence, change “...and Geotechnical Information.” to “...Environmental Information, and Geotechnical Information.”

Delete the entire Section 104.5.9 and replace with the following:

“104.5.9 Landscape Subcontractors The Contractor shall retain only Landscape Subcontractors that are certified by the Department’s Environmental Office Landscape Unit.”

## SECTION 105 GENERAL SCOPE OF WORK

Delete the entire Section 105.6 and replace with the following:

105.6.1 Department Provided Services The Department will provide the Contractor with the description and coordinates of vertical and horizontal control points, set by the Department, within the Project Limits, for full construction Projects and other Projects where survey control is necessary. For Projects of 1,500 feet in length, or less: The Department will provide three points. For Projects between 1,500 and 5,000 feet in length: The Department will provide one set of two points at each end of the Project. For Projects in excess of 5,000 feet in length, the Department will provide one set of two points at each end of the Project, plus one additional set of two points for each mile of Project length. For non-full construction Projects and other Projects where survey control is not necessary, the Department will not set any control points and, therefore, will not provide description and coordinates of any control points. Upon request of the Contractor, the Department will provide the Department’s survey data management software and Survey Manual to the Contractor, or its survey Subcontractor, for the exclusive use on the Department’s Projects.

105.6.2 Contractor Provided Services Utilizing the survey information and points provided by the Department, described in Subsection 105.6.1, Department Provided Services, the Contractor shall provide all additional survey layout necessary to complete the Work. This may include, but not be limited to, reestablishing all points provided by the Department, establishing additional control points, running axis lines, providing layout and maintenance of all other lines, grades, or points, and survey quality control to ensure conformance with the Contract. The Contractor is also responsible for providing construction centerline, or close reference points, for all Utility Facilities relocations and adjustments as necessary to complete the Work. When the Work is to connect with existing Structures, the Contractor shall verify all dimensions before proceeding with the Work. The Contractor shall employ or retain competent engineering and/or surveying personnel to fulfill these responsibilities.

The Contractor must notify the Department of any errors or inconsistencies regarding the data and layout provided by the Department as provided by Section 104.3.3 - Duty to Notify Department If Ambiguities Discovered.

105.6.2.1 Survey Quality Control The Contractor is responsible for all construction survey quality control. Construction survey quality control is generally defined as, first, performing initial field survey layout of the Work and, second, performing an independent check of the initial layout using independent survey data to assure the accuracy of the initial layout; additional iterations of checks may be required if significant discrepancies are discovered in this process. Construction survey layout quality control also requires written documentation of the layout process such that the process can be followed and repeated, if necessary, by an independent survey crew.

105.6.3 Survey Quality Assurance It is the Department's prerogative to perform construction survey quality assurance. Construction survey quality assurance may, or may not, be performed by the Department. Construction survey quality assurance is generally defined as an independent check of the construction survey quality control. The construction survey quality assurance process may involve physically checking the Contractor's construction survey layout using independent survey data, or may simply involve reviewing the construction survey quality control written documentation. If the Department elects to physically check the Contractor's survey layout, the Contractor's designated surveyor may be required to be present. The Department will provide a minimum notice of 48 hours to the Contractor, whenever possible, if the Contractor's designated surveyor's presence is required. Any errors discovered through the quality assurance process shall be corrected by the Contractor, at no additional cost to the Department.

105.6.4 Boundary Markers The Contractor shall preserve and protect from damage all monuments or other points that mark the boundaries of the Right-of-Way or abutting parcels that are outside the area that must be disturbed to perform the Work. The Contractor indemnifies and holds harmless the Department from all claims to reestablish the former location of all such monuments or points including claims arising from 14 MRSA § 7554-A. For a related provision, see Section 104.3.11 - Responsibility for Property of Others.

## SECTION 106 QUALITY

106.4.3 Testing Change the first sentence in paragraph three from "...maintain records of all inspections and tests." to "...maintain original documentation of all inspections, tests, and calculations used to generate reports."

106.6 Acceptance Add the following to paragraph 1 of A: "This includes Sections 401 - Hot Mix Asphalt, 402 - Pavement Smoothness, and 502 - Structural Concrete - Method A - Air Content."

Add the following to the beginning of paragraph 3 of A: "For pay factors based on Quality Level Analysis, and"

106.7.1 Standard Deviation Method Add the following to F: "Note: In cases where the mean of the values is equal to either the USL or the LSL, then the PWL will be 50 regardless of the computed value of s."

Add the following to H: "Method C Hot Mix Asphalt:  $PF = [55 + (\text{Quality Level} * 0.5)] * 0.01$ "

## SECTION 107 TIME

107.3.1 General Add the following: "If a Holiday occurs on a Sunday, the following Monday shall be considered a Holiday. Sunday or Holiday work must be approved by the Department, except that the Contractor may work on Martin Luther King Day, President's Day, Patriot's Day, the Friday after Thanksgiving, and Columbus Day without the Department's approval."

107.7.2 Schedule of Liquidated Damages Replace the table of Liquidated Damages as follows:

<u>From More Than</u>	<u>Up to and Including</u>	<u>Amount of Liquidated Damages per Calendar Day</u>
\$0	\$100,000	\$100
\$100,000	\$300,000	\$200
\$300,000	\$500,000	\$400
\$500,000	\$1,000,000	\$575
\$1,000,000	\$2,000,000	\$750
\$2,000,000	\$4,000,000	\$900
\$4,000,000	and more	\$1,875

**SECTION 108**  
**PAYMENT**

108.4 Payment for Materials Obtained and Stored First paragraph, second sentence, delete the words "...Delivered on or near the Work site at acceptable storage places."

**SECTION 109**  
**CHANGES**

109.1.1 Changes Permitted Add the following to the end of the paragraph: "There will be no adjustment to Contract Time due to an increase or decrease in quantities, compared to those estimated, except as addressed through Contract Modification(s)."

109.1.2 Substantial Changes to Major Items Add the following to the end of the paragraph: "Contract Time adjustments may be made for substantial changes to Major Items when the change affects the Critical Path, as determined by the Department"

109.4.4 Investigation / Adjustment Third sentence, delete the words "subsections (A) - (E)"

109.5.1 Definitions - Types of Delays

B. Compensable Delay Replace (1) with the following; "a weather related Uncontrollable Event of such an unusually severe nature that a Federal Emergency Disaster is declared. The Contractor will only be entitled to an Equitable Adjustment if the Project falls within the geographic boundaries prescribed under the disaster declaration."

109.7.2 Basis of Payment Replace with the following: "Equitable Adjustments will be established by mutual Agreement for compensable items listed in Section 109.7.3- Compensable Items, based upon Unit or Lump Sum Prices. If Agreement cannot be reached, the Contractor shall accept payment on a Force Account basis as provided in Section 109.7.5 - Force Account Work, as full and complete compensation for all Work relating to the Equitable Adjustment."

109.7.3 Compensable Items Replace with the following: "The Contractor is entitled to compensation for the following items, with respect to agreed upon Unit or Lump Sum Prices:

1. Labor expenses for non-salaried Workers and salaried foremen.
2. Costs for Materials.
3. A 15 % markup on the totals of Items 1 and 2 of this subsection 109.7.3 for home office overhead and profit of the Contractor, its Subcontractors and suppliers, and any lower tier Subcontractors or suppliers, with no mark-ups on mark-ups.
4. Cost for Equipment, based on Blue Book Rates or leased rates, as set forth in Section 109.7.5(C), or the Contractor's Actual Costs if determined by the Department to be lower.
5. Time.
6. Subcontractor quoted Work, as set forth below in Section 109.7.5 (F)."

#### 109.7.5 Force Account Work

##### C. Equipment

Paragraph 2, delete sentence 1 which starts; "Equipment leased...."

Paragraph 6, change sentence 2 from "The Contractor may furnish..." to read "If requested by the Department, the Contractor will produce cost data to assist the Department in the establishment of such rental rate, including all records that are relevant to the Actual Costs including rental Receipts, acquisition costs, financing documents, lease Agreements, and maintenance and operational cost records."

Add the following paragraph; "Equipment leased by the Contractor for Force Account Work and actually used on the Project will be paid for at the actual invoice amount plus 10% markup for administrative costs."

Add the following section;

"F. Subcontractor Work When accomplishing Force Account Work that utilizes Subcontractors, the Contractor will be allowed a maximum markup of 5% for profit and overhead on the Subcontractor's portion of the Force Account Work."

## SECTION 110 INDEMNIFICATION, BONDING, AND INSURANCE

Delete the entire Section 110.2.3 and replace with the following:

110.2.3 Bonding for Landscape Establishment Period The Contractor shall provide a signed, valid, and enforceable Performance, Warranty, or Maintenance Bond complying with the Contract, to the Department at Final Acceptance.

The bond shall be in the full amount for all Pay Items for work pursuant to Sec 621, Landscape, payable to the “Treasurer - State of Maine,” and on the Department’s forms, on exact copies thereof, or on forms that do not contain any significant variations from the Department’s forms as solely determined by the Department.

The Contractor shall pay all premiums and take all other actions necessary to keep said bond in effect for the duration of the Landscape Establishment Period described in Special Provision 621.0036 - Establishment Period. If the Surety becomes financially insolvent, ceases to be licensed or approved to do business in the State of Maine, or stops operating in the United States, the Contractor shall file new bonds complying with this Section within 10 Days of the date the Contractor is notified or becomes aware of such change.

All Bonds shall be procured from a company organized and operating in the United States, licensed or approved to do business in the State of Maine by the State of Maine Department of Business Regulation, Bureau of Insurance, and listed on the latest Federal Department of the Treasury listing for “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies.”

By issuing a bond, the Surety agrees to be bound by all terms of the Contract, including those related to payment, time for performance, quality, warranties, and the Department’s self-help remedy provided in Section 112.1 - Default to the same extent as if all terms of the Contract are contained in the bond(s).

Regarding claims related to any obligations covered by the bond, the Surety shall provide, within 60 Days of Receipt of written notice thereof, full payment of the entire claim or written notice of all bases upon which it is denying or contesting payment. Failure of the Surety to provide such notice within the 60-day period constitutes the Surety’s waiver of any right to deny or contest payment and the Surety’s acknowledgment that the claim is valid and undisputed.

## SECTION 202 REMOVING STRUCTURES AND OBSTRUCTIONS

202.02 Removing Buildings Make the following change to the last sentence in the final paragraph, change “...Code of Maine Regulations 401.” to “...Department of Environmental Protection Maine Solid Waste Management Rules, 06-096 CMR Ch. 401, Landfill Siting, Design and Operation.”

## SECTION 203 EXCAVATION AND EMBANKMENT

203.01 Description Under b. Rock Excavation; add the following sentence: “The use of perchlorate is not allowed in blasting operations.”



SECTION 502  
STRUCTURAL CONCRETE

502.05 Composition and Proportioning; TABLE #1; NOTE #2; third sentence; Change "...alcohol based saline sealer..." to "alcohol based silane sealer...". Add NOTE #6 to Class S Concrete.

502.0502 Quality Assurance Method A - Rejection by Resident Change the first sentence to read: "For an individual subplot with test results failing to meet the criteria in Table #1, or if the calculated pay factor for Air Content is less than 0.80....."

502.0503 Quality Assurance Method B - Rejection by Resident Change the first sentence to read: "For material represented by a verification test with test results failing to meet the criteria in Table #1, the Department will....."

502.0505 Resolution of Disputed Acceptance Test Results Combine the second and third sentence to read: "Circumstances may arise, however, where the Department may ....."

502.10 Forms and False work

D. Removal of Forms and False work 1., First paragraph; first, second, and third sentence; replace "forms" with "forms and false work"

502.11 Placing Concrete

G. Concrete Wearing Surface and Structural Slabs on Precast Superstructures Last paragraph; third sentence; replace "The temperature of the concrete shall not exceed 24° C [75° F] at the time of placement." with "The temperature of the concrete shall not exceed 24° C [75° F] at the time the concrete is placed in its final position."

502.15 Curing Concrete First paragraph; replace the first sentence with the following; "All concrete surfaces shall be kept wet with clean, fresh water for a curing period of at least 7 days after concrete placing, with the exception of vertical surfaces as provided for in Section 502.10 (D) - Removal of Forms and False work."

Second paragraph; delete the first two sentences.

Third paragraph; delete the entire paragraph which starts "When the ambient temperature...."

Fourth paragraph; delete "approved" to now read "...continuously wet for the entire curing period..."

Fifth paragraph; second sentence; change "...as soon as it is possible to do so without damaging the concrete surface." to "...as soon as possible."

Seventh paragraph; first sentence; change "...until the end of the curing period." to "...until the end of the curing period, except as provided for in Section 502.10(D) - Removal of Forms and False work."

502.19 Basis of Payment First paragraph, second sentence; add "pier nose armor" to the list of items included in the contract price for concrete.

### SECTION 503 REINFORCING STEEL

503.06 Placing and Fastening Change the second paragraph, first sentence from: "All tack welding shall be done in accordance with Section 504, Structural Steel." to "All tack welding shall be done in accordance with AWS D1.4 Structural Welding Code - Reinforcing Steel."

### SECTION 504 STRUCTURAL STEEL

504.09 Facilities for Inspection Add the follow as the last paragraph: "Failure to comply with the above requirements will be consider to be a denial to allow access to work by the Contractor. The Department will reject any work done when access for inspection is denied."

504.18 Plates for Fabricated Members Change the second paragraph, first sentence from: "...ASTM A 898/A 898 M..." to "...ASTM A 898/A 898 M or ASTM A 435/A 435 M as applicable and..."

504.31 Shop Assembly Add the following as the last sentence: "The minimum assembly length shall include bearing centerlines of at least two substructure units."

504.64 Non Destructive Testing-Ancillary Bridge Products and Support Structures Change the third paragraph, first sentence from "One hundred percent..." to "Twenty five percent..."

### SECTION 535 PRECAST, PRESTRESSED CONCRETE SUPERSTRUCTURE

535.02 Materials Change "Steel Strand for Concrete Reinforcement" to "Steel Strand." Add the following to the beginning of the third paragraph; "Concrete shall be Class P conforming to the requirements in this section. 28 day compressive strength shall be as stated on the plans. Coarse aggregate...."

535.05 Inspection Facilities Add the follow as the last paragraph: "If the above requirements are not met, the Contractor shall be considered to be in violation of Standard Specification 104.2.5 – Right to Inspect Work. All work occurring during a violation of this specification will be rejected."

535.26 Lateral Post-Tensioning Replace the first paragraph; "A final tension..." with "Overstressing strands for setting losses cannot be accomplished for chuck to chuck lengths of 7.6 m [25 ft] and less. In such instances, refer to the Plans for all materials and methods. Otherwise, post-tensioning shall be in accordance with PCI standards and shall provide the anchorage force noted in the Plans. The applied jacking force shall be no less than 100% of the design jacking force."

SECTION 603  
**PIPE CULVERTS AND STORM DRAINS**

603.0311 Corrugated Polyethylene Pipe for Option III Replace the Minimum Mandrel Diameter Table with the following:

Nominal Size US Customary (in)	Minimum Mandrel Diameter (in)	Nominal Size Metric (mm)	Minimum Mandrel Diameter (mm)
12	11.23	300	280.73
15	14.04	375	350.91
18	16.84	450	421.09
24	22.46	600	561.45
30	28.07	750	701.81
36	33.69	900	842.18
42	39.30	1050	982.54
48	44.92	1200	1122.90

SECTION 604  
**MANHOLES, INLETS, AND CATCH BASINS**

604.02 Materials Add the following:

“Tops and Traps	712.07
Corrugated Metal Units	712.08
Catch Basin and Manhole Steps	712.09”

SECTION 605  
**UNDERDRAINS**

605.05 Underdrain Outlets Make the following change:

In the first paragraph, second sentence, delete the words “metal pipe”.

SECTION 606  
**GUARDRAIL**

606.02 Materials Delete the entire paragraph which reads “The sole patented supplier of multiple mailbox...” and replace with “Acceptable multiple mailbox assemblies shall be listed on the Department’s Approved Products List and shall be NCHRP 350 tested and approved.” Delete the entire paragraph which reads “Retroreflective beam guardrail delineators...” and replace with “Reflectorized sheeting for Guardrail Delineators shall meet the requirements of Section 719.01 - Reflective Sheeting. Delineators shall be fabricated from high-impact, ultraviolet and weather resistant thermoplastic.

606.09 Basis of Payment First paragraph; delete the second and third sentence in their entirety and replace with “Butterfly-type guardrail reflectorized delineators shall be mounted on all W-beam guardrail at an interval of every 10 posts [62.5 ft] on tangents sections and every 5 posts [31.25 ft] on curved sections as directed by the Resident. On divided highways, the delineators shall be yellow on the left hand side and silver/white on the right hand side. On two-way

roadways, the delineators shall be silver/white on the right hand side. All delineators shall have retroreflective sheeting applied to only the traffic facing side. Reflectorized guardrail delineators will not be paid for directly, but will be considered incidental to the guardrail items.”

## SECTION 609 CURB

609.04 Bituminous Curb f., Delete the requirement “Color Natural (White)”

## SECTION 615 LOAM

615.02 Materials Make the following change:

<u>Organic Content</u>	<u>Percent by Volume</u>
Humus	“5% - 10%”, as determined by Ignition Test

## SECTION 618 SEEDING

618.01 Description Change the first sentence to read as follows: “This work shall consist of furnishing and applying seed .....” Also remove “,and cellulose fiber mulch” from 618.01(a).

618.03 Rates of Application In 618.03(a), remove the last sentence and replace with the following: “These rates shall apply to Seeding Method 2, 3, and Crown Vetch.”

In 618.03(c) “1.8 kg [4 lb]/unit.” to “1.95 kg [4 lb]/unit.”

618.09 Construction Method In 618.09(a) 1, sentence two, replace “100 mm [4 in]” with “25 mm [1 in] (Method 1 areas) and 50 mm [2 in] (Method 2 areas)”

618.15 Temporary Seeding Change the Pay Unit from Unit to Kg [lb].

## SECTION 620 GEOTEXTILES

620.03 Placement Section (c)

Title: Replace “Non-woven” in title with “Erosion Control”.

First Paragraph: Replace first word “Non-woven” with “Woven monofilament”.

Second Paragraph: Replace second word “Non-woven” with “Erosion Control”.

620.07 Shipment, Storage, Protection and Repair of Fabric Section (a)

Replace the second sentence with the following: “Damaged geotextiles, as identified by the Resident, shall be repaired immediately.”

620.09 Basis of Payment

Pay Item 620.58: Replace “Non-woven” with “Erosion Control”

Pay Item 620.59: Replace “Non-woven” with “Erosion Control”

SECTION 621  
LANDSCAPING

621.0036 Establishment Period In paragraph 4 and 5, change “time of Final Acceptance” to “end of the period of establishment”. In Paragraph 7, change “Final Acceptance date” to “end of the period of establishment” and change “date of Final Acceptance” to “end of the period of establishment”.

SECTION 626  
HIGHWAY SIGNING

626.034 Concrete Foundations Add to the following to the end of the second paragraph: “Pre-cast and cast-in-place foundations shall be warranted against leaning and corrosion for two years after the project is completed. If the lean is greater than 2 degrees from normal or the foundation is spalling within the first two years, the Contractor shall replace the foundation at no extra cost.”

SECTION 627  
PAVEMENT MARKINGS

627.10 Basis of Payment Add to the following to the end of the third paragraph: “If allowed by Special Provision, the Contractor may utilize Temporary Bi-Directional Yellow and White(As required) Delineators as temporary pavement marking lines and paid for at the contract lump sum price. Such payment will include as many applications as required and removal.”

SECTION 637  
DUST CONTROL

637.06 Basis of Payment Add the following after the second sentence of the third paragraph: “Failure by the Contractor to follow Standard Specification or Special Provision - Section 637 and/or the Contractor’s own Soil Erosion and Pollution Control Plan concerning Dust Control and/or the Contractor’s own Traffic Control Plan concerning Dust Control and/or visible evidence of excessive dust problems, as determined by the Resident, will result in a reduction in payment, computed by reducing the Lump Sum Total by 5% per occurrence per day. The Department’s Resident or any other representative of the Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item. Additional penalties may also be assessed in accordance with Special Provision 652 - Work Zone Traffic Control and Standard Specification 656 - Temporary Soil Erosion and Water Pollution Control.”

SECTION 639  
ENGINEERING FACILITIES

639.04 Field Offices Change the forth to last paragraph from: “The Contractor shall provide a fully functional desktop copier...” to “....desktop copier/scanner...”

Description Change “Floor Area” to “Floor Area (Outside Dimension)”. Change Type B floor area from “15 (160)” to “14.4 (155)”.

## SECTION 652

### MAINTENANCE OF TRAFFIC

652.2.3 Flashing Arrow Board Delete the existing 5 paragraphs and replace with the following: Flashing Arrow Panels (FAP) must be of a type that has been submitted to AASHTO's National Transportation Product Evaluation Program (NTPEP) for evaluation and placed on the Maine Department of Transportations' Approved Products List of Portable Changeable Message Signs & Flashing Arrow Panels.

FAP units shall meet requirements of the current Manual on Uniform Traffic Control Devices (MUTCD) for Type "C" panels as described in Section 6F.56 - Temporary Traffic Control Devices. An FAP shall have matrix of a minimum of 15 low-glare, sealed beam, Par 46 elements capable of either flashing or sequential displays as well as the various operating modes as described in the MUTCD, Chapter 6-F. If an FAP consisting of a bulb matrix is used, each element should be recess-mounted or equipped with an upper hood of not less than 180 degrees. The color presented by the elements shall be yellow.

FAP elements shall be capable of at least a 50 percent dimming from full brilliance. Full brilliance should be used for daytime operation and the dimmed mode shall be used for nighttime operation. FAP shall be at least 2.4 M x 1.2 M [96" x 48"] and finished in non-reflective black. The FAP shall be interpretable for a distance not less than 1.6 km [1 mile].

Operating modes shall include, flashing arrow, sequential arrow, sequential chevron, flashing double arrow, and flashing caution. In the three arrow signals, the second light from the arrow point shall not operate.

The minimum element on-time shall be 50 percent for the flashing mode, with equal intervals of 25 percent for each sequential phase. The flashing rate shall be not less than 25 nor more than 40 flashes per minute. All on-board circuitry shall be solid state.

Primary power source shall be 12 volt solar with a battery back-up to provide continuous operation when failure of the primary power source occurs, up to 30 days with fully charged batteries. Batteries must be capable of being charged from an onboard 110 volt AC power source and the unit shall be equipped with a cable for this purpose.

Controller and battery compartments shall be enclosed in lockable, weather-tight boxes. The FAP shall be mounted on a pneumatic-tired trailer or other suitable support for hauling to various locations, as directed. The minimum mounting height of an arrow panel should be 2.1 M [7 feet] from the roadway to the bottom of the panel.

The face of the trailer shall be delineated on a permanent basis by affixing retro-reflective material, known as conspicuity material, in a continuous line as seen by oncoming drivers.

A portable changeable message sign may be used to simulate an arrow panel display."

652.2.4 Other Devices Delete the last paragraph and add the following:  
"652.2.5 Portable Changeable Message Sign Trailer mounted Portable Changeable Message Signs (PCMS) must be of a type that has been submitted to AASHTO's National

Transportation Product Evaluation Program (NTPEP) for evaluation and placed on the Maine Department of Transportations' Approved Products List of Portable Changeable Message Signs & Flashing Arrow Panels. The PCMS unit shall meet or exceed the current specifications of the Manual on Uniform Traffic Control Devices (MUTCD), 6F.55.

The front face of the sign should be covered with a low-glare protective material. The color of the LED elements shall be amber on a black background. The PCMS should be visible from a distance of 0.8 km [0.5 mile] day and night and have a minimum 15° viewing angle. Characters must be legible from a distance of at least 200 M [650 feet].

The message panel should have adjustable display rates (minimum of 3 seconds per phase), so that the entire message can be read at least twice at the posted speed, the off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed. Each message shall consist of either one or two phases. A phase shall consist of up to eight characters per line. The unit must be capable of displaying at least three lines of text with eight characters per line. Each character shall be 457 mm [18"] high. Each character module shall use at least a five wide and seven high pixel matrix. The text of the messages shall not scroll or travel horizontally or vertically across the face of the sign.

Units shall automatically adjust their brightness under varying light conditions to maintain legibility.

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. Message must be changeable with either 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.

PCMS units shall have the capability of being made programmable by means of wireless communications. PCMS units shall also be fully capable of having an on-board radar system installed if required for a particular application.

PCMS' primary power source shall be solar with a battery back-up to provide continuous operation when failure of the primary power source occurs. Batteries must be capable of being charged from a 110 volt AC power source. The unit must also be capable of being operated solely from a 110 volt AC power source and be equipped with a cable for this purpose.

The PCMS shall be mounted on a trailer in such a way that the bottom of the message sign panel shall be a minimum of 2.1 M [7 ft] above the roadway in urban areas and 1.5 M [5 ft] above the roadway in rural areas when it is in the operating mode. PCMS trailers should be of a heavy duty type with a 51 mm [2"] ball hitch and a minimum of four leveling jacks (at each corner). The sign shall be capable of being rotated 360° relative to the trailer. The face of the trailer shall be delineated on a permanent basis by affixing retro-reflective material, known as conspicuity material, in a continuous line as seen by oncoming drivers."

652.3.3 Submittal of Traffic Control Plan In item e. change "A list of all certified flaggers..." to "A list of all the Contractor's certified flaggers..."

In the last paragraph add the following as the second sentence: “The Department will review and provide comments to the Contractor within 14 days of receipt of the TCP.”

652.3.5 Installation of Traffic Control Devices In the first paragraph, first sentence; change “Signs shall be erected...” to “Portable signs shall be erected...” In the third sentence; change “Signs must be erected so that the sign face...” to “Post-mounted signs must also be erected so that the sign face...”

652.4 Flaggers Replace the first paragraph with the following; “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. Flaggers shall wear safety apparel meeting ANSI 107-1999 Class 2 risk exposure and clearly identify the wearer as a person, shall be visible at a minimum distance of 300 m [1000 ft], and shall wear a hardhat with retroreflectivity. For nighttime conditions, Class 3 apparel should be considered, retroreflective or flashing SLOW/STOP paddles shall be used, and except in emergency situations the flagger station shall be illuminated to assure visibility.”

Second paragraph, first sentence; change “...have sufficient distance to stop before entering the workspace.” to “...have sufficient distance to stop at the intended stopping point.” Third sentence; change “At a spot obstruction...” to “At a spot obstruction with adequate sight distance,...”

