

**Updated 12/13/2021**

# **FEDERAL PROJECT**

## BIDDING INSTRUCTIONS

### FOR ALL PROJECTS:

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

#### For a Paper Bid:

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

#### For an Electronic Bid:

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

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

### IN ADDITION, FOR FEDERAL AID PROJECTS:

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

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

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

# NOTICE

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

Prospective bidders, subcontractors or suppliers who wish to download a copy of the bid package and receive a courtesy notification of project specific bid amendments must fill out the on-line plan holder registration form and provide an email address to the MDOT Contracts mailbox at: [MDOT.contracts@maine.gov](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 Rebecca Snowden at [rebecca.snowden@maine.gov](mailto:rebecca.snowden@maine.gov) or Guy Berthiaume at [guy.berthiaume@maine.gov](mailto:guy.berthiaume@maine.gov).

# NOTICE

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

Bid Enclosed - Do Not Open

PIN:

Town:

Date of Bid Opening:

Name of Contractor with mailing address and telephone number:

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

Double Envelope: Bid Enclosed

PIN:

Town:

Date of Bid Opening:

Name of Contractor:

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

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

Bid Enclosed: Do Not Open

PIN:

Town:

Name of Contractor:



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

**KNOW ALL MEN BY THESE PRESENTS THAT** \_\_\_\_\_

\_\_\_\_\_, of the City/Town of \_\_\_\_\_ and State of \_\_\_\_\_

as Principal, and \_\_\_\_\_ as Surety, a

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

Business in \_\_\_\_\_ and hereby held and firmly bound unto the Treasurer of

the State of Maine in the sum of \_\_\_\_\_, for payment which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

The condition of this obligation is that the Principal has submitted to the Maine Department of Transportation, hereafter Department, a certain bid, attached hereto and incorporated as a part herein, to enter into a written contract for the construction of \_\_\_\_\_

\_\_\_\_\_ and if the Department shall accept said bid

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

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

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

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

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

force, and effect.

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

WITNESS:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

WITNESS

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PRINCIPAL:

By \_\_\_\_\_

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

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

SURETY:

By \_\_\_\_\_

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

Name of Local Agency: \_\_\_\_\_

# NOTICE

Bidders:

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

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

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

## RFI No: \_\_\_\_\_

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

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

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

# NOTICE

## Disadvantaged Business Enterprise Proposed Utilization

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

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

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

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

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

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

## INSTRUCTIONS FOR PREPARING THE MaineDOT CONTRACTOR'S DBE/SUBCONTRACTOR UTILIZATION FORM

The Contractor Shall Extend equal opportunity to MaineDOT certified DBE firms (as listed in MaineDOT's DBE Directory of Certified Businesses) in the selection and utilization of Subcontractors and Suppliers.

### SPECIFIC INSTRUCTIONS FOR COMPLETING THE FORM:

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

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

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

Revised 1/12

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

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

For FFY 2022-24 (October 1, 2021 through September 30, 2024) MaineDOT has established an annual DBE participation goal of **1.97%** to be achieved through race/gender neutral means. This goal has been approved by the Federal Highway Administration and remains in effect through September 30, 2024. MaineDOT must meet this goal each federal fiscal year. If the goal is not met, MaineDOT must provide a justification for not meeting the goal and provide a plan to ensure the goal is met, which may include contract goals on certain projects that contractors will be required to meet.

MaineDOT asks all contractors, consultants and subcontractors to seek certified DBE firms for projects and to work to meet the determined 1.97% goal without the need to impose contract goals. DBE firms are listed on the MaineDOT website at:

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

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

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

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

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

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

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

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

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

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

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

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

Equal Opportunity Use:

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

FHWA ☐

FTA ☐

FAA ☐

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

Rev. 01/15

**Maine Department of Transportation Civil Rights Office**

**Directory of Certified Disadvantaged Business Enterprises**

**Listing can be found at:**

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

**For additional information and guidance contact:**

**Civil Rights Office at (207) 624-3066**

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



September 14, 2007

### **Vendor Registration**

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

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

# NOTICE

Each bid for a federal project **shall** be accompanied by a completed the Disadvantaged Business Enterprise (DBE) Proposed Utilization Form. If you are submitting an electronic bid, the DBE form may be faxed to 207-624-3431.

Failure to submit the completed form with the bid will be considered a curable defect.

**SPECIAL PROVISION 102.7.3**  
**ACKNOWLEDGMENT OF BID AMENDMENTS**

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

| Amendment Number | Date |
|------------------|------|
|                  |      |
|                  |      |
|                  |      |
|                  |      |
|                  |      |
|                  |      |
|                  |      |
|                  |      |
|                  |      |
|                  |      |

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

CONTRACTOR

\_\_\_\_\_  
Date

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

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

## **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 **Reed & Reed** (Contractor) a corporation or other legal entity organized under the laws of the State of **Maine**, with its principal place of business located at **275 River Road, Woolwich, Maine.**

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

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

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, **WIN 022511.01 and WIN 22512.01 for the purchase and delivery of FRP pier casings, and existing bridge superstructure and deck demolition for the replacement bridges in the City of Old Town, Penobscot County,** 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 31, 2024.**

### **C. Price.**

The LUMP SUM Bid Price 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

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

**D. Contract.**

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

**E. Certifications.**

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

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

**F. Offer.**

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

**WIN 022511.01 and WIN 022512.01 for installation of piers and bridge demolition in the City of Old Town, Maine.**

State of Maine, 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.

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

As Offeror also agrees:

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

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

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

Fourth: 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 this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

---

Date

---

Jack Parker, Chairman and CEO

---

Date

---

Witness

**G. Award.**

Your offer is hereby accepted.  
documents referenced herein.

This award consummates the Contract, and the

MAINE DEPARTMENT OF TRANSPORTATION

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Date

---

By: Bruce A. Van Note, Commissioner

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Witness

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

CONTRACT PERFORMANCE BOND  
(Surety Company Form)

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

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

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

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

WITNESSES:

Signature.....  
Print Name Legibly .....

Signature .....  
Print Name Legibly .....

SURETY ADDRESS:

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

TELEPHONE.....

SIGNATURES:

CONTRACTOR:

.....  
Print Name Legibly .....

SURETY:

.....  
Print Name Legibly .....

NAME OF LOCAL AGENCY:

ADDRESS .....  
.....  
.....



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

CONTRACT PAYMENT BOND  
(Surety Company Form)

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

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

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

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

WITNESS:

SIGNATURES:

CONTRACTOR:

Signature.....

.....

Print Name Legibly .....

Print Name Legibly .....

SURETY:

Signature.....

.....

Print Name Legibly .....

Print Name Legibly .....

SURETY ADDRESS:

NAME OF LOCAL AGENCY:

.....

ADDRESS .....

.....

.....

TELEPHONE .....

.....

"General Decision Number: ME20240047 02/02/2024

Superseded General Decision Number: ME20230047

State: Maine

Construction Type: Highway

County: Penobscot County in Maine.

#### HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

|                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022: | <ul style="list-style-type: none"> <li>. Executive Order 14026 generally applies to the contract.</li> <li>. The contractor must pay all covered workers at least \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.</li> </ul>  |
| If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:         | <ul style="list-style-type: none"> <li>. Executive Order 13658 generally applies to the contract.</li> <li>. The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.</li> </ul> |

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

| Modification Number | Publication Date |
|---------------------|------------------|
| 0                   | 01/05/2024       |
| 1                   | 02/02/2024       |

\* ENGI0004-004 04/01/2023

|                            | Rates    | Fringes |
|----------------------------|----------|---------|
| POWER EQUIPMENT OPERATOR:  |          |         |
| Grader/Blade, Mechanic,    |          |         |
| Paver (Asphalt, Aggregate, |          |         |
| and Concrete), Roller      |          |         |
| Asphalt.....               | \$ 27.03 | 13.80   |

\* TEAM0340-003 01/01/2017

|                                  | Rates       | Fringes |
|----------------------------------|-------------|---------|
| TRUCK DRIVER (Vacuum Truck)..... | \$ 14.84 ** | 13.08   |

\* SUME2014-042 06/23/2017

|                                   | Rates       | Fringes |
|-----------------------------------|-------------|---------|
| CARPENTER, Includes Form Work.... | \$ 18.95    | 3.23    |
| CEMENT MASON/CONCRETE FINISHER... | \$ 19.27    | 1.13    |
| ELECTRICIAN.....                  | \$ 25.78    | 6.83    |
| IRONWORKER, REINFORCING.....      | \$ 21.85    | 0.00    |
| IRONWORKER, STRUCTURAL.....       | \$ 22.33    | 4.50    |
| LABORER: Asphalt, Includes        |             |         |
| Raker, Shoveler, Spreader and     |             |         |
| Distributor.....                  | \$ 17.08 ** | 2.48    |
| LABORER: Common or General.....   | \$ 12.83 ** | 2.20    |
| LABORER: Landscape.....           | \$ 17.03 ** | 2.81    |
| OPERATOR:                         |             |         |
| Backhoe/Excavator/Trackhoe.....   | \$ 16.33 ** | 2.78    |
| OPERATOR: Bobcat/Skid             |             |         |
| Steer/Skid Loader.....            | \$ 19.26    | 5.57    |
| OPERATOR: Broom/Sweeper.....      | \$ 18.77    | 0.00    |
| OPERATOR: Bulldozer.....          | \$ 21.71    | 5.67    |
| OPERATOR: Loader.....             | \$ 18.94    | 7.66    |
| OPERATOR: Milling Machine.....    | \$ 26.83    | 7.05    |
| OPERATOR: Roller (Earth).....     | \$ 17.61    | 2.97    |
| TRAFFIC CONTROL: Flagger.....     | \$ 9.00 **  | 0.00    |
| TRAFFIC CONTROL:                  |             |         |
| Laborer-Cones/                    |             |         |
| Barricades/Barrels -              |             |         |
| Setter/Mover/Sweeper.....         | \$ 17.02 ** | 5.37    |
| TRUCK DRIVER: Dump Truck.....     | \$ 14.56 ** | 6.32    |

WELDERS - Receive rate prescribed for craft performing

operation to which welding is incidental.

\*\*\*\*\*

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

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

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

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

#### Union Rate Identifiers

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

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

#### Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

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

#### Union Average Rate Identifiers

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

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

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#### WAGE DETERMINATION APPEALS PROCESS

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

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

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal

process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

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

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

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

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

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

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

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

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END OF GENERAL DECISION"

**APPENDIX A**  
**Description of Materials, Supplies, Equipment and Bid Price**

**SCHEDULE OF ITEMS**

- The Bid must be Delivered to the precise location and by the precise time set forth in the Notice to Contractors or any applicable Bid Amendment.
- Required unit prices, lump sum prices and/or bid amounts must be provided and legible.
- Do not make handwritten changes to the bid documents.

**Bidders are required to bid all Items.**

| <b>Item Description</b>                                                                                     | <b>Approx.<br/>Quantity<br/>and Units</b> | <b>Unit Price</b> | <b>Bid Amount</b> |
|-------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------|-------------------|
| <b>202.10<br/>Remove Existing Superstructure<br/>(Property of Contractor) - Bridge #1<br/>Beams</b>         | <b>1.0 / LS</b>                           | <b>\$</b>         | <b>\$</b>         |
| <b>202.10<br/>Remove Existing Superstructure<br/>(Property of Contractor) -<br/>Bridge #2 Beams</b>         | <b>1.0 / LS</b>                           | <b>\$</b>         | <b>\$</b>         |
| <b>202.10<br/>Remove Existing Superstructure<br/>(Property of Contractor) -<br/>Bridge #1 Concrete Deck</b> | <b>1.0 / LS</b>                           | <b>\$</b>         | <b>\$</b>         |
| <b>202.10<br/>Remove Existing Superstructure<br/>(Property of Contractor) -<br/>Bridge #2 Concrete Deck</b> | <b>1.0 / LS</b>                           | <b>\$</b>         | <b>\$</b>         |
| <b>202.202<br/>Remove Pavement Surface</b>                                                                  | <b>800.0 / SY</b>                         | <b>\$</b>         | <b>\$</b>         |
| <b>501.551<br/>FRP Composite Pile, Delivered</b>                                                            | <b>279.0 / LF</b>                         | <b>\$</b>         | <b>\$</b>         |
| <b>524.304<br/>Temporary Construction Access</b>                                                            | <b>1.0 / LS</b>                           | <b>\$</b>         | <b>\$</b>         |
| <b>527.34<br/>Work Zone Crash Cushions</b>                                                                  | <b>1.0 / UN</b>                           |                   |                   |
| <b>629.05<br/>Hand Labor, Straight Time</b>                                                                 | <b>20.0/HR</b>                            | <b>\$</b>         | <b>\$</b>         |

|                                                                      |                    |               |                    |
|----------------------------------------------------------------------|--------------------|---------------|--------------------|
| <b>631.12<br/>All Purpose Excavator (Including Operator)</b>         | <b>20.0/HR</b>     | <b>\$</b>     | <b>\$</b>          |
| <b>631.172<br/>Truck – Large (Including Operator)</b>                | <b>20.0/HR</b>     | <b>\$</b>     | <b>\$</b>          |
| <b>652.33<br/>Drum</b>                                               | <b>20.0/Each</b>   | <b>\$</b>     | <b>\$</b>          |
| <b>652.34<br/>Cone</b>                                               | <b>20.0/EA</b>     | <b>\$</b>     | <b>\$</b>          |
| <b>652.35<br/>Construction Signs</b>                                 | <b>500.0/SF</b>    | <b>\$</b>     | <b>\$</b>          |
| <b>652.361<br/>Maintenance of Traffic Control Devices</b>            | <b>1.0/LS</b>      | <b>\$</b>     | <b>\$</b>          |
| <b>652.38<br/>Flaggers</b>                                           | <b>40 / HR</b>     | <b>\$</b>     | <b>\$</b>          |
| <b>656.75<br/>Temporary Soil Erosion and Water Pollution Control</b> | <b>1.0 / LS</b>    | <b>\$</b>     | <b>\$</b>          |
| <b>659.10<br/>Mobilization</b>                                       | <b>1.0 / LS</b>    | <b>\$</b>     | <b>\$</b>          |
| <b>910.20<br/>Special Work (Temporary Detour Maintenance)</b>        | <b>10,000 / UN</b> | <b>\$1.00</b> | <b>\$10,000.00</b> |
| <b>TOTAL</b>                                                         |                    |               | <b>\$</b>          |

Bids are not accepted by email or FAX. If a paper Bid is to be sent express, please take note that overnight services do not always arrive in time. Packages using express services should be sent to Maine Department of Transportation, 24 Child Street, Augusta, Maine.