Fourth paragraph, delete and replace with “Flaggers shall be provided as a minimum, a 10 minute break, every 2 hours and a 30 minute or longer lunch period away from the work station. Flaggers may only receive 1 unpaid break per day; all other breaks must be paid. Sufficient certified flaggers shall be available onsite to provide for continuous flagging operations during break periods. Breaker flaggers will not be paid for separately, but shall be considered incidental to the appropriate pay item.”

652.8.2 Other Items Replace the last paragraph with the following: “There will be no payment made under any 652 pay items after the expiration of the adjusted total contract time.”

## SECTION 653 POLYSTYRENE PLASTIC INSULATION

653.05 Placing Backfill In the second sentence; change “...shall be not less than 150 mm [6 in] loose measure.” to “...shall be not less than 250 mm [10 in] loose measure.” In the third sentence; change “...crawler type bulldozer of not more than 390 kg/m<sup>2</sup> [80 lb/ft<sup>2</sup>] ground contact pressure...” to “...crawler type bulldozer of not more than 4875 kg/m<sup>2</sup> [2000 lb/ft<sup>2</sup>] ground contact pressure...”

653.06 Compaction In the last sentence; change “...not more than 390 kg/m<sup>2</sup> [80 lb/ft<sup>2</sup>] ground contact...” to “...not more than 4875 kg/m<sup>2</sup> [2000 lb/ft<sup>2</sup>] ground contact...”



## SECTION 656

### TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL

656.5.1 If Pay Item 656.75 Provided Replace the second paragraph with the following: "Failure by the Contractor to follow Standard Specification or Special Provision - Section 656 and/or the Contractor's own Soil Erosion and Pollution Control Plan will result in a reduction in payment, computed by reducing the Lump Sum Total by 5% per occurrence per day. The Department's Resident or any other representative of the Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item."

## SECTION 701

### STRUCTURAL CONCRETE RELATED MATERIALS

701.10 Fly Ash - Chemical Requirements Change all references from "ASTM C311" to "ASTM C114".

## SECTION 703

### AGGREGATES

703.05 Aggregate for Sand Leveling Change the percent passing the 9.5 mm [3/8 in] sieve from "85 - 10" to "85 - 100"

703.06 Aggregate for Base and Subbase Delete the first paragraph: "The material shall have..." and replace with "The material shall have a minimum degradation value of 15 as determined by Washington State DOT Test Method T113, Method of Test for Determination of Degradation Value (March 2002 version), except that the reported degradation value will be the result of testing a single specimen from that portion of a sample that passes the 12.5 mm [1/2 in] sieve and is retained on the 2.00 mm [No. 10] sieve, minus any reclaimed asphalt pavement used."

703.07 Aggregates for HMA Pavements Delete the fourth paragraph: "The composite blend shall have..." and replace with "The composite blend, minus any reclaimed asphalt pavement used, shall have a Micro-Deval value of 18.0 or less as determined by AASHTO T 327. In the event the material exceeds the Micro Deval limit, a Washington Degradation test shall be performed. The material shall be acceptable if it has a value of 30 or more as determined by Washington State DOT Test Method T 113, Method of Test for Determination of Degradation Value (March 2002 version) except that the reported degradation value will be the result of testing a single composite specimen from that portion of the sample that passes the 12.5mm [1/2 inch] sieve and is retained on the 2.00mm [No 10] sieve, minus any reclaimed asphalt pavement used."

703.09 HMA Mixture Composition The coarse and fine aggregate shall meet the requirements of Section 703.07. The several aggregate fractions for mixtures shall be sized, graded, and combined in such proportions that the resulting composite blends will meet the grading requirements of the following table.

**AGGREGATE GRADATION CONTROL POINTS**

SIEVE SIZE	Nominal Maximum Aggregate Size---Control Points (Percent Passing)				
	TYPE 25 mm	TYPE 19 mm	TYPE 12.5 mm	TYPE 9.5 mm	TYPE 4.75 mm
	PERCENT BY WEIGHT PASSING - COMBINED AGGREGATE				
37.5 mm	100				
25 mm	90-100	100			
19 mm	-90	90-100	100		
12.5 mm		-90	90-100	100	100
9.5 mm		-	-90	90-100	95-100
4.75 mm		-	-	-90	80-100
2.36 mm	19-45	23-49	28-58	32-67	40 - 80
1.18 mm		-	-	-	-
600 µm		-	-	-	-
300 µm		-	-	-	-
75 µm	1-7	2-8	2-10	2-10	2-10

Gradation Classification---- The combined aggregate gradation shall be classified as coarse-graded when it passes below the Primary Control Sieve (PCS) control point as defined in the following table. All other gradations shall be classified as fine-graded.

**GRADATION CLASSIFICATION**

PCS Control Point for Mixture Nominal Maximum Aggregate Size (% passing)				
Nominal Maximum Aggregate Size	TYPE 25 mm	TYPE 19 mm	TYPE 12.5 mm	TYPE 9.5 mm
Primary Control Sieve	4.75 mm	4.75 mm	2.36 mm	2.36 mm
PCS Control Point (% passing)	40	47	39	47

If a Grading "D" mixture is allowed per Special Provision Section 403, it shall meet the following gradation and the aggregate requirements of Section 703.07.

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
½ inch	100
¾ inch	93-100
No. 4	60-80
No. 8	46-65
No. 16	25-55
No. 30	16-40
No. 50	10-30
No. 100	6-22
No. 200	3.0-8.0

703.18 Common Borrow Replace the first paragraph with the following: “Common borrow shall consist of earth, suitable for embankment construction. It shall be free from frozen material, perishable rubbish, peat, and other unsuitable material including material currently or previously contaminated by chemical, radiological, or biological agents unless the material is from a DOT project and authorized by DEP for use.”

703.22 Underdrain Backfill Material Change the first paragraph from “...for Underdrain Type B...” to “...for Underdrain Type B and C...”

## SECTION 706 NON-METALLIC PIPE

706.06 Corrugated Polyethylene Pipe for Underdrain, Option I and Option III Culvert Pipe Change the first sentence from “...300 mm diameters to 900 mm” to “...300 mm diameters to 1200 mm” Delete, in it’s entirety, the last sentence which begins “This pipe and resins...” and replace with the following; “The manufacturing plants of polyethylene pipe shall be certified by the Eastern States Consortium. Polyethylene pipe shall be accepted based on third party certification by the AASHTO’s National Transportation Product Evaluation Program.”

## SECTION 709 REINFORCING STEEL AND WELDED STEEL WIRE FABIC

709.03 Steel Strand Change the second paragraph from “...shall be 12mm [½ inch] AASHTO M203M/M203 (ASTM A416/A416M)...” to “...shall be 15.24 mm [0.600 inch] diameter AASHTO M203 (ASTM A416)...”

## SECTION 710 FENCE AND GUARDRAIL

710.03 Chain Link Fabric Add the following sentence: “Chain Link fabric for PVC coated shall conform to the requirements of AASHTO M181, Type IV-Class B.”

710.07 Guardrail Posts Section b. change “...AASHTO M183/M183M...” to “...AASHTO M 270M/M 270 Grade 250 (36)...”

## SECTION 712 MISCELLANEOUS HIGHWAY MATERIALS

712.06 Precast Concrete Units In the first paragraph, change “...ASTM C478M...” to “...AASHTO M199...” Delete the second paragraph and replace with the following; “Approved structural fibers may be used as a replacement of 6 x 6 #10 gauge welded wire fabric when used at an approved dosage rate for the construction of manhole and catch basin units. The material used shall be one of the products listed on the Maine Department of Transportation’s Approved Product List of Structural Fiber Reinforcement.” Delete the fifth paragraph and replace with the following; “The concrete mix design shall be approved by the Department. Concrete shall contain 6% air content, plus or minus 1½% tolerance when tested according to AASHTO T152. All concrete shall develop a minimum compressive strength of 28 MPa [4000 psi] in 28 days when tested according to AASHTO T22. The absorption of a

specimen, when tested according to AASHTO T280, Test Method “A”, shall not exceed nine percent of the dry mass.”

Add the following:

“712.07 Tops, and Traps These metal units shall conform to the plan dimensions and to the following specification requirements for the designated materials.

Gray iron or ductile iron castings shall conform to the requirements of AASHTO M306 unless otherwise designated.”

712.08 Corrugated Metal Units The units shall conform to plan dimensions and the metal to AASHTO M36/M36M. Bituminous coating, when specified, shall conform to AASHTO M190 Type A.

712.09 Catch Basin and Manhole Steps Steps for catch basins and for manholes shall conform to ASTM C478M [ASTM C478], Section 13 for either of the following material:

- (a) Aluminum steps-ASTM B221M, [ASTM B211] Alloy 6061-T6 or 6005-T5.
- (b) Reinforced plastic steps Steel reinforcing bar with injection molded plastic coating copolymer polypropylene. Polypropylene shall conform to ASTM D 4101.

712.23 Flashing Lights Flashing Lights shall be power operated or battery operated as specified.

- (a) Power operated flashing lights shall consist of housing, adapters, lamps, sockets, reflectors, lens, hoods and other necessary equipment designed to give clearly visible signal indications within an angle of at least 45 degrees and from 3 to 90 m [10 to 300 ft] under all light and atmospheric conditions.

Two circuit flasher controllers with a two-circuit filter capable of providing alternate flashing operations at the rate of not less than 50 nor more than 60 flashes per minute shall be provided.

The lamps shall be 650 lumens, 120 volt traffic signal lamps with sockets constructed to properly focus and hold the lamp firmly in position.

The housing shall have a rotatable sun visor not less than 175 mm [7 in] in length designed to shield the lens.

Reflectors shall be of such design that light from a properly focused lamp will reflect the light rays parallel. Reflectors shall have a maximum diameter at the point of contact with the lens of approximately 200 mm [8 in].

The lens shall consist of a round one-piece convex amber material which, when mounted, shall have a visible diameter of approximately 200 mm [8 in]. They shall distribute light and not diffuse it. The distribution of the light shall be asymmetrical in a downward direction. The light distribution of the lens shall not be uniform, but shall consist of a small high intensity portion with narrow distribution for long distance throw and a larger

low intensity portion with wide distribution for short distance throw. Lenses shall be marked to indicate the top and bottom of the lens.

(b) Battery operated flashing lights shall be self-illuminated by an electric lamp behind the lens. These lights shall also be externally illuminated by reflex-reflective elements built into the lens to enable it to be seen by reflex-reflection of the light from the headlights of oncoming traffic. The batteries must be entirely enclosed in a case. A locking device must secure the case. The light shall have a flash rate of not less than 50 nor more than 60 flashes per minute from minus 30 °C [minus 20 °F] to plus 65 °C [plus 150 °F]. The light shall have an on time of not less than 10 percent of the flash cycle. The light beam projected upon a surface perpendicular to the axis of the light beam shall produce a lighted rectangular projection whose minimum horizontal dimension shall be 5 degrees each side of the horizontal axis. The effective intensity shall not have an initial value greater than 15.0 candelas or drop below 4.0 candelas during the first 336 hours of continuous flashing. The illuminated lens shall appear to be uniformly bright over its entire illuminated surface when viewed from any point within an angle of 9 degrees each side of the vertical axis and 5 degrees each side of the horizontal axis. The lens shall not be less than 175 mm [7 in] in diameter including a reflex-reflector ring of 13 mm [ $\frac{1}{2}$  in] minimum width around the periphery. The lens shall be yellow in color and have a minimum relative luminous transmittance of 0.440 with a luminance of 2854° Kelvin. The lens shall be one-piece construction. The lens material shall be plastic and meet the luminous transmission requirements of this specification. The case containing the batteries and circuitry shall be constructed of a material capable of withstanding abuse equal to or greater than 1.21 mm thick steel [No. 18 U.S. Standard Gage Steel]. The housing and the lens frame, if of metal shall be properly cleaned, degreased and pretreated to promote adhesion. It shall be given one or more coats of enamel which, when dry shall completely obscure the metal. The enamel coating shall be of such quality that when the coated case is struck a light blow with a sharp tool, the paint will not chip or crack and if scratched with a knife will not powder. The case shall be so constructed and closed as to exclude moisture that would affect the proper operation of light. The case shall have a weep hole to allow the escape of moisture from condensation. Photoelectric controls, if provided, shall keep the light operating whenever the ambient light falls below 215 lx [20 foot candles]. Each light shall be plainly marked as to the manufacturer's name and model number.

If required by the Resident, certification as to conformance to these specifications shall be furnished based on results of tests made by an independent testing laboratory. All lights are subject to random inspection and testing. All necessary random samples shall be provided to the Resident upon request without cost to the Department. All such samples shall be returned to the Contractor upon completion of the tests.

712.32 Copper Tubing Copper tubing and fittings shall conform to the requirements of ASTM B88M Type A [ASTM B88, Type K] or better.

712.33 Non-metallic Pipe, Flexible Non-metallic pipe and pipe fittings shall be acceptable flexible pipe manufactured from virgin polyethylene polymer suitable for transmitting liquids intended for human or animal consumption.

712.34 Non-metallic Pipe, Rigid Non-metallic pipe shall be Schedule 40 polyvinylchloride (PVC) that meets the requirement of ASTM D1785. Fittings shall be of the same material.

712.341 Metallic Pipe Metallic pipe shall be ANSI, Standard B36.10, Schedule 40 steel pipe conforming to the requirements of ASTM A53 Types E or S, Grade B. End plates shall be steel conforming to ASTM A36/A36M.

Both the sleeve and end plates shall be hot dip galvanized. Pipe sleeve splices shall be welded splices with full penetration weld before galvanizing.

712.35 Epoxy Resin Epoxy resin for grouting or sealing shall consist of a mineral filled thixotropic, flexible epoxy resin having a pot life of approximately one hour at 10°C [50°F]. The grout shall be an approved product suitable for cementing steel dowels into the preformed holes of curb inlets and adjacent curbing. The sealant shall be an approved product, light gray in color and suitable for coating the surface.

712.36 Bituminous Curb The asphalt cement for bituminous curb shall be of the grade required for the wearing course, or shall be Viscosity Grade AC-20 meeting the current requirements of Subsection 702.01 Asphalt Cement. The aggregate shall conform to the requirements of Subsection 703.07. The coarse aggregate portion retained on the 2.36 mm [No. 8] sieve may be either crushed rock or crushed gravel.

The mineral constituents of the bituminous mixture shall be sized and graded and combined in a composite blend that will produce a stable durable curbing with an acceptable texture.

Bituminous material for curb shall meet the requirements of Section 403 - Hot Bituminous Pavement.

712.37 Precast Concrete Slab Portland cement concrete for precast slabs shall meet the requirements of Section 502 - Structural Concrete, Class A.

The slabs shall be precast to the dimension shown on the plans and cross section and in accordance with the Standard Detail plans for Concrete Sidewalk Slab. The surface shall be finished with a float finish in accordance with Subsection 502.14(c). Lift devices of sufficient strength to hold the slab while suspended from cables shall be cast into the top or back of the slab.

712.38 Stone Slab Stone slabs shall be of granite from an acceptable source, hard, durable, predominantly gray in color, free from seams which impair the structural integrity and be of smooth splitting character. Natural color variations characteristic of the deposit will be permitted. Exposed surfaces shall be free from drill holes or indications of drill holes. The granite slabs in any one section of backslope must be all the same finish.

The granite slabs shall be scabble dressed or sawed to an approximately true plane having no projections or depressions over 13 mm [½ in] under a 600 mm [2 ft] straightedge or over 25 mm [1 in] under a 1200 mm [4 ft] straightedge. The arris at the intersection of the top surface and exposed front face shall be pitched so that the arris line is uniform throughout the length of the installed slabs. The sides shall be square to the exposed face unless the slabs are to be set

on a radius or other special condition which requires that the joints be cut to fit, but in any case shall be so finished that when the stones are placed side by side no space more than 20 mm [3/4 in] shall show in the joint for the full exposed height.

Liftpin holes in all sides will be allowed except on the exposed face.

## SECTION 717 ROADSIDE IMPROVEMENT MATERIAL

717.03 C. Method #3 - Roadside Mixture #3 Change the seed proportions to the following:

Crown Vetch	25%
Perennial Lupine	25%
Red Clover	12.5%
Annual Rye	37.5%

717.05 Mulch Binder Change the third sentence to read as follows:

“Paper fiber mulch may be used as a binder at the rate of 2.3 kg/unit [5 lb/unit].”

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

720.08 U-Channel Posts Change the first sentence from “..., U-Channel posts...” to “..., Rib Back U-Channel posts...”

## SECTION 722 GEOTEXTILES

722.01 Stabilization/Reinforcement Geotextile Add the following to note #3; “The strengths specified in the columns labeled”<50%” and “≥ 50%” refer to the elongation at which the geotextile material was tested. For example; if a fabric is tested at 15% elongation then it must meet or exceed the minimum strength shown in the “<50%” column. Submittals must include the percent elongation at which the material was tested.”

722.02 Drainage Geotextile Add the following to note #3; “The strengths specified in the columns labeled”<50%” and “≥ 50%” refer to the elongation at which the geotextile material was tested. For example; if a fabric is tested at 15% elongation then it must meet or exceed the minimum strength shown in the “<50%” column. Submittals must include the percent elongation at which the material was tested.”

722.01 Erosion Control Geotextile Add the following note to Elongation in the Mechanical Property Table; “The strengths specified in the columns labeled”<50%” and “≥ 50%” refer to the elongation at which the geotextile material was tested. For example; if a fabric is tested at 15% elongation then it must meet or exceed the minimum strength shown in the “<50%” column. Submittals must include the percent elongation at which the material was tested.”

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. 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."

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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.

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**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:

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.

8. 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.
9. 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.
10. 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.
11. Validate all tests and other selection requirements.
12. 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.
13. 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.
14. 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.
15. 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.
16. 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.

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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:

Goals for female participation in each trade 6.9%

Goals for minority participation for each trade

Maine

001 Bangor, ME 0.8%

Non-SMSA Counties (Aroostook, Hancock, Penobscot, Piscataquis, Waldo, Washington)

002 Portland-Lewiston, ME

SMSA Counties: 4243 Lewiston-Auburn, ME 0.5%  
(Androscoggin)

6403 Portland, ME 0.6%  
(Cumberland, Sagadahoc)

Non-SMSA Counties: 0.5%  
(Franklin, Kennebec, Knox, Lincoln, Oxford, Somerset, York)

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 through 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

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D. Disadvantaged Business Enterprise (DBE) Requirements The Department has established an annual Disadvantaged Business Enterprise goal to be achieved through race neutral means. This goal will adjusted periodically and will be provided by Supplemental Provision. The Contractor shall comply with all provisions of this section regarding DBE participation and the Department’s latest version of the Disadvantaged Business Enterprise Program Manual, said Manual being incorporated herein by reference. In the case of conflict between this Contract and said Manual, this Contract shall control. The Department reserves the right to adjust DBE goals on a project-by-project basis by addendum.

Policy. It is the Department’s policy that DBEs as defined in 23 CFR Part 26 and referenced in the Transportation Equity Act for 21st Century of 1998, as amended from the Surface Transportation Uniform Relocation Assistance Act of 1987, and the Intermeddle Surface Transportation Efficiency Act of 1991. The intent hereto remains to provide the maximum opportunity for DBEs to participate in the performance of contracts financed in whole or in part with federal funds.

The Department and its Contractors shall not discriminate on the basis of race, color, national origin, ancestry, sex, age, or disability in the award and performance of DOT assisted contracts.

Disadvantaged Business Enterprises are those so certified by the Maine Department of Transportation Civil Rights Office prior to bid opening date.

The Department has determined that elements of a good faith effort to meet the contract goal include but are not limited to the following:

1. Whether the Contractor advertised in general circulation, trade association, and minority/women's-focus media concerning the subcontracting opportunities;
2. Whether the Contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract is being solicited;
3. Whether the Contractor followed up on initial solicitations of interest by contacting DBEs to determine with certainty whether the DBEs were interested;
4. Whether the Contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goals;
5. Whether the Contractor provided interested DBEs with adequate information about the plans, specification and requirements of the contract;
6. Whether the Contractor negotiated in good faith with interested DBEs, not rejecting the DBE as unqualified without sound reasons based on a thorough investigation of their capabilities;
7. Whether the Contractor made efforts to assist interested DBEs with other appropriate technical/financial assistance required by the Department or Contractor;
8. Whether the Contractor effectively used the services of available minority/women's community organizations, minority/women's business assistance offices; and other organizations that provide assistance in the recruitment and placement of DBEs.

Substitutions of DBEs. The following may be acceptable reasons for Civil Rights Office approval of such a change order:

- The DBE defaults, voluntarily removes itself or is over-extended;
- The Department deletes portions of the work to be performed by the DBE.

It is not intended that the ability to negotiate a more advantageous contract with another certified DBE be considered a valid basis for such a change in DBE utilization once the DBE Bid Submission review has been passed. Any requests to alter the DBE commitment must be in writing and included with the change order.

Failure to carry out terms of this Standard Specification shall be treated as a violation of this contract and will result in contract sanctions which may include withholding of partial payments totaling the creditable dollars amount which would have been paid for said DBE participation, termination of this contract or other measures which may affect the ability of the Contractor to obtain Department contracts.

Copies of the Maine Department of Transportation's DBE Program may be obtained from:

Maine Department of Transportation  
Civil Rights Office  
#16 State House Station  
Augusta, Maine 04333-0016  
tel. (207) 624-3519

Quarterly Reporting Requirement. The Contractor must submit Semi-annual reports of actual dollars paid to Disadvantaged Business Enterprises (DBE's) on this Project to the MDOT Civil Rights Office by the end of the third week of April and October for the period covering the preceding six months considered Federal Fiscal Year periods. The reports will be submitted directly to the Civil Rights Office on the form provided in the latest version of the DBE Program Manual. Failure to submit the report by the deadline may result in a withholding of approval of partial payment estimates by the Department.

### 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" ([expermnt.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 MDOT 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 MDOT or from sources designated by MDOT. 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 MDOT 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 MDOT 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 MDOT, 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.

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Start of FHWA 1273 REQUIRED CONTRACT PROVISIONS  
FEDERAL-AID CONSTRUCTION CONTRACTS(As revised through March 10, 1994)

I. GENERAL

1. 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.
2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.
4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2;  
Section IV, paragraphs 1, 2, 3, 4, and 7;  
Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 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 DOL, or the contractor's employees or their representatives.
6. Selection of Labor: During the performance of this contract, the contractor shall not:
  - a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or
  - b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION (Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

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 (28 CFR 35, 29 CFR 1630 and 41 CFR 60) 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 Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 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 State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.
  - b. The contractor will accept as his 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, 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, preapprenticeship, and/or on-the-job training."

2. EEO Officer. The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO 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 who 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.
  - 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 minority group employees.
  - 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 minority groups 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 minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group 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, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)
  - c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group 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, national origin, age or disability. The following procedures shall be followed:
- a. The contractor will conduct periodic inspections of project sites to insure 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 his 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 his avenues of appeal.
6. Training and Promotion.
- a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.
  - 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. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision

for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

- 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 minority group and women employees 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 his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. 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 best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.
  - b. The contractor will use best 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, 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 SHA 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 minority and women 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, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) 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 SHA.
8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment. The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

- a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.
  - b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.
  - c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.
9. 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 completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.
- a. The records kept by the contractor shall document the following:
    - (1) The number 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;
    - (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and
    - (4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.
  - b. All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the MDOT and the Federal Highway Administration.

The Contractor will submit to the MDOT a report for the month of July, indicating the total hours worked by 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 PR-1391. If on-the-job training is being required by "Training Special Provision," the Contractor will be required to furnish Form FHWA-1409. The report is required for week ending July 15 and can be obtained from MDOT, is due by week ending August 20th. This report is to be furnished directly to MDOT - Civil Rights Office.

III. NONSEGREGATED FACILITIES (Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

- a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.
- b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).
- c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE (Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

- a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the

provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

- b. 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.
- c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

- a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.
- b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:
  - (1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;
  - (2) the additional classification is utilized in the area by the construction industry;
  - (3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and
  - (4) with respect to helpers, when such a classification prevails in the area in which the work is performed.
- c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour 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.

- d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said 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
- e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

- a. 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 or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.
- b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

- (1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.
- (2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor

as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

- (3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.
- (4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

- (1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.
- (2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.



- (3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.
  - (4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
  - c. **Helpers.** Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.
5. **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. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.
  6. **Withholding.** The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.
  7. **Overtime Requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4

and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation. Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.
9. Withholding for Unpaid Wages and Liquidated Damages. The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS (Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3). The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.
2. Payrolls and Payroll Records:
  - a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.
  - b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in

Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

- c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.
- d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
  - (1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;
  - (2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;
  - (3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.
- f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

- g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

## VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:
  - a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.
  - b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.
  - c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.
2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

## VII. SUBLETTING OR ASSIGNING THE CONTRACT

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 State. 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).
  - a. "Its own organization" shall be construed to include only workers employed and paid directly 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, assignee, or agent of the prime contractor.

- 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 on the contract as a whole and in general are to be limited to minor components of the overall contract.
2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII 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. 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 SHA 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 SHA 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 SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

#### VIII. SAFETY: ACCIDENT PREVENTION

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 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA 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.
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 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. 333).
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. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS 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, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

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 1, 1916, (39 Stat. 355), as amended and supplemented;*

*Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both."*

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations

in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.
3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.
4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions:  
(Applicable to all Federal-aid contracts - 49 CFR 29)
  - a. By signing and submitting this proposal, the prospective primary 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 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 primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
  - c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.
  - d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
  - e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out

in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

- f. The prospective primary 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.
- g. The prospective primary 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 Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
- 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. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.
- i. 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.
- 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.

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Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--  
Primary Covered Transactions

- 1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
  - a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
  - b. Have not within a 3-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;

- c. 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 1b of this certification; and
- d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

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2. Instructions for Certification - Lower Tier Covered Transactions: (Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective lower tier 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.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
- 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.
- 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.

- 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 may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
- 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.

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Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--  
Lower Tier Covered Transactions:

- 1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

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**XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING**

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

- 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 his or her bid or proposal that he or she 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.

End of FHWA 1273

ROCKLAND RAIL STATION  
HISTORIC RESTORATION

ROCKLAND-KNOX COUNTY  
PIN 010223.00

SECTION 3

**STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION**



**ROCKLAND  
KNOX COUNTY**

**PROJECT NO. STP-1022(300)X**

**RESTORATION OF THE HISTORIC  
ROCKLAND RAIL STATION**

**PROJECT MANUAL**

Allied Project No. 04-035  
MDOT PIN NO. 10223.00

March 31, 2008

Prepared By:

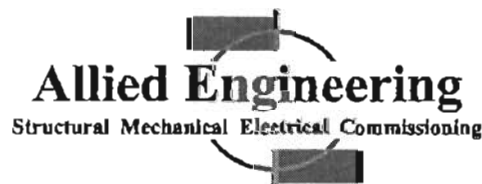


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## SECTION 01100 – SUMMARY OF WORK

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

#### 1.2 SECTION INCLUDES

- A. Work Covered by Contract Documents
- B. Contract Method
- C. Contractor's Use of Premises
- D. Work Under Other Contracts
- E. Future Work
- F. Products Ordered in Advance
- G. Specification Formats and Conventions
- H. Drawings Furnished
- I. Examination of the Site Contractor's Duties
- K. Weather Protection
- L. Completion Date
- M. Start Date

#### 1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Project consists of the masonry, roofing and window restorations at the Historic Rockland Rail Station. Work will include but not be limited to lead abatement on windows and trim, slate roof shingle replacement with flashings and rakes, and masonry restoration for all exposed exterior masonry walls. The various items of work for this project are hereinafter specified under the respective branch headings of the work or shown on the accompanying drawings and shall be included in the contracts made for the completion of any

SUMMARY OF WORK

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respective divisions of the work. Such contracts shall also include necessary details reasonably incidental to the proper execution and completion of such work.

1. Project Location: Rockland, Maine
  2. Owner: Maine Department of Transportation.
- B. Whenever a conflict, contradiction, or discrepancy between any statutes, regulations, plans or specifications, or if the Contractor request clarification of his responsibilities hereunder, it is the Contractor's responsibility to obtain the advance written approval of the Engineer prior to deviating from any of the specifications.
- C. Engineer Identification: The Contract Documents dated March 31, 2008, were prepared for the Project by Allied Engineering, Inc.
- D. The Department of Transportation will provide Construction Administration for this project with assistance from the Engineer.

#### 1.4 CONTRACT METHOD

- A. Project will be constructed under a series of lump sum line items including allowances.

#### 1.5 CONTRACTOR'S USE OF PREMISES

The Contractor is being made aware that this is a very active site and will remain so during the length of Project. A Special Provision has been provided that outlines how the contractor needs to work with the occupants of the site in order for them to maintain their current operations.

- A. Confine operations at site to areas permitted by:
1. Law, Ordinances, Permits, Contract Documents.
  2. As defined by limit of work line on Site Plan.
  3. As designated by Owner for location of office and storage of material areas.
- B. Do not unreasonably encumber site with materials or equipment.
- C. Do not load structure with weight that will endanger structure
- D. Assume full responsibility for protection and safekeeping of products stored on premises
- E. Obtain and pay for use of additional storage or work areas needed for operations

## 1.6 WORK UNDER OTHER CONTRACTS

- A. Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract.

## 1.7 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 16-division format and CSI/CSC's "MasterFormat" numbering system.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
  - 1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
  - 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
    - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

## 1.8 DRAWINGS FURNISHED

- A. The Contractor may request additional drawings from the Department for the work. The Department will provide as many extra sets as it may have available from the bid process and if none are available, will provide up to 6 sets of the "Contract Drawings and Specifications" for use by the Contractor and their subs. The Department will also furnish such additional copies as may be required for submission to public authorities to accompany applications for permits
- B. Additional copies of drawings and specifications will be issued at cost of reproduction.
- C. It is the intention that these specifications and the drawings accompanying same shall provide for this Project to be completed in all its respective parts. Any work shown on the drawings and not particularly described in the specifications, or vice versa, shall be furnished by the Contractor as part of his contract.

1.9 EXAMINATION OF THE SITE

- A. All Contractors' submitting proposals for the work shall first examine the site and all conditions thereon. All proposals shall take into consideration all such conditions as may affect the work under this contract.

1.10 CONTRACTORS DUTIES

- A. Asbestos-Free Materials: Contractor shall provide certification that all materials used for construction under this contract are 100% asbestos-free. Refer to Section 01340 – Shop Drawings, Product Data and Samples for submittals.
- B. Except as specifically noted, provide and pay for:
  - 1. Labor, materials and equipment.
  - 2. Tools, construction equipment and machinery
  - 3. Water, heat and utilities required for construction
  - 4. Other facilities and services necessary for proper execution and completion of work
- C. Secure and pay for all permits, government fees, and licenses that are applicable at the time of bid for proper execution and completion of the work. A formal Building Permit or fee will not be required for this project, but the Contractor will make the City aware of when the work will begin and will coordinate with the City should they desire to inspect any of the work.
- D. Promptly submit written notice to the Engineer of observed variance of Contract Documents from legal requirements.
  - 1. Appropriate Modifications to Contract Documents will adjust necessary changes to comply with Codes and Regulations.
  - 2. Assume responsibility for work known to be contrary to such requirements without notice
- E. Enforce strict discipline and good order among employees. Do not employ unfit persons not skilled in assigned task.
- F. Contractor's employees shall not transport, drink, or have in their possession on the job site any intoxicating beverage. Possession of any controlled substances without a physician's prescription is also prohibited. Any Contractor's employee appearing to be under the influence of an intoxicating beverage or narcotics will be escorted off the property and turned over to a competent escort as determined by the Engineer's Representative. Any vehicle found to contain controlled substances or controlled substance residue will be reported to the State Police for investigation.
- G. Use or possession of firearms, ammunition and/or explosives is prohibited. Where explosives are required due to construction requirements, specific handling requirements and approvals are required.

SUMMARY OF WORK

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H. WEATHER PROTECTION:

1. During the construction period, it is the Contractor's responsibility that the building be under constant protection from the weather. Should there be any weather damage to the building's interior; such damage is to be rectified to the satisfaction of the Engineer without cost to the owner.

I. START DATE:

1. Shop drawings and submittals may commence upon entering a contract with the Owner. The contractor may start work as soon as the contract is fully executed and all submittals required to start the project are in accordance with the project manual.

PART 2 - PRODUCTS

2.1 MATERIALS:

- A. All materials used for construction under this contract shall be 100% asbestos-free

PART 3 - NOT USED

END OF SECTION 01100

## SECTION 01270 - UNIT PRICES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for unit prices.
- B. Related Sections include the following:
  - 1. Division 1 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

#### 1.3 DEFINITIONS

- A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

#### 1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.
- B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A list of unit prices is included in Part 4. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

UNIT PRICES

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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - SCHEDULE OF UNIT PRICES REQUIRED

4.1 LIST OF UNIT PRICES

A. MASONRY RESTORATION – Division 4:

1. Spot Repointing: Provide a per square foot unit price for all materials and labor to provide restoration quality workmanship in cutting out deteriorated mortar joints of undamaged brick masonry in a localized area or field of a wall surface, to the specified depth, and repointing with mortar blended to suit the specifications and to match the existing mortar to remain.
2. Complete Rebuilding: Provide a per square foot unit price for all materials and labor to perform additional removal and restorative reconstruction of brick masonry including (only) the two outer wythes of brick employing restoration quality workmanship as specified.
3. Slate Shingle Replacement: Provide a per square foot (exposed slate) unit price for all labor and materials to replace existing damaged slate with new slate in a matching color using patching and repair techniques, thus not implying full surface (edge-to-edge) installation. See also, the Specification Section text for square footage of new slate to be anticipated in the base-bid.

END OF SECTION 01270

UNIT PRICES

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## SECTION 01310 – PROJECT MANAGEMENT AND COORDINATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

#### 1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. General project coordination procedures.
  - 2. Conservation.
  - 3. Coordination Drawings.
  - 4. Administrative and supervisory personnel.
  - 5. Project meetings.
- B. The General contractor shall be responsible for over all coordination of the project
  - 1. Each contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific contractor.

#### 1.3 COORDINATION

- A. Coordination: Coordinate construction operations included in various Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, which depend on each other for proper installation, connection, and operation. Coordinate sequence of work to accommodate Owner's occupancy.
- B. If necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
  - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Coordination of Security: All security coordination shall be through the General contractor. The Contractor shall be expected to keep the owners representative informed of any deviation in the

PROJECT MANAGEMENT AND COORDINATION

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normal work schedule. The owner's representative shall be given a minimum of two (2) hours notice when a Contractor is not going to be working on a scheduled day because of inclement weather, lack of material etc.

- D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  - 1. Preparation of Contractor's Construction Schedule.
  - 2. Preparation of the Schedule of Values.
  - 3. Installation and removal of temporary facilities and controls.
  - 4. Delivery and processing of submittals.
  - 5. Attendance of the Preconstruction Conference
  - 6. Attendance of Progress meetings.
  - 7. Preinstallation conferences.
  - 8. Project closeout activities.
  
- E. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.
  - 1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work.

#### 1.4 SUBMITTALS

- A. Schedule and coordinate submittals specified in Section 01330 – Submittal Procedures.
- B. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service such equipment.
- C. Coordinate requests for substitutions to assure compatibility of space, of operating elements, and affect on work of other sections.
- D. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.
  - 1. Indicate relationship of components shown on separate Shop Drawings.
  - 2. Indicate required installation sequences.
  - 3. Refer to Division 15 Section "Basic Mechanical Materials and Methods" and Division 16 Section "Basic Electrical Materials and Methods" for specific Coordination Drawing requirements for mechanical and electrical installations.
- E. Staff Names: Within 5 days of starting construction operations, submit a list of principal staff assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including



home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone.

#### 1.5 PRECONSTRUCTION CONFERENCE

- A. The successful low bid Contractor will be required to attend a Pre-construction Conference Meeting at the jobsite. At said meeting, the Contractor shall supply to the Owner and the Engineer, in writing, the name of the Project Foreman and/or Manufacturer's Approved Applicator directing all phases of the installation.

#### 1.6 PROGRESS MEETINGS

- A. The Engineer will schedule and administer bi-weekly construction progress meetings, and called meetings, throughout the progress of the work. Meetings will be held at the railroads conference room in the train station.
- B. The Engineer will preside at meetings, record minutes, and distribute copies after meeting to the owner and the General contractor. The General contractor shall be responsible to provide copies of the minutes to any subcontractors that attend the meetings.
- C. Location of Meetings: Job site.
  1. The Preconstruction meeting may be held at the owner's facility in close proximity to the job site.
- D. Attendance: The Contractor, Job Superintendent, Owner, Engineer and the Clerk-of-Works.

E. Minimum Agenda:

1. Review of work progress.
2. Field observations, problems and decisions.
3. Identification of problems, which impede planned progress.
4. Review of submittals schedule and status of submittals.
5. Review of off-site fabrication and delivery schedules.
6. Maintenance of progress schedule.
7. Corrective measures to regain projected schedules.
8. Planned progress during succeeding work period.
9. Coordination of projected progress.
10. Maintenance of quality and work standards.
11. Effect of proposed changes on progress schedule and coordination.
12. Other business relating to work.
13. Review of Contractor's Application for Payment.
14. Preinstallation conferences may also be held at the Progress meetings.

1.7 PROJECT CLOSEOUT

- A. Coordinate completion and cleanup of work of separate sections in preparation for substantial completion.
- B. After Owner's occupancy of premises, coordinate access to site by various sections for correction of defective work and work not in accordance with Contract Documents to minimize disruption of Owner's activities.
- C. Assemble and coordinate closeout submittals specified.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01310

## SECTION 01330 - SUBMITTAL PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals.
- B. Related Sections include the following:
  - 1. Standard General Conditions.
  - 2. Supplemental Conditions.
  - 3. Division 1 Section "Operation and Maintenance Data".

#### 1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Engineer's responsive action.
- B. Informational Submittals: Written information that does not require Engineer's approval. Submittals may be rejected for not complying with requirements.

#### 1.4 SUBMITTAL PROCEDURES

- A. General: Electronic copies of CAD Drawings of the Contract Drawings will not be provided by Engineer for Contractor's use in preparing submittals.
- B. Submittal Requirements: Submittals shall have a separate cover sheet for each Division. Submittals for more than one Division shall not be combined.
  - 1. Apply Contractor's stamp, signed or initialed certifying to review, verification of products, field dimensions and field construction criteria, and coordination of information with requirements of work and Contract Documents.
  - 2. Submittals that do not have an approval stamp and signature in compliance with this Section shall be returned without review by the Engineer. The Contractor shall be fully responsible for any delays due to returned shop drawings, product data sheets.

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3. Do not fabricate products or begin work or which requires submittals until return of submittals with Engineer's review. All work shall be in conformity with reviewed shop drawings
4. When shop drawings and/or submitted data sheets do not meet the product/materials shown or specified, the Engineer will review submissions no more than two (2) times. After the second review the Contractor shall have the cost to review all subsequent submissions reimbursed to the Owner at the Engineer's published standard billing rate for personnel involved. Cost shall be deducted from the Contract via a Change Order.

C. Standards:

1. Materials: Any material specified by reference to the number, symbol, or title of a specified standard such as Commercial Standard, a Federal Specification, a trade association standard, or other similar standard, shall comply with the requirements in the latest revision thereof, and any amendment or supplement thereto, in effect on the date of invitation for proposals, except as limited to type, class of grade, or modified in such reference, and except as otherwise indicated.
2. Standards: The Standard referred to, except as modified in the specifications, shall have full force and effect as though printed in these specifications. These standards are not furnished to bidders for the reason that the manufacturers and trades involved are assumed to be familiar with their requirements. The Engineer will furnish, upon request, information as to how copies of the standards referred to may be obtained.
3. Serial Numbers: Where A.S.T.M. Serial Numbers are used, they refer to the latest tentative specifications; standard specifications; standard method or standard method of testing, issued by the American Society for Testing and Materials.

D. Certificate of Conformance: Except where tests and/or inspections in connection with structural materials are specified or required by applicable laws, rules and regulations, manufacturer's certificates covering conformance with the requirements of the above mentioned Federal Specifications and Commercial Standards may be accepted in lieu of such tests. Such certificates shall be furnished to the Engineer for all items so specified.

1. Submit to the Engineer manufacturer's certificates covering conformance with the requirements of asbestos-free materials on all materials.

E. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Contractor shall be fully responsible for observing the need for and making any changes in the arrangement of piping, connections, wiring, manner of installing and the like which may be required by the equipment he proposes to supply. If the drawings show variations from contract drawings or specifications whether because of standard shop practice or other reasons, the Contractor will not be relieved of the responsibility for completing the work in full accordance with the Contract Documents even though such shop drawings are approved by the Engineer.

SUBMITTAL PROCEDURES

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- a. Shop drawings, product data sheets that do not have an approval stamp and signature in compliance with this Section shall be returned without review by the Engineer. The Contractor shall be fully responsible for any delays due to returned shop drawings, product data sheets.
  - 3. Within 30 days after the date of the Letter of Intent and before any material or equipment is purchased, the Contractor shall submit to the Engineer manufacturer's data, catalog cuts, samples, or other information as required by individual Specification Sections.
    - a. Deviations from the contract, deemed necessary, will only be considered when accompanied by a letter (identifying the item specified, the item proposed, and any cost variation) outlining specific reasons for requesting such deviation. If these conditions are not met, the submittal shall be returned to the Contractor for corrective action. The adequacy and accuracy of submittals and their compliance with contract documents are the responsibility of the Contractor. All approval actions taken by the Engineer will in no way relieve the Contractor of his quality control requirements.
- F. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's receipt of submittal.
  - 1. Initial Review: Allow 15 days for initial review of each submittal. Delete subparagraph below if not required.
  - 2. If intermediate submittal is necessary, process it in same manner as initial submittal.
  - 3. Allow 15 days for processing each resubmittal.
  - 4. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.
- G. Identification: Place a permanent label or title block on each submittal for identification.
  - 1. Indicate name of firm or entity that prepared each submittal on label or title block.
  - 2. Provide a space approximately 4 by 5 inches on label or beside title block to record Contractor's review and approval markings and action taken by Engineer.
  - 3. Include the following information on label for processing and recording action taken:
    - a. Project name.
    - b. Date.
    - c. Name and address of Engineer.
    - d. Name and address of Contractor.
    - e. Name and address of subcontractor.
    - f. Name and address of supplier.
    - g. Name of manufacturer.
    - h. Unique identifier, including revision number.
    - i. Number and title of appropriate Specification Section.
    - j. Drawing number and detail references, as appropriate.
    - k. Other necessary identification.
- H. Deviations: Highlight, encircle, or otherwise identify deviations from the Contract Documents on submittals.

SUBMITTAL PROCEDURES

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- I. Additional Copies: Unless additional copies are required for final submittal, and unless Engineer observes noncompliance with provisions of the Contract Documents, initial submittal may serve as final submittal.
  - 1. Submit six (6) copies of Shop Drawings, Product Data and Manufacturer's Instructions to the Engineer.
  - 2. Additional copies submitted for maintenance manuals will not be marked with action taken and will be returned.
  
- J. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Engineer will discard submittals received from sources other than Contractor.
  - 1. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Engineer on previous submittals, and deviations from requirements of the Contract Documents, including minor variations and limitations. Include the same label information as the related submittal.
  - 2. Include Contractor's certification stating that information submitted complies with requirements of the Contract Documents.
  - 3. Transmittal Form: Provide locations on form for the following information:
    - a. Project name.
    - b. Date.
    - c. Destination (To:).
    - d. Source (From:).
    - e. Names of subcontractor, manufacturer, and supplier.
    - f. Category and type of submittal.
    - g. Submittal purpose and description.
    - h. Submittal and transmittal distribution record.
    - i. Remarks.
    - j. Signature of transmitter.
  
- K. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
  
- L. Use for Construction: Use only final submittals with mark indicating action taken by Engineer in connection with construction.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

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1. Within 30 days after the date of the Letter of Intent and before any material or equipment is purchased, the Contractor shall submit to the Engineer manufacturer's data, catalog cuts, samples, or other information as required for the items listed in each section.
    - a. Deviations from the contract, deemed necessary, will only be considered when accompanied by a letter (identifying the item specified, the item proposed, and any cost variation) outlining specific reasons for requesting such deviation. If these conditions are not met, the submittal shall be returned to the Contractor for corrective action. The adequacy and accuracy of submittals and their compliance with contract documents are the responsibility of the Contractor. All approval actions taken by the Engineer will in no way relieve the Contractor of his quality control requirements.
  2. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
  3. Mark each copy of each submittal to show which products and options are applicable.
  4. Include the following information, as applicable:
    - a. Manufacturer's written recommendations.
    - b. Manufacturer's product specifications.
    - c. Manufacturer's installation instructions.
    - d. Manufacturer's catalog cuts.
    - e. Wiring diagrams showing factory-installed wiring.
    - f. Printed performance curves.
    - g. Operational range diagrams.
    - h. Standard product operating and maintenance manuals.
    - i. Compliance with recognized trade association standards.
    - j. Compliance with recognized testing agency standards.
    - k. Application of testing agency labels and seals.
    - l. Notation of coordination requirements.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Include the following information, as applicable:
    - a. Shop drawings shall be drawn to scale, shall show all necessary working dimensions and such details, sections, plans and elevations (all properly cross-referenced to the contract drawings) as are necessary to clearly delineate arrangements, construction and connection with other work. They shall be numbered consecutively and dated and shall indicate the project name, the names of the Contractor and the Subcontractor, the name and description of the equipment or articles shown, the manufacturer's name, the kinds, types, grades, thicknesses and finishes of materials, including all fittings, fastenings and the like and the locations at which materials or equipment are to be installed in the work. Marked-up copies of standard drawings showing typical conditions and details and indicating their specific application to the work will not be acceptable. Shop drawings shall be accompanied by a letter of transmittal identifying the items of work submitted. Shop drawings shall be submitted in such time as to cause no

SUBMITTAL PROCEDURES

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delay in the orderly progress of work, under the contract, due allowance being made for checking and such correcting, resubmission, and rechecking as may be necessary. The approval of the shop drawings will be general and shall not relieve the Contractor from sole responsibility for errors or omissions of any sort, nor for proper fitting and construction on work or the finishing of materials or work required by the contract documents but not shown or indicated on the shop drawings. Approval will not imply verification of required quantity of material, nor correctness of dimensions. Requests by the Engineer for changes and corrections on shop drawings shall not be construed as an order for extra work under the contract.

- b. Present shop drawings in a clear and thorough manner. Title each drawing with project name and number. Identify each element of drawings by reference to sheet number and detail, schedule or room number of contract documents.
  - c. Dimensions.
  - d. Identification of field dimensions, show relation to adjacent or critical features or work or products.
  - e. Identification of products.
  - f. Fabrication and installation drawings.
  - g. Roughing-in and setting diagrams.
  - h. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
  - i. Shopwork manufacturing instructions.
  - j. Templates and patterns.
  - k. Schedules.
  - l. Design calculations.
  - m. Compliance with specified standards.
  - n. Notation of coordination requirements.
  - o. Notation of dimensions established by field measurement.
- 2. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
  - 3. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 40 inches.
  - 4. Number of Copies: Submit one correctable, translucent, reproducible print and one blue- or black-line print of each submittal. The Engineer will return the reproducible print.

C. Samples: Prepare physical units of materials or products, including the following:

- 1. Samples properly identified and described, shall be submitted in the number specifically called for in the body of the specification or as may be required by the Engineer. They shall be submitted and resubmitted until approved. No approval of a sample shall be taken in itself to change or modify any contract requirement. Finishes, materials or workmanship in the completed buildings shall match the approved samples.
- 2. Comply with requirements in Division 1 Section "Quality Requirements" for mockups.
- 3. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

## PART 3 - EXECUTION

### SUBMITTAL PROCEDURES

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3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Engineer.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ENGINEER'S [AND CONSTRUCTION MANAGER'S] ACTION

- A. General: Engineer will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Engineer will review each submittal, make marks to indicate corrections or modifications required, and return it. Engineer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
  - 1. **REVIEWED, REVIEWED W/NOTES – *No Resubmission*, REVIEWED W/NOTES – *Resubmission Required*, and NOT ACCEPTABLE**
- C. Informational Submittals: Engineer will review each submittal and will not return it, or will reject and return it if it does not comply with requirements.
- D. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

END OF SECTION 01330

## SECTION 01400 - QUALITY REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - 1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
  - 2. Specified tests, inspections, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with the Contract Document requirements.
  - 3. Requirements for Contractor to provide quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections include the following:
  - 1. Division 1 Section "Construction Progress Documentation" for developing a schedule of required tests and inspections.
  - 2. Divisions 2 through 16 Sections for specific test and inspection requirements.

#### 1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction complies with requirements. Services do not include contract enforcement activities performed by Architect.

QUALITY REQUIREMENTS

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- C. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- D. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
  - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

#### 1.4 REGULATORY REQUIREMENTS

#### 1.5 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
  - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of the types of testing and inspecting they are engaged to perform.
  - 2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Contractor Responsibilities: Unless otherwise indicated, provide quality-control services specified and required by authorities having jurisdiction.
  - 1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
    - a. Contractor shall not employ the same entity engaged by Owner, unless agreed to in writing by Owner.
  - 2. Notify testing agencies at least 36 hours in advance of time when Work that requires testing or inspecting will be performed.
  - 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  - 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  - 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing.

- D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that revised or replaced Work that failed to comply with requirements established by the Contract Documents.
- E. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
  - 1. Notify Engineer and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  - 2. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
  - 3. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
  - 4. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.
  - 5. Do not perform any duties of Contractor.
- F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
  - 1. Access to the Work.
  - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
  - 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
  - 4. Facilities for storage and field-curing of test samples.
  - 5. Delivery of samples to testing agencies.
  - 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
  - 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
  - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

QUALITY REQUIREMENTS

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- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
  - 1. Provide materials and comply with installation requirements specified in other Sections of these Specifications. Restore patched areas and extend restoration into adjoining areas in a manner that eliminates evidence of patching.
  - 2. Comply with the Contract Document requirements for Division 1 Section "Cutting and Patching."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01400

## SECTION 01500 - TEMPORARY FACILITIES AND CONTROLS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

#### 1.2 SUMMARY

- A. This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection facilities.
- B. Temporary utilities include, but are not limited to, the following:
  - 1. Water service and distribution.
  - 2. Sanitary facilities, including toilets, wash facilities, and drinking-water facilities.
  - 3. Heating and cooling facilities.
  - 4. Electric power service.
  - 5. Lighting.
  - 6. Telephone service.
- C. Support facilities include, but are not limited to, the following:
  - 1. Temporary roads and paving.
  - 2. Dewatering facilities and drains.
  - 3. Field offices.
  - 4. Storage and fabrication sheds.
- D. Related Sections include the following:
  - 1. Division 1 Section "Submittal Procedures" for procedures for submitting copies of implementation and termination schedule and utility reports.
  - 2. Division 1 Section "Execution Requirements" for progress cleaning requirements.
  - 3. Divisions 2 through 16 for temporary heat, ventilation, and humidity requirements for products in those Sections.

### 1.3 DEFINITIONS

- A. Permanent Enclosure: As determined by Engineer, permanent or temporary roofing is complete, insulated, and weather tight; exterior walls are insulated and weather tight; and all openings are closed with permanent construction or substantial temporary closures.

### 1.4 USE CHARGES

- A. General: Cost or use charges for temporary facilities are not chargeable to Owner or Engineer and shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, the following:
  - 1. Owner's construction forces.
  - 2. Occupants of Project.
  - 3. Engineer
  - 4. Architect.
  - 5. Testing agencies.
  - 6. Personnel of authorities having jurisdiction.
- B. Water Service: Use water from Owner's existing water system without metering and without payment of use charges.
- C. Electric Power Service: Provide generator power for construction activities or pay electric power service use charges, whether metered or otherwise, for electricity used by all entities engaged in construction activities at Project site.
- D. Telephone/Fax Machine: Provide and pay for service that the contractor and the subs may need. The use of the existing phone services will not be allowed.
- E. Temporary Heat: Pay labor and fuel charges for temporary heat for all entities engaged in construction activities at Project Site.

### 1.5 PROJECT CONDITIONS

- A. Temporary Utilities: At earliest feasible time, when acceptable to Owner, change over from use of temporary service to use of permanent service.
  - 1. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.
- B. Conditions of Use: The following conditions apply to use of temporary services and facilities by all parties engaged in the Work:

1. Keep temporary services and facilities clean and neat.
2. Relocate temporary services and facilities as required by progress of the Work.