By signing below, the Bidder (1) represents that the Bidder has examined the Contract Agreement contained in the Bid Documents, the Contract, all documents referenced in said Contract, and the site and scope of work, (2) does hereby bid and offer to enter into this contract to construct and/or perform the Work in strict accordance with the terms and conditions of this Contract at the unit prices bid in the attached "Schedule of Items", (3) represents that the Bidder has given the Department notice of any errors or ambiguities related to the documents or the work that have been discovered by the Bidder, (4) represents that the above-named organization is the legal entity entering into the resulting contract with the Department if they are awarded the contract and, (5) represents that the undersigned is authorized to enter contractual obligations on behalf of the above-named organization.

Bidder acknowledges that the properly completed and signed Schedule of Items provided with the Bid constitutes the Bidder's offer and that this offer shall remain open for 30 calendar days after the date of opening of bids.

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.

Use pen and ink to complete paper bids. Signatures shall be original. Stamped and copied signatures will not be accepted.



Old Town  
022511.01 & 022512.01  
Llewellyn Estes Bridges #1 & #2  
February 1, 2024

***Signature***

***Date***

---

***(Print Bidder's Name and Title)***

**Electronic bidding will NOT be available  
for this bid.**

**Bids will NOT be accepted  
by email or fax.**

**SIGNED PAPER BIDS ARE  
REQUIRED  
and may be  
mailed, sent express or hand delivered.**

For further information, see "BIDDING INSTRUCTIONS"  
which are located near the front of the bid book.

Description The Contractor shall furnish, deliver, and install the materials listed in the Schedule of Items in this Appendix in accordance with the contract documents. The structure must meet the requirements of this Contract, the Plans, the State of Maine, Department of Transportation, Standard Specifications, March 2020 Edition and Standard Details March 2020 Edition as updated through advertisement, Supplemental Specifications, and Special Provisions.

Contract Administrator

The contract administrator for this contract will be:

Name: Andrew Lathe  
Title: Project Manager  
Address: Maine Department of Transportation  
16 State House Station Road, Augusta, ME 04333-0016

The Contractor shall submit invoices to the Contract Administrator as described in this contract. The Department may assign a designated alternate to the Contract Administrator. The Contractor will be notified of any such change.

Invoices and Payments The Contractor shall submit an itemized bill to the Department for materials following delivery for approval and payment. At a minimum, invoices shall include the following information:

Contractor name, address & Contract Number  
Invoice Date & Number  
Dates of Delivery  
Items and Quantities at Bid Price

The Department will pay based upon the materials delivered at the prices bid and the invoices approved. Payments to the Contractor shall be full compensation for furnishing all labor, equipment, materials, services, and incidentals used to supply the materials under the Contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of any kind arising from the nature or prosecution of the Work. The Department may withhold payments claimed by the Contractor on account of incomplete or incorrect invoices or materials that are defective or not in conformance with the contract.

Material Quality Materials and manufactured products shall be new unless otherwise specified, free from defect, and in conformity with the Contract. If there is no applicable standard set forth in this Contract for a particular item, then the item shall be in accordance with industry standards prevailing at the time of bid. The Department has the authority to inspect all Materials and every detail of the Work. The Department may reject the finished product if any of the components do not comply with the specifications. The Department may reject materials not conforming to the Specifications at any time.

SPECIAL PROVISION  
SECTION 101.2.1  
SUPPLEMENTAL DEFINITIONS

The following definitions are amended in Section 101.2 Definitions.

Successful Bidder Bidder to whom the Department intends to award the Contract.

Contractor After the Department has executed the Contract by cosigning the Contract Agreement, Offer, & Award form, previously signed by the successful bidder, the Successful Bidder becomes the Contractor. The Contractor will be the single point of responsibility for all Contract obligations to the Department. The Contractor shall be an independent Contractor with respect to the Department and shall not be an employee, agent, or representative of the Department. Alternatively, “contractor”, with a lower case “c”, may mean a firm engaged in construction Work.

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

Subsection 104.4.7 Cooperation with Other Contractors is amended by adding the following:

A Highway Reconstruction project is planned for Stillwater Avenue in Old Town, including intersection improvements at Bennoch Road and College Avenue. This project has advertised under WIN 022950.01 and plans and specifications are available from the MaineDOT website.

The Contractor shall coordinate all activities including traffic control with others to ensure safe travel for all road users. This shall be specifically addressed within the Contractor's Traffic Control Plan.

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

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

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

Town of Old Town  
Stillwater Bridge #1472 and #2806  
WINs 022512.01 and 022511.01  
February 2, 2024

SPECIAL PROVISION  
SECTION 107  
TIME  
(Contract Completion Date)

The Contract Completion Date for this project is December 31, 2024.

SPECIAL PROVISION  
SECTION 108  
PAYMENT  
(Invoices and Payment)

The Contractor shall submit an itemized invoice to the Department for services monthly and at the completion of the Work or as otherwise noted in the Contract documents for approval and payment.

At a minimum, invoices shall be on a Contractor's letterhead and shall include the following information:

- Contractor name, address & Contract Number
- Invoice Date & Number
- Period during which Work was performed or Dates of Service
- Description and Location of Work or Service
- Quantities at the Prices contained in the Contractor's Bid
- Percent complete of each Item priced at the Unit cost for each Item at the Unit Prices contained in the Contractor's Bid
- Extra Work agreed to by written Contract Modification
- Total amount due

The Department will make payments based upon approved complete and correct invoices for accepted Work invoiced at bid prices. No such payment will be made if, in the judgment of the Department, the Work is not in accordance with the provisions of the Contract.

Payments to the Contractor shall be full compensation for furnishing all labor, equipment, materials, services, and incidentals used to perform all Work under the Contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of any kind arising from the nature or execution of the Work. The Contractor shall pay all taxes, charges, fees, and allowances. Except as expressly provided otherwise in this Contract, all such taxes, charges, fees, and allowances are Incidental to the Contract. Most items are exempt from Maine sales tax. The Contractor shall Bid in accordance with the Maine statutory exemption from sales tax. No payments due the Contractor will be adjusted for inflation. No interest shall be due and payable on any payment due the Contractor. The Department may require that the Contractor submit backup documentation including copies of receipts, invoices, and itemized payments to Subcontractors.

The Department may withhold payments claimed by the Contractor on account of:

- A. Incomplete, Inaccurate or Incorrect Invoices,
- B. Defective Work or non-conforming Work,



- C. Damages for Non-conforming, Defective or Unauthorized Work or Equipment,
- D. Damage to a third party,
- E. Claims filed or reasonable evidence indicating probable filing of claims,
- F. Failure of the Contractor to make payments to Subcontractors or for Materials or labor,
- G. Regulatory non-compliance or enforcement,
- H. Failure to submit Documentation
- I. All other causes that the Department reasonably determines negatively affect the State's interest.

SPECIAL PROVISION  
SECTION 202  
REMOVING STRUCTURES AND OBSTRUCTIONS  
(Removing Existing Concrete Bridge Deck and Superstructure Beams)

Standard Specifications Section 202 shall be amended as follows.

202.03 Removing Existing Superstructure, Structural Concrete, Railings, Curbs, Sidewalks and Bridges is amended by adding the following:

The Contractor shall submit a Bridge Demolition Plan to the Resident. The Bridge Demolition Plan shall outline the methods and equipment to be used to remove and dispose of all materials included in the existing bridge. This Plan shall also identify debris containment plans associated with this work.

All bridge materials within the existing bridge decks and superstructures shall become the property of the Contractor.

202.07 Method of Measurement is amended by adding the following:

Removal of existing concrete deck shall be measured as all bridge components above the top of the steel beams and cover plates and shall include, but is not limited to, removal and disposal of existing utilities, transition barriers, transition guardrail, sidewalk, curbs, backwall demolition for joint removal, wearing surface, and shielding installation and removal.

Removal of existing superstructure beams for demolition shall be measured from the bottom of the masonry plate to the top of the steel beam and cover plates.

202.08 Basis of Payment is amended by adding the following:

The removal of the existing concrete decks and the removal of the superstructure beams will be paid for at the contract lump sum price, which price shall be full compensation for removing and disposing of the existing bridge decks and superstructures, existing utilities, other items outlined above, and installation and removal of debris shielding.

| <u>Pay Item</u>                                                                             | <u>Pay Unit</u> |
|---------------------------------------------------------------------------------------------|-----------------|
| 202.10 Removing Existing Superstructure Property of Contractor –<br>Bridge #1 Concrete Deck | LS              |
| 202.10 Removing Existing Superstructure Property of Contractor –<br>Bridge #2 Concrete Deck | LS              |
| 202.10 Removing Existing Superstructure Property of Contractor – Bridge #1 Beams            | LS              |
| 202.10 Removing Existing Superstructure Property of Contractor – Bridge #2 Beams            | LS              |

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

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

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

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

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

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

TABLE 1: MILLING CONDITIONS FOR ADJOINING LANES

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

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

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

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

TABLE 2: MILLING CONDITIONS FOR THE EDGE OF TRAVELED WAY

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

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

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

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

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

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

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

Basis of Payment

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

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

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

Pay Item

Pay Unit

202.202 Removing Pavement Surface  
202.20201 Removing Pavement Surface (Hourly)

S.Y.  
Hour

**SPECIAL PROVISIONS**  
**SECTION 202**  
**REMOVING STRUCTURES AND OBSTRUCTIONS**  
**(Vacuum Truck)**

Description The Contractor shall provide a vacuum truck as part of the pavement removal surface cleaning operation. The vacuum truck may act as a supplement to the contractors normal milled surface cleaning equipment train, or act as the primary cleaning equipment. Number of vacuum trucks to be used, the sequence of how they are used, and duration they are to be used will generally be up to the contractor with the exception that the vacuum truck will be required in any final cleanup operation prior to the roadway being opened up to traffic.

The equipment shall meet the minimum criteria outlined in this Special Provision.

Equipment The equipment for vacuuming the pavement surface removing the bituminous surface shall be a power operated regenerative air sweeper equipped with cleaning and vacuum system that contains the materials being cleaned and vacuumed from the surface, filters the air of any milling debris, contains the milling debris in a sealed, onboard self-off-loading hopper, and returns the air to the sweeper heads to aid in continued surface cleaning.

Each machine shall use a controlled blast of air the width of the pickup head to dislodge debris from the surface. It will be equipped with a mid-mount, on demand wide sweeper broom, gutter brooms, and vacuum system which will use high velocity recycled air to assist in removing millings and dirt from the surface. The broom assist pick-up head shall work independently of gutter brooms. Recycled air will be distributed across the entire width of a pick-up head(s), covering the entire width of the sweeper. The sweeper shall have positive contact suction heads designed to remove milling debris and dust from surface. All debris picked up by the pick-up head is directed up a large diameter heavy duty 12” -14” suction hose into the hopper. A high-capacity dust separator located before the blower is required limiting polluted air (dust) to re-enter back into the atmosphere. Each air assisted vacuum head shall be equipped with a minimum of 2 water nozzle jets used to minimize dust. The additional use of compressed air and air wand may be required to loosen bonded materials from the surface in preparation of vacuuming.

Basis of Payment Payment will not be made directly for the vacuum truck but will be considered incidental to the square yard or hourly rental contract price for removing pavement surface and will be full compensation for mobilizing to the site, de-mobilizing from the site, labor, supervision, and cleaning of the milled surface, and disposal of all vacuumed materials removed from required surfaces. Hauling and stockpiling of the material will not be paid for directly but will be considered incidental to the pavement removal items.

SPECIAL PROVISION  
SECTION 501  
FOUNDATION PILES  
(FRP Composite Piles)

Section 501 – Foundation Piles is amended by the addition of the following:

501.01 Description

This work shall consist of fabricating and delivering Fiber Reinforced Polymer (FRP) Composite Piles as specified in these Specifications.

501.02 Materials

Materials for the FRP Composite Piles shall meet the following requirements:

Resin: Resin shall be off the MaineDOT Qualified Products List for Fiber Reinforced Polymer Systems

Fiberglass: All reinforcement used during the FRP Composite Pile manufacturing process shall be commercial grade glass fiber and shall be compatible with the resin system used to impregnate the fibers.

Pigments: All pigments shall be polydispersion liquid pigments. The final color of the FRP form shall be grey, as approved by the Resident.

Gel Coat: Exterior surfaces of the piles shall be treated with a gel coat with UV inhibitor.

501.03 Quality Control Plan

The Contractor shall submit all quality control records from the Manufacturer. Records shall document testing, inspection, and practices used in the manufacture of the FRP Composite Piles.

501.031 Working Drawings

The Contractor shall prepare and submit shop detail, assembly diagrams, or other necessary Working Drawings. Working Drawings shall include FRP glass layup and angles for each layer, location of injection or infusion ports, and manufacturer product sheets for the resin and glass layers.