PART 2 - PRODUCTS not used

2.1 EQUIPMENT

- A. General: Provide equipment suitable for use intended.
- B. Field Offices: The Department does not require the use of a field office at the site. Should the contractor want an office, it will be at the contractor's expense and need to be coordinated with the operators for actual placement.
- C. Fire Extinguishers: Hand carried, portable, UL rated. Provide class and extinguishing agent as indicated or a combination of extinguishers of NFPA-recommended classes for exposures.
  1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.
- D. Self-Contained Toilet Units: Single-occupant units of chemical, aerated recirculation or combustion type; vented; fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material. At least one unit must meet ADA standards. Placement location to be away from the building as coordinated with the operators.
- E. Drinking-Water Fixtures: Drinking-water fountains, containerized, tap-dispenser, bottled-water drinking-water units, including paper cup supply.
- F. Heating Equipment: Unless Owner authorizes use of permanent heating system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
  1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
  2. Heating Units: Listed and labeled, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use for type of fuel being consumed.
- G. Electrical Outlets: Properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-V plugs into higher-voltage outlets; equipped with ground-fault circuit interrupters, reset button, and pilot light.
- H. Power Distribution System Circuits: Where permitted and overhead and exposed for surveillance, wiring circuits, not exceeding 125-V ac, 20-A rating, and lighting circuits may be nonmetallic sheathed cable.

PART 3 - EXECUTION

TEMPORARY FACILITIES AND CONTROLS

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### 3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

### 3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Engage appropriate local utility company to install temporary service or connect to existing service. Where utility company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with utility company recommendations.
  - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
  - 2. Provide adequate capacity at each stage of construction. Before temporary utility is available, provide trucked-in services.
  - 3. Obtain easements to bring temporary utilities to Project site where Owner's easements cannot be used for that purpose.
- B. Water Service: Use of Owner's existing water service facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
  - 1. Provide rubber hoses as necessary to serve Project site.
- C. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities. The use of the buildings toilet facilities will not be allowed.
  - 1. Disposable Supplies: Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Maintain adequate supply. Provide covered waste containers for disposal of used material.
  - 2. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy.
  - 3. Drinking-Water Facilities: Provide bottled-water, drinking-water units.
- D. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment from that specified that will not have a harmful effect on completed installations or elements being installed.
  - 1. Maintain a minimum temperature of 50 deg F (10 deg C) in permanently enclosed portions of building for normal construction activities, and 65 deg F (18.3 deg C) for finishing activities and areas where finished Work has been installed.

### TEMPORARY FACILITIES AND CONTROLS

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2. Cold weather protection is required when the average nighttime temperatures fall below 40 degrees F. It shall be considered necessary during the period of rough construction and up to the time when the work is entirely closed in and the heating apparatus is in permanent position, ready for operation on a temporary basis by the Contractor. This work shall include protection of work exposed to the elements, against adverse dampness and cold, by covering, enclosing, heating materials and work under construction, and providing suitable working conditions for all trades employed on the work. This cold weather protection shall be provided by the Contractor at his own expense.
  3. Temporary heat shall be considered the period when temporary heating is required from the time the work is entirely closed in and the heating apparatus is in permanent position and ready for operation, until the building and equipment is occupied by the Owner or designated as substantially complete by the Engineer.
  4. Temporary heating for protection shall be provided from the permanent heating system when necessary to prevent freezing within the building, to dry out the building and to provide suitable working conditions for the installation and curing of materials. A temperature of not less than 50 degrees F nor more than the maximum design temperatures shall be maintained throughout the entire building.
- E. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment from that specified that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
- F. Electric Power Service: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload-protected disconnecting means, automatic ground-fault interrupters, and main distribution switchgear.
- G. Electric Distribution: Provide receptacle outlets adequate for connection of power tools and equipment.
1. Provide waterproof connectors to connect separate lengths of electrical power cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
  2. Provide warning signs at power outlets other than 110 to 120 V.
  3. All work shall conform with The National Electric Code.
- H. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations and traffic conditions.
1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
  2. Install exterior-yard site lighting that will provide adequate illumination for construction operations, traffic conditions, and signage visibility when the Work is being performed.
- I. Telephone Service: Provide temporary telephone service throughout construction period for common-use facilities used by all personnel engaged in construction activities if desired.

#### TEMPORARY FACILITIES AND CONTROLS

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1. At each telephone, post a list of important telephone numbers.
  - a. Police and fire departments.
  - b. Ambulance service.
  - c. Contractor's home office.
  - d. Architect's office.
  - e. Engineers' offices.
  - f. Owner's office.
  - g. Principal subcontractors' field and home offices.

### 3.3 SUPPORT FACILITIES INSTALLATION

#### A. General: Comply with the following:

1. Locate field offices, storage sheds, sanitary facilities, and other temporary construction and support facilities for easy access, away from current operations.
2. Maintain support facilities until near Substantial Completion. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
3. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.

#### B. Traffic Controls: Provide temporary traffic controls at junction of temporary roads with public roads. Include warning signs for public traffic and "STOP" signs for entrance onto public roads. Comply with requirements of authorities having jurisdiction.

#### C. Dewatering Facilities and Drains: Comply with requirements in applicable Division 2 Sections for temporary drainage and dewatering facilities and operations not directly associated with construction activities included in individual Sections. Where feasible, use same facilities. Maintain Project site, excavations, and construction free of water.

1. Provide resilient floor covering and painted gypsum wallboard walls and acoustical ceiling. Provide operable windows with adjustable blinds and insect screens.
2. Provide an electric heater with thermostat capable of maintaining a uniform indoor temperature of 68 deg F (20 deg C). Provide an air-conditioning unit capable of maintaining an indoor temperature of 72 deg F (23 deg C).
3. Provide fluorescent light fixtures capable of maintaining average illumination of 20 fc (215 lx) at desk height. Provide 110- to 120-V duplex outlets spaced at not more than 12-foot (4-m) intervals, 1 per wall in each room.

#### D. Temporary Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate. Cover finished, permanent stairs with protective covering of plywood or similar material so finishes will be undamaged at time of acceptance.

#### E. Barricades, Warning Signs, Directional Signs and Lights: Construction activities will have an impact on access to the restaurant and the railroads offices. The contractor will erect barricades and protective structures to protect the public and workers using the building. Should an

TEMPORARY FACILITIES AND CONTROLS

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entrance need to be closed due to construction activities, the contractor will provide directional signs as necessary to move people to other entrances. Comply with standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and public of possible hazard. Where appropriate and needed, provide lighting, including flashing red or amber lights.

- F. Temporary Pumping: Provide all necessary labor and equipment to keep all portions of the excavation free from water and shall maintain pumps in operation as may be required. This will include a wellpoint system if required by the work.
- G. Exposed Excavation: Provide fences, barricades, lights and other similar items around exposed excavations until such excavations have been completely filled.
- H. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
  - 1. Materials and facilities that constitute temporary facilities are the property of Contractor. Owner reserves right to take possession of Project identification signs.
  - 2. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements in Division 1 Section "Closeout Procedures."

END OF SECTION 01500

## SECTION 01770 - CLOSEOUT PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Inspection procedures.
2. Project Record Documents.
3. Operation and maintenance manuals.
4. Warranties.
5. Instruction of Owner's personnel.
6. Final cleaning.
7. Evidence of payment and release of liens
8. Consent of Surety to final payment
9. Certificates of Insurance for products and completed operations

- B. Related Sections include the following:

1. Supplementary Conditions for Certificates of Insurance for Products and Completed Operations.
2. Division 1 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
3. Divisions 2 through 16 Sections for specific closeout and special cleaning requirements for products of those Sections.

#### 1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.

1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
2. Advise Owner of pending insurance changeover requirements.

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3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
5. Prepare and submit Project Record Documents, operation and maintenance manuals.
6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
8. Complete startup testing of systems.
9. Submit test/adjust/balance records.
10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
11. Advise Owner of changeover in heat and other utilities.
12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
13. Complete final cleaning requirements, including touchup painting.
14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Engineer, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

#### 1.4 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
2. Submit certified copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Engineer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit pest-control final inspection report and warranty.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

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- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
  - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

#### 1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
  - 1. Organize list of spaces in sequential order,
  - 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
  - 3. Include the following information at the top of each page:
    - a. Project name.
    - b. Date.
    - c. Name of Engineer.
    - d. Name of Contractor.
    - e. Page number.

#### 1.6 PROJECT RECORD DOCUMENTS

- A. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for Engineer's reference during normal working hours.
- B. Record Drawings: Maintain and submit one set of blue- or black-line white prints of Contract Drawings and Shop Drawings.
  - 1. Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
    - a. Give particular attention to information on concealed elements that cannot be readily identified and recorded later.
    - b. Accurately record information in an understandable drawing technique.
    - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
    - d. Mark Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where Shop Drawings are marked, show cross-reference on Contract Drawings.

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2. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
  3. Mark important additional information that was either shown schematically or omitted from original Drawings.
  4. Note Construction Change Directive numbers, Change Order numbers, alternate numbers, and similar identification where applicable.
  5. Identify and date each Record Drawing; include the designation "AS-BUILT DRAWINGS" in a prominent location. Organize into manageable sets; bind each set with durable paper cover sheets. Include identification on cover sheets.
- C. Record Product Data: Submit one copy of each Product Data submittal. Mark one set to indicate the actual product installation where installation varies substantially from that indicated in Product Data.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
  3. Note related Change Orders, Record Drawings, where applicable.
- D. Miscellaneous Record Submittals: Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

## 1.7 OPERATION AND MAINTENANCE MANUALS

- A. Assemble a complete set of operation and maintenance data indicating the operation and maintenance of each system, subsystem, and piece of equipment not part of a system. Include operation and maintenance data required in individual Specification Sections and as follows:
1. Operation Data:
    - a. Emergency instructions and procedures.
    - b. System, subsystem, and equipment descriptions, including operating standards.
    - c. Operating procedures, including startup, shutdown, seasonal, and weekend operations.
    - d. Description of controls and sequence of operations.
    - e. Piping diagrams.



2. Maintenance Data:

- a. Manufacturer's information, including list of spare parts.
  - b. Name, address, and telephone number of Installer or supplier.
  - c. Maintenance procedures.
  - d. Maintenance and service schedules for preventive and routine maintenance.
  - e. Maintenance record forms.
  - f. Sources of spare parts and maintenance materials.
  - g. Copies of maintenance service agreements.
  - h. Copies of warranties and bonds.
- B. Organize operation and maintenance manuals into suitable sets of manageable size. Bind and index data in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, with pocket inside the covers to receive folded oversized sheets. Identify each binder on front and spine with the printed title "OPERATION AND MAINTENANCE MANUAL," Project name, and subject matter of contents.

1.8 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- a. For items of work when acceptance is delayed beyond Date of Substantial Completion, submit within ten (10) days after acceptance, listing the date of acceptance as the beginning of the warranty period.
- B. Partial Occupancy: Submit properly executed warranties within 10 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive **8-1/2-by-11-inch (115-by-280-mm)** paper.
  2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
  3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

## PART 3 - EXECUTION

### 3.1 DEMONSTRATION AND TRAINING

- A. Instruction: Instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
  - 1. Provide instructors experienced in operation and maintenance procedures.
  - 2. Provide instruction at mutually agreed-on times. For equipment that requires seasonal operation, provide similar instruction at the start of each season.
  - 3. Schedule training with Owner with at least seven days' advance notice.
  - 4. Coordinate instructors, including providing notification of dates, times, length of instruction, and course content.
- B. Program Structure: Develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections. For each training module, develop a learning objective and teaching outline. Include instruction for the following:
  - 1. System design and operational philosophy.
  - 2. Review of documentation.
  - 3. Operations.
  - 4. Adjustments.
  - 5. Troubleshooting.
  - 6. Maintenance.
  - 7. Repair.

### 3.2 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

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1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
  - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
  - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
  - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
  - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
  - e. Remove snow and ice to provide safe access to building.
  - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
  - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
  - h. Sweep concrete floors broom clean in unoccupied spaces.
  - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
  - j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
  - k. Remove labels that are not permanent.
  - l. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
    - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
  - m. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
  - n. Replace parts subject to unusual operating conditions.
  - o. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
  - p. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
  - q. Clean ducts, blowers, and coils if units were operated without filters during construction.
  - r. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
  - s. Leave Project clean and ready for occupancy.

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- C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid Project of rodents, insects, and other pests. Prepare a report.
- D. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01770

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RESTORATION OF THE HISTORIC  
ROCKLAND RAIL STATION  
MDOT PIN NO. 10223.00

## SECTION 01782 - OPERATION AND MAINTENANCE DATA

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
  - 1. Operation and maintenance documentation directory.
  - 2. Emergency manuals.
  - 3. Operation manuals for systems, subsystems, and equipment.
  - 4. Maintenance manuals for the care and maintenance of products, materials, and finishes, systems and equipment.
- B. Related Sections include the following:
  - 1. Division 1 Section "Summary of Multiple Contracts" for coordinating operation and maintenance manuals covering the Work of multiple contracts.
  - 2. Division 1 Section "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.
  - 3. Division 1 Section "Closeout Procedures" for submitting operation and maintenance manuals.
  - 4. Division 1 Section "Project Record Documents" for preparing Record Drawings for operation and maintenance manuals.
  - 5. Divisions 2 through 16 Sections for specific operation and maintenance manual requirements for products in those Sections.

#### 1.3 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

#### 1.4 SUBMITTALS

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- A. Initial Submittal: Submit 2 draft copies of each manual at least 15 days before requesting inspection for Substantial Completion. Include a complete operation and maintenance directory. Architect will return 1 copy of draft and mark whether general scope and content of manual are acceptable.
- B. Final Submittal: Submit 1 copy of each manual in final form at least 15 days before final inspection. Architect will return copy with comments within 15 days after final inspection.
  - 1. Correct or modify each manual to comply with Architect's comments. Submit 3 copies of each corrected manual within 15 days of receipt of Architect's comments.

## 1.5 COORDINATION

- A. Where operation and maintenance documentation includes information on installations by more than one factory-authorized service representative, assemble and coordinate information furnished by representatives and prepare manuals.

## PART 2 - PRODUCTS

### 2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Organization: Include a section in the directory for each of the following:
  - 1. List of documents.
  - 2. List of systems.
  - 3. List of equipment.
  - 4. Table of contents.
- B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
- C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
- D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with the same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

## 2.2 MANUALS, GENERAL

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
1. Title page.
  2. Table of contents.
  3. Manual contents.
- B. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:
1. Subject matter included in manual.
  2. Name and address of Project.
  3. Name and address of Owner.
  4. Date of submittal.
  5. Name, address, and telephone number of Contractor.
  6. Name and address of Architect.
  7. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
1. Binders: Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch (115-by-280-mm) paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
    - a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
    - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.
  2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include typed list of products and major components of

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equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.

3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software diskettes for computerized electronic equipment.
4. Supplementary Text: Prepared on 8-1/2-by-11-inch (115-by-280-mm), 20-lb/sq. ft. (75-g/sq. m) white bond paper.
5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
  - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
  - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

## 2.3 EMERGENCY MANUALS

- A. Content: Organize manual into a separate section for each of the following:
  1. Type of emergency.
  2. Emergency instructions.
  3. Emergency procedures.
- B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
  1. Fire.
  2. Flood.
  3. Gas leak.
  4. Water leak.
  5. Power failure.
  6. Water outage.
  7. System, subsystem, or equipment failure.
  8. Chemical release or spill.
- C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- D. Emergency Procedures: Include the following, as applicable:
  1. Instructions on stopping.
  2. Shutdown instructions for each type of emergency.
  3. Operating instructions for conditions outside normal operating limits.
  4. Required sequences for electric or electronic systems.
  5. Special operating instructions and procedures.



## 2.4 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
1. System, subsystem, and equipment descriptions.
  2. Performance and design criteria if Contractor is delegated design responsibility.
  3. Operating standards.
  4. Operating procedures.
  5. Operating logs.
  6. Wiring diagrams.
  7. Control diagrams.
  8. Piped system diagrams.
  9. Precautions against improper use.
  10. License requirements including inspection and renewal dates.
- B. Descriptions: Include the following:
1. Product name and model number.
  2. Manufacturer's name.
  3. Equipment identification with serial number of each component.
  4. Equipment function.
  5. Operating characteristics.
  6. Limiting conditions.
  7. Performance curves.
  8. Engineering data and tests.
  9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include the following, as applicable:
1. Startup procedures.
  2. Equipment or system break-in procedures.
  3. Routine and normal operating instructions.
  4. Regulation and control procedures.
  5. Instructions on stopping.
  6. Normal shutdown instructions.
  7. Seasonal and weekend operating instructions.
  8. Required sequences for electric or electronic systems.
  9. Special operating instructions and procedures.
- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

## 2.5 PRODUCT MAINTENANCE MANUAL

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Product Information: Include the following, as applicable:
  - 1. Product name and model number.
  - 2. Manufacturer's name.
  - 3. Color, pattern, and texture.
  - 4. Material and chemical composition.
  - 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
  - 1. Inspection procedures.
  - 2. Types of cleaning agents to be used and methods of cleaning.
  - 3. List of cleaning agents and methods of cleaning detrimental to product.
  - 4. Schedule for routine cleaning and maintenance.
  - 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
  - 1. Include procedures to follow and required notifications for warranty claims.

## 2.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUAL

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in the manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.

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- C. **Manufacturers' Maintenance Documentation:** Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
  - 1. Standard printed maintenance instructions and bulletins.
  - 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
  - 3. Identification and nomenclature of parts and components.
  - 4. List of items recommended to be stocked as spare parts.
  
- D. **Maintenance Procedures:** Include the following information and items that detail essential maintenance procedures:
  - 1. Test and inspection instructions.
  - 2. Troubleshooting guide.
  - 3. Precautions against improper maintenance.
  - 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
  - 5. Aligning, adjusting, and checking instructions.
  - 6. Demonstration and training videotape, if available.
  
- E. **Maintenance and Service Schedules:** Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
  - 1. **Scheduled Maintenance and Service:** Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
  - 2. **Maintenance and Service Record:** Include manufacturers' forms for recording maintenance.
  
- F. **Spare Parts List and Source Information:** Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
  
- G. **Maintenance Service Contracts:** Include copies of maintenance agreements with name and telephone number of service agent.
  
- H. **Warranties and Bonds:** Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
  - 1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. **Operation and Maintenance Documentation Directory:** Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.

- B. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
  - 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
  - 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
  - 1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
- F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.
  - 1. Do not use original Project Record Documents as part of operation and maintenance manuals.
  - 2. Comply with requirements of newly prepared Record Drawings in Division 1 Section "Project Record Documents."
- G. Comply with Division 1 Section "Closeout Procedures" for the schedule for submitting operation and maintenance documentation.

END OF SECTION 01782

## SECTION 02221 - BUILDING DEMOLITION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

#### 1.2 SUMMARY

- A. Work under this section shall be completed as an alternate to the contract if accepted by the owner.
- B. This Section includes the following:
  - 1. Demolition and removal of buildings components as specified.
  - 2. Masonry restoration/repair.
  - 3. Exterior wood trim fenestration repair/replacement.
  - 4. Roofing materials and flashing.
  - 5. Minor electrical component repair/replacement.
- C. Related Sections include the following:
  - 1. Division 15 Sections for demolishing or relocating site mechanical items.
  - 2. Division 16 Sections for demolishing or relocating site electrical items.

#### 1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or recycled.
- B. Remove and Salvage: Detach items from existing construction and deliver them to Owner.
- C. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or recycled.

#### 1.4 MATERIALS OWNERSHIP

- A. Title to Materials: Title to all materials and equipment to be removed, except as specified otherwise, is vested in the Contractor upon receipt of contract. Materials and equipment shall not be viewed by prospective purchasers or sold on the site.

BUILDING DEMOLITION

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## 1.5 SUBMITTALS

- A. Proposed Environmental-Protection Dust-Control and Noise-Control Measures: Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation. Identify options if proposed measures are later determined to be inadequate.
- B. Schedule of Building Demolition Activities: Indicate the following:
  - 1. Detailed sequence of demolition and removal work, with starting and ending dates for each activity.
  - 2. Interruption of utility services.
  - 3. Locations of temporary protection and means of egress.
  - 4. Coordination of Owner's continuing occupancy of adjacent buildings.
- C. Pre-demolition Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by building demolition operations. Submit before Work begins.
- D. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

## 1.6 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Standards: Comply with ANSI A10.6 and NFPA 241.
- D. Predemolition Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination." Review methods and procedures related to building demolition including, but not limited to, the following:
  - 1. Inspect and discuss condition of construction to be demolished.
  - 2. Review and finalize building demolition schedule and verify availability of demolition personnel, equipment, and facilities needed to make progress and avoid delays.
  - 3. Review and finalize protection requirements.

## 1.7 PROJECT CONDITIONS

- A. The building will remain in continuous use throughout the life of the project. The contractor will coordinate construction activities and the use of the facility in compliance with the Special

Provisions. Contractor may need to limit the timing of some activities to coincide with busy times for the restaurant or the arrivals of trains to the station.

1. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
  2. Maintain access to existing walkways, exits, and other adjacent occupied or used facilities.
    - a. Do not close or obstruct walkways, exits, or entrance drive without written permission from authorities having jurisdiction.
  3. Provide directional and wayward finding signs to assist the public in gaining access to the operations of the facility. Provide protective devices as may be necessary as well as temporary lighting to assist with this effort.
- B. Hazardous Materials: No asbestos materials anticipated on this project.
- C. Storage or sale of removed items or materials on-site is not permitted.

#### 1.8 COORDINATION

- A. Arrange repair work schedule so as not to interfere with Owner's on-site operations.

### PART 2 - PRODUCTS[ (Not Used)]

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Survey existing conditions and correlate with requirements indicated to determine extent of building demolition required.
- B. Review Project Record Documents of existing construction provided by Owner. Owner does not guarantee that existing conditions are the same as those indicated in Project Record Documents.
- C. Inventory and record the condition of items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements are encountered, investigate and measure the nature and extent of the element. Promptly submit a written report to Engineer.

#### 3.2 PREPARATION

- A. Existing Utilities: Refer to Division 15 and 16 Sections for shutting off, disconnecting, removing, and sealing or capping utilities. Do not start repair work until utility disconnecting and sealing have been completed and verified in writing.

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### 3.3 PROTECTION

- A. Existing Facilities: Protect adjacent walkways, and roadways during repair operations.
- B. Existing Utilities: Maintain utility services serving adjacent occupied or operating facilities and protect them against damage during repair operations.
  - 1. Do not interrupt existing utilities serving adjacent occupied or operating facilities unless authorized in writing by Owner and authorities having jurisdiction.
  - 2. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and to authorities having jurisdiction.
    - a. Provide at least 72 hours' notice to Owner if shutdown of service is required during changeover.
- C. Temporary Protection: Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction and as indicated. Comply with requirements in Division 1 Section "Temporary Facilities and Controls."
  - 1. Protect existing site improvements, appurtenances, and landscaping to remain.
  - 2. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  - 3. Provide protection to ensure safe passage of traffic around building demolition area and occupied portions of adjacent buildings and structures.

### 3.4 DEMOLITION, GENERAL

- A. General: Use methods required to complete the Work within limitations of governing regulations and as follows:
  - 1. Do not use cutting torches until work area is cleared of flammable materials. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
  - 2. Maintain adequate ventilation when using cutting torches.
  - 3. Locate building demolition equipment and remove debris and materials so as not to impose on access road to adjacent facility and parking area.
- B. Site Access and Temporary Controls: Conduct debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
  - 1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
  - 2. Use water mist and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations. Do not use water when it may damage adjacent construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.



### 3.5 MECHANICAL DEMOLITION

- A. Remove debris from elevated portions by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

### 3.6 EXPLOSIVE DEMOLITION

- A. Explosives: Use of explosives is not permitted.

### 3.7 SITE RESTORATION

- A. Site Grading: repair damaged surface affected during the course of the restoration to match adjacent surface type and condition.

### 3.8 REPAIRS

- A. General: Promptly repair damage to adjacent construction caused by building demolition operations.
- B. Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.

### 3.9 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
  - 1. Do not allow demolished materials to accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

### 3.10 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by building demolition operations. Return adjacent areas to condition existing before building demolition operations began.

END OF SECTION 02221

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RESTORATION OF THE HISTORIC  
ROCKLAND RAIL STATION  
MDOT PIN NO. 10223.00

## SECTION 04500 - MASONRY RESTORATION

### PART 1. - GENERAL

#### 1.1 RELATED DOCUMENTS:

- A. A. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

#### 1.2 DESCRIPTION OF WORK:

- A. Extent and specific locations of masonry restoration work are indicated on Drawings.
- B. Masonry restoration work includes the following:
1. Pressure washing, surface restoration cleaning, and chemical removal cleaning of various exposed masonry and stone surfaces as preparation for work.
    - a. Chemical removal cleaning shall be performed on areas noted on Drawings and wherever Silicone caulking and graffiti has been applied, including spray-paint.
    - b. Surface Restoration Cleaning shall be performed on entire building surface once chemical removal cleaning has been completed – but using appropriate cleaners for the various materials being cleaned (granite, limestone, brick and precast concrete), and as specified.
  2. Removing and rebuilding damaged and mismatched repaired brick masonry to match existing undamaged brick masonry.
  3. Repointing mortar joints over selected portions of building exterior (Spot Repointing) including joints in brick and stone.
- C. Removal of corrosion from existing steel lintels at exterior masonry openings and preparation for application of primer under the Division 9 Section “Painting”.
- D. Unit Prices are specified in Division 1 Sections and outlined below:
1. Contractor to provide a per square foot unit cost proposal in spaces provided on the Bid Form, for the following items of work:
    - a. Additional removal and restorative reconstruction of brick masonry.
    - b. Additional spot repointing as defined in Part 3 of this Section.

#### 1.3 QUALITY ASSURANCE:

- A. Restoration Specialist: Work must be performed by a firm having not less than 5 years successful experience in comparable masonry restoration projects and employing personnel skilled in the restoration processes and operations indicated.
- B. Pre-Restoration Conference: Prior to start of general masonry restoration, a meeting shall be held and attended by all affected trades, most importantly the Restoration Specialist Mason as specified in Division 1. Conference will also have representatives of Architect, Engineer, MDOT, Maine Historic Preservation and City of Rockland in attendance.

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- C. Field-Constructed Sample: Prior to start of general masonry restoration, prepare the following sample panels on building where directed by Owner. Obtain Owner's and Maine Historic Preservation Commission's acceptance of visual qualities before proceeding with the work. Retain acceptable panels in undisturbed condition, suitably marked, during construction as a standard for judging completed work.
  - 1. Repair, Cleaning and Repointing: Prepare 3 separate sample areas approximately 4' high by 4' wide for each type of repointing / repair work and as outlined below:
    - a. One demonstrating methods and quality of workmanship expected in removal (only) of mortar from joints showing the depth and extents of existing mortar removal necessary in preparation for the repointing.
    - b. One demonstrating methods and quality of workmanship expected in masonry cleaning, and removal from and replacement of mortar in joints in both brick and stone.
    - c. One demonstrating quality and appearance of materials and workmanship expected in removal and replacement of damaged brick units including the rebuilding of a designated area.
- D. Source of Materials: Obtain materials for masonry restoration from a single source for each type material required (face brick, lime, cement, sand, etc.) to ensure match of quality, color, pattern, and texture.
  - 1. Mortar aggregates vary for each material being built or set with mortar; whether brick, limestone or granite. Sand and fine stone aggregates shall be carefully selected and blended as required to match the color and gradation of the original mortar specified herein.
- E. References: The following organizations, standards and/or guidelines apply to the work of this Section.
  - 1. American Concrete Masonry Association - ACMA
  - 2. American Society for Testing and Materials - ASTM
  - 3. Brick Institute of America –BIA
  - 4. Society for Protective Coatings – SSPC
  - 5. National Park Service Preservation Briefs, 1, 2, and 42.
  - 6. Maine Department of Environmental Protection - MDEP

#### 1.4 SUBMITTALS:

- A. Product Data: Submit manufacturer's technical data for each product indicated including recommendations for their application and use. Include test reports and certifications substantiating that products comply with requirements.
- B. Restoration Program: Submit written program for restoration process including protection of surrounding materials on building and site during operations. Describe in detail materials, methods and equipment to be used. Develop a quality control program for the execution of consistent joint restoration.
  - 1. Quality control program shall include provisions for supervising performance and preventing damage to existing masonry due to worker fatigue or inappropriate techniques.

- C. If alternative methods and materials to those indicated are proposed for any phase of restoration work, provide written description, including evidence of successful use on other, comparable projects, and program of testing to demonstrate effectiveness for use on this project.
- D. Samples: Submit, for verification purposes and approval, prior to mock-up erection, samples of the following:
1. Each new exposed masonry material to be used for replacing existing materials. Include in each set of samples the full range of colors and textures to be expected in completed work.
  2. For face-bricks provide straps or panels containing not less than 4 units, showing full range of color/flash.
  3. Each type mortar for pointing and masonry rebuilding and repair, in form of 6" long by 1/2" wide sample strips of mortar set in aluminum or plastic channels. Include detailed description of sources of components and proportions.
- E. DELIVERY, STORAGE AND HANDLING:
1. Carefully pack, handle, and ship masonry units and accessories strapped together in suitable packs or pallets or in heavy cartons. Unload and handle to prevent chipping and breakage.
  2. Deliver other materials to site in manufacturer's original and unopened containers and packaging, bearing labels as to type and names of products and manufacturers.
  3. Protect masonry restoration materials during storage and construction from wetting by rain, snow or ground water, and from staining or intermixture with earth or other types of materials.
  4. Protect grout, mortar and other materials from deterioration by moisture and temperature. Store in a dry location or in waterproof containers. Keep containers tightly closed and away from open flames. Protect liquid components from freezing. Comply with manufacturer's recommendations for minimum and maximum temperature requirements for storage.
- F. PROJECT CONDITIONS:
1. Do not restoration clean, wash masonry, re-point mortar joints or repair masonry unless air temperatures are between 40 deg.F (4 deg.C) and 80 deg.F (27 deg.C) and will remain so for at least 48 hours after completion of work; or provide enclosures for shelter and (if required) temporary heated air, maintained to assure these conditions.
  2. Prevent cleaning materials, chemical stripping agents, grout or mortar used in cleaning, repointing and repair work from staining face of surrounding masonry and other surfaces. Remove any foreign or construction material in contact with exposed masonry and other surfaces immediately.
  3. Dust Generating Grinding and Cutting Tools: In the event that hand-held, powered, diamond blade mortar cutting tools are approved for use; all equipment shall be shrouded and equipped with dust capture equipment including vacuum and duct systems to collect and retain virtually all dust from cutting operations.
    - a. Dust collection and other protection requirements shall be provided as necessary for compliance with MDEP and Dept. of Labor/OSHA regulations for safety and Personnel Exposure Limits to Silica Dust and to capture the generated dust that would otherwise be a nuisance; to protect building occupants, public, and abutters.

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4. Protect sills, ledges and other projections from mortar droppings, dust, cleaning chemical damage, etc.
5. Glazing, vehicles, entrances, hardware and any other surface potentially damaged by cleaning agents or mortar dust shall be protected from these materials.
  - a. Cease cleaning operations when windy conditions occur to the extent that overspray, dust and mist from cleaning and mortar removal operations could be airborne beyond the area of protective barriers.

G. PRECONSTRUCTION MEETING:

1. Prior to the start of masonry restoration there will be a meeting on site including the Owner, Maine Historic Preservation Commission, Architect, Masonry Restoration Specialist, representatives from any Subcontractors, and others as requested, to review the following:
  - a. Sequencing and schedule coordination of various trades affected by this work,
  - b. Sources of all restoration materials and qualities & colors being used to match existing,
  - c. Materials storage and lay-off areas proposed/requested,
  - d. Proposed Area of sample panels,
  - e. Submittals and substitutions,
  - f. Proposed methods of staging and safety/security.
    - (1) Contractor to review with Owner methods of securing staging from vandalism and unauthorized use during off hours.
  - g. Project schedule and procedures,
  - h. Contacts and communication.

H. SEQUENCING/SCHEDULING:

1. Perform masonry restoration work in the following sequence unless otherwise reviewed and approved by Architect and Owner:
  - a. Perform initial spot cleaning including removal of all inappropriate sealants and caulking, and inspect all areas of damage.
  - b. Repair existing brick masonry including replacing damaged existing masonry with new masonry materials manufactured to match existing or salvaged brick that matches exactly.
  - c. Repair or replace all deteriorated flashings where and as indicated.
  - d. Rake-out existing mortar from joints indicated to require repointing.
  - e. Re-point existing mortar joints of masonry indicated to be restored.
  - f. Inspect for additional areas in need of restoration and confirm with Architect and Owner these added areas, receive notice to proceed and perform necessary restoration to these areas.
  - g. Pressure wash masonry and stone surfaces.
  - h. Final clean all surfaces.

PART 2. - PRODUCTS

2.1 MASONRY MATERIALS:

- A. Face Brick and Accessories: Provide face brick and accessories, including units for lintels, arches, corners, and other special ground, cut, or sawed shapes where required to complete masonry restoration work.

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1. Provide units with color, surface texture and size to match existing brickwork and with similar physical properties.
  - a. Exterior Face-Brick to match Building; Locate existing salvaged face brick that match existing units as closely as possible. If unable to locate existing matching units, custom manufacture brick units in color range and dimension to the existing units. **It is estimated that less than 100 units will be required.**
  - b. Existing exterior brick is a non-modular “Roman” or oversized normal proportion, deeply flashed, with wide-ranging coloration and include some mottling like a clear glaze produced by high temperature firing on the heavily textured unit faces.
    - (1) Sizes: Most brick used for wall face-brick is a nominal 12” long x 2-1/2” high x 3-3/4” thick. Soldier course units vary in the height dimension but a majority is 2-1/4” high.
    - (2) Texture: Face-brick is heavily textured, similar to Glen – Gery “Rugg” or “Spun Bark.”
    - (3) Building Brick: Provide building brick complying with ASTM C 62 for masonry work concealed from view, of same vertical dimension as face brick if required.
  - c. Grade SW, for concealed back-up.

## 2.2 MORTAR MATERIALS:

- A. Portland Cement: ASTM C 150, Type I, for concealed work and repointing mortar if color match can be obtained there with.
  1. For color matching of repointing mortar to be used on exterior masonry indicated, provide non-staining white cement or natural cement complying with staining requirement of ASTM C 91 for not more than 0.03% water-soluble alkali.
  2. Hydrated Lime: ASTM C 207, Type S.
    - a. If color match cannot be obtained or at masonry restoration contractor’s option, custom color blended mortar may be used as specified below.
  3. Aggregate for Mortar: ASTM C 144, unless otherwise indicated.
    - a. Match sizes, textures and gradations of aggregate contained in the existing mortars as closely as possible. There are 2 – 3 varieties of mortar color/gradation depending on application; varying from brick to limestone to granite joints.
    - b. NOTE that the existing mortar mixes used in the face-brick and the limestone has a significant percentage of large-grained aggregate of what is apparently quartz or similar stone.
    - c. For pointing mortar provide sand with rounded edges when available.
- B. Water: Clean, potable, free of oils, acids, alkalis and organic matter. Water is available from building plumbing. Contractor shall supply pump(s) and all necessary hoses for use as necessary.

## 2.3 CLEANING MATERIALS AND EQUIPMENT:

- A. Water for Cleaning: Clean, potable, free of oils, acids, alkalis, salts, and organic matter. Water MAY NOT be available from building plumbing. If necessary, Contractor shall supply water from a portable storage tank, pump(s) and all necessary hoses for use as necessary.
  1. Warm Water: Heat water to temperature of 140 deg.F - 180 deg.F (60 deg.C-82 deg.C).

- B. Restoration Masonry Cleaning Agents: Below are products with graduated aggressiveness for use on surfaces indicated (only). Limit use to specified surfaces, only after test demonstration of effectiveness without adverse impact.
1. Enviro Klean 2010 All Surface Cleaner concentrate by ProSoCo, Inc.; A multi-use water-rinsable cleaning and degreasing agent with a pH of 10.5 suitable for use on all exterior surfaces. Use full strength unless directed otherwise by manufacturer.
  2. Sure Klean Light Duty Restoration Cleaner by ProSoCo, Inc.; A gelled multi-use stain and soil remover for dense masonry and stone, water-rinsable, mildly acidic with a pH of 1.5 – 2.0, suitable for use on all masonry and stone surfaces. Use full strength unless directed otherwise by manufacturer.
  3. Enviro Klean EK Restoration Cleaner by ProSoCo, Inc.; A concentrated, nearly neutral cleaning compound for removal of carbonization and environmental staining from brick and granite (only) with a pH of 5.5. Use full strength unless directed otherwise by manufacturer.
- C. Chemical Stripping System: For localized Paint (graffiti) removal; “Fast Acting Stripper” by ProSoCo, Inc. or approved equal. Limit use to brick and granite only, after test demonstration of effectiveness without adverse impact.
- D. Limestone Cleaner: All limestone (only) shall be cleaned with concentrated, acidic Sure Klean Limestone Restorer by ProSoCo., Inc. with a pH of 0.18 when diluted at 1:6. Determine proper dilution ratio from 16% up to 50% by testing on selected discrete panels of building’s stone.
- E. Brushes: Fiber bristles only.
- F. Acidic Cleaner: "Ultra - Safe Acid" Muriatic acid replacement shall be used for post-restoration masonry cleaning of areas pointed with new mortar or rebuilt entirely.
- G. MORTAR MIXES:
1. General:
    - a. Measurement and Mixing: Measure cementitious and aggregate material in a dry condition by volume or equivalent weight. Do not measure by shovel, use known measure. Mix materials in a clean mechanical batch mixer.
    - b. Mixing Pointing Mortar: Thoroughly mix cementitious and aggregate materials together before adding any water. Then mix again adding only enough water to produce a damp, unworkable mix which will retain its form when pressed into a ball. Maintain mortar in this dampened condition for 1-to-2 hours. Add remaining water in small portions until mortar of desired consistency is reached. Use mortar within 30 minutes of final mixing; do not re-temper or use partially hardened material.
  2. Do not use admixtures of any kind in mortar, unless otherwise indicated.
  3. Mortar Proportions: Existing Mortar exposed-to-view shall be examined, tested if necessary and matched as exactly as possible with new materials for aggregate gradation and color.
    - a. Pointing Mortar for Brick: One (1) part white Portland cement, one (1) part lime and six (6) parts mortar aggregate in color and aggregate size that matches existing as precisely as possible.
      - (1) Option for color adjustment: Natural cement may be used if beneficial in providing a closer color match.
      - (2) Optional Pre-mixed colored matching mortar: Contractor may elect to obtain services and product of the following mortar supplier/specialist firm capable of

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providing historically correct preblended, colored and aggregate graded mortarmix; U.S. Heritage Group, 3516 N. Kostner, Chicago, IL 60641. (773) 286-2100, [info@usheritage.com](mailto:info@usheritage.com) .

4. Rebuilding Mortar: Same as pointing mortar.
  - a. Rebuilding Mortar: Comply with ASTM C 270, Proportion Specification, Type N, unless otherwise indicated with cementitious material content limited to portland cement and lime.

### PART 3. - EXECUTION

#### 3.1 PREPARATION:

- A. Protect persons and surrounding surfaces of building whose masonry surfaces are being restored, building site, vehicles, and surrounding pavements from injury resulting from masonry restoration work.
  1. All windows and painted surfaces are designated to be restored as part of the Work of this Project. Mask and protect these surfaces and elements to prevent damage that may be caused by cleaning and washing operations or mortar drippings, coordinating the masonry work with the proposed restoration activities of these elements.
- B. Contractor to provide all necessary staging and scaffolding to complete work in a safe and appropriate fashion, including crane or hoisting apparatus for placement of scaffolding adjacent to wall surfaces inaccessible from exterior finish grade.
- C. Dispose of run-off from cleaning operations by legal means and in manner that prevents damage to landscaping, and water penetration into building interiors.
- D. Erect temporary protection covers over pedestrian walkways and at points of entrance and exit for persons and vehicles that must remain in operation during course of masonry restoration work.
- E. Remove loose mortar, soil or debris from open masonry joints to whatever depth it occurs.

#### 3.2 BRICK REMOVAL AND REBUILDING:

- A. Removal:
  1. Carefully remove by hand any bricks which are mismatched, damaged, spalled or deteriorated in areas indicated. Cut out full units from joint to joint and in manner to permit replacement with full size units.
  2. Support and protect masonry indicated to remain which surrounds removal area.
  3. Salvage as many whole, undamaged original bricks as possible for reuse where appropriate.
  4. Remove mortar, loose particles and soil from salvaged brick by cleaning with brushes and water. Store brick for reuse.
  5. Clean remaining brick at edges of removal areas by removing mortar, dust, and loose debris in preparation for rebuilding.
- B. Rebuilding:
  1. Brick:

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- a. Examine all new/replacement brick obtained for the project and select individual units for best match with brick in locations requiring rebuilding, to blend with existing to greatest extent possible.
- b. Install new or salvaged brick to replace removed brick. Where new brick must be used, the rebuilding mason shall carefully select brick from the specified blends to achieve a color palette matching the original brick in the area to be rebuilt, as exactly as possible. Fit replacement units into bonding and coursing pattern of existing brick. If cutting is required use motor driven saw designed to cut masonry with clean, sharp unchipped edges.
- c. Lay replacement brick with completely filled bed, head and collar joints. Butter ends with sufficient mortar to fill head joints and shove into place. Wet clay brick that have ASTM C 67 initial rates of absorption (suction) of more than 30 grams per 30 sq. in. per minute. Use wetting methods, which ensure that units are nearly saturated, but surfaces dry when laid. Maintain joint width for replacement units to match existing.
- d. Tool exposed mortar joints in repaired areas to match existing joints of surrounding masonry construction, all slated for full repointing. Match joint profiles and design of original construction to the greatest extent possible and as detailed herein and in Drawings.

### 3.3 STEEL LINTEL "RESTORATION"

- A. All existing steel lintels shall remain unless otherwise indicated in Drawings and shall be restored as follows:
  1. Rake joints in which lintel is located and expose all edges of steel possible.
  2. Remove all rust, corrosion, scale and paint from exposed steel of lintels using hand and/or blast cleaning methods protecting adjacent surfaces and materials as necessary.
    - a. Achieve SSPC – SP2 level of preparation to receive primer specified in other Sections of these Specifications.

### 3.4 REPOINTING EXISTING MASONRY:

- A. Joint Raking:
  1. Rake out mortar from joints to depths equal to between 2 and 2-1/2 times their widths but not less than 1/2 inch nor less than that required to expose sound, unweathered mortar.
  2. Remove mortar from masonry surfaces within raked-out joints to provide reveals with square backs and to expose masonry for contact with pointing mortar. Brush, vacuum or flush joints with water to remove dirt and loose debris.
  3. Do not spall edges of masonry units or widen joints. Replace any masonry units that become damaged.
  4. Power operated rotary hand saws and grinders will be permitted but only with specific written approval of Owner based on submission by Contractor of a satisfactory quality control program and demonstrated ability of operators to use tools without damage to masonry. Quality control program shall include provisions for supervising performance and preventing damage to bricks due to worker fatigue, as well as dust capture methods and personnel protection from mortar dust.
- B. Joint Pointing:

1. Rinse masonry joint surfaces with water to remove any dust and mortar particles. Time application of rinsing so that, at time of pointing, excess water has evaporated or run off, and joint surfaces are damp but free of standing water.
2. Apply first layer of pointing mortar to areas where existing mortar was removed to depths greater than surrounding areas. Apply in layers not greater than 3/8" until a uniform depth is formed. Compact each layer thoroughly and allow to become thumbprint-hard before applying next layer.
3. After joints have been filled to a uniform depth, place remaining pointing mortar in 3 layers with each of first and second layers filling approximately 2/5 of joint depth and third layer the remaining 1/5. Fully compact each layer and allow to become thumbprint hard before applying next layer. Recess final layer slightly from face. Take care not to spread mortar over edges onto exposed masonry surfaces, or to featheredge mortar.
4. At Brick Joints Only: When mortar is thumbprint hard, rake joints back to a depth of approximately 1/2" to match original appearance of joints. Remove excess mortar from edge of joint by brushing and texture mortar joint face by "stippling" with stiff bristled brush after sweeping gently to expose faces of larger aggregate.
5. Cure mortar by maintaining in a damp condition for not less than 72 hours.

### 3.5 CHEMICAL CLEANING

- A. Chemical cleaners are water based and have the same potential problems of plain water cleaning. The Contractor shall avoid all potential environmental damage due to chemical runoff on to adjacent plant life, earth, and bodies of water. Comply with all Department of Environmental Protection Guidelines. The use of Hydrochloric (Muriatic) acid shall not be permitted.
- B. Sure Klean "Fast Acting" Stripper shall be employed for the localized removal of exterior sealants and paint (graffiti, etc.) from porous brick walls and granite only. Perform test application and removal to determine best grade of product to apply, most effective application method and optimum dwell time prior to removal of dissolved residue.
  1. Apply the paint stripping compound in strict accordance with manufacturer's printed instructions, to the masonry surface using spray equipment; or by soft fibered brush or roller as appropriate for grade of product selected.
  2. Allow the paint stripping compound to remain on the wall for necessary time period (dwell time) depending upon emulsification rate and wall coating condition(s). (Do not allow the stripper compound to dry in.)
  3. Rinse treated surfaces with fresh water employing pressure washing equipment removing all paint stripper, coatings, debris, dirt, etc.
    - a. Test cleaned and rinsed masonry periodically to confirm that all cleaning agents are completely neutralized.
- C. Graduated Strength Chemical Cleaning Systems: The products listed below are specified in an incremental progression of strength and aggressiveness. All products shall be tested for effectiveness and impact to the substrate as recommended by manufacturer, in an isolated test panel. Only the most gentle effective product(s) shall be used and moving to a stronger solution shall only occur after proving the less aggressive approach is ineffective.
  1. Enviro Klean 2010 All Surface Cleaner concentrate by ProSoCo, Inc. shall be employed for cleaning and degreasing light-to-heavily soiled stone and masonry .

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2. Sure Klean Light Duty Restoration Cleaner by ProSoCo, Inc.; Shall be employed for removal of tougher atmospheric soiling, subsurface staining and soiling from brick masonry and natural stone.
3. Enviro Klean EK Restoration Cleaner shall be employed for removal of paint residue, oxidation, atmospheric staining, clay and mud stains, rust, and smoke from brick and precast concrete masonries in the following manner unless otherwise indicated from previous testing:
  - a. Manufacturer's product literature and instructions for use of each product shall be implicitly followed. Unless otherwise specified by manufacturer, the following procedures apply generally to all Cleaning Chemicals. Dilution shall be performed only where specifically required.
    - (1) Thoroughly prewet the masonries to be cleaned. NOTE: The purpose of the prewetting is to limit the activity of the cleaning solutions to the masonry surface and prevent them from being too readily absorbed by the dry masonries. Failure to adequately prewet may result in streaking and other residual staining of the treated masonries.
    - (2) Apply the cleaning solution liberally to the masonry surface using densely packed, soft fibered, masonry washing brushes.
    - (3) Allow the cleaning solution to remain on the wall for three to five minutes depending upon drying conditions. (Do not allow the cleaning solution to dry in.)
    - (4) Reapply the cleaning solution in a scrubbing manner.
    - (5) Rinse treated surfaces with fresh water employing pressure washing equipment removing all cleaning compounds, dirt, etc.
    - (6) Test cleaned and rinsed masonry periodically to confirm that all cleaning agents are completely neutralized.
    - (7) Repeat as necessary.
  - D. Upon completion of all paint removal and restorative cleaning operations, affected masonries shall be allowed adequate time to thoroughly dry.

### 3.6 FINAL CLEANING:

- A. After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and foreign matter using stiff nylon or bristle brushes and clean water, spray applied at low pressure.
- B. Use of metal scrapers or brushes will not be permitted.
- C. Use of acid or alkali cleaning agents will not be permitted.
- D. Proceed with cleaning in an orderly manner; work from top to bottom of each scaffold width and from one end of each elevation to the other.
- E. Perform cleaning in a manner that results in uniform coverage of all surfaces, including corners, moldings, interstices and which produces an even effect without streaking or damage to masonry surfaces.
- F. Water Application Methods:
  1. Spray Applications: Spray-apply water to masonry surfaces to comply with requirements indicated for location, purpose, water temperature, pressure, volume and equipment. Unless otherwise indicated, hold spray nozzle not less than 6" from surface of masonry and apply

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water from side to side in overlapping bands to produce uniform coverage and an even effect.

- a. Spray Pressure: Begin with medium pressure spray in the range of 500-800 psi; 4-6 gallons per minute. Start at the lowest pressure working up to the most effective pressure setting but not in excess of 800 psi. Modulate pressure and inspect thoroughly to ensure no damage to brick is being caused.
  - b. Spray Nozzle - wide coverage nozzle, if effective. Medium coverage may be employed if proven to be more effective after test to demonstrate no detriment to masonry and stone.
- G. All cleaning compounds shall be medium-pressure rinsed completely from the building surfaces before permitting the substrate to dry.
1. Test cleaned and rinsed masonry to confirm that all cleaning agents are completely neutralized.
  2. Continue to rinse cleaned wall surfaces until tests prove positively that all cleaning agents have been neutralized.

END OF SECTION 04500

## SECTION 06401 - EXTERIOR ARCHITECTURAL WOODWORK

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Exterior standing and running trim.
  - 2. Exterior ornamental work.
  - 3. Shop priming exterior woodwork.
- B. The Work of this Section involves repairs to, preparation for refinishing, and in some cases - removal and disposal of materials that have been tested and found to contain lead-based paint. Exterior woodwork finishes on items including but not limited to fascia, soffits, window sills, brick-moldings, cupola and doors have been determined to contain lead at 0.1 mg/cm<sup>2</sup> or more.
  - 1. OSHA regulates work that impacts materials containing any detectable amount of lead.
  - 2. Personnel protection and compliant work practices for all work under this Section impacting materials with these coatings shall be part of the scope of this Section.
  - 3. Comply with all Department of Environmental Protection Guidelines for disposal of materials known to contain lead-based products.

#### 1.3 SUBMITTALS

- A. Product Data: For wood-preservative-treated materials indicated.
- B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

#### 1.4 QUALITY ASSURANCE

- A. Quality Standard: Unless otherwise indicated, comply with AWI's "Architectural Woodwork Quality Standards."

### PART 2 - PRODUCTS

#### 2.1 WOODWORK FABRICATORS

- A. Fabricators: Subject to compliance with requirements, provide exterior architectural woodwork by one of the following:

EXTERIOR ARCHITECTURAL WOODWORK

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## 2.2 MATERIALS

- A. Preservative Treatment by Non-pressure Process: Comply with AWPA N1 using the following preservative for woodwork items indicated to receive water-repellent preservative treatment:
  - 1. Water-Repellent Preservative: Formulation containing 3-iodo-2-propynyl butyl carbamate (IPBC) complying with AWPA P8 as its active ingredient.
  - 2. Water-Repellent Preservative/Insecticide: Formulation containing 3-iodo-2-propynyl butyl carbamate (IPBC) as its active ingredient, combined with an insecticide containing chlorpyrifos as its active ingredient, both complying with AWPA P8.
- B. Nails: Hot-dip galvanized or stainless steel.
- C. Screws: Bronze or stainless steel.

## 2.3 FABRICATION

- A. Wood Moisture Content: 9 to 15 percent.
- B. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible, before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
- C. Woodwork for Opaque Finish:
  - 1. Grade: Premium.
  - 2. Wood Species: Eastern white pine, sugar pine, or western white pine.
- D. Backout or groove backs of flat trim members and kerf backs of other wide, flat members, except for members with ends exposed in finished work.
- E. Shop Priming: Shop prime woodwork for paint finish with one coat of wood primer specified in Division 9 painting Sections.
  - 1. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of woodwork. Apply two coats to surfaces installed in contact with concrete or masonry and to end-grain surfaces.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.
- B. Quality Standard: Install woodwork to comply with same grade specified in Part 2 for type of woodwork involved.
- C. Install woodwork true and straight with no distortions. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches.

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- D. Scribe and cut woodwork to fit adjoining work, and refinish cut surfaces or repair damaged finish at cuts.
- E. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure to grounds, stripping and blocking with countersunk concealed fasteners and blind nailing. Use fine finishing nails for exposed nailing, countersunk and filled flush with woodwork.
- F. Install trim with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Scarf running joints and stagger in adjacent and related members.
- G. Complete finishing work specified in this Section to extent not completed at shop or before installation of woodwork. Fill nail and screw holes with matching filler where exposed.
- H. Refer to Division 9 Sections for final finishing of installed architectural woodwork.
- I. Clean woodwork on exposed and semi-exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 06401

## SECTION 07300 - SLATE SHINGLE ROOFING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. A. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

#### 1.2 DESCRIPTION OF WORK

- A. The work of this section includes but is not limited to:
  - 1. Removal and reinstallation of existing slate shingles where indicated.
  - 2. Patching and repair of slate roofing including new slate as required to replace broken slate.
    - a. **Allow for approximately 1,000 square feet (10 square or 18% of total roof surface) in area to be replaced with new slate** due to existing damage and breakage during flashing and gutter replacement operations specified.
  - 3. Installation of elastomeric membrane underlayment.
  - 4. Restoration of wire snow-guards including replacement where missing.