501.032 Fabrication

The FRP Composite Piles shall have the following dimensions:

|                         |                   |
|-------------------------|-------------------|
| Outside Diameter        | 53.5 inch         |
| Wall Thickness          | 0.75 inch         |
| Length Bridge 1, Pier 1 | 25 feet (3 piles) |
| Length Bridge 2, Pier 1 | 37 feet (3 piles) |
| Length Bridge 2, Pier 2 | 31 feet (3 piles) |



The FRP Composite Piles shall be fabricated to the tolerances listed below:

|                   |                                 |
|-------------------|---------------------------------|
| Overall Length    | +/- 1%                          |
| Outside Diameter  | +/- 1%                          |
| Wall Thickness    | +1/4 inch, -1/8 inch            |
| Sweep             | +/- 1/8 inch per 10 feet        |
| Local Smoothness  | 1/4 inch per 10 feet            |
| Roundness         | +/- 1% in max and min diameters |
| Fiber orientation | +/- 3° installation             |

501.047 Splicing Piles

Splicing of the FRP composite piles shall not be permitted.

501.05 Method of Measurement

b. Piles Furnished

The unit measure for furnishing FRP Composite Piles shall be the linear foot. The quantity to be paid for will be the sum of the lengths in feet of the piles ordered in writing by the Resident. No allowance will be made for the lengths of piles to replace piles previously accepted by the Resident but are subsequently damaged prior to completion of the Contract.

501.06 Basis of Payment

The accepted quantities of FRP Composite Piles will be paid for at the Contract Unit Price per linear foot, satisfactorily fabricated and delivered. Such payment will include full compensation for all materials, equipment, testing, and labor to fabricate and deliver the FRP composite pile, and all incidentals necessary to complete the work.

Payment will be made under:

|         | <u>Pay Items</u>              | <u>Pay Unit</u> |
|---------|-------------------------------|-----------------|
| 501.551 | FRP Composite Pile, Delivered | Linear Foot     |

SPECIAL PROVISION  
SECTION 524  
TEMPORARY STRUCTURAL SUPPORTS  
(Temporary Access Construction)

524.01 Description This work consists of the design, construction, maintenance, removal, restoration work, and all labor, materials and equipment required to construct temporary access roads, embankments, rock roads, bridges, trestles, and work platforms, hereafter referred to as Temporary Access Construction, deemed necessary by the Contractor to adequately access and complete the Work within the limitations of existing environmental permits.

This work does not include temporary fills, structures, or platforms that serve exclusively as cofferdams, stream diversions, demolition platforms, or that are constructed for purposes other than providing construction access to the work area.

524.02 Materials Construction materials shall be selected at the Contractor's option and, whether new or used, shall be sound and of adequate cross section for the intended loads. Used materials will be acceptable provided appropriate allowances are made for their condition.

524.03 Design Temporary Access Construction shall be designed to support all vertical loads including live load and impact, differential settlement forces, horizontal and longitudinal forces, and forces from river and ice flows. Detailed plans showing sizes, arrangements, connections, bracing and quality of materials to be used shall be submitted to the Resident for documentation. Temporary Access Construction shall be designed by a Professional Engineer licensed in the State of Maine. All plans and Working Drawings shall be signed and sealed by that Engineer.

The consent of the Department regarding design, construction or use of Temporary Access Construction shall not be construed, in any way, as relieving the Contractor of responsibility for providing means for temporary access that are adequately designed and constructed to carry the loads and forces that will be placed upon them.

The Department will have no obligation to review or comment on any design, construction, maintenance, or removal of Temporary Access Construction. No review or comment by the Department, or any lack of review or comment by the Department, shall relieve the Contractor of its responsibility to properly design, construct, maintain in good condition, and completely remove Temporary Access Construction in accordance with the Contract, or shall shift any responsibility to the Department. The Contractor shall be responsible for all damages resulting from the failure of their temporary works.

Any temporary fill placed within the limits of the waterway shall be constructed using methods, and erosion-resistant materials, that will resist stream flow and minimize erosion to the extent practicable. Temporary fill within the waterway shall be removed to the extent practicable, and to the satisfaction of the Resident, upon completion of the project.

The limits of temporary fill within the waterway shall not encroach beyond the temporary impacts plan submitted to the Army Corps of Engineers and included in the Appendix of these Contract Documents.

524.031 Submittals The Contractor shall submit plans and Working Drawings to the Resident for record at least 14 Calendar Days prior to beginning construction of the Temporary Access Construction.

524.041 Construction Requirements The installation of Temporary Access Construction shall be in conformance with the Contractor's design and details, constructed within the acquired right-of-way and applicable environmental permits, and shall use only the materials specified.

All related work including preparing, improving and restoring roads as required to provide access to the construction site and Temporary Access Construction shall be performed in accordance with the applicable governing specifications and the plans. Such work may involve clearing, grading, slope stabilization, geotextiles, construction of base courses and temporary roadways, temporary fencing and gates, temporary drainage, dust abatement where required, and maintenance of affected embankments and slopes, guardrail and drainage structures as directed by the Resident.

Disturbed slopes steeper than 1.5 horizontal to 1.0 vertical will require restoration with riprap and permanent erosion control as shown on the plans or as determined appropriate by the Contractor's engineer.

All Temporary Access Construction shall be removed completely, and to the satisfaction of the Resident, upon completion of the project. Where foundation elements are socketed or otherwise anchored into bedrock, the foundation elements shall be removed to either the top of bedrock, or to one foot below the streambed elevation, whichever is higher. Areas of disturbance shall be graded, landscaped and restored to the satisfaction of the Resident to a condition equal to, or better, than the condition that existed prior to the start of construction.

524.07 Method of Measurement Temporary Access Construction shall be measured as one Lump Sum.

524.08 Basis of Payment Temporary Access Construction will be paid for at the Contract Lump Sum price, which price shall be full compensation for all materials, equipment, labor, and

incidentals necessary for the design, erection, maintenance, repair, replacement, modification of existing structures, dismantling and removal of the Temporary Access Construction. This does not include the removal or demolition of any existing bridge items. Reconstruction, grading, restoration, and erosion control required in the area(s) of the Temporary Access Construction will be included in this item unless already covered under the permanent Work Items.

Payment will be made under:

| <u>Pay Item</u>                            | <u>Pay Unit</u> |
|--------------------------------------------|-----------------|
| 524.304      Temporary Access Construction | Lump Sum        |

SPECIAL PROVISION  
SECTION 652  
MAINTENANCE OF TRAFFIC

This section is amended by the addition of the following.

652.1 Description is amended by adding the following paragraph:

This work shall also consist of maintaining existing traffic control devices for the bridge project.

652.8 Basis of Payment is amended by adding the following paragraph at the start of the section:

Maintaining existing traffic control devices installed as part of earlier Contract packages will be considered part of Maintenance of Traffic Control Devices and will not be paid for separately. This includes, but is not limited to, existing construction and detour signs, Type III barricades, drums, cones, and temporary barrier. Newly installed traffic control devices needed for the work added under this Contract will be paid for and maintained using the Contract pay items.

SPECIAL PROVISION  
SECTION 652  
MAINTENANCE OF TRAFFIC

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652.1 Description is amended by adding the following paragraph:

This work shall also consist of maintaining existing traffic control devices for the bridge project.

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SPECIAL PROVISION  
SECTION 659  
MOBILIZATION

Replace Standard Specification 108.2.3 – Mobilization Payments with the following:

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

Percent Mobilization Bid will be determined by taking the amount Bid for Mobilization and dividing by the Total Contract Amount less Mobilization.  $\text{Mob}/(\text{Total Contract} - \text{Mob})$ .

Payment will be made at the following intervals:

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

SPECIAL PROVISION  
SECTION 910  
SPECIAL WORK  
(Temporary Detour Maintenance)

Description

This work shall consist of maintaining the existing on-site temporary detour during the execution of this Contract which includes, but is not limited to, maintenance and repair of the temporary bridge structure and approaches, not caused by the Contractor, and as directed by the Department.

For bid purposes a Contractor Allowance of \$10,000.00 has been included in the schedule of items. The Contractor Allowance will not be paid for directly but has been included to account for the estimated cost of the extra work to be performed by the Contractor.

Basis of Payment

Payment will be made in accordance with Standard Specification Section 109.7, Equitable Adjustments to Compensation and Time.

| <u>Pay Item</u>                                         | <u>Pay Unit</u> |
|---------------------------------------------------------|-----------------|
| 910.20      Special Work – Temporary Detour Maintenance | Unit            |



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1) **WARRANTY.** Contractor warrants:

- a) That all articles and services to be supplied by it under this contract are fit and sufficient for the purpose intended;
- b) That all articles and services covered by this contract will conform to the specifications, drawing samples, symbols or other description specified by the Department;
- c) That such articles are merchantable, good quality and free from defects whether patent or latent in material and workmanship;
- d) That all workmanship, materials and articles to be provided are of the best grade and quality; and,
- e) That it has good and clear title to all articles to be supplied by it and the same are free and clear from all liens, encumbrances and security interest.

Neither the final certificate of payment nor any provision herein, nor partial nor entire use of the articles provided shall constitute an acceptance of work not done in accordance with this Contract or relieve the Contractor from liability in respect of any warranties or responsibility for faulty material or workmanship. The Contractor shall remedy any defects in the materials and articles delivered pursuant to this Contract and pay any damages resulting from such defects which shall appear within 1 year from the date of final acceptance of the materials and articles provided hereunder. The Department shall give written notice of observed defects with reasonable promptness.

- 2) **TAXES.** Contractor agrees that, unless otherwise indicated in this Contract, the prices herein do not include federal, state or local sales, or use the tax from which an exemption is available for purposes of this order. Contractor agrees to accept and use tax exemption certificates when supplied by the Department as applicable. In case it shall ever be determined that any tax included in the prices herein was not required to be paid by Contractor, Contractor agrees to notify the Department and to make prompt application for the refund thereof, to take all proper steps to procure the same and when received to pay the same to the Department.
- 3) **PACKING & SHIPMENT.** Deliveries shall be made as specified without charge for boxing, shipping or storage, unless otherwise specified. Articles shall be suitably packed to secure lowest transportation cost and to conform with the requirements of common carriers and any applicable specifications. Order numbers and symbols must

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be plainly marked on all invoices, packages, bills of lading and shipping orders. Bill of lading should accompany each invoice. Count or weight shall be final and conclusive on shipments not accompanied by packing lists. Shipping terms F.O.B. destination.

- 4) **DELIVERY.** Delivery should be strictly in accordance with delivery schedule. Articles fabricated beyond the Department's releases are at Contractor's risk. Contractor shall not make material commitments or production arrangements in excess of the amount or in advance of the time necessary to meet delivery schedule. Unless otherwise specified herein, or receipt of written approval, no deliveries shall be made in advance of the Department's delivery schedule. Neither party shall be liable for excess costs of deliveries or defaults due to causes beyond its control and without its fault or negligence, provided, however, that when the Contractor has reason to believe that the deliveries will not be made as scheduled, written notice setting forth the cause of the anticipated delay will be given immediately to the Department. If the Contractor's delay or default is caused by the delay or default of a subcontractor, such delay or default shall be excusable only if it arose out of causes beyond the control of both Contractor and subcontractor and without fault of negligence or either of them and the articles or services to be furnished were not obtainable from other sources in sufficient time to permit Contractor to meet the required delivery schedule.
- 5) **REMEDY.** If Contractor's deliveries fail to meet such schedule, the Department, without limiting its other remedies, may direct expedited shipping, and the difference between the expedited routing and the order routing costs shall be paid by the Contractor.
- 6) **INSPECTION.** All articles and work will be subject to final inspection and approval after delivery, notwithstanding prior payment, it being expressly agreed that payment will not constitute final acceptance. The Department at its option may either reject any article or work not in conformity with the requirements and terms of this order, or re-work the same at Contractor's expense. The Department may reject an entire shipment of similar articles if a sample inspection discloses that ten (10%) percent of the articles inspected are defective. This may be waived if the Contractor agrees to reimburse the Department for the cost of a complete inspection of the articles included in such shipment. Rejected material will be returned at Contractor's risk and expense at the full invoice price plus applicable transportation charges, if any. No replacement of defective articles of work shall be made unless specified by the Department.

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- 7) **BENEFITS AND DEDUCTIONS.** If the Contractor is an individual, the Contractor understands and agrees that he/she is an independent contractor for whom no Federal or State Income Tax will be deducted by the Department, and for whom no retirement benefits, survivor benefit insurance, group life insurance, vacation and sick leave, and similar benefits available to State employees will accrue. The Contractor further understands that annual information returns, as required by the Internal Revenue Code or State of Maine Income Tax Law, will be filed by the State Controller with the Internal Revenue Service and the State of Maine Bureau of Revenue Services, copies of which will be furnished to the Contractor for his/her Income Tax records.
- 8) **INDEPENDENT CAPACITY.** In the performance of this Contract, the parties hereto agree that the Contractor, and any agents and employees of the Contractor shall act in the capacity of an independent contractor and not as officers or employees or agents of the State.
- 9) **DEPARTMENT'S REPRESENTATIVE.** The Contract Administrator shall be the Department's representative during the period of this Contract. He/she has authority to curtail services if necessary to ensure proper execution. He/she shall certify to the Department when payments under the Contract are due and the amounts to be paid. He/she shall make decisions on all claims of the Contractor.
- 10) **CHANGES IN THE WORK.** The Department may make changes to its order, the Contract Amount will be amended accordingly, these changes will not invalidate this Contract. In no event shall Contractor fail or refuse to continue the performance of its obligations under this Contract because of the inability of the parties to agree on an adjustment or adjustments. Any monetary adjustment or any substantive change in the articles or materials shall be in the form of an amendment, signed by both parties and approved by the MaineDOT. Said amendment must be effective prior to delivery of the articles or materials.
- 11) **SUBLETTING, ASSIGNMENT OR TRANSFER.** The Contractor shall not sublet, sell, transfer, assign or otherwise dispose of this Contract or any portion thereof, or of its right, title or interest therein, without written request to and written consent of the Contract Administrator. No subcontracts or transfer of Contract shall in any case release the Contractor of its liability under this Contract.
- 12) **PERSONNEL.** The Contractor warrants that it has not employed or contracted with any company or person, other than for assistance with the normal study and preparation of a proposal, to solicit or secure this Contract and that it has not paid, or agreed to pay, any company or person, other than a bona fide employee working solely for the Contractor, any fee, commission, percentage, brokerage fee, gifts, or

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any other consideration, contingent upon, or resulting from the award for making this Contract. For breach or violation of this warranty, the Department shall have the right to annul this Contract without liability or, in its discretion to otherwise recover the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

13) **EQUAL EMPLOYMENT OPPORTUNITY.** During the performance of this Contract, the Contractor agrees as follows:

- a) The Contractor shall not discriminate against any employee or applicant for employment relating to this Contract because of race, color, religious creed, sex, national origin, ancestry, age, physical or mental disability, or sexual orientation, unless related to a bona fide occupational qualification. The Contractor shall take affirmative action to ensure that applicants are employed and employees are treated during employment, without regard to their race, color, religion, sex, age, national origin, physical or mental disability, or sexual orientation.

Such action shall include but not be limited to the following: employment, upgrading, demotions, or transfers; recruitment or recruitment advertising; layoffs or terminations; rates of pay or other forms of compensation; and selection for training including apprenticeship. The Contractor agrees to post in conspicuous places available to employees and applicants for employment notices setting forth the provisions of this nondiscrimination clause.

- b) The Contractor shall, in all solicitations or advertising for employees placed by or on behalf of the Contractor relating to this Contract, state that all qualified applicants shall receive consideration for employment without regard to race, color, religious creed, sex, national origin, ancestry, age, physical or mental disability, or sexual orientation.
- c) The Contractor shall send to each labor union or representative of the workers with which it has a collective bargaining agreement, or other agreement or understanding, whereby it is furnished with labor for the performance of this Contract a notice to be provided by the contracting agency, advising the said labor union or workers' representative of the Contractor's commitment under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- d) The Contractor shall inform the Department's Equal Employment Opportunity Coordinator of any discrimination complaints brought to an external regulatory body (Maine Human Rights Commission, EEOC, Office of Civil Rights) against

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- their agency by any individual as well as any lawsuit regarding alleged discriminatory practice.
- e) The Contractor shall comply with all aspects of the Americans with Disabilities Act (ADA) in employment and in the provision of service to include accessibility and reasonable accommodations for employees and clients.
  - f) Contractors and subcontractors with contracts in excess of \$50,000 shall also pursue in good faith affirmative action programs.
  - g) The Contractor shall cause the foregoing provisions to be inserted in any subcontract for any work covered by this Contract so that such provisions shall be binding upon each subcontractor, provided that the foregoing provisions shall not apply to contracts or subcontracts for standard commercial supplies or raw materials.
- 14) **STATE EMPLOYEES NOT TO BENEFIT.** No individual employed by the State at the time this Contract is executed or any time thereafter shall be admitted to any share or part of this Contract or to any benefit that might arise therefrom directly or indirectly that would constitute a violation of 5 MRSA § 18 or 17 MRSA § 3104. No other individual employed by the State at the time this Contract is executed or any time thereafter shall be admitted to any share or part of this Contract or to any benefit that might arise therefrom directly or indirectly due to his employment by or financial interest in the Contractor or any affiliate of the Contractor. The Contractor shall cause the foregoing provisions to be inserted in any subcontract for any work covered by this Contract so that such provisions shall be binding upon each subcontractor, provided that the foregoing provisions shall not apply to contracts or subcontracts for standard commercial supplies or raw materials.
- 15) **MATERIAL SAFETY DATA SHEETS.** All manufacturers, importers, suppliers, or distributors of hazardous chemicals doing business in this State must provide a copy of the current material safety data sheet for any hazardous chemical to their direct purchasers of that chemical.
- 16) **ACCESS TO RECORDS.** The Contractor shall maintain all books, documents, payrolls, papers, accounting records and other evidence pertaining to this Contract and make such materials available at its offices at all reasonable times during the period of this Contract and for such subsequent period as specified under Maine Uniform Accounting and Auditing Practices for Community Agencies (MAAP) rules. The Contractor shall allow inspection of pertinent documents by the Department or

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any authorized representative of the State of Maine or Federal Government, and shall furnish copies thereof, if requested.

- 17) **TERMINATION.** The performance of work under the Contract may be terminated by the Department in whole, or in part, whenever the Contract Administrator determines that such termination is in the best interest of the Department including but not limited to the following circumstances:
- (a) The Contractor fails to make delivery of articles, or to perform services within the time or time specified herein, or
  - (b) The Contractor fails to make delivery of articles, or specified materials, or
  - (c) If Contractor defaults under any other term or condition of this contract, or
  - (d) If Contractor fails to make progress as to endanger the performance of this contract in accordance with its terms; or,
  - (e) If Contractor is adjudged bankrupt, or if it makes a general assignment for the benefit of its creditors or if a receiver is appointed on account of its insolvency.

In the event that the Division terminates this agreement in whole or in part pursuant to this paragraph, the Division may procure (articles and services similar to those so terminated) upon such terms and in such manner as deemed appropriate by the Department, and Contractor shall be liable to the Department for any excess cost incurred.

- 18) **GOVERNMENTAL REQUIREMENTS.** The Contractor warrants and represents that it will comply with all governmental ordinances, laws and regulations.
- 19) **GOVERNING LAW.** This Contract is pursuant to 23 M.R.S.A. §52, and shall be governed in all respects by the laws, statutes, and regulations of the United States of America and of the State of Maine. Any legal proceeding against the State regarding this Contract shall be brought in State of Maine administrative or judicial forums. The Contractor consents to personal jurisdiction in the State of Maine.
- 20) **STATE HELD HARMLESS.** The Contractor agrees to indemnify, defend and save harmless the State, its officers, agents and employees from any and all claims, costs, expenses, injuries, liabilities, losses and damages of every kind and description (hereinafter in this paragraph referred to as “claims”) resulting from or arising out of the performance of this Contract by the Contractor, its employees, agents, or

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subcontractors. This indemnification includes all legal costs and other expenses of defense against any asserted claims to which this indemnification applies. This indemnification does not extend to a claim that results solely and directly from (i) the Department's negligence or unlawful act, or (ii) action by the Contractor taken in reasonable reliance upon an instruction or direction given by an authorized person acting on behalf of the Department in accordance with this Contract.

- 21) **NOTICE OF CLAIMS.** The Contractor shall give the Department Contract Administrator immediate notice in writing of any legal action or suit filed related in any way to the Contract or which may affect the performance of duties under the Contract, and prompt notice of any claim made against the Contractor by any subcontractor which may result in litigation related in any way to the Contract or which may affect the performance of duties under the Contract.
- 22) **NON-APPROPRIATION.** Notwithstanding any other provision of this Contract, if the State does not receive sufficient funds to fund this Contract and other obligations of the State, if funds are de-appropriated, or if the State does not receive legal authority to expend funds from the Maine State Legislature or Maine courts, then the State is not obligated to make payment under this Contract.
- 23) **SEVERABILITY.** The invalidity or unenforceability of any particular provision or part thereof of this Contract shall not affect the remainder of said provision or any other provisions, and this Contract shall be construed in all respects as if such invalid or unenforceable provision or part thereof had been omitted.
- 24) **FORCE MAJEURE.** The Department may, at its discretion, excuse the performance of an obligation by a party under this Contract in the event that performance of that obligation by that party is prevented by an act of God, act of war, riot, fire, explosion, flood or other catastrophe, sabotage, severe shortage of fuel, power or raw materials, change in law, court order, national defense requirement, or strike or labor dispute, provided that any such event and the delay caused thereby is beyond the control of, and could not reasonably be avoided by, that party. The Department may, at its discretion, extend the time period for performance of the obligation excused under this section by the period of the excused delay together with a reasonable period to reinstate compliance with the terms of this Contract.

For purposes of Early Release Package #3 only, the following special condition is included as an additional paragraph in Section 24, Force Majeure, of this Appendix B:

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In the event that Creative Composites informs Contractor that it is unable to provide Fiber-Reinforced Polymer Pier Casings as required under its supply contract with Contractor, Contractor will be excused from any delay resulting from Creative Composites' failure to provide said pier casings, including any delay while Contractor makes diligent efforts to procure and obtain substitute pier casings meeting the required specifications under the Contract, which diligent efforts Contractor will be obligated to make.

25) **DEBARMENT, SUSPENSION, INELIGIBILITY, OR EXCLUSION.** By signing the Contract, the Contractor certifies that it has not been debarred, suspended, declared ineligible or voluntarily excluded from contracts by the Federal Government or any state agency within the last 3 years.

26) **SET-OFF RIGHTS.** The State shall have all of its common law, equitable and statutory rights of set-off. These rights shall include, but not be limited to, the State's option to withhold for the purposes of set-off any monies due to the Contractor under this Contract up to any amounts due and owing to the State with regard to this Contract, any other Contract, any other Contract with any State department or agency, including any Contract for a term commencing prior to the term of this Contract, plus any amounts due and owing to the State for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. The State shall exercise its set-off rights in accordance with normal State practices including, in cases of set-off pursuant to an audit, the finalization of such audit by the State agency, its representatives, or the State Controller.



## 2020 STANDARD DETAIL UPDATES

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

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

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

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

**SECTION 101**  
**CONTRACT INTERPRETATION**

**101.2 Definitions**

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

**Construction Limit Line** Remove this definition in its entirety.

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

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

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

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

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

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

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

## SECTION 102 BIDDING

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

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

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

## SECTION 103 AWARD AND CONTRACTING

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

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

## SECTION 104 GENERAL RIGHTS AND RESPONSIBILITIES

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

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

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

## SECTION 105 GENERAL SCOPE OF WORK

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

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

## SECTION 106 QUALITY

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

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

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

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

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

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

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

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

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

## SECTION 107 TIME

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

## SECTION 108 PAYMENT

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

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

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

**Payment will be made at the following intervals:**

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

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

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

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

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

Amend this section by adding “**Item 461.2101 Polymer Modified 9.5 mm**” to the list of Pay Items that are eligible for a price adjustment. Also add “**Item 461.2101 - 6.4%**” to the list of Asphalt percentages.

## SECTION 110 INDEMNIFICATION, BONDING, AND INSURANCE

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

## SECTION 206 STRUCTURAL EXCAVATION

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

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

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

## SECTION 401

## HOT MIX ASPHALT PAVEMENT

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

### SECTION 501 FOUNDATION PILES

#### 501.05 Method of Measurement

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

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

### SECTION 502 STRUCTURAL CONCRETE

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

#### **“502.10 Placing Concrete**

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

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

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

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

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

TABLE 4



METHOD A & B MINIMUM QUALITY CONTROL TESTING REQUIREMENTS \*

| TEST                         | TEST METHOD         | SAMPLING LOCATION | FREQUENCY                                                                                                |
|------------------------------|---------------------|-------------------|----------------------------------------------------------------------------------------------------------|
| Gradation                    | AASHTO T-27 & T-11  | Stockpile         | One set per proposed grading before production. One set every 100 yd <sup>3</sup> (Min. 1 set per month) |
| Organic Impurities           | AASHTO T-21         | Stockpile         | <b>Once per fine aggregate per year **</b>                                                               |
| % Absorption                 | AASHTO T-84 & T-85  | Stockpile         | Once per aggregate per year                                                                              |
| Specific Gravity             | AASHTO T-84 & T-85  | Stockpile         | Once per aggregate per year                                                                              |
| Total Moisture in Aggregate  | AASHTO T-255        | Stockpile         | One set per day's production                                                                             |
| Free Water and Aggregate Wt. | N/A                 |                   | One per day's production                                                                                 |
| % Entrained Air              | AASHTO T-152        | On Project        | On first two loads and every third load thereafter provided consistent results are achieved              |
| Compressive Strength         | AASHTO T-22         | On Project        | One set per subplot                                                                                      |
| Compressive Strength         | AASHTO T-22 @ 7days | On Project        | One set per subplot                                                                                      |

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

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

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

502.19, Basis of Payment, Revise the third paragraph by removing the word 'transverse' so that it reads: **"Saw cut grooving of concrete wearing surfaces will be paid for at the Contract Lump Sum Price, which shall be payment for furnishing all materials, labor, and equipment, including depth gauges and all incidentals, to satisfactorily complete the work."**  
(Also see 535.24 and 535.25 for related changes)

## SECTION 503 REINFORCING STEEL

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

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

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

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

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

## SECTION 506 SHOP APPLIED PROTECTIVE COATING – STEEL

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

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

## SECTION 523 BEARINGS

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

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

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

## SECTION 526 CONCRETE BARRIER

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

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

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

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

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

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

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

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

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

### **526.02 Materials**

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

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

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

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

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

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

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

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

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

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

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

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

**526.03 Construction Requirements**

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

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

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

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

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

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

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

- a. Cross-sectional dimensions shall not vary from design dimensions by more than  $\frac{1}{4}$  inch. The vertical centerline shall not be out of plumb by more than  $\frac{1}{4}$  inch.**
- b. Longitudinal dimensions shall not vary from the design dimensions by more than  $\frac{1}{4}$  inch per 10 feet of barrier section and shall not exceed  $\frac{3}{4}$  inches per section.**
- c. Location of anchoring holes shall not vary by more than  $\frac{1}{2}$  inch from the dimensions shown in the concrete barrier details on the Plans.**
- d. Surface straightness shall not vary more than  $\frac{1}{4}$  inch under a 10-foot straightedge.**
- e. The barrier shall have no significant cracking. Significant cracking is defined as fractures or cracks passing through the section, or any continuous crack extending for a length of 12 inches or more, regardless of position in the section.**