#### 1.3 RELATED SECTIONS

- A. Division 1 Section "Unit Prices" for bidding requirements of scope modification price-point for Work related to this Section.
- B. Division 7: Flashing and Sheet Metal.

#### 1.4 SUBMITTALS

- A. Submittals shall be in accordance with Division 1 - Conditions of the Contract.
- B. Submit manufacturer's product data for new slate shingles and all proposed hardware.
- C. Samples: Submit no less than 2 full size slate shingles representing full range of color proposed to match existing, and snow guards proposed for use, for approval by Designer and Maine Historic Preservation Commission.

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## 1.5 QUALITY ASSURANCE

- A. Slate Roofing Contractor shall have at least five (5) years experience working with sensitive historic structures. Submit list of completed projects; include names and addresses of each project and related Architect and Owner.
  - 1. Roofing contractor shall have a minimum of ten (10) years experience in general roofing work.
- C. Employ only skilled workmen who are trained especially in properly laying and nailing slate and who are completely familiar with the specified requirements and methods required for proper performance of the Work of this Section.
- D: Warrantee: In addition to Project Guarantee for first year after date of Substantial Completion, the Roofing Contractor shall warrantee the Work of this Section for a period of Two Years to be free of leaks, failures and breakage due to faulty workmanship. Any and all repairs required on the roof due to defective materials or workmanship furnished under this Contract shall be made without cost to the Owner.

## 1.6 PROTECTION OF MATERIALS

- A. Deliver materials to the job site in manufacturer's original containers, properly labeled for identification
- B. Provide raised platforms and waterproof covers or watertight trailer to protect new materials from the weather and from contamination from dirt and debris.
- C. Examination: Examine all portions of the roof surfaces to receive slate shingles and clean it of any foreign matter that could cause any damage whatsoever to the roof system. Apply roofing material only when the surface is satisfactory. Beginning work shall imply acceptance of the conditions.

## 1.7 WEATHER PRECAUTIONS

- A. Install or repair slate shingle roofing and accessories when weather conditions insure proper application of materials. Surfaces must be dry and free of foreign materials, snow, ice, and frost.
- B. Do not remove roofing from structures when rain is forecasted or in progress.
- C. Do not remove any greater quantity of slate shingle roofing than can be replaced or repaired on the same day.

## 1.8 REFERENCES

- A. NRCA Roofing and Waterproofing Manual, most current edition.
- B. National Park Service – Preservation Brief No. 29: “The Repair, Replacement, and Maintenance of Historic Slate Roofs”.

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## 1.9 JOB CONDITIONS

- A. Examine substrate and the conditions under which the slate will be installed and notify the Architect of any unsatisfactory conditions. Do not proceed with installation until unsatisfactory conditions have been corrected as directed and in an acceptable manner.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

#### A. Slate Shingles:

1. Remove and reinstall existing slate shingles in locations indicated.
2. At locations where existing shingles remain and patching or repairs are required, utilize slate removed from existing roof areas indicated and saved for such use.
3. New Slate: For roof surfaces indicated to receive new slate shingles, the slate shall be semi-weathering type, 3/16" to 1/4" thick, 16" long and various widths from 9" to 12" to match existing. Slate shall meet ASTM C406 Classification S1 and be of commercial standard quality. Colors shall be blended sea green and gray in range to match existing as close as possible.
  - a. New slate product acceptable for use in this project includes weathering Sea Green by Hilltop Slate, Inc. or Taran Brothers Slate Co. of Vermont, Evergreen Slate Co., Inc., Granville, N.Y., or North Country Slate<sup>®</sup> Toronto, Ontario 1-800-975-2835.
    - (1) At Contractor's option, recycled (used) slate in new condition and color range matching existing may be used as available from Vermont Recycled Slate & Roofing, Inc., Fair Haven, VT 05743. [info@usedslate.com](mailto:info@usedslate.com), 1-802-265-4506.
  - b. Slate shall be Semi-Weathering, Grade A, natural cleft (Standard Smooth) finish shingles of hard, dense, sound rock, and machine punched for two nails each. No cracked slate shall be used. No broken corners on covered ends will be permitted as this reduces nailing strength and watertightness.

- B. Waterproofing membrane: W.R. Grace Company, Bituthene "Ice and Water Shield", Certainteed "Winterguard" or "Eaveguard" by Bakor, are acceptable self-adhesive waterproof underlayments.

- C. Bib sheets used for slate patching; 16oz. lead coated copper.

- D. Nails: All slate shall be attached with large-head 10 gauge solid copper slating nails. Field slate shall be secured with 2 nails 1 1/2" long and 2" nails shall be used on hip and ridge slates.

- E. Elastic Cement: Provide a quarrier approved top quality waterproof, elastic slater's cement colored to match the general color of the slate as nearly as possible.

- F. Snow Guards: Provide copper wire "Hoop-style" snow and ice retainer guards formed of 0.145 inch diameter, bare mill-finish copper to match existing, equal to #74 Wire Loop type as manufactured by Alpine SnowGuards a division of Vermont Slate and Copper Services, Inc., Stowe, VT [www.alpinesnowguards.com](http://www.alpinesnowguards.com), or ASG71 by Old World Distributors, Inc.

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[www.oldworlddistributors.com](http://www.oldworlddistributors.com).

1. Either barb-nail type or copper sheet attachment tab type may be used and both varieties may be required for various restoration needs. Install in all locations where missing or damaged beyond repair and replace all deformed units where slate is indicated to be removed and reinstalled.
2. Guards are located on all surfaces of existing roofs, spaced at approximately 24" on center each way.
3. Allow for approximately 15% requiring replacement in roof areas to remain and 75% to be replaced where slate is indicated to be removed and reinstalled or replaced entirely.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Waterproofing Membrane: Install under existing slate shingles in areas indicated to receive membrane, over entire wood roof deck. Slate shingles shall be removed and reinstalled as necessary.
  1. Horizontal joints shall be lapped 2-1/2 inches and ends 4 inches, lapping from above, over the lower membrane.
- B. Slate Shingles: Install shingles in accordance with NRCA Steep Roofing Manual, "Application of Slate", National Park Service's Preservation Brief No. 29, and as recommended by quarrier.
  1. Exposed nails shall be permissible only in top courses where unavoidable. Cover all exposed nail heads with plastic cement.
  2. Hips shall be laid to match existing in "saddle" style with slates laid in elastic cement spread over unexposed surface of under-courses of slate and nailed securely in place.
  3. All broken or missing slate shall be replaced with new matching slate (size and color) using the bib method where individual slates are being inserted in a field of installed or existing slate.
  4. All roof and dormer sidewall surfaces shall be completely (re)covered with slate shingles as specified herein, in a watertight and proper, workmanlike manner as appropriate for historic restoration.
  5. Slate starter course shall be flush with copper eave strips and succeeding courses shall be laid in even, horizontal rows with approximately 9-inch headlap to match existing coursing and exposure. Each course shall break joints with the pre-existing one by at least 3 inches.
  6. Slates at the eaves shall be doubled using the same thickness slate for undereaves at the first exposed course. Undereave slate to be approximately 3-inches longer than exposure of the first course.
  7. All slating nails shall be of sufficient length to fully penetrate the roof sheathing. Adjust nailing if course falls on space between board sheathing to ensure positive attachment.

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8. Fit slate neatly around pipes, vents, or other roof penetrations and with minimal space for differential movement where abutting walls and dormers.
  9. Exposure: Match existing exposure on all surfaces and wherever replacement slate are being inserted in the existing field. Allow for exposure of 6-1/2 inches and field verify to confirm prior to ordering slate.
- C. Snow Guards: Install snow guards in full conformance with Manufacturer's instructions. Entire roof surface of each roof area shall have complete snow guard coverage.

### 3.02 PRECAUTIONS

- A. Examination: Examine all portions of the roof and clean it of any foreign matter that could cause any damage whatsoever to the roof and apply roofing material only when the surface is uniform, smooth, clean and dry, free of irregularities and satisfactory to the Slaters.
1. Inspect for damaged and broken existing slate. All broken slate shall be removed and replaced.
  2. Verify that all installation and repair of membrane underlayment and copper flashings is complete and surfaces are ready to receive slate.
  3. Do not start work until unsatisfactory conditions have been corrected. Commencement of work shall imply acceptance of the conditions.
- B. Electrolytic Action: Where two dissimilar metals adjoin or lap each other (example: galvanized metal ducts and copper cap flashing), an approved separating strip or other insulating material shall be installed.
- C. Slates overlapping sheet metal work shall have the nails placed to avoid puncturing the sheet metal to the greatest extent possible.
- D. Do not drive nails in so far as to produce a strain on the slates. All broken slates as a result of nailing too tightly shall be replaced.

### 3.3 FINAL ADJUSTMENTS AND CLEANING

- A. Inspect completed work and replace any slate shingles that have been damaged during the Project and performance of other work.
- B. All debris or excess slate determined by the Owner to be salvageable shall be assembled on a pallet, carefully retained and stored in a location designated by the Owner for their future use.
- C. Remove all debris resulting from the slate roofing project from the site and legally dispose.

END OF SECTION 07300

## SECTION 07600 - FLASHING AND SHEET METAL

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

1.

#### 1.2 SUMMARY

- A. This Section includes but is not necessarily limited to the following:

1. Metal counter flashing, step, cap and base flashing where required.
2. Exposed metal trim, connectors and rainwater control system including gutters, leaders, downspouts and conductors with all attachments and accessories.
3. Miscellaneous sheet metal accessories.
4. Elastic flashing and liner.

#### 1.3 APPLICABLE REFERENCES

- A. The standards, guidelines, details and practices of the following Organizations are applicable and may be referenced herein:

1. American Society for Testing and Materials (ASTM).
2. Sheet Metal and Air Conditioning Contractor's National Association, Inc. (SMACNA).
3. National Roofing Contractors Association (NRCA).

#### 1.4 SUBMITTALS

- A. General: Submit the following in accordance with the Conditions of Contract.

1. Technical product data, installation instructions and general recommendations for each specified sheet material and fabricated product.
2. Samples: Provide actual sections of factory or shop fabricated components specified or proposed for Work for review, approval and acceptance by Designer, Owner and Maine Historic Preservation Commission, and as follows;
  - a. One 8-inch-square sample of each specified sheet material to be exposed as finished surfaces.
  - b. One twelve inch length of shop fabricated gutter, downspout, elbow, and conductor, including sample of fabricated outlet and seams.

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- c. Actual complete samples of support bracket, hanger, end caps, wall straps, fastenings, clips, rods, and related accessories or attachments.
3. Shop drawings showing layout, profiles, methods of joining, and anchorages details, including major counterflashings, trim/fascia units, gutters and downspout fittings.

## 1.5 PROJECT CONDITIONS

- A. Coordinate work of this section with interfacing and adjoining work for proper sequencing of each installation. Ensure best possible weather resistance and durability of work and protection of materials and finishes.

## PART 2 - PRODUCTS

### 2.1 SHEET METAL FLASHING AND TRIM MATERIALS

- A. Copper: ASTM B 370; temper H00 (cold-rolled) except where temper 060 is required for forming; 16 oz. (0.0216-inch thick) except as otherwise indicated. To be used in the following locations:
  1. Field-formed and prefabricated gutters, conductors, collectors, leader boxes, leaders and adapters for rainwater discharge system at building perimeter and areas indicated.
  2. Clips, counterflashing, stepflashing, through-wall flashing, and drip edges where indicated and as necessary.
  3. Cap flashing, ridge caps, and plumbing vent-thru-roof pipe flashing where indicated and as detailed on Drawings.

### 2.2 MISCELLANEOUS MATERIALS AND ACCESSORIES:

- A. Solder: For use with copper, provide 50 - 50 tin/lead solder (ASTM B 32), with rosin flux.
- B. Fasteners: Same metal as flashing/sheet metal or other non-corrosive metal as recommended by sheet manufacturer. Match finish of exposed heads with material being fastened.
- C. Bituminous Coating: SSPC - Paint 12, solvent-type bituminous mastic, nominally free of sulfur, compounded for 15-mil dry film thickness per coat.
- D. Mastic Sealant: Polyisobutylene; nonhardening, nonskinning, non-drying, nonmigrating sealant.
- E. Paper Slip Sheet: 5-lb. rosin-sized building paper.
- F. Metal Accessories: Provide sheet metal clips, straps, anchoring devices, and similar accessory units as required for installation of work, matching or compatible with material being installed, noncorrosive, size and gage required for performance.
- G. Plastic Roofing Cement: ASTM D 2822, asphaltic, non-fibrated if available. Product shall be certified asbestos free.

### 2.3 FABRICATED UNITS

FLASHING AND SHEET METAL

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- A. General Metal Fabrication: Shop-fabricate work to greatest extent possible. Comply with details shown and with applicable requirements of SMACNA "Architectural Sheet Metal Manual" and other recognized industry practices. Fabricate for waterproof and weather-resistant performance, with expansion provisions for running work, sufficient to permanently prevent leakage, damage, or deterioration of the work. Form work to fit substrates. Comply with material manufacturer instructions and recommendations for forming material. Form exposed sheet metal work without excessive oil-canning, buckling, and tool marks, true to line and levels indicated, with exposed edges folded back to form hems.
- B. Seams: Fabricate nonmoving seams in sheet metal with flat-lock seams, Pittsburgh seams in downspout tubes and seams of type standard in the industry at the various types of joints where necessary. Match existing joints and seams exactly wherever possible. Tin edges to be seamed, form seams, and solder.
- C. Expansion Provisions: Where lapped or bayonet-type expansion provisions in work cannot be used or would not be sufficiently water/weatherproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).
- D. Sealant Joints: Where movable, non-expansion type joints are indicated or required for proper performance of work, form metal to provide for proper installation of elastomeric sealant, in compliance with SMACNA standards.
- E. Separations: Provide for separation of metal from non-compatible metal or corrosive substrates by coating concealed surfaces at locations of contact, with bituminous coating or other permanent separation as recommended by manufacturer/fabricator.
- F. Prefabricated Gutter & Downspout System: Provide manufactured components to match existing halfround gutters and rectangular conductors as closely as possible, available from the following:
  - 1. Berger Bros. Co., Feasterville, PA; [www.bergerbros.com](http://www.bergerbros.com)
  - 2. Copper Gutter Shop, Div. Of BendTek, Inc. , Orleans, MA; [www.bendtek.com](http://www.bendtek.com)
  - 3. Imperial Design, Buffalo, NY; [www.imperialdesign.on.ca](http://www.imperialdesign.on.ca)
  - 4. Old World Distributors, Inc.; [www.oldworlddistributors.com](http://www.oldworlddistributors.com)
    - a. Downspout: 16 ounce smooth rectangular copper, 4" x 5" rectangular downspout with factory formed elbows and fittings.
    - b. Gutter: Fabricated of copper in standard, 6-inch half-round shape with "single bead" formed by rolled exposed edge in profile to match existing exactly.
    - c. Downspout Straps: Provide 16 ounce Copper bands with rectangular end caps to match existing where missing or damaged.
- G. Anchors and Attachments:
  - 1. Gutter Support Straps and Hangers: Salvage and reuse all existing support hardware feasible. Locate matching replacements where required from Architectural Salvagers or manufacturers of exact match from suppliers listed above. New hangers where required shall be stainless steel.
    - a. Allow for replacement of 25% of the existing hangers, necessary as a result of roof edge repairs and gutter replacement. Existing hangers are spaced at approximately 24" o.c.

2. Masonry Anchors: Stainless Steel, plated, or copper anchors that provide corrosion resistant attachment, with “zamak”, white metal expansion shields where installed in masonry.

## PART 3 - EXECUTION

### 3.1 INSTALLATION REQUIREMENTS

- A. General: Except as otherwise indicated, comply with manufacturer's installation instructions and recommendations and with SMACNA "Architectural Sheet Metal Manual." Anchor units of work securely in place by methods indicated, providing for thermal expansion of metal units; conceal fasteners where possible, and set units true to line and level, matching existing where possible. Install work with laps, joints, and seams that will be permanently watertight and weatherproof.
- B. Overlay flanges of work in a coat of water cut-off mastic where required for waterproof performance.

### 3.2 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces, removing substances that might cause corrosion of metal or deterioration of finishes.
- B. Protection: Advise Contractor of required procedures for surveillance and protection of flashings and sheet metal work during construction to ensure that work will be without damage or deterioration other than natural weathering at time of Substantial Completion.

END OF SECTION 07600



## SECTION 07901 - JOINT SEALANTS

### PART 1. - GENERAL

#### A. RELATED DOCUMENTS

1. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

#### B. SUMMARY

1. This Section includes joint sealants for exterior joints in vertical surfaces and horizontal surfaces as indicated below:
  - a. Joints around window openings in exterior walls in area of Work as indicated.
  - b. Joints between dissimilar materials exposed to view, within the scope and area of improvements Work, shall receive caulking sealant whether indicated in Drawings or not.
  - c. Joints at the intersection of separate structural systems or assemblies that have different support conditions.
  - d. Interior joints in vertical surfaces and horizontal nontraffic surfaces.
  - e. Joints between architectural stone units where indicated.
  - f. Joints between dissimilar building structures experiencing movement and/or where indicated.
  - g. Joints between brick and adjacent stonework or precast concrete set with mortar including copings and cornices where indicated.
  - h. Joints between tread units of granite steps and between stone and adjacent construction where mortar will not prove durable due to weathering or potential dissimilar movement.

#### C. SYSTEM PERFORMANCE REQUIREMENTS

1. Provide elastomeric joint sealants that have been produced and installed to establish and to maintain watertight and airtight continuous seals without causing staining or deterioration of joint substrates.

#### D. SUBMITTALS

1. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
  - a. Product data from manufacturers for each joint sealant product required.
    - (1) Provide test data for each type of elastomeric sealant, indicating compliance with requirements specified by reference to ASTM C 920.
  - b. Samples for verification purposes of each type and color of exterior joint sealant required.

JOINT SEALANTS

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E. QUALITY ASSURANCE

1. Installer Qualifications: Engage an experienced Installer who has completed joint sealant applications similar in material, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.
2. Single Source Responsibility for Joint Sealant Materials: Obtain joint sealant materials from a single manufacturer for each different product required.

F. DELIVERY, STORAGE, AND HANDLING

1. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, pot life and curing time.
2. Store and handle materials in compliance with manufacturer's recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

G. PROJECT CONDITIONS

1. Environmental Conditions: Do not proceed with installation of joint sealants under the following conditions:
  - a. When ambient and substrate temperature conditions are outside the limits permitted by joint sealant manufacturer or below 40 deg F (4.4 deg C).
  - b. When joint substrates are wet.
2. Joint Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than allowed by joint sealant manufacturer for application indicated.
3. Joint Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with their adhesion are removed from joint substrates.

H. SEQUENCING AND SCHEDULING

1. Sequence installation of exterior joint sealants to occur not less than 21 or more than 30 days after completion of waterproofing where recommended by moisture-proofing system manufacturer.

PART 2. – PRODUCTS

A. MATERIALS, GENERAL

1. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
2. Colors: Provide color of exposed joint sealants to comply with selections made by Architect from manufacturer's full range of standard colors.

JOINT SEALANTS

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## B. ELASTOMERIC JOINT SEALANT

1. Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing elastomeric sealants that comply with ASTM C 92 classifications for Type, Grade, Class, and Uses.
2. Products: Subject to compliance with requirements, provide the following:
  - a. Exterior Joints with constant movement: Permanently flexible, low modulus, moisture cured, two-component, gun grade, non-sag polyurethane sealant equal to the following:
    - (1) "Chem-Calk 500"; with Color Pack II System; Bostik Construction Products Div.
    - (2) Sika's "Sika-Flex 2C".
    - (3) "NR-200 Urexpan"; Pecora Corp.
  - b. Exterior Joints with limited movement: Permanently flexible, low modulus, moisture cured, Single-Component, gun-grade Nonsag Urethane Sealant:
    - (1) Sika Corporation, Inc.; Sikaflex - 1a.
    - (2) Sonneborn, Division of ChemRex Inc.; Ultra.
    - (3) Sonneborn, Division of ChemRex Inc.; NP 1.
    - (4) Tremco; Vulkem 116.
  - c. Interior Joints: Single-Component Mildew-Resistant Acid-Curing Silicone Sealant, gun grade, equal to the following :
    - (1) Dow Corning Corporation; 786 Mildew Resistant.
    - (2) GE Silicones; Sanitary SCS1700.
    - (3) Tremco; Tremsil 200 White.

## C. LATEX JOINT SEALANTS

1. Latex Sealant Standard: Provide manufacturer's paintable, flexible, air-cured, water-based caulking that complies with ASTM C 834, Type O P, Grade NF.
2. Products: Subject to compliance with requirements, provide the following:
  - a. Interior and Exterior Joints between paintable dissimilar and/or matching materials as scheduled.
    - (1) Bostik Findley; Chem-Calk 600.
    - (2) Pecora Corporation; AC-20+.
    - (3) Sonneborn, Division of ChemRex Inc.; Sonolac.
    - (4) Tremco; Tremflex 834.

## D. JOINT SEALANT BACKING

1. General: Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
2. Plastic Foam Joint Fillers: Preformed, compressible strips of closed-cell polyethylene foam, nonabsorbent to liquid water and gas, non-outgassing in unruptured state; used to control sealant depth and otherwise contribute to producing optimum sealant performance and joint design.
3. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint filler materials or

joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

E. MISCELLANEOUS ACCESSORY MATERIALS:

1. Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint sealant-substrate tests and field tests.
2. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming in any way joint substrates and adjacent nonporous surfaces, and formulated to promote optimum adhesion of sealants with joint substrates.
3. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3. – EXECUTION

A. EXAMINATION

1. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint sealant performance. Do not proceed with installation of joint sealants until unsatisfactory conditions have been corrected.

B. PREPARATION

1. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with recommendations of joint sealant manufacturer and the following requirements:
  - a. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  - b. Clean concrete, masonry, and similar porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
  - c. Clean metal, and other nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.
2. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealant manufacturer based on preconstruction joint sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's recommendations. Confine primers to areas of joint sealant bond; do not allow spillage or migration onto adjoining surfaces.
3. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### C. INSTALLATION OF JOINT SEALANTS

1. General: Comply with joint sealant manufacturer's printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.
2. Elastomeric Sealant Installation Standard: Comply with recommendations of ASTM C 962 for use of joint sealants as applicable to materials, applications, and conditions indicated.
3. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:
  - a. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
  - b. Do not leave gaps between ends of joint fillers.
  - c. Do not stretch, twist, puncture, or tear joint fillers.
  - d. Install bond breaker tape between sealants where backer rods are not used between sealants and joint fillers or back of joints.
4. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability. Install sealants at the same time sealant backings are installed.
5. Tooling of Nonsag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint.
  - a. Use masking tape to protect adjacent surfaces of recessed tooled joints. Remove excess sealant from surfaces adjacent to joint.
  - b. Do not use tooling agents that discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.
  - c. Provide concave joint configuration per Figure 5A in ASTM C 962, unless otherwise indicated.
  - d. Provide recessed joint configuration, per Figure 5C in ASTM C 962, of recess depth and at locations indicated.

### D. CLEANING

1. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealants and of products in which joints occur.

### E. PROTECTION

1. Protect joint sealants during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out, remove and replace damaged or deteriorated joint sealants immediately so that installations with repaired areas are indistinguishable from original work.

### F. JOINT-SEALANT SCHEDULE

JOINT SEALANTS

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1. Exterior Control-Joint Sealant: Exterior vertical control joints in unit masonry.
  - a. Joint Sealant: Multi-component non-sag urethane sealant.
2. Exterior Abutting Dissimilar Materials: Exterior perimeter joints between brick masonry and frames of doors, windows, and louvers.
  - a. Joint Sealant: Single-component nonsag urethane sealant.
3. Interior Joint-Sealant: Interior perimeter joints of exterior openings, and perimeter joints between interior wall surfaces and frames of interior doors and windows.
  - a. Joint Sealant: Latex sealant.

END OF SECTION 07901

## SECTION 08590 - WOOD WINDOW REHABILITATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

#### 1.2 SUMMARY

- A. This Section involves the rehabilitation of designated windows and includes but is not necessarily limited to the following:
  - 1. Stripping and repainting wood windows and all removable stop mouldings.
  - 2. Window member repair and patching.
  - 3. Wood window unit removal and reinstallation.
  - 4. Replacement of broken glass and reglazing remaining glass lites.
  - 5. Window hardware repair and replacement including replacement of all sash weight cords.
  - 6. Weather stripping with new, traditional styled metal strip system on all operable sash.
  - 7. Insect screen replacement.
  - 8. Caulking windows where existing caulking is no longer adhered properly including backglazing.
- B. Related Sections include the following:
  - 1. Division 9 Section "Painting" for the materials to be used for finish painting of window units. Priming and painting of all sash and removable mouldings is the Work of this Section.
- C. The Work of this Section involves repairs to and preparation for refinishing, of existing single-hung window units, woodwork and related finish materials. These items have been tested and found to contain lead-based paint. Interior woodwork finishes on items including but not limited to window sash, trim and sills, doors, casings, and frames have been determined to contain lead at 0.1 mg/cm<sup>2</sup> or more.
  - 1. OSHA regulates work that impacts materials containing any detectable amount of lead.
  - 2. Personnel protection and compliant work practices for all work under this Section impacting materials with these coatings shall be part of the scope of this Section.
  - 3. The Contractor shall avoid all potential environmental damage due to chemical waste impacting personnel, plant life, earth, and bodies of water. Comply with all Department of Environmental Protection Guidelines for the removal and disposal of contaminated materials and coatings.

#### 1.3 SUBMITTALS

WOOD WINDOW REHABILITATION

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- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specifications Sections.
- B. Product Data for each type of window repair materials including primer, glazing compound, glass, weatherstripping, hardware, and paint materials.
- C. Historic Treatment Program: For each phase of historic treatment process, including protection of surrounding materials on the building and Project site during operations.
- D. Samples: Submit for review and approval a sample section of window sash with glass and glazing compound as a representative mock-up for the purposes of demonstrating workmanship, quality, detail and accuracy in replicating existing original glazing methods and detail. The sample will be retained as a control reference for future comparison with finished work for approval and final acceptance.