**526.04 Method of Measurement Permanent Concrete Barrier Type II, IIIa, IIIb, Texas Classic Rail, and Precast Median Barrier will be measured for payment by lump sum, complete in place.**

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

**The Contractor shall replace sections of portable concrete barrier, including anchored barrier damaged by the traveling public when directed by the Resident. Replacement sections will be measured for payment in accordance with Standard Specification 109.7, Equitable Adjustments to Compensation and Time.**

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

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

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

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

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

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

Payment will be made under:

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

## **SECTION 527** **ENERGY ABSORBING UNIT**

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

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

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

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

## SECTION 535 PRECAST, PRESTRESSED CONCRETE SUPERSTRUCTURE

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

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

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

## SECTION 606 GUARDRAIL

Amend this section by replacing it with the following:

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

31" W-Beam Guardrail - Mid-Way Splice

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

Thrie Beam

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

Anchorage assemblies used to anchor trailing ends, radius guardrail, or other ends not exposed to traffic shall meet the applicable standards of "A Guide to Standardized Highway Barrier Hardware"

prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Task Force 13 Report, Drawing SEW02a.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Guardrail terminals will be paid for at the contract price each, complete in place which price shall be full payment for furnishing and installing all components including the terminal section, posts, offset blocks, "w" beam, cable foundation posts, plates and for all incidentals necessary to complete the installation within the limits as shown on the Standard Details or the Manufacturer's installation instructions. Pay limits for a flared terminal will be 37.5 feet. Pay limits for a tangent terminal will be 50 feet. Each guardrail terminal will be clearly marked with the Manufacturer's name and model number to facilitate any future needed repair. Such payment shall also be full compensation for furnishing all material, excavating, backfilling holes, assembling, and all incidentals necessary to

complete the work, except that for excavation for posts or anchorages in solid ledge rock, payment will be made under 109.7.5 – Force Account. Type III Retroreflective Adhesive Sheeting shall be applied to the approach buffer end sections and sized to substantially cover the end section. On all roadways, the ends shall be marked with alternating black and retroreflective yellow stripes. The stripes shall be 3 in wide and sloped down at an angle of 45 degrees toward the side on which traffic is to pass the end section. Guardrail terminals shall also include a set of installation drawings supplied to the Resident.

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

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

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

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

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

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

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

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

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

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

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

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

Payment will be made under:

| <u>Pay Item</u>                                                     | <u>Pay Unit</u> |
|---------------------------------------------------------------------|-----------------|
| 606.1301 31” W-Beam Guardrail - Mid-Way Splice – Single Faced       | Linear Foot     |
| 606.1302 31” W-Beam Guardrail - Mid-Way Splice – Double Faced       | Linear Foot     |
| 606.1303 31” W-Beam Guardrail - Mid-Way Splice, 15’ Radius and Less | Linear Foot     |
| 606.1304 31” W-Beam Guardrail - Mid-Way Splice, Over 15’ Radius     | Linear Foot     |
| 606.1305 31” W-Beam Guardrail - Mid-Way Splice Flared Terminal      | Each            |
| 606.1306 31” W-Beam Guardrail - Mid-Way Splice Tangent Terminal     | Each            |
| 606.1307 Bridge Transition (Asymmetrical) – Type IA                 | Each            |
| 606.1721 Bridge Transition - Type I                                 | Each            |
| 606.1722 Bridge Transition - Type II                                | Each            |
| 606.1731 Bridge Connection - Type I                                 | Each            |
| 606.1732 Bridge Connection - Type II                                | Each            |
| 606.178 Guardrail Beam                                              | Linear Foot     |
| 606.25 Terminal Connector                                           | Each            |
| 606.257 Terminal Connector - Thrie Beam                             | Each            |
| 606.259 Anchorage Assembly                                          | Each            |
| 606.265 Terminal End-Single Rail - Galvanized Steel                 | Each            |
| 606.266 Terminal End-Single Rail - Corrosion Resistant Steel        | Each            |
| 606.275 Terminal End-Double Rail - Galvanized Steel                 | Each            |
| 606.276 Terminal End-Double Rail - Corrosion Resistant Steel        | Each            |
| 606.352 Reflectorized Beam Guardrail Delineators (“Butterfly” type) | Each            |
| 606.3521 Linear Delineation System Panel                            | Each            |
| 606.353 Reflectorized Flexible Guardrail Marker                     | Each            |
| 606.354 Remove and Reset Reflectorized Flexible Guardrail Marker    | Each            |
| 606.356 Underdrain Delineator Post                                  | Each            |
| 606.358 Guardrail, Modify                                           | Linear Foot     |
| 606.362 Guardrail, Adjust                                           | Linear Foot     |
| 606.365 Guardrail, Remove, Modify, and Reset                        | Linear Foot     |
| 606.366 Guardrail, Remove and Reset                                 | Linear Foot     |

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

## SECTION 608 SIDEWALKS

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

## SECTION 609 CURB

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

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

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

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

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

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

## SECTION 610 STONE FILL, RIPRAP, STONE BLANKET, AND STONE DITCH PROTECTION

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

## SECTION 618 SEEDING

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

## SECTION 619 MULCH

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

## SECTION 626 FOUNDATIONS, CONDUIT, AND JUNCTION BOXES FOR HIGHWAY SIGNING, LIGHTING, AND SIGNALS

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

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

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

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

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



## SECTION 627 PAVEMENT MARKINGS

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

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

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

**The manufacturer and product name of the low temperature waterborne paint**

**The manufacturer’s technical product data sheets**

**The product’s SDS sheets**

**All required and recommended application specifications for the product**

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

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

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

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

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

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

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

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

**SECTION 637**  
**DUST CONTROL**

**Revise this section by removing it in its entirety.**

**SECTION 643**  
**TRAFFIC SIGNALS**

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

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

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

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

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

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

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

## SECTION 645 HIGHWAY SIGNING

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

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

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

## SECTION 652 MAINTENANCE OF TRAFFIC

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

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

Amend this Section by adding the following new subsection:

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

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

**Category 2 (Barricades, Portable Sign Supports, Category 1 devices with attachments, and similar devices that are not expected to produce significant vehicular velocity change but may be otherwise hazardous) – All Category 2 devices will be crash tested and/or evaluated to**

**MASH2016 criteria by January 1, 2025. Current Category 2 devices in useful serviceable condition that are successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2024.**

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

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

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

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

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

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

## SECTION 681

### **PRECAST AGGREGATE-FILLED, CONCRETE BLOCK GRAVITY WALL**

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

## SECTION 701

### **STRUCTURAL CONCRETE RELATED MATERIAL**

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

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

## SECTION 703 AGGREGATES

Add the following to Section 703 - Aggregates

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

| Sieve Designation  | Percentage by Weight Passing Square Mesh Sieves |
|--------------------|-------------------------------------------------|
| $\frac{3}{8}$ inch | 85-100                                          |
| No. 200            | 0-5.0                                           |

703.06 Aggregate for Base and Subbase The following shall apply to Sections (a.) and (c.) below. The material shall have a Micro-Deval value of 25.0 or less as determined by AASHTO T 327. If the Micro-Deval value exceeds 25.0, the Washington State Degradation DOT Test Method T113, Method of Test for Determination of Degradation Value (January 2009 version) shall be performed, except that the test shall be performed on the portion of the sample that passes the  $\frac{1}{2}$  inch sieve and is retained on the No. 10 sieve. If the material has a Washington Degradation value of less than 15, the material shall be rejected. The material used in Section (b.) below shall have a Micro-Deval value of 25.0 or less as determined by AASHTO T 327. If the Micro-Deval value exceeds 25.0 the material may be used if it does not exceed 25 percent loss on AASHTO T 96, Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.

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

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

| Sieve Designation | Percentage by Weight Passing Square Mesh Sieves |        |
|-------------------|-------------------------------------------------|--------|
|                   | Type A                                          | Type B |
| ½ inch            | 45-70                                           | 35-75  |
| ¼ inch            | 30-55                                           | 25-60  |
| No. 40            | 0-20                                            | 0-25   |
| No. 200           | 0-6.0                                           | 0-6.0  |

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

Table 4: Maximum Percent RAP According to Test Results

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

Table 5: RAP Verification Limits

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

For specification purposes, RAP will be categorized as follows:

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

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

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

used in any surface or shim mixture provided that PG 58-34 asphalt binder is used. Mixtures exceeding 20.0 percent Class I RAP must be evaluated and approved by the Department.

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

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

## SECTION 709 REINFORCING STEEL AND WELDED STEEL WIRE FABRIC

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

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

## SECTION 710 FENCE AND GUARDRAIL

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

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

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

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

“Braces shall be of spruce, eastern hemlock, Norway pine, pitch pine, or tamarack timbers or other AWPAs approved species, or spruce, cedar, tamarack or other AWPAs approved species round posts of sufficient length to make a diagonal brace between adjacent posts. All wood posts and braces

shall be pressure-treated in accordance with AASHTO M 133 and AWWA U1, UC4A Commodity Specification B: Posts. “

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

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

Revise the next paragraph so that it reads:

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

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

## SECTION 711 MISCELLANEOUS BRIDGE MATERIAL

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

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

## SECTION 712 MISCELLANEOUS HIGHWAY MATERIAL

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

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

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

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

## SECTION 713 STRUCTURAL STEEL AND RELATED MATERIAL

### Section 713.02 High Strength Bolts

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

## SECTION 718 TRAFFIC SIGNALS MATERIAL

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

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

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

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

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

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

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

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

Amend this Section by adding the following subsection:

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

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

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

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

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

1. The work under this item specifies the requirements for the FMU. The FMU shall operate independent of the brand/type of intersection controller deployed in the ATC traffic cabinet.
2. The FMU shall conform to the following requirements:
  - 2.1 The FMU shall function correctly between -34 degrees C and +74 degrees C.
  - 2.2 The FMU shall be provided with appropriately rated connectors that allows the FMU to be exchanged by unplugging connectors, without tools.
  - 2.3 The FMU shall monitor and log all ATC Controller and ATC cabinet faults and or alarms.

- 2.4 The FMU shall be wired directly to the ATC cabinet.
- 2.5 The FMU shall have an internal cellular modem running at 4G LTE.
  - 2.5.1 The Cellular modem shall be designed to be replaced / upgraded to 5G service when available.
- 2.6 The FMU shall incorporate an integrated GPS and cell modem.
- 2.7 The configuration of the FMU shall be accomplished by accessing the internal web server with a browser. It shall be possible to configure the FMU without any special software.
- 2.8 The FMU shall be powered via a standard 120V input power.
- 2.9 The FMU shall allow for the routing of the controller configuration packets to and from the controller (either by Ethernet or serial communications) for any type of controller utilized by the MaineDOT. In this way it shall be possible to configure the controller and utilize the controller specific software to interrogate the controller, and the FMU shall provide the communications pipe which allows this to be accomplished.
- 2.10 The FMU shall, within the size limitations above, include a battery and battery charging/monitoring circuit, to allow the FMU to function correctly even when all power to the intersection has failed. The battery shall continue to power the FMU for a minimum of 5 hours after all power has failed to the intersection.
- 2.11 The FMU shall incorporate an integrated GPS which will allow the FMU to geo-locate itself on the FMU management software map, without configuration.
- 2.12 The FMU shall operate without requiring a static IP address. The only configuration required at the FMU is to enter the URL of where the FMU management software is hosted.
- 2.13 In the event that the cell service is interrupted or is not available, the FMU shall store any events that occur in internal memory and forward these events automatically to the FMU management software when the cell service is restored. In this way, a complete record of events at the device can be maintained even if cell service is interrupted for a period. The system will store 5000 events.
- 2.14 The FMU shall utilize HTTP and HTTPS protocols, and XML data structures, for communication with the FMU management software. In this way the data will be open for future expansion and competition. The use of secret proprietary protocols is not permitted.
- 2.15 The FMU shall include Ethernet communications via an Ethernet Port with RJ45 connector.
- 2.16 The FMU shall include weather proof antennas.

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

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

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

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



4.1.3.8 The cabinet door status (Open or Closed)

4.1.3.9 The intersection fan status (Fan On or Fan off)

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

4.1.4.1 The AC mains voltage

4.1.4.2 The battery back-up voltage

4.1.4.3 The cabinet temperature

4.1.4.4 The cabinet humidity

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

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

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

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

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

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

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

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

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

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

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

## **7. Alerts FMU Management Software**

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

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

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

- 8.1 The contractor shall supply the FMU with the FMU manufacturers 10 year options for Connectivity and Service, as part of the purchase price. The Connectivity and Service agreement shall include at a minimum:
  - 8.1.1 Cellular Connectivity
  - 8.1.2 No cellular overage charges
  - 8.1.3 Extended warranty on the hardware for the period of the Connectivity and Service Agreement
  - 8.1.4 Over-the-air software updates
  - 8.1.5 Over-the-air security updates
  - 8.1.6 Future Connected Vehicles Service

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

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

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

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

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

## APPENDIX A

To

2022 Title VI Implementation Plan

The United States Department of Transportation (USDOT) Standard Title VI/Non-Discrimination Assurances

DOT Order No. 1050.2A

The **Maine Department of Transportation** (herein referred to as the "Recipient"), HEREBY AGREES THAT, as a condition to receiving any Federal financial assistance from the U.S. Department of Transportation (DOT), through the **Federal Highway Administration (FHWA)**, is subject to and will comply with the following:

### Statutory/Regulatory Authorities

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
- 49 C.F.R. Part 21 (entitled Non-discrimination in Federally Assisted Programs Of The Department Of Transportation-Effectuation Of Title VI Of The Civil Rights Act Of 1964);
- 28 C.F.R. Section 50.3 (U.S. Department of Justice Guidelines for Enforcement of Title VI of the Civil Rights Act of 1964);

The preceding statutory and regulatory cites hereinafter are referred to as the "Acts" and "Regulations," respectively.