#### 1.4 QUALITY ASSURANCE

- A. Contractor Qualifications: Engage an experienced Historic Treatment Specialist for the window rehabilitation who is a firm or individual experienced in historic treatment of windows similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- B. Product Options: The repair materials of wood windows are based on the past performance of materials indicated. Other manufacturers whose product have equal performance characteristics may be considered. Refer to Division 1 Section "Substitutions."
- C. Protection: This Contractor shall use all means necessary to protect windows and accessories before, during and after installation and to protect the work of all other trades. In the event of damage, immediately make all repairs and/or replacements necessary at no additional cost to the Owner.

#### 1.5 APPLICABLE REFERENCES

- A. The standards, guidelines, details and practices of the following Organizations are applicable and may be referenced herein:
  1. AWI Quality Standard: Comply with applicable requirements in AWI's "Architectural Woodwork Quality Standards" for construction, details, finishes, grades of wood windows, and other requirements.
  2. Materials and Methods Standard: Provide materials and workmanship using methods recommended by publications and guidelines of Flat Glass Jobbers Association.
  3. Guidelines and Recommendations: Obtain and follow the recommendations of the National Park Service – Preservation Brief #9.



## PART 2 - PRODUCTS

### 2.1 REPLACEMENT WOOD MATERIALS

- A. Wood: Clear fine-grained lumber; kiln dried to a moisture content of 6 to 12 percent at time of fabrication; free of visible blue stain, knots, pitch pockets, and surface checks larger than 1/32 inch deep by 2 inches wide; and treated with water-repellent preservative.
  - 1. Interior and Exterior Trim and Frame Parts, Including Heads, Jambs, Sills, Sash Parts and Brick mouldings: Ponderosa pine, eastern white pine, Idaho white pine, or Douglas fir.
    - a. Grade: Select, clear, knot-free solid wood. Finger jointed material is unacceptable.
    - b. Profile: All required new mouldings, sash parts, trim and beads shall match the existing exactly in profile and dimension. New knives shall be ground if and as necessary for all new material to provide matching material in the event that stock material is not identical.

### 2.2 WOOD PATCHING MATERIALS

- A. Wood Pretreatment: Ready-to-use product designed for hardening and sealing soft fibers of wood materials that have deteriorated due to weathering and exposure and designed specifically to enhance the bond of wood patching compound to existing wood.
  - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Abatron, Inc.; Liquidwood.
    - b. Advanced Repair Technology; Primatrate.
    - c. Wood Care Systems; Liquid TIMBR.
- B. Wood Patching Compound: 2-part epoxy-resin wood compound with a 10- to 15-minute cure at 70 deg F, in knife grade formulation and recommended by manufacturer for type of wood repair indicated. Compound shall be designed for filling damaged wood materials that have deteriorated due to weathering and exposure. Compound shall be capable of filling deep holes and capable of spreading to feather edge.
  - 1. Products: Subject to compliance with requirements, provide one of the following:
    - a. Abatron, Inc.; Liquidwood with WoodEpoxy.
    - b. Advanced Repair Technology; Primatrate with Flex-Tec HV.
    - c. Gougeon Brothers, Inc.; West System.
    - d. Wood Care Systems; Liquid TIMBR with TIMBR Flex.

### 2.3 GLAZING MATERIALS

- A. Glass: 1/8" double strength, double ground, standard float glass.
- B. Glazing System: Provide standard oil-based glazing putty manufactured by Dap or equal, and zinc, rustproof glazing points in size and configuration suitable for lite size.

## 2.4 REPLACEMENT WINDOW HARDWARE

- A. General: Provide complete sets of window hardware consisting of sash balances, hinges, pulls, latches, and accessories indicated for each window where damaged or missing. Replacement window hardware shall be designed to smoothly operate, tightly close, and securely lock wood windows and be sized to accommodate sash or ventilator weight and dimensions.
- B. Repair and Refinish Existing Hardware: Remove window hardware and repair and refinish.
- C. Replacement Hardware: Replace existing damaged or missing window hardware with “best-match” replacement hardware, manufactured to replicate the existing hardware as closely as possible, by one of the following:
  - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Ball and Ball.
    - b. Bronze Craft Corporation (The).
    - c. Craftsmen Hardware Co., Ltd.
    - d. Phelps Company Architectural Specialties.
- D. Window Hardware:
  - 1. Material: Solid bronze of alloy indicated.
  - 2. Design: Provide manufacturer’s standard hardware manufactured to replicate existing hardware.
  - 3. Weight and Pulley Sash-Balance Type: Provide where missing, concealed weight and pulley balance system including rolled steel weights, cast-bronze pulleys, synthetic sash cord; provide size and capacity to hold sash stationary at any open position.
  - 4. Replacement Window Hardware: Match existing window hardware of the following types:
    - a. Window lock.
    - b. Window latch.
    - c. Handle.
    - d. Window weatherstripping. Provide new bronze strip-type throughout the Project’s operable sash. Original windows were not weatherstripped.
- E. Window Hardware Finishes: Comply with BHMA A156.18 for base material and finish requirements indicated by the following:
  - 1. BHMA 612: Satin bronze, clear coated, bronze base metal.

## 2.5 REPLACEMENT INSECT SCREENS

- A. Replacement Insect Screens: Provide insect screens to match existing materials and profiles. Insect screens shall be tight fitting and removable, with a minimum of exposed fasteners and latches.
  - 1. Locate screens on outside of window.
  - 2. Provide insect screen for each operable exterior sash or ventilator.

- B. Insect Screen Frames: Screens shall be wood stile and rail construction, and as follows:
  1. Wood Insect Screen Frames: Fabricate frames with mitered or coped joints, and concealed fasteners.
  2. Wood Species: Match wood species of exterior trim and frame parts.
- C. Aluminum Wire Fabric: 18-by-16 mesh of 0.011-inch- diameter, coated aluminum wire.
  1. Wire-Fabric Finish: Charcoal gray.

## 2.6 MISCELLANEOUS MATERIALS

- A. Cleaning Materials:
  1. Detergent Solution: Solution prepared by mixing 2 cups of tetrasodium polyphosphate (TSP), 1/2 cup of laundry detergent, 5 quarts of 5 percent sodium hypochlorite bleach, and 15 quarts of warm water for each 5 gal. of solution required.
  2. Mildewcide: Provide commercial proprietary mildewcide or a solution prepared by mixing 1/3 cup of household detergent, 1 quart of 5 percent sodium hypochlorite bleach, and 3 quarts of warm water.
- B. Adhesive: Wood adhesive with a 15- to 45-minute cure at 70 deg F, in gunnable formulation and recommended by adhesive manufacturer for exterior wood repair.
- C. Fasteners: Provide bronze or brass fasteners compatible with window members, trim, hardware, anchors and other components.
  1. Exposed Fasteners: If exposed fasteners are used, match existing fasteners.
- D. Anchors, Clips, and Accessories: Fabricate anchors, clips, and window accessories of aluminum or nonmagnetic stainless steel complying with requirements in ASTM B 633 for SC 3 (Severe) service condition.

## 2.7 FABRICATION OF REPLACEMENT MEMBERS

- A. General: Fabricate window replacement members and units to comply with AWI Section 1000 requirements for Custom grade.
  1. Fabricate replacement wood sash members that are reglazable without dismantling sash members or framing members.
  2. Weather Stripping: Provide full-perimeter weather stripping for each operable sash.
  3. Mullions: Provide replacement mullions where required, matching existing units, complete with anchors for support to structure and installation of window units.
  4. Glazing Stops: Provide replacement glazing stops where missing or damaged, coordinated with glazing system indicated. Provide glazing stops to match sash frames.
  5. Molded Profiles of Replacement Members: Match existing profiles.
  6. Sash Members: Fabricate with mortise and tenon joints, coped, glued under pressure, and pinned. Half-lap muntin bars at intersections.
  7. Frame Members: Dado, rabbet, and plant assemble.
  8. Ease edges of replacement members as necessary to match existing members.

## 2.8 WOOD WINDOW FINISHES

- A. Factory-Finished Windows: Provide fabricator's standard factory finish consisting of prime coat and two finish coats; 3-mil dry film thickness. Apply finish to exposed exterior and interior wood surfaces.
  - 1. Color: As selected by Architect from manufacturer's full range.

## PART 3 - EXECUTION

### 3.1 HISTORIC TREATMENT SPECIALIST

- A. Available Historic Treatment Specialists: Subject to compliance with requirements, historic treatment specialists that may perform the Work include, but are not limited to, the following:
  - 1. Bagala Window Works, Portland, ME. [www.bagalawindowworks.com](http://www.bagalawindowworks.com)
  - 2. House Revivers, Bangor, ME (947-3863)
  - 3. Jung Restoration, Bath, ME (442-0584)
  - 4. Window Repair Systems, Inc., Victor, NY. [www.windowrepairsystems.com](http://www.windowrepairsystems.com)
  - 5. Wooden Window Restoration, Stonington, ME (367-5599).
- B. Responsibilities: Coordinate and perform historic restoration treatment of wood windows.

### 3.2 HISTORIC TREATMENT PROCEDURES, GENERAL

- A. Window Removal: Where sashes or windows or window components are indicated for removal, cover resultant openings with temporary enclosures so that openings are weathertight during repair period.
  - 1. Identify removed windows, sashes, and members with numbering system to ensure reinstallation in same location. Key windows, sashes, and members to Drawings showing location of each removed unit. Mark units in a location that will be concealed after reinstallation.
- B. Repair by Removing Window Units: Where entire units, either sashes or complete window, are indicated to be removed and restored, completely remove unit and restore off-site. Repair entire windows by patching or repairing members as specified for wood window member patching.
  - 1. Reglaze units prior to reinstallation.
- C. Reinstall restored units with new anchors into existing openings.

### 3.3 WOOD WINDOW MEMBER REPAIR

- A. Repair wood members at locations indicated on Drawings and in schedules. Replace all missing window parts.
  - 1. Repair wood members by pretreating and filling with patching compounds or by replacing with new members spliced into existing wood members as indicated in schedules.

2. Repair windows by splicing in replacement wood sections where deterioration is structural, including at meeting points of rails and meeting points of true muntins.
- B. Repair by Pretreatment and Patching Compound:
1. Clean wood surfaces prior to consolidation treatment and patching.
  2. If rotted or soft wood remains, remove down to sound wood according to patching manufacturer's written instructions.
  3. Apply wood pretreatment to soft wood fibers to remain, complying with manufacturer's written instructions. Coat surface of wood with consolidation treatment by brushing, applying multiple coats until wood is saturated. Allow treatment to harden before filling void with patching compound.
  4. Mix only as much patching compound as can be applied according to manufacturer's written instructions.
  5. Apply patching compound to fill depressions, nicks, cracks, and other voids created by removed or missing wood. Apply compound in layers as recommended in writing by manufacturer until the void is completely filled. Sand patching compound smooth and flush and matching contour of existing wood member.
  6. Clean spilled compound from adjacent materials immediately.
- C. Repair by Wood Member Replacement: Custom fabricate new wood members to replace missing members or members deteriorated beyond repair. Either replace entire wood member or splice new wood member into existing member.
1. Cut out deteriorated or damaged sections of wood members and replace them by splicing replacement wood members into existing remaining wood members.
  2. Anchor new wood members by nailing and adhesive.
  3. Install wood members with concealed fasteners. Fill nail holes and touch up the finish to match surrounding wood finish.

### 3.4 GLAZING

- A. Glazing: Remove all loose interior glazing and back-glaze. Care shall be exercised to maintain original glass.
1. Where interior glazing compound is required, glazing compound and back-glazing can be accomplished with glass in place. Do all work in conformance to the standards of the Flat Glass Jobbers Association.
  2. Remove cracked and broken glass. Clean substrate, bed glass in glazing compound and face glaze to neat, clean surface parallel with inside of muntin or glazing rebate, with corner carefully made and all excess putty removed and all surfaces left clean. Do all work in conformance with the standards of the Flat Glass Jobbers Association.
  3. Replace all polycarbonate lites with float glass material specified herein.
  4. Glass should be set in the best manner of the trade and in such a way that there is an equal bearing over the entire width of the pane. All glass should be set in a true plane, tight and straight, with proper clearances, firmly anchored to prevent rattling and looseness.

### 3.5 SASH WEIGHTS

- A. Reattach sash weights with new sash cord to match original, such that there is tension when sash is closed. Clean or replace pulleys and lubricate to assure smooth operation. Replace sash weight access panels if missing. Reinstall all panels and sash stop mouldings with removable fasteners, not nails.

### 3.6 REPLACEMENT INSECT SCREEN INSTALLATION

- A. Install insect screens by mounting to window frame according to manufacturer's written instructions and as Detailed.

### 3.7 PAINTING

- A. Prime paint restored woodwork as soon as possible after stripping and reglazing. Priming and painting all wood windows and removable mouldings shall be performed by window rehabilitation contractor. All painting shall be in accordance with requirements as set forth in Division 9, Section 09900 – Painting.
- B. Paint glazing 1/16” beyond sealant onto glass.
- C. Do not paint sash cord or pulleys.
- D. Do not paint operable sash to stop mouldings.
- E. Do not paint weather-stripping.

### 3.8 ADJUSTMENT

- A. Adjust existing and replacement operating sashes and hardware to provide a tight fit at contact points and with weather stripping, and to provide smooth operation and a weathertight closure. Lubricate hardware and moving parts as necessary.

### 3.9 CLEANING AND PROTECTION

- A. Protect restored window surfaces from contact with contaminating substances resulting from construction operations.
- B. Monitor restored window surfaces adjacent to and below exterior concrete and masonry surfaces during construction for presence of dirt, scum, alkaline deposits, stains, or other contaminants. If contaminating substances contact window surfaces, remove contaminants immediately according to glass manufacturer's written recommendations.

- C. Clean exposed surfaces immediately after historic treatment of wood windows. Avoid damaging coatings and finishes. Remove excess sealants, glazing and patching materials, dirt, and other substances.
- 3.10 Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.
- 3.11 CLEANING
- A. Remove labels and paint from glass surface and all traces of glazing process.

END OF SECTION 08590

## SECTION 09900 - PAINTING

### PART 1 - GENERAL

#### A. RELATED DOCUMENTS

1. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

#### B. SUMMARY

1. This Section includes the following: surface preparation, painting, and finishing of exposed items and surfaces on exterior and limited interior items of the existing building – both new and existing construction and elements.
  - a. Surface preparation, priming, and finish coats specified in this Section are in addition to shop-priming and surface treatment specified under other Sections.
  - b. Paint exposed surfaces, except where a surface or material is specifically indicated not to be painted or is to remain natural. Where an item or surface is not specifically mentioned, paint the same as similar adjacent materials or surfaces. If color or finish is not designated, the Architect will select from standard colors or finishes available.
  - c. Painting is not required on prefinished items; concealed surfaces; operating parts; and labels.
  - d. Prime and backprime all exterior wood trim and finish work.
2. Labels: Do not paint over Underwriters Laboratories, Factory Mutual or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.
3. Related Work specified elsewhere in this Project Manual includes:
  - a. Section 04500 – Masonry Restoration
  - b. Section 06401 – Exterior Architectural Woodwork.
  - c. Section 08590 – Wood Window Rehabilitation
4. The Work of this Section involves repairs to, preparation for refinishing, and in some cases - removal and disposal of materials that have been tested and found to contain lead-based paint. Exterior and interior woodwork finishes on items including but not limited to fascia, soffits, windows & doors and related trim, sills, and brick-moldings, have been determined to contain lead at 0.1 mg/cm<sup>2</sup> or more.
  - a. OSHA regulates work that impacts materials containing any detectable amount of lead.
  - b. Personnel protection and compliant work practices for all work under this Section impacting materials with these coatings shall be part of the scope of this Section.
  - c. Comply with all Department of Environmental Protection Guidelines for disposal of materials known to contain lead-based products. The Contractor shall avoid all potential environmental damage due to paint residue and chemical runoff onto adjacent plant life, earth, and bodies of water.



C. SUBMITTALS

1. General: Submit the following according to Conditions of the Contract and Division 1 Specification Sections.
2. Product data for each paint system specified including primers.
  - a. Provide the manufacturer's technical information including label analysis and instructions for handling, storage, and application of each material proposed for use.
  - b. List each material and cross-reference the specific coating, finish system, and application. Identify each material by the manufacturer's catalog number and general classification.
3. Samples for color selection in the form of manufacturer's color charts.

D. QUALITY ASSURANCE

1. Single-Source Responsibility: Provide primers and undercoat paint produced by the same manufacturer as the finish coats.
2. Mock-up: Prepare and finish with specified full finish system, a sample area "mock-up" of the finished woodwork to demonstrate and obtain approval from the Owner, Designer, MHPC, etc., of the materials and workmanship to be used for the entire project. Mock-up shall be approximately 6 square feet of surface of the existing exterior woodwork, in a location acceptable to the Designer.

E. DELIVERY, STORAGE, AND HANDLING

1. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Maintain containers used in storage in a clean condition, free of foreign materials and residue.

F. JOB CONDITIONS

1. Apply paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 deg F (10 deg C) and 90 deg F (32 deg C) and are predicted to remain within this range for a minimum of 4 hours after the
2. Do not apply paint when the relative humidity exceeds 85 percent; or at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces. These conditions include visible precipitation events such as rain, fog, mist and dew.

G. FIELD QUALITY CONTROL

1. The Owner reserves the right to invoke the following test procedure at any time and as often as they deem necessary during the period when paint is being applied:
  - a. Owner may engage a qualified independent testing agency to sample paint material being used. Samples of material delivered to the Project will be taken, identified, sealed, and certified in the presence of the Contractor.
  - b. Testing Agency will perform appropriate tests of the following characteristics as required:
    - (1) Proper surface preparation.
    - (2) Finished dry film thickness.
    - (3) Coating composition.

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2. The Owner may direct the Contractor to stop painting if test results show material being used or the application thereof does not comply with the specifications and requirements of this Section. The Contractor shall remove noncomplying paint from the Project Site, pay for costs incurred by testing procedure, and repaint surfaces previously coated with the noncomplying paint.
  - a. If necessary, the Contractor may be required to remove noncomplying paint from previously painted surfaces if, on repainting with specified paint, the two coatings are incompatible.
  - b. No additional costs to the Contract or time extensions will be entertained in these events.

#### H. EXTRA MATERIAL

1. Provide a minimum of one gallon of each color of finish paint for every ten gallons used to complete the work. Extra maintenance material shall be purchased at same time project materials are acquired and shall be from same production run as project material and color mixed to match, prior to delivery to site.

### PART 2 - PRODUCTS

#### A. PAINT MATERIALS, GENERAL

1. Material Compatibility: Provide primers, finish coat materials, and related materials that are compatible with one another, existing conditions and the substrates indicated under conditions of service and application, as demonstrated by the manufacturer based on testing and field experience. Contractor is responsible for the verification of existing substrates in the field prior to ordering material.
2. Material Quality: Provide the manufacturer's best-quality trade sale paint material of the various coating types specified. Paint material containers not displaying manufacturer's product identification will not be acceptable.
3. Colors: Provide color selections made by the Architect and Owner from the manufacturer's full range of standard and deep hue colors. Architect reserves the option to select up to three different interior colors, and three different exterior trim colors.

#### B. PRODUCTS

1. Number of coats listed is a minimum, apply additional coats if undercoats, stains, or other conditions show through final coat of paint until paint film is of uniform finish, color, and appearance.
2. VOC Compliance: All paint materials must comply with the State of Maine Dept. of Environmental Protection, Chapter 151 regulations on Volatile Organic Compound (VOC) Limits in Architectural and Industrial Maintenance Coatings, adopted by the Ozone Transport Commission member States. For full documentation of Rule, see; <http://www.maine.gov/sos/cec/rules/06/096/096c151.doc> .
3. Manufacturer: Subject to compliance with requirements, provide products of one of the listed Manufacturers.
  - a. Benjamin Moore (BM)
  - b. California
  - c. ICI (Including all represented brands)
  - d. Pratt & Lambert (PL)

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- e. Sherwin Williams (SW)
  - f. Where only one manufacturer is indicated, products by the other listed manufacturers that meet the performance characteristics of the listed product will be acceptable.
4. Exterior Painting:
- a. Exterior Ferrous Metal: Gloss enamel finish: two coats over primer with total dry film thickness not less than 2.5 mils. Primer is not required on shop primed items.
    - (1) Synthetic rust-inhibiting Primer:
      - (a) ICI/Dulux: Devshield 4130, Metal Primer.
      - (b) BM: IronClad Retardo Rust-Inhibitive Paint #163.
      - (c) SW: Kem Kromik Universal Metal Primer, Series B50.
      - (d) Color: Use a primer color that is compatible with finish color.
    - (2) Gloss alkyd enamel:
      - (a) ICI/Dulux: Devshield 4328 Interior/Exterior Alkyd-Urethane Gloss Enamel.
      - (b) BM: Impervo High-Gloss Enamel #133.
      - (c) SW: Industrial Enamel, Series B54.
  - b. Exterior Painted Wood Trim: Satin acrylic exterior self-priming paint (overcoat - no primer needed) for unprimed and previously painted surfaces; 2 coats of finish paint.
    - (1) Primer: None
    - (2) Paint:
      - (a) BM: MoorGlo Latex House and Trim Paint (096)
      - (b) California: 2010 Satin Gloss 100% Acrylic Latex House & Trim Paint
      - (c) ICI: Dulux Fortis Premium 100% Acrylic Satin 6403 Series Exterior Enamel.
5. Interior Painting:
- a. Interior Painted Woodwork - Semigloss Enamel Finish: two coats over primer.
    - (1) Interior undercoat.
      - (a) BM: Moore's Alkyd Enamel Underbody (217)
      - (b) California: Premium Alkyd Enamel Undercoat 22206
      - (c) ICI: Ultra-Hide Oil/Alkyd Interior Wood Undercoater primer-sealer.
    - (2) Interior, semigloss, odorless, acrylic-latex enamel second and third coats.
      - (a) BM: Pristine Acrylic Semi-Gloss (214)
      - (b) California: Premium 100% Acrylic Latex Semi-Gloss 563XX.
      - (c) ICI: Ultra-Hide Latex Semi-gloss Enamel.

PART 3 - EXECUTION

A. EXAMINATION

1. Examine substrates and conditions under which painting will be performed for compliance with paint application requirements. Surfaces receiving paint must be thoroughly dry before paint is applied.
  - a. All surfaces to receive paint to be smooth and free of any defects. All nails and screws, and any dents, tool marks or blemishes to be filled and sanded smooth. All welds to be ground smooth.
  - b. Do not begin to apply paint until unsatisfactory conditions have been corrected. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.
2. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on

characteristics of finish materials to ensure use of compatible primers. Notify the Architect about anticipated problems using the materials specified over substrates primed by others.

## B. PREPARATION

1. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted, or provide surface-applied protection prior to surface preparation and painting. Remove these items, if necessary, to completely paint the items and adjacent surfaces. Following completion of painting operations in each space or area, have items reinstalled by workers skilled in the trades involved.
2. Cleaning: Before applying paint or other surface treatments, clean the substrates of substances that could impair the bond of the various coatings. Remove oil and grease prior to cleaning.
3. Surface Preparation: Clean and prepare surfaces to be painted according to the manufacturer's instructions for each particular substrate condition and as specified.
  - a. Provide barrier coats over incompatible primers or remove and re-prime. Notify Owner in writing about anticipated problems using the specified finish-coat material with substrates primed by others.
  - b. Wood: Clean surfaces of all unnecessary fasteners, dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper as required. See Section 06401 "Exterior Architectural Woodwork" for restoration and preparation of wood for painting. Sand smooth, all surfaces exposed to view and dust off with tack cloth.
    - (1) Scrape and clean small, dry, seasoned knots and apply a thin coat of white shellac or other recommended knot sealer before applying primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand all work smooth when dried.
    - (2) For existing woodwork to be repainted, remove loose paint by gentle scraping, re-prime bare wood, then sand and fill as required for smooth finish coats. Match quality sample produced in mock-ups.
    - (3) Prime or seal all wood designated to be painted, immediately upon delivery to site. Prime edges, ends, faces, undersides and back sides of all exterior woodwork. Protect from moisture and damage until installation, finishing, and final acceptance.
4. Ferrous Metals: Clean un-galvanized ferrous metal surfaces that have not been shop primed; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with recommendations of the Steel Structures Painting Council (SSPC).
  - a. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by the paint manufacturer, and touch up with the same primer as the shop coat.
5. Materials Preparation: Carefully mix and prepare paint materials according to manufacturer's directions.
  - a. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
  - b. Stir material before application to produce a mixture of uniform density; stir as required during application. Do not stir surface film that forms into material. Remove any film and, if necessary, strain material before using.

- c. Use only thinners approved by the paint manufacturer and only within recommended limits.

C. APPLICATION

1. General: Apply paint according to manufacturer's directions and recommendations. Use applicators and techniques best suited for substrate and type of material being applied.
2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film. Provide finish coats that are compatible with primers used.
3. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer.
4. Give special attention to ensure that surfaces, including edges, corners, crevices, welds, and exposed fasteners, receive a dry film thickness equivalent to that of flat surfaces.
5. Sand lightly between each succeeding enamel coat.
6. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
  - a. Do not re-coat until previous coat has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and where application of another coat of paint does not cause the undercoat to lift or lose adhesion.
7. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to the manufacturer's directions.
  - a. Brushes: Use brushes best suited for the material applied.
  - b. Rollers: Use rollers of carpet, velvet back, or high-pile sheep's wool as recommended by the manufacturer for the material and texture required.
  - c. Spray Equipment: Spray application of finishes is NOT ACCEPTABLE.
8. Minimum Coating Thickness: Apply materials no thinner than the manufacturers recommended spreading rate.
9. Prime Coats: Before applying finish coats, apply a prime coat of material, as recommended by the manufacturer, to material that is required to be painted or finished and that has not been prime-coated by others. Re-coat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.
10. Pigmented (Opaque) Finishes: Completely cover to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
11. Completed Work: Matched approved samples for color, texture, and coverage or coating thickness(es). Remove, refinish, or repaint work not complying with requirements, to the satisfaction of the Owner, Designer and MHPC, at no additional cost.

CLEANING

12. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the site. After completing painting, clean glass and paint-spattered

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surfaces. Remove spattered paint by washing and scraping. Be careful not to scratch or damage adjacent finished surfaces.

13. After paint has thoroughly dried, reinstall trim items and components removed to facilitate finishing operations.
14. Comply with all Department of Environmental Protection Guidelines for disposal of materials known to contain lead-based products.