### General Assurances

In accordance with the Acts, the Regulations, and other pertinent directives, circulars, policy, memoranda, and/or guidance, the Recipient hereby gives assurance that it will promptly take any measures necessary to ensure that:

***"No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity, for which the Recipient receives Federal financial assistance from DOT, including the FHWA."***

The Civil Rights Restoration Act of 1987 clarified the original intent of Congress, with respect to Title VI and other Non-discrimination requirements (The Age Discrimination Act of 1975, and Section 504 of the Rehabilitation Act of 1973), by restoring the broad, institutional-wide scope and coverage of these non-discrimination statutes and requirements to include all programs and activities of the Recipient, so long as any portion of the program is Federally assisted.

### Specific Assurances

More specifically, and without limiting the above general Assurance, the Recipient agrees with and gives the following Assurances with respect to its Federally assisted **Highway Program**:

1. The Recipient agrees that each "activity," "facility," or "program," as defined in §§ 21.23(b) and 21.23(e) of 49 C.F.R. § 21 will be (with regard to an "activity") facilitated, or will be (with regard

to a "facility") operated or will be (with regard to a "program") conducted in compliance with all requirements imposed by, or pursuant to the Acts and the Regulations.

2. The Recipient will insert the following notification in all solicitations for bids, Requests For Proposals for work, or material subject to the Acts and the Regulations made in connection with all **Federal-Aid Highway Program activities** and, in adapted form, in all proposals for negotiated agreements regardless of funding source:

"The **Maine Department of Transportation**, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award."

3. The Recipient will insert the clauses of Appendix C and G of this Assurance in every contract or agreement subject to the Acts and the Regulations.
  4. The Recipient will insert the clauses of Appendix E of this Assurance, as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a Recipient.
  5. That where the Recipient receives Federal financial assistance to construct a facility, or part of a facility, the Assurance will extend to the entire facility and facilities operated in connection therewith.
  6. That where the Recipient receives Federal financial assistance in the form, or for the acquisition of real property or an interest in real property, the Assurance will extend to rights to space on, over, or under such property.
  7. That the Recipient will include the clauses set forth in Appendix D and Appendix F of this Assurance, as a covenant running with the land, in any future deeds, leases, licenses, permits, or similar instruments entered into by the Recipient with other parties:
    - a. for the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and
    - b. for the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.
  8. That this Assurance obligates the Recipient for the period during which Federal financial assistance is extended to the program, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property, or interest therein, or structures or improvements thereon, in which case the Assurance obligates the Recipient, or any transferee for the longer of the following periods:
-

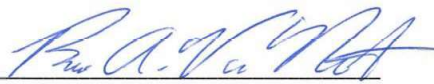
- a. the period during which the property is used for a purpose for which the Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits; or
  - b. the period during which the Recipient retains ownership or possession of the property.
9. The Recipient will provide for such methods of administration for the program as are found by the Secretary of Transportation or the official to whom he/she delegates specific authority to give reasonable guarantee that it, other recipients, sub-recipients, sub-grantees, contractors, subcontractors, consultants, transferees, successors in interest, and other participants of Federal financial assistance under such program will comply with all requirements imposed or pursuant to the Acts, the Regulations, and this Assurance.
10. The Recipient agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the Acts, the Regulations, and this Assurance.

By signing this ASSURANCE, the **Maine Department of Transportation** also agrees to comply (and require any sub-recipients, sub-grantees, contractors, successors, transferees, and/or assignees to comply) with all applicable provisions governing the **FHWA and USDOT** access to records, accounts, documents, information, facilities, and staff. You also recognize that you must comply with any program or compliance reviews, and/or complaint investigations conducted by the **FHWA and USDOT**. You must keep records, reports, and submit the material for review upon request to **FHWA and USDOT**, or its designee in a timely, complete, and accurate way. Additionally, you must comply with all other reporting, data collection, and evaluation requirements, as prescribed by law or detailed in program guidance.

The **Maine Department of Transportation** gives this ASSURANCE in consideration of and for obtaining any Federal grants, loans, contracts, agreements, property, and/or discounts, or other Federal-aid and Federal financial assistance extended after the date hereof to the recipients by the U.S. Department of Transportation under the **Federal Aid Highway Program**. This ASSURANCE is binding on **Maine**, other recipients, sub-recipients, sub-grantees, contractors, subcontractors and their subcontractors', transferees, successors in interest, and any other participants in the **Federal Aid Highway Program**. The person(s) signing below is authorized to sign this ASSURANCE on behalf of the Recipient.

**MAINE DEPARTMENT OF TRANSPORTATION**

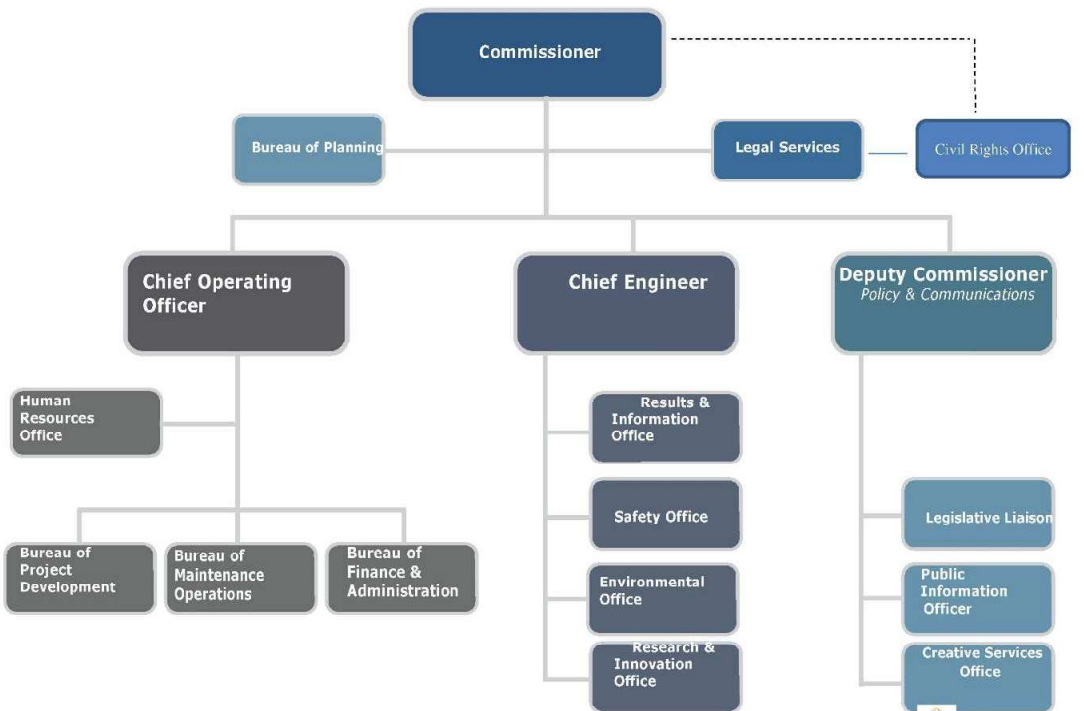
(Name of Recipient)

by   
Bruce A. Van Note, Commissioner

DATED Sept. 13, 2021

## APPENDIX B

### MaineDOT Organizational Structure



October 2021



## APPENDIX C

### Performance Requirements

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
  2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
  3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Nondiscrimination on the grounds of race, color, or national origin.
  4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the FHWA to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the FHWA, as appropriate, and will set forth what efforts it has made to obtain the information.
  5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:
    - a. withholding payments to the contractor under the contract until the contractor complies; and/or
    - b. cancelling, terminating, or suspending a contract, in whole or in part.
  6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto, The
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contractor will take action with respect to any subcontract or procurement as the Recipient or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

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## APPENDIX D

### CLAUSES FOR DEEDS TRANSFERRING UNITED STATES PROPERTY

The following clauses will be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of Assurance 4:

NOW, THEREFORE, the U.S. Department of Transportation as authorized by law and upon the condition that the Maine Department of Transportation will accept title to the lands and maintain the project constructed thereon in accordance with 23 U.S. Code 5 107, the Regulations for the Administration of the Federal Aid Highway Program, and the policies and procedures prescribed by the FHWA of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. S 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the Maine Department of Transportation all the right, title and interest of the U.S. Department of Transportation in and to said lands described in Exhibit A attached hereto and made a part hereof.

#### (HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto Maine Department of Transportation and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the Maine Department of Transportation, its successors and assigns.

The Maine Department of Transportation, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed I,] [and] \* (2) that the Maine Department of Transportation will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, US. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended [i and (3) that in the event of breach of any of the above-mentioned non-discrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation and its assigns as such interest existed prior to this instruction].\*

(\*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

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## APPENDIX E

### CLAUSES FOR TRANSFER OF REAL PROPERTY ACQUIRED OR IMPROVED UNDER THE ACTIVITY, FACILITY, OR PROGRAM

The following clauses will be included in deeds, licenses, leases, permits, or similar instruments entered into by the Maine Department of Transportation pursuant to the provisions of Assurance 7(a):

- A. The (grantee, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that:
  - 1. In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Acts and Regulations (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.
- B. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Nondiscrimination covenants, Maine Department of Transportation will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued. \*
- C. With respect to a deed, in the event of breach of any of the above Non-discrimination covenants, the Maine Department of Transportation will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will there upon revert to and vest in and become the absolute property of the Maine Department of Transportation and its assigns. \*

(\*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

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## APPENDIX F

### CLAUSES FOR CONSTRUCTION/USE/ACCESS TO REAL PROPERTY ACQUIRED UNDER THE ACTIVITY, FACILITY OR PROGRAM

The following clauses will be included in deeds, licenses, permits, or similar instruments/agreements entered into by the Maine Department of Transportation pursuant to the provisions of Assurance 7(b):

- A. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, "as a covenant running with the land") that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, set forth in this Assurance.
- B. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Nondiscrimination covenants, the Maine Department of Transportation will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued. \*
- C. With respect to deeds, in the event of breach of any of the above Nondiscrimination covenants, the Maine Department of Transportation will there upon revert to and vest in and become the absolute property of the Maine Department of Transportation and its assigns. \*

(\*Reverter clause and related language to be used only when it is determined that such a clause IS necessary to make clear the purpose of Title VI.)

## APPENDIX G

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following nondiscrimination statutes and authorities; including but not limited to:

### Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. 5 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. 5 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. 5 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. 5 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. 5 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC 5 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. 55 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38; • The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. 5 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

## APPENDIX H

### FEDERAL HIGHWAY ADMINISTRATION CIVIL RIGHTS ASSURANCE

The Maine Department of Transportation HEREBY CERTIFIES THAT, as a condition of receiving Federal financial assistance under the Federal Transit Act of 1964, as amended, it will ensure that:

1. No person on the basis of race, color or national origin will be subjected to discrimination in the level and quality of transportation services and transportation-related benefits.
2. The Maine Department of Transportation will compile, maintain, and submit in a timely manner Title VI information required in compliance with the Department of Transportation's Title VI regulation, 49 CFR Part 21.9.
3. The Maine Department of Transportation will make it known to the public that those person or persons alleging discrimination on the basis of race, color or national origin as it relates to the provision of transportation services and transportation-related benefits may file a complaint with the Federal Highway Administration and/or the U.S. Department of Transportation.

The person or persons whose signature appears below is authorized to sign this assurance on behalf of the grant applicant or recipient.



Bruce A. Van Note, Commissioner  
Maine Department of Transportation

DATE:

7/23/21

## APPENDIX I

### TITLE VI/NONDISCRIMINATION POLICY STATEMENT

The Commissioner of the Maine Department of Transportation (MaineDOT) is ultimately responsible for and committed to the effective implementation of the Title VI Program to achieve compliance with Title VI of the Civil Rights Act of 1964, as amended, the Civil Rights Restoration Act of 1987, and related statutes and regulations in all Federal programs and activities. Understanding that the Commissioner will not be performing any day-to-day implementation duties, the MaineDOT conducts its Title VI/Environmental Justice Program in a team approach by involving personnel from all program areas, with guidance from the Title VI Coordinator. Responsibility for the day to day administration of the Program will be delegated to the Title VI Program Coordinator who is currently the Director of the Civil Rights Office. The Title VI Program Coordinator has been delegated sufficient authority and responsibility to effectively carry out her duties.

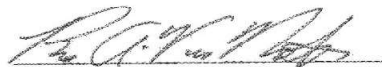
The Title VI Program Coordinator ensures MaineDOT's compliance with Title VI/Environmental Justice implementing regulations. Bureau Directors are responsible for Program implementation in their Bureaus and shall identify and delegate Title VI/Nondiscrimination Federal Program Area Liaisons to perform the routine data collection/data analysis and process reviews.

Inquiries concerning the MaineDOT's policies, investigations, complaints, compliance with applicable laws, regulations, and concerns regarding compliance with Title VI/Environmental Justice may be directed to:

Maine Department of Transportation  
# 16 State House Station  
Augusta, Maine 04333-1116  
Telephone (207) 624-3066 | TTY users Dial Relay: 711  
[sherry.tompkins@maine.gov](mailto:sherry.tompkins@maine.gov)

MaineDOT is committed to ensuring that the fundamental principles of equal opportunity are upheld in all decisions involving our employees and contractors/consultants, and to ensuring that the public-at-large is afforded access to all of our programs and services whether those programs and activities are federally funded or not.

This Policy Statement will be circulated throughout the MaineDOT, made available to the public, and be included by reference in all contracts, agreements, programs and services administered by the Department of Transportation.



Bruce A. Van Note, Commissioner

Date: 7/23/21

## APPENDIX J

### SAMPLE QUESTIONS FOR PROGRAM AREA REVIEWS

#### **Bureau of Planning**

- What measures do you take to ensure that a cross-section of people representative of the populations affected by the Department's projects, including identifying and proactively reaching out to various and diverse social, economic and ethnic groups, participate in the Department's Public Involvement Process?
- How do you ensure that appropriate accommodations are made for persons with Limited English Proficiency (LEP) (persons who have difficulty speaking, reading, writing and/or understanding English)? Were interpreters available when needed to assist with LEP needs?
- How do you collect and analyze statistical data on race, color and national origin of populations in all areas impacted by the Department's programs or services?

#### **Bureau of Project Development**

##### **Property Office**

- What mechanisms are used to identify what communities (minority, LEP) are represented in the negotiation phase of property acquisition?
- How do you ensure that Property Office staff who have direct contact with persons affected by the Department's acquisition of property needed for projects, including compliance with the Uniform Relocation Act of 1970?
- Have you received any complaints related to discrimination on the basis of race, color or national origin? How many and how did you process them?

##### **Multimodal Program**

- How do you ensure that Local Public Agencies (LPA) provide the Department with signed Title VI assurances (Form 1050.2A), including Appendices A and K, annually?
- How do you ensure that LPAs include in their subcontracts FHWA Form 1273 and Title VI Assurances, including Appendices A and K?
- Have you received any complaints related to discrimination on the basis of race, color or national origin? How many and how did you process them?
- How do ensure that public meetings and notices related to LPA projects comply with Title VI?

#### **Bureau of Maintenance and Operations**

- How do you ensure that the Bureau's activities comply with Title VI requirements of nondiscrimination on the basis of race, color or national origin?
- Have you received any complaints related to discrimination on the basis of race, color or national origin? How many and how did you handle them?

## APPENDIX K

Subrecipient Reviewed: \_\_\_\_\_ Date(s) of Desk Audit \_\_\_\_\_

Reviewer(s) \_\_\_\_\_

- ☐ Title VI/Nondiscrimination Policy Statement
- ☐ Title VI/Nondiscrimination Assurances
- ☐ Name and position of Title VI/Nondiscrimination Coordinator
- ☐ Title VI/Nondiscrimination Plan
- ☐ Procedures for processing external discrimination complaints
- ☐ A list of external discrimination complaints and lawsuits
- ☐ Any Accommodations for Limited English Proficient Persons
- ☐ Addressing Environmental Justice in minority populations and low-income populations
- ☐ Ensuring nondiscrimination in the public participation process
- ☐ Collecting and analyzing data to ensure nondiscrimination in programs and activities
- ☐ Process for ensuring that solicitations for bid/requests for proposals contain the Title VI/Nondiscrimination Assurance paragraph
- ☐ Process for ensuring subcontracts contain the appropriate contract provisions and language from the Title VI Assurances
- ☐ Process for Ensuring nondiscrimination in the award of contracts
- ☐ Developing a Title VI/Nondiscrimination Annual Work Plan & Accomplishment Report



## APPENDIX L

# SUB-RECIPIENT TITLE VI COMPLIANCE ASSESSMENT TOOL

23 Code of Federal Regulations (CFR) Part 200.9 (b)(7) requires that the Maine Department of Transportation (MaineDOT) conduct periodic reviews of cities, planning agencies and other recipients of federal-aid highway funds, including locally public agencies, to ensure that they are complying with Title VI of the Civil Rights Act of 1964. Title VI states that “no person in the United States shall be excluded from participation, denied the benefits of, or be subjected to discrimination in any Federally-funded program, policy or activity on the basis of race, color or national origin.”

MaineDOT has developed this assessment as a means of determining sub-recipient compliance; helping sub-recipients understand their Title VI responsibilities; and assisting MaineDOT in planning future training and technical assistance.

This assessment is part of MaineDOT’s Title VI review process and has been designed to take only a few minutes of your time. Please fax (207-624-3021) or mail (16 State House Station, Augusta, ME 04333-0016) the completed questionnaire with attachments to: Sherry Tompkins, Director of Civil Rights, no later than August 30, 2021

Questions or concerns may be emailed to: [sherry.tompkins@maine.gov](mailto:sherry.tompkins@maine.gov) or you may reach Sherry by phone at (207) 624-3066.

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### Baseline Questionnaire

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1. Name of your Agency: \_\_\_\_\_
2. Number of full-time and part-time employees: F/T \_\_\_\_\_ P/T \_\_\_\_\_
3. Has your agency provided written Title VI Assurances to MaineDOT? If not, please attach a copy. \_\_\_\_\_
4. Does your agency physically include the Civil Right Special Provisions (FHWA-Form 1273) in all contracts and ensure that they are included in all sub-contracts, including third-tier contracts? \_\_\_\_\_  
\_\_\_\_\_
5. Who is the Title VI contract person for your agency? \_\_\_\_\_.  
Does this person accept complaints from the public? \_\_\_\_\_ If not, who does? \_\_\_\_\_  
Please include title, email and telephone number for each person listed. \_\_\_\_\_  
\_\_\_\_\_

6. In the past three years, has your agency been named in a discrimination complaint or lawsuit? \_\_\_\_\_. If so, when and what was the nature of the complaint or lawsuit and the outcome. \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
7. Does your agency have a written discrimination complaint process? If so, please attach a copy. \_\_\_\_\_
8. Has your agency made the public aware of the right to file a complaint? \_\_\_\_\_ If so, by what mechanism \_\_\_\_\_
- \_\_\_\_\_. Please attach a copy.
9. Does your agency provide free translation services for persons with Limited English Proficiency (LEP)? \_\_\_\_\_. Please explain \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
10. In the past twelve (12) months, what has your agency done to receive and consider input from all citizen groups, especially minority, low income, disabled and transit-dependent? Please describe, if applicable. \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
11. Does your agency have a method to collect racial and ethnic data on citizens impacted by your projects? \_\_\_\_\_. If so, please describe. \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

12. Does your agency include the required Disadvantaged Business Enterprise (DBE) assurance language at 49 CFR 26.13(a) and (b) verbatim in all financial agreements, contracts and sub-contracts? (Please see DBE Assurance language below.) \_\_\_\_\_

\*\*\*\*\*

**§26.13 What assurances must recipients and contractors make?**

- (a) Each financial assistance agreement you sign with DOT operating administration (or a primary recipient) must include the following assurance:

The recipient shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR Part 26. The recipient shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure nondiscrimination in the award and administration of DOT assisted contracts. The recipient's DBE program, as required, by 49 CFR Part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S. C. 3801 et seq.).

- (b) Each contract you sign with a contractor (and each sub-contract the prime contractor signs with a sub-contractor) must include the following assurance:

The contractor, sub recipient or sub-contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

\*\*\*\*\*

13. Does your agency monitor DBEs on construction projects to ensure they are performing a commercially useful function (CUF)? \_\_\_\_\_. If so, where is this documented? \_\_\_\_\_.

If a DBE is not performing a CUF, what actions for steps have you taken? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Who do you notify? \_\_\_\_\_

14. Do you have any questions regarding this assessment or Title VI? \_\_\_\_\_  
Please include them here along with your email address and/or phone number and  
a MaineDOT representative will respond. \_\_\_\_\_

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15. Would your agency like Title VI training or other Civil Rights technical assistance  
from MaineDOT? \_\_\_\_\_. If yes, please explain. \_\_\_\_\_

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Does your agency have teleconferencing ability? \_\_\_\_\_

16. Please provide the name, title and contact information of the person who  
completed this baseline assessment. \_\_\_\_\_

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17. Provide an annual report on Title VI accomplishments for the previous year and  
goals for the next year. \_\_\_\_\_

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APPENDIX M

**Maine Department of Transportation  
External Discrimination Complaint Form**

**(Title VI/Nondiscrimination and ADA/Section 504 Complaints)**

|                                                                                                                                                                                                                                                                      |              |                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------------------------------------|
| <b>Name</b>                                                                                                                                                                                                                                                          | <b>Phone</b> | <b>Name of Person(s) That Discriminated Against You</b> |
| <b>Address</b>                                                                                                                                                                                                                                                       |              | <b>Location and Position of Person (If Known)</b>       |
| <b>City, State, Zip</b>                                                                                                                                                                                                                                              |              | <b>City, State, Zip</b>                                 |
| <b>Agency involved</b>                                                                                                                                                                                                                                               |              | <b>Date of Alleged Incident</b>                         |
| <b>Discrimination Because of:</b><br><input type="checkbox"/> Race <input type="checkbox"/> Color <input type="checkbox"/> National Origin <input type="checkbox"/> Sex<br><input type="checkbox"/> Age <input type="checkbox"/> Disability                          |              | <b>What Remedy are you requesting?</b>                  |
| <b>Explain As Briefly And Clearly As Possible What Happened And How You Were Discriminated Against. Indicate Who Was Involved. Be Sure To Include How Other Persons Were Treated Differently Than You. Also Attach Any Written Material Pertaining To Your Case.</b> |              |                                                         |
| <b>Signature</b>                                                                                                                                                                                                                                                     |              | <b>Date</b>                                             |

**Please Mail Complaint to:**

Maine Department of Transportation  
Civil Rights Office  
# 16 State House Station  
Augusta, Maine 04333-0016  
Or Call (207) 624- 3066 or TYY Relay 711

## APPENDIX N



### **NON-DISCRIMINATION/TITLE VI POSTER**

#### **Title VI and Nondiscrimination Commitment to all USDOT funded programs:**

Pursuant to Title VI of the Civil Rights Act of 1964 and related laws and regulations, MaineDOT will not exclude from participation in, deny the benefits of, or subject to discrimination anyone on the grounds of race, color, national origin, sex, age or disability.

#### **Complaint Procedures:**

MaineDOT has established a discrimination complaint procedure and will take prompt and reasonable action to investigate and eliminate discrimination when found. Any person who believes that he or she has been aggrieved by an unlawful discriminatory practice under Title VI has a right to file a formal complaint with MaineDOT. Any such complaint must be in writing and filed with the MaineDOT Title VI Coordinator within one hundred eighty (180) calendar days following the date of the alleged discriminatory occurrence. For more information, please contact the MaineDOT's Title VI Coordinator.

#### **ADA/504 Statement:**

Pursuant to Section 504 of the Rehabilitation Act of 1973 (Section 504), the Americans with Disabilities Act of 1990 (ADA) and related federal and state laws and regulations, MaineDOT will make every effort to ensure that its facilities, programs, services, and activities are accessible to those with disabilities. MaineDOT will provide reasonable accommodation to disabled individuals who wish to participate in public involvement events or who require special assistance to access MaineDOT facilities, programs, services or activities. Because providing reasonable accommodation may require outside assistance, organization or resources, MaineDOT asks that requests be made at least five (5) calendar days prior to the need for accommodation. Questions, concerns, comments or requests for accommodation should be made to MaineDOT's ADA Coordinator.

Services are provided free without charge for individuals with special needs with disabilities. Any fees will be paid by the recipient or subrecipient. The public will have access to translators, "I Speak Cards", TTY/TDD services and vital documents translated when requested.

#### **MaineDOT Title VI**

Sherry Y. Tompkins, Director  
Civil Rights Office  
Maine Department of Transportation  
16 State House Station  
Augusta, Maine 04333  
Office Phone: (207) 624-3066  
Cell Phone: (207) 592-0686  
TTY: Users Dial MAINE RELAY 711



## Call Us with Questions

If you believe that you have been discriminated against because of your race, color, national origin, sex, age, disability or income level, or because you have difficulty with the English language, call us at 207-624-3056. MaineDOT's Civil Rights Office will explain the process for filing a complaint. Complaint forms are on our website.

[mainedot.gov/civilrights/title-vi](https://mainedot.gov/civilrights/title-vi)

### Language translation services available upon request.

Services de traduction de langue disponibles sur demande.

Servicios de traducción disponibles bajo petición.

要求提供的 语言翻译服务。

Lugha ya tafsiri huduma inapatikana juu ya ombi.  
Ladenani panarjamahan Basa aya kana paménta.

بیلظنا دینع قحاتم غزلنا قهرج تنلی تاددخ

Có các dịch vụ phiên dịch khi quý vị yêu cầu.



**MaineDOT**

Maine Department of Transportation  
Civil Rights Office

16 State House Station  
Augusta, Maine 04333-0016

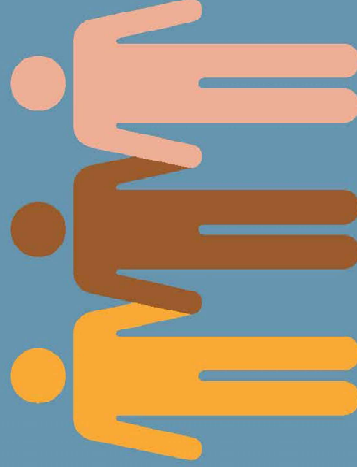
Phone: 207-624-3056

TTY Users Dial Maine Relay 711



[mainedot.gov](https://mainedot.gov)

## Know YOUR Rights

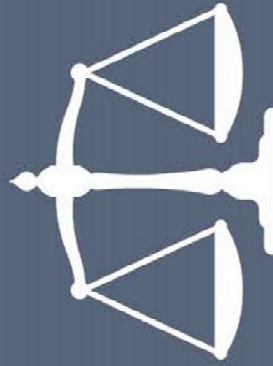


**MaineDOT**  
Civil Rights Office

# TITLE VI PROGRAM of the Civil Rights Act

MaineDOT's mission is to provide the people of Maine with a safe, efficient and effective transportation system. Our work is intended to serve the transportation needs of all people in Maine, regardless of race, color, national origin, sex, age, disability, income level or limited English proficiency.