D. PROTECTION

1. Protect work of other trades, whether being painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as acceptable to Owner.
2. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

END OF SECTION 09900

## SECTION 10290 – BIRD AND PEST CONTROL

### PART 1 - GENERAL

#### 1.1. – RELATED DOCUMENTS

- 1.1.1. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

#### 1.2. - DESCRIPTION OF WORK:

- A. Extent and specific locations of bird control system preparation and installation work are indicated on Drawings.
- B. Bird Control System work includes the following:
  - 1. Supply all necessary components, hardware and netting fabric for installation of a complete bird exclusion system at the Station canopies and soffits designated to receive system as indicated in Drawings.
  - 2. Areas where birds were previously congregating and/or staining the building shall have all nest material removed and surfaces shall be cleaned and sanitized as specified herein as part of the work of this Section prior to Masonry and Exterior Woodwork Restoration activities specified in other Sections of this Project Manual.

#### 1.3 - SYSTEM DESCRIPTION:

- A. Bird Exclusion Netting is constructed of black, UV resistant polypropylene. The knotless mesh is effective in excluding birds of all sizes. Bird Netting is available in two grades, Premium and Lightweight.
- B. Bird Netting Hardware fastens the bird netting to all types of surface shapes and materials. A variety of netting installation tools and accessories are available to make the netting installation an efficient process.
- C. Surface Cleaning System: surface disinfectants and deodorizers to neutralize potentially hazardous bird and/or animal wastes and properly prepare the surface for installation.

#### 1.4 - QUALITY ASSURANCE

- A. Installer must obtain, review and understand all Bird Exclusion Netting and associated Hardware installation guidelines.
- B. Installer must be completely familiar with the proper installation procedures for the Bird Netting System and Hardware.
- C. Installer should contact manufacturer for any updated or newly developed planning or procedural information that may be pertinent to the installation.

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## 1.5 - SUBMITTALS

- A. Submit all manufacturers' related literature including specifications and installation guidelines for the Bird Exclusion Netting and Hardware and the specified Surface Cleaning System.
- B. Sample of the Exclusion Netting – not less than 6” square (15.2cm square) in the specified grade.
- C. Contractor to complete estimate worksheet detailing the scope of the netting enclosure, and the mounting hardware type, location and spacing.

## 1.6 – STORAGE & HANDLING

- A. Provide storage to keep all bird netting system shipping boxes dry, clean and undamaged. Do not stack or place other packaging or objects on the bird netting system boxes.
- B. Keep all Bird Netting System Products in their original packaging until needed for installation.

## PART 2 - PRODUCTS

### 2.1 – ACCEPTABLE MANUFACTURER

- A. Nixalite of America Inc  
1025 16th Avenue, PO Box 727, Dept. NI, East Moline, Illinois 61244; U.S.A.  
Ph: 800.624.1189 or 309.755.8771 - Fax: 800.624.1196 or 309.755.0077  
E-mail: birdcontrol@nixalite.com or planning@nixalite.com  
Web: www.nixalite.com.
- B. ABC Advanced Bird Control – A division of Nixalite of America Inc  
PO Box 727, Dept. NI, East Moline, Illinois 61244, U.S.A.  
Ph: 888.212.8682 or 309.755.4708 – Fax: 309.755.1865  
E-mail: info@abcbirdcontrol.com  
Web: www.abcbirdcontrol.com.

### 2.2 – BIRD EXCLUSION NETTING

- A. Material: Black, UV resistant polypropylene. UV stabilizer: carbon black - 2% by weight.
- B. Construction: Knotless, extruded and pre-stretched netting.
- C. Mesh size: 1/2” (1.3cm) square, Premium Grade. Works for all pest bird species.
- D. Sizes:
  - Premium PollyNet:
  - Width - 14’ (4.2m)
  - Lengths - 10’ (3.0m), 50’ (15.2m), 100’ (30.4m), 250’ (76.2m) and 3,000’ (914.4m).
  - Custom sizes available – call for details.
- E. Physical Properties:
  - Premium PollyNet:
  - Average strength – 10 lbs./strand (4.5kg).
  - Average strand count – 2 per inch.
  - Weight: 8.5 lbs. (3.8kg) per 1,000 square feet.

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- F. Thermal Properties:
  - Melting point: 320+ degrees F.
  - Flash point: 625 degrees F.
  - Remains flexible at very low temperatures.
  - Polypropylene is an inert compound and resistant to a wide range of chemicals.
- G. Warranty: 5 year limited warranty.

### 2.3 BIRD NETTING HARDWARE

- A. Installer to contact manufacturer for up-to-date information and recommendations for netting hardware applications, item combinations, new items and new procedures. Use the hardware system recommended by the manufacturer.
- B. Available Hardware Systems: Hardware and Tensioned Support Cable Hardware. Choose the hardware system that best suits the netting installation and conditions.
- C. Poly Hardware: All poly hardware is made from UV stabilized black polypropylene. Hardware combinations can be mixed to suit changing surface materials and conditions.
  - 1. Poly Clip: Perimeter fastening. Secure to perimeter with hardware recommended by manufacturer. Maximum spacing: 12”(30.5cm) O.C.
  - 2. Twist Locks: Seam fastening. Twist Locks join two overlapped pieces of netting together at a seam. Maximum spacing: 3” (7.6cm) O.C.
  - 3. Net Ties: Multi-purpose fastener. Quickly fastens the netting fabric to all types of objects. Use to prevent netting sag or loose fitting nets by securing the netting to objects above or behind netting installation. Three sizes to choose from.
  - 4. Quick Tie Chain: Overhead support straps. Each is 24” (61cm) long. Use to prevent net sag by fastening bird net to objects above or behind netting installation.
  - 5. Poly Cord: Multi-purpose fastener. Reinforce seams, patch tears, close circular openings, use for overhead support, etc.
- D. Tensioned Support Cable Hardware: Use support cables to prevent net sag when spanning large open areas. Maximum spacing between support cables: 30’ (9.1m). Choose the Connection and Anchoring Hardware that best suits the installation surface and conditions. Contact manufacturer for hardware recommendations.
  - 1. Connection hardware:
    - a. Net Cable: Aircraft grade 302/304 stainless steel 7x7, 49 strand, 3/32” (2.2mm) diameter cable. 900 lb. (407 kg) breaking strength. In 250’ (76.2m) and 500’ (152.4m) spool lengths. Hardware determines max cable run lengths.
    - b. Turnbuckles: Stainless steel, hook & eye turnbuckles - three sizes.  
Small: Max cable run: 25 feet (7.6m). Safe working load 360 lbs. (163kg).  
Medium: Max cable run: 50 feet (15.2m). Safe working load 500 lbs. (226kg)

Large: Max cable run: 75 feet (22.9m). Safe working load 1,000 lbs. (454kg).

- c. Ferrules: Zinc plated copper ferrules for 3/32" (2.2mm) cable. Acceptable connection for cable runs up to 25' (7.6m) max. Always use 2 ferrules per connection. Always use in conjunction with Cable Thimble.
- d. Wire Rope Clamps: Galvanized or stainless steel for 3/32" (2.2mm) diameter cable. Recommended connection for all cable runs. Mandatory connection for cable runs over 25' (7.6m). Always use 2 clamps per connection. Always use in conjunction with Cable Thimble.
- e. Cable Thimble: Stainless steel cable thimble for 3/32" (2.2mm) diameter cable. Cable Thimble prevents cable fraying and creasing when tensioning cable system.

## 2. Cable Anchoring Hardware:

- a. Eyebolts: for steel, iron, and heavy gauge sheet metal. Extreme duty stainless steel eyebolt, 2" (5.1cm) long, 9/16" I.D. (14.2mm) with 1/4-20 stainless steel hex nut. Maximum spacing between eyebolts: 50' (15.2m).
- b. Screw Eyes: for wood beams, heavy to medium gauge sheet metal and wood core surfaces. Extreme duty stainless steel screw eyes 2" (5.1cm) long, 17/32" I.D. (13.5mm). Pilot holes recommended for all surfaces. Maximum spacing between screw eyes: 50' (15.2m).
- c. Eyebolts and Machine Screw Anchors: for concrete, stone, masonry block, brick and pre-cast surfaces. Eyebolt specs are same as above.  
Machine Screw Anchor: Zinc plated anchor – 1/2" (12.7mm) diameter x 1" (25.4mm) deep with 1/4-20 threads inside. Setting tool included with anchors.

E. Additional Installation Methods: Due to PollyNet versatility and ease of installation, there are many possible methods for fastening. Contact manufacturer for details regarding details and procedures.

## 2.4 – SURFACE CLEANING SYSTEM

- A. Steri-Fab: surface disinfectant and bactericide to neutralize bird waste. Do not use with Microcide-SQ on the same surface.
- B. Microcide-SQ: surface cleaner and deodorizer to sanitize surface and remove any residual odor from bird inhabitation. Do not use with Steri-Fab on the same surface.
- C. Microsan: anti-bacterial soap and lotion to prevent disease transmittal after working around surfaces contaminated with bird & animal wastes. Use to compliment personal protection equipment standards (PPE).
- D. All Marine Bird Dropping Remover: a non-toxic, biodegradable bird dropping remover that is safe and effective for use in both marine and land applications. Instantly dissolves bird droppings both wet and dry, in or out of the marine environment.

- E. Stain & Odor Remover: a non-toxic, biodegradable stain and odor remover that uses naturally occurring active ingredients to remove the worst types of odors and stains. Safe and effective for both wet and dry environments.

## PART 3 - EXECUTION

### 3.1 - INSPECTION

- A. Visually inspect the surfaces that will receive the netting hardware and all areas that will end up behind or inside the netting installation. Note damaged surfaces or incomplete construction that could compromise the bird netting installation.
- B. Note all areas, surfaces or objects that may require maintenance or periodic replacement after the bird netting is installed (i.e. lights, electrical equipment, etc.). Use the appropriate netting accessories to allow access behind the installed netting system.
- C. Note any objects or conditions that could damage the installed bird netting. Install the PollyNet in such a manner as to avoid these conditions.

### 3.2 - PREPARATION

- A. Field Measurements: Verify dimensions of the areas to be enclosed. Make sure you have sufficient quantity of bird netting, netting hardware and surface cleaning products to properly install the Bird Netting System.

### 3.3 – SURFACE CLEANING

- A. All surfaces to be clean, dry and free of obstructions before bird control is installed.
- B. IF BIRD WASTE IS PRESENT :  
Treat, neutralize and safely remove all bird waste from installation surfaces. Installer must follow all city, state and federal regulations regarding the proper removal and disposal of bird droppings.
- C. Use Nixalite's surface cleaning products to neutralize any bird droppings, nests and related waste materials that may be present. Allow all surfaces to air dry completely, and then reapply to sanitize and deodorize the surface before proceeding. Strictly follow treatment instructions provided with Nixalite's surface cleaning products.
- D. Use Nixalite anti-bacterial personal protection products to help prevent disease transmittal when working around surfaces contaminated with bird droppings.

### 3.4 - INSTALLATION

- A. Install the bird netting hardware as recommended by manufacturer. General order of installation: install perimeter and support hardware; attach bird netting to installed hardware; install access or additional support hardware as specified.
- B. Install PollyNet as recommended by the manufacturer. If necessary cut the PollyNet to fit the area. If multiple pieces are needed, join the pieces together with the recommended seam fastening hardware.
- C. Install PollyNet to avoid contact with machinery, vehicles, extreme heat, tree branches, etc. Make necessary adjustments to keep netting a sufficient distance from these objects or conditions.
- D. Finished PollyNet installation to be taught, free of wrinkles, gaps and openings.

### 3.5 – ADJUSTMENTS / CLEANING

- A. Remove debris and waste materials from project site.
- B. Inspect finished installation. Make any adjustments needed to conform to manufacturer's PollyNet installation guidelines.

END OF SECTION 10290

## SECTION 16000 - BASIC ELECTRICAL REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. This contract will be governed by the State of Maine, Department of Transportation Standard Specifications, Revision of December 2002. Division 100, General Conditions will be used to set forth the conditions under which this contract will be administered. When conflicts arise between the documents, either request a clarification or use the more stringent requirement.

#### 1.2 SUMMARY

- A. Alternates: Refer to Division 1 to determine extent of, if any, work of this section that will be affected by any alternates if accepted.
- B. Furnish all materials, equipment, labor, and supplies and perform all operations necessary to complete the electrical work in accordance with the intent of the drawings and these specifications.
- C. Temporary Power and Lighting:
  - 1. Power Distribution: Provide weatherproof, grounded circuits with ground-fault interruption features, with proper power characteristics and either permanently wired or plug-in connections as appropriate for intended use. Provide overload-protected disconnect switch for each circuit at distribution panel. Space 4-gang convenience outlets (20 amp circuit) so that every portion of work can be reached with 100' extension cord.
  - 2. Temporary Lighting: Provide lighting of intensity and quality sufficient for proper and safe performance of the work and for access thereto and security thereof. (Consult OSHA requirements.)

#### 1.3 QUALITY ASSURANCE

- A. All wiring shall be in accordance with the latest issue of the National Electrical Code.
- B. The Contractor shall show evidence, upon request, of having successfully completed at least five similar projects. Installation of each system shall be under the supervision of a factory-authorized organization.
- C. The Contractor shall show evidence, upon request, that he maintains a fully equipped service organization capable of furnishing adequate inspection and service to the system. The

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Contractor must have a service contract program for the maintenance of the system after the guarantee period.

- D. All electrical equipment shall be approved by Underwriters Laboratories, Inc. Each system shall be products of a single manufacturer of established reputation and experience. The Contractor shall have supplied similar apparatus to comparable installations rendering satisfactory service for at least three years.
- E. Prior to submission for review of any item of equipment, determine whether or not it will fit in the space provided. Any changes in the size or location of the material or equipment supplied, which may be necessary in order to meet field conditions or in order to avoid conflicts between trades, shall be brought to the immediate attention of the Architect/Engineer and approval received before such alterations are made.

#### 1.4 SUBMITTALS

- A. In accordance with Division 1, furnish the following:
  - 1. Manufacturer's descriptive literature: For each type of product indicated.
  - 2. Submit shop drawings which include engineering drawings of the system with specification sheets covering all component parts of the system and interconnection diagrams.
  - 3. Certification:
    - a. Prior to final inspection, deliver to the Owner's Representative four (4) copies of certification that the material is in accordance with the drawings and specifications and has been properly installed.
    - b. Submit certification of system operating test.
  - 4. Manuals: Submit copies of complete set of operating instructions including circuit diagrams and other information of system components. Supply six complete sets of each.

#### 1.5 PROJECT CONDITIONS

- A. Regulatory Requirements:
  - 1. Conform to the requirements of all laws and regulations applicable to the work.
  - 2. Cooperate with all authorities having jurisdiction.
  - 3. Compliance with laws and regulations governing the work on this project does not relieve the Contractor from compliance with more restrictive requirements contained in these specifications.

4. If the Contract Documents are found to be at variance with any law or regulation, the Contractor shall notify the Architect/Engineer promptly in writing. The Contractor shall assume full responsibility for any work contrary to law or regulation, and shall bear all costs for the corrections thereof.
5. Minimum Requirements: The National Electrical Code (NEC), Underwriters Laboratories, Inc. (UL), the National Fire Codes, and National Fire Protection Association (NFPA) are a minimum requirement for work under this section. Design drawings and other specification sections shall govern in those instances where requirements are greater than those specified in the NEC.

B. Permits, Fees, and Inspections:

1. Secure and pay for all permits, fees, licenses, inspections, etc., required for the work under Division 16.
2. Schedule and pay for all legally required inspections and cooperate with inspecting officers.
3. Provide Certificates of Inspection and Approval from all regulatory authorities having jurisdiction over the work in Division 16.

C. Drawings:

1. Do not scale the drawings. The general location of the apparatus and the details of the work are shown on the drawings, which form a part of this specification. Exact locations are to be determined at the building as the work progresses, and shall be subject to the Architect/Engineer's approval. Actual field conditions shall govern all dimensions.
2. Anything shown on the drawings and not mentioned in the specifications or vice versa shall be furnished as if it were both shown and specified.
3. It is not intended that the drawings shall show every wire, device, fitting, conduit or appliance, but it shall be a requirement to furnish without additional expense, all material and labor necessary to complete the systems in accordance with the NEC and the best practice of the trade.

## 1.6 WARRANTY

- A. The Contractor shall guarantee all equipment and wiring free from inherent mechanical or electrical defects for one year from date of acceptance.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

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- A. Light Switches:
  - 1. Line voltage switches: 20-amp, 120/277-volt specification grade.
  - 2. Finish shall be ivory.
  - 3. Mount switches 4'-0" above finished floor at door entrance.
- B. Plates shall be 302 stainless steel.
- C. Boxes shall be steel minimum 2-1/2" deep or 1-1/2" deep plus plaster ring sized for wall finished material.
- D. Light Fixtures: The light fixtures shall be as described on the drawings or other approved equal is also acceptable.
  - 1. Refurbishing and retrofitting existing exterior light fixtures shall be performed by Custom Metalcraft Architectural Lighting of Charlestown, MA (617-242-0868) or other approved preservation company.
    - a. Luminaires shall be refinished to match original. Existing moving parts, gaskets, etc. shall be restored and refabricated as required to provide fully functioning fixtures suitable for wet locations.
    - b. Luminaires shall be retrofit for scheduled lamp source.
    - c. Refurbished fixtures shall be UL labeled by the preservation company.
- E. Wiring Materials:
  - 1. Wiring shall be enclosed in electrical rigid galvanized steel, intermediate metal conduit, or electrical metallic tubing sized in accordance with code requirements for the conductors. Type MC cable may be used where concealed in walls or ceilings and allowed by code.
    - a. Conduit fittings shall be steel compression type.
    - b. Terminations for all conduit shall have insulated bushings or insulated throat connectors in accordance with code requirements.
    - c. All conduits shall be substantially supported with approved clips or hangers spaced not to exceed ten feet on center. Minimum conduit size shall be 1/2".
  - 2. Flexible Metal Conduit shall be used for all connections to motors and vibrating equipment and shall comply with Fed. Spec. WW-C-566.
  - 3. Liquid-Tight Flexible Metal Conduit shall consist of flexible steel conduit with a liquid-tight PVC jacket over the conduit.



- a. Fittings shall incorporate a threaded grounding cone, a steel or plastic compression ring, and a gland for tightening.
  - b. Liquid-tight flexible metal conduit shall be used in damp or wet locations when flexible metal conduit would otherwise be used.
  - c. Liquid-tight flexible metal conduit shall not penetrate the roof or exterior walls, and shall not be installed in lengths exceeding 72" except where necessary for flexibility.
- 4. All Wiring shall be type THW, XHHW, or THWN, UL labeled, copper conductors with 600-volt insulation, except as otherwise noted. Minimum size wire shall be No. 12 AWG.
  - 5. Type MC Cable shall have minimum No. 12 AWG type THWN or XHHW insulated copper conductors with an internal bare or insulated copper ground wire.
- F. Fire-Stop Material:
- 1. Fire-stopping material shall maintain its dimension and integrity while preventing the passage of flame, smoke, and gases under conditions of installation and use when exposed to the ASTM E 119 time-temperature curve for a time period equivalent to the rating of the assembly penetrated. Cotton waste shall not ignite when placed in contact with the non-fire side during the test. Fire-stopping material shall be noncombustible as defined by ASTM E 136; and in addition for insulation materials, melt point shall be a minimum of 1700°F for one-hour protection and 1850°F for two-hour protection.
  - 2. Seals for floor, exterior wall, and roof shall also be watertight.
- G. Grounding Conductors:
- 1. Insulated grounding wires shall be UL and NEC approved types, copper, with THWN or XHHW insulation color identified green, except where otherwise shown on the drawings or specified.
  - 2. Wire shall not be less than shown on the drawings and not less than required by the NEC.
- H. Equipment Grounding Connections: Connections shall be of the compression type solderless connectors.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. General:

1. All work shall be in accordance with the National Electrical Code's requirements as amended to date, with the local electric utility company's rules, the Fire Underwriter's requirements, and all local, state and federal laws and regulations.
2. In general, all wiring in finished areas shall be concealed in walls or above ceilings. Exposed wiring shall not be installed in finished areas without prior written authorization from the Engineer.
3. Conduits shall be of sizes required by the National Electrical Code. Exposed conduits shall be installed with runs parallel or perpendicular to walls and ceiling, with right-angle turns consisting of bends, fittings, or outlet boxes. No wire shall be installed until work that might cause damage to wires or conduits has been completed. Conduits shall be thoroughly cleaned of water or other foreign matter before wire is installed.
4. Where conduits, wireways and other electrical raceways pass through fire partitions, fire walls, or floor, install a fire-stop that provides an effective barrier against the spread of fire, smoke and gases. Fire-stop material shall be packed tight and completely fill clearances between raceways and openings. Floor, exterior wall, and roof seals shall also be made watertight.
5. Where raceways puncture roof, coordinate with Division 7.
6. All splices shall be mechanically and electrically perfect, using crimp type wire connectors.
7. Revise existing panelboard directories. Furnish new cards as needed. Directories shall be typewritten or printed using a computer.
8. In general, conductors shall be the same size from the last protective device to the load and shall have an ampacity the same as or greater than the ampacity of the protective device where the wire size is not shown on the drawings. Use the 60°C ampacity rating for wire sizes No. 14 through No. 1. For 120V circuits, home runs longer than 50 feet shall be minimum No. 10 AWG, longer than 100 feet shall be minimum No. 8 AWG, and longer than 180 feet shall be minimum No. 6 AWG.

B. Grounding:

1. The entire electrical system shall be permanently and effectively grounded in accordance with Code requirements.
2. Connections to junction boxes, equipment frames, etc., shall be bolted.
3. Conduit Systems:
  - a. Ground all metallic conduit systems.
  - b. Conduit systems shall contain a grounding conductor sized per NEC Table 250-122 or as shown on the drawings. Increase conduit size where necessary to accommodate the grounding conductor.

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4. Feeders and Branch Circuits: Install green grounding conductors with all feeders and branch circuits.
5. Lighting Fixtures: Conduits shall not be used for grounding fixtures. Green equipment grounding conductor must be bonded to all fixtures.

C. Alterations:

1. The Contractor shall study all drawings and specifications, visit the site, and acquaint himself with the existing conditions and the requirements of the plans and specifications. No claim will be recognized for extra compensation due to the failure of the Contractor to familiarize himself with the conditions and extent of the proposed work.
2. The Contractor shall execute all alterations, additions, removals, relocations or new work, etc., as indicated or required to provide a complete installation in accordance with the intent of the drawing and specifications.
3. Reconnect existing circuits to remain. Remove existing equipment to be discontinued.
4. Any existing work disturbed or damaged by the alterations or new work shall be repaired or replaced to the Engineer's satisfaction.
5. Equipment relocated or removed and reinstalled shall be cleaned and repaired to a first-class condition before reinstallation.

D. Identification: Provide tags on each end of all pulled wires giving location of other end.

E. Record Drawings: The Contractor shall keep on the job a set of prints showing any changes to the installation. These shall be given to the Engineer at the completion of the work.

F. Testing and Adjusting:

1. The entire installation shall be free from short-circuits and improper grounds. Tests shall be made in the presence of the Engineer or his representatives.
2. Each individual lighting circuit shall be tested at the panel; and in testing for insulation resistance to ground, the lighting equipment shall be connected for proper operation. In no case shall the insulation resistance be less than that required by the National Electrical Code. Failures shall be corrected in a manner satisfactory to the Architect/Engineer.
3. Each system shall be completely tested and shall be adjusted for proper operation as required by the Engineer.

LUMINAIRE SCHEDULE									
TYPE	DESCRIPTION	MFR	CATALOG SERIES NUMBERS - NOTE THAT THESE NUMBERS ARE NOT COMPLETE CATALOG #'S. PROVIDE ALL REQUIREMENTS ON SCHEDULE, NOTES, SPECS, AND DRAWINGS COMBINED.	MOUNTING	VOLTS	LAMP			KEY NOTES
						QTY	WATTS	TYPE	
EX	IRON LANTERN		EXISTING REFURBISHED EXTERIOR FIXTURE	WALL - MATCH EXISTING HEIGHT	120	1	70	MH	1, 2
H1	CUTOFF WALL PACK	LUMARK	MH-IP-T-70-120-PE	WALL 10' 0" AFG	120	1	70	MH	2
H2	EXTERIOR FLOOD	LUMARK	MH-SF-K-175-120-PE-BZ WITH BRONZE VISOR	WALL 18' 6" AFG	120	1	175	MH	2
H3	SURFACE DOWNLIGHT	KIRLIN	HSS-13221-43	SOFFIT SURFACE	120	1	70	MH	2

**KEY NOTES:**

1. RETROFIT EXISTING INCANDESCENT FIXTURE WITH SCHEDULED METAL HALIDE LAMP AND REMOTE BALLAST. REFER TO SPECIFICATION SECTION 16000 FOR MORE INFORMATION.
2. Connect fixture to existing branch circuit from which existing fixture was removed. Verify that the existing circuit has adequate capacity for additional load.

END OF SECTION 16000

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RESTORATION OF THE HISTORIC  
ROCKLAND RAIL STATION  
MDOT PIN NO. 10223.00

LUMINAIRE SCHEDULE									
TYPE	DESCRIPTION	MFR	CATALOG SERIES NUMBERS - NOTE THAT THESE NUMBERS ARE NOT COMPLETE CATALOG #'S. PROVIDE ALL REQUIREMENTS ON SCHEDULE, NOTES, SPECS, AND DRAWINGS COMBINED.	MOUNTING	VOLTS	LAMP			KEY NOTES
						QTY	WATTS	TYPE	
(ER)	EXTERIOR WALL	EXISTING REFURBISHED EXTERIOR FIXTURE		WALL - MATCH EXISTING HEIGHT	120	1	70	MH	1
H1	CUTOFF WALL PACK	LUMARK	MH-IP-T-70-120-PE	WALL 10' 0" AFG	120	1	70	MH	2
H2	EXTERIOR FLOOD	LUMARK	MH-SF-K-175-120-PE-BZ WITH BRONZE VISOR	WALL 18' 6" AFG	120	1	175	MH	2

**KEY NOTES:**

1. RETROFIT EXISTING INCANDESCENT FIXTURE WITH SCHEDULED METAL HALIDE LAMP AND REMOTE BALLAST. REFER TO SPECIFICATION SECTION 16000 FOR MORE INFORMATION.
2. Connect fixture to existing branch circuit from which existing fixture was removed. Verify that the existing circuit has adequate capacity for additional load.