MaineDOT is committed to assuring that none of its activities or programs encourage discrimination. We manage our programs without regard to race, color, national origin, sex, age, disability, income level, or the ability to speak or understand English.



MaineDOT will not allow discrimination by a MaineDOT employee or by recipients of federal-aid funds such as cities, counties, contractors, or planning agencies. MaineDOT prohibits all discriminatory practices which may result in:

- Unfair denial of any service, financial aid or benefit provided by the federally funded program;
- Different standards or requirements for participation in programs;
- Segregation or separate treatment within our programs;
- Differences in the quality, quantity or way in which a benefit is provided;
- Discrimination in any activities in a facility built with federal funds.

To ensure compliance with Title VI, and other related laws, MaineDOT:

- Avoids or reduces harmful health and environmental impacts which programs or activities might have on minority and low-income populations;
- Ensures the full and fair participation by all communities in its decision-making process;
- Prevents the denial, reduction or delay of benefits for minority and low-income populations;
- Provides language interpreters to people who have difficulty understanding English.

## How to File a Complaint

If you believe you have been discriminated against, you will need to file a written complaint. The complaint must be submitted within 180 days of the alleged discrimination. The complaint form is on our website for you to download.

**Be prepared to fill in:**

- Your name, address and phone number;
- The name and address of the organization you believe discriminated against you;
- Details of the alleged discrimination and any other relevant information; and
- The names of anyone we could contact regarding the alleged discrimination.

**Once you have filled in the form, mail it to us:**

**MaineDOT Civil Rights Office**

16 State House Station  
Augusta, Maine 04333-0016

207-624-3056







## Environmental Summary Sheet

WIN: 22511.01/22512.01

Date Submitted: May 11, 2023

Town: Old Town

CPD Team Leader: Andrea Brady

ENV Field Contact: Ryan Annis

NEPA Complete: 3/8/21 – Individual Categorical Exclusion: 771.117.d.13

☐ **Section 106**

SHPO Concurrence – No effect

Section 106 Resources: None

☐ **Section 4(f) and 6(f)**

Section 4(f)

No 4f properties.

Section 6(f)

No Takes

☒ **Maine Department of Inland Fisheries and Wildlife Essential Habitat**

Threatened yellow lampmussel and tidewater mucket were observed in July 2019. Mussel survey and relocation completed in July 2021. No followup monitoring required.

☒ **Section 7**

**Species of Concern: Atlantic Salmon – Located within DPS and Critical Habitat**

**Comments/References:** Formal Consultation with USFWS - Biological Opinion (BO) from USFWS was issued on March 3, 2021. **Special Conditions apply; see Special Provision 105**

**Species of Concern: Northern Long-Eared Bat – Project is Located in a Buffered Area with Positive Acoustic Survey Results.** May Affect

**Comments/References:** Formal Consultation with USFWS – Biological Opinion (BO) from USFWS was issued on May 3, 2023. Valid from March 31, 2023 through April 1, 2024; re-initiation required on or before April 1, 2024 if any continuing action is expected to affect the NLEB. **Special Conditions apply; see Special Provision 105**

☒ **Essential Fish Habitat**

EFH consultation for Atlantic Salmon was completed on March 5, 2021

☐ **Maine Department of Conservation/Public Lands, Submerged Land Lease**

Not Applicable

☐ **Maine Land Use Regulation Commission**

Not Applicable

☒ **Maine Department of Environmental Protection**

Permit by Rule (PBR) signed 8/27/2021

*\*Applicable Standards and Permit are included with the contract*

☒ **Army Corps of Engineers, Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Individual Permit**

- Work Start Notification Form and Compliance Certification Form to be completed by ENV Field Contact and submitted to ACOE with copy to Andrea Brady

- **Special Conditions apply; see Special Provision 105**

*\*Applicable Standards and Permit are included with the contract*

☐ **Stormwater Review**

N/A – Within regulated MS4 area but will not disturb more than one acre.

☒ **Special Provisions Required**

**Special Provision 105-Environmental Requirements**

N/A ☐

**Applicable** ☒

**Special Provision 656-Minor Soil Disturbance**

N/A ☒

**Applicable** ☐

**Standard Specification 656-Erosion Control Plan**

N/A ☐

**Applicable** ☒

**Special Provision 203-Dredge Material**

N/A ☐

**Applicable** ☒

**Special Provision 203-Special Fill-Streambed Materials**

N/A ☒

**Applicable** ☐

**Special Provision 610-Stream Channel Rock**

N/A ☒

**Applicable** ☐

**General Note for Hazardous Waste**

N/A ☒

**Applicable** ☐

**Special Provision 203-Hazardous Waste**

N/A ☒

**Applicable** ☐

*\*All permits and approvals based on plans/scope as of: 8/27/21*

## DEPARTMENT OF THE ARMY PERMIT

**Permittee** Maine Department of Transportation, 16 State House Station, Augusta, Maine 04333-0016

**Permit No.** NAE-2021-2324

**Issuing Office** New England District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

**Project Description:** Place temporary and permanent fill in order to replace two existing deteriorated Stillwater Avenue bridges. The project will result in approximately 14,015SF of permanent and 15,905SF of temporary stream bed impact.

The work is shown on the enclosed plans titled, "OLD TOWN – STILLWATER BRIDGES in one sheet dated "4/21/2021", STILLWATER AVENUE, OLD TOWN, PENOBSCOT COUNTY in one sheet undated; "OLD TOWN PENOBSCOT COUNTY STILLWATER BRIDGES OVER STILLWATER RIVER, STILLWATER AVENUE" in one sheet dated "5/12/2021"; and "STILLWATER BRIDGES OVER STILLWATER RIVER, OLD TOWN, PENOBSCOT COUNTY" in five sheets dated "5/12/2021".

**Project Location:**

In the Stillwater River at Old Town, Maine

**Permit Conditions:**

**General Conditions:**

1. The time limit for completing the work authorized ends on December 31, 2027. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

### Special Conditions:

1. The permittee shall ensure that a copy of this permit is at the work site (and the project office) authorized by this permit whenever work is being performed, and that all personnel with operational control of the site ensure that all appropriate personnel performing work are fully aware of its terms and conditions. The entire permit shall be made a part of any and all contracts and sub-contracts for work that affects areas of Corps jurisdiction at the site of the work authorized by this permit. This shall be achieved by including the entire permit in the specifications for work. The term "entire permit" means this permit (including its drawings, plans, appendices and other attachments) and also includes permit modifications.

If the permit is issued after the construction specifications, but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. If the permit is issued after receipt of bids or quotes, the entire permit shall be included in the contract or sub-contract. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions contained within the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps jurisdiction.

2. The permittee shall complete and return the enclosed [Work Start Notification Form] and [Mitigation Work Start Notification Form] to this office at least two weeks before the anticipated starting date.

3. The permittee shall complete and return the enclosed Compliance Certification Form to this office at least within one month following the completion of the authorized work.

4. Adequate sedimentation and erosion control devices, such as geo-textile silt fences or other devices capable of filtering the fines involved, shall be installed and properly maintained to minimize impacts during construction. These devices must be removed upon completion of work and stabilization of disturbed areas. The sediment collected by these devices must also be removed and placed upland, in a manner that will prevent its later erosion and transport to a waterway or wetland.

5. No additional fill (e.g., access roads, cofferdams) may be placed in waters or wetlands unless specifically authorized by this permit. If temporary fill is used, it shall be disposed of at an upland site and suitably contained to prevent its subsequent erosion into a water of the U.S., and the area shall be restored to its original contours (but not higher) and character upon completion of the project. During use, such temporary fill must be stabilized to prevent erosion or, in the case fill placed in flowing water (rivers or streams), clean washed stone should be used.

6. Except where stated otherwise, reports, drawings, correspondence and any other submittals required by this permit shall be sent to the U.S. Army Corps of Engineers at [cenae-r-me@usace.army.mil](mailto:cenae-r-me@usace.army.mil) with the subject line "Permit No. NAE-2021-2324" Documents which are not marked and addressed in this manner may not reach their intended destination and do not comply with the requirements of this permit.

7. All in-water work (e.g., the installation and removal of temporary bridge and cofferdam construction) will be conducted during the work windows outlined in the Formal Endangered Species Act Consultation between the Federal Highway Administration and the U.S. Fish & Wildlife Service dated March 3, 2021. The work windows are designed to minimize effects on the most sensitive life stages of Atlantic salmon.

### **Permit Special Conditions Resulting From Formal Endangered Species Act Consultation Between the Federal Highway Administration (FHWA) and the U.S. Fish & Wildlife Service (USFWS) (Reference USFWS Biological Opinion (BO) dated "March 3, 2021")**

1. The Maine DOT will hold a pre-construction meeting for appropriate Environmental Office staff from the Maine DOT, other Maine DOT staff, and the Maine DOT construction crew or contractor(s) to review all procedures and requirements for avoiding and lessening effects to Atlantic salmon and to ensure the protection of Atlantic salmon and its critical habitat. The Corps, the FHWA, and the Service will be provided an invitation to attend this meeting as well.

2. The Contractor will be required to submit a Soil Erosion and Water Pollution Control Plan (SEWPCP) for review and approval by the Maine DOT staff prior to the start of work. The plan includes the review of the implementation of any AMMs proposed.

3. As a component of the Soil Erosion and Water Pollution Control Plan (SEWPCP) for each project, the Maine DOT or their contractor will develop and implement a Spill Prevention Control and Countermeasure Plan (SPCCP) designed to avoid any stream impacts from hazardous chemicals associated with construction activities, such as diesel fuel, oil, lubricants, and other hazardous materials. All refueling or other construction equipment maintenance will be done at a location consistent with SPCCP and in a manner that avoids chemical or other hazardous materials getting into the stream. These measures include the following:

- a. All vehicle and equipment refueling activities shall occur more than 100 feet (30.5 meters) from any water source.
- b. All vehicles carrying fuel shall have specific equipment and materials needed to contain or clean up any incidental spills at the project site. Equipment and materials would include spill kits appropriately sized for specific quantities of fuel, shovels, absorbent pads, straw bales, containment structures and liners, and/or booms.

- c. During use, all pumps and generators shall have appropriate spill containment structures and/or absorbent pads in place.
  - d. All equipment used for in-stream work shall be cleaned of external oil, grease, dirt, and mud. Any leaks or accumulations of these materials would be corrected before entering streams or areas that drain directly to streams or wetlands.
4. The Maine DOT will implement their BMPs in accordance with the Maine DOT: Best Management Practices for Erosion and Sedimentation Control (Maine DOT 2008). This BMP manual outlines means and methods to prevent sedimentation into streams from construction activities or storm events. This document is included by reference. These BMP measures include many filtering and sedimentation control techniques designed to dissipate water discharge energy (flow), filtering out sediments, and allowing particulate matter to settle out from suspension to the greatest extent practicable.
5. Vegetation clearing adjacent to the stream will be minimized to the maximum extent practicable. All areas of disturbed soil will be mulched and seeded with an approved native or noninvasive herbaceous seed mix following construction and/or planted with native woody vegetation and trees appropriate during the first available planting season, except where riprap has been placed.
6. To minimize the spread of noxious weeds into the riparian zone, all off-road equipment and vehicles (operating off of existing open and maintained roads) must be cleaned prior to entering the construction site to remove all soil, seeds, vegetation, or other debris that could contain seeds or reproductive portions of plants. All equipment will be inspected prior to off-loading to ensure that they are clean.
7. All in-water work (e.g., the installation and removal of temporary bridge and cofferdam construction) will be conducted during the work windows outlined in Table 1 of the BO. The work windows are designed to minimize effects on the most sensitive life stages of Atlantic salmon:

**Table 1. In-water work windows and associated activities.**

| Activity                            | Window             |
|-------------------------------------|--------------------|
| Fill placement for temporary bridge | July 1 to March 30 |
| Installation of work trestle        | July 1 to March 30 |
| Pier demolition                     | July 1 to March 30 |
| Pile driving                        | July 1 to March 30 |
| Cofferdam construction              | July 1 to March 30 |
| Work within cofferdam               | Any time           |
| Cofferdam removal                   | Any time           |
| Placement of riprap                 | Any time           |
| Temporary fill removal              | Any time           |
| Temporary structure removal         | Any time           |

- 8. Construction of temporary approaches and abutments will be contained within turbidity curtains.
- 9. Fill for temporary approaches will be limited to no more than 25 percent of the width of the river.
- 10. Temporary fill will consist of non-erodible material on top of a geotextile fabric filter layer.
- 11. All areas of temporary waterway or wetland fill will be restored to their original contour and character upon the completion of the project.
- 12. Demolition and debris removal and disposal will comply with Section 202.03 of the Maine Dot's Standard Specifications. The Contractor will contain all demolition debris, including debris from wearing surface removal, saw cut slurry, dust, etc., and will not allow it to discharge to any resource. The Contractor will dispose of debris in accordance with the Maine Solid Waste Law (Title 38 M.R.S.A., Section 1301 et. seq.). The demolition plan, containment, and disposal of demolition debris will be addressed in the Contractor's SEWPCP.
- 13. Temporary bridge piles will be removed with a vibratory hammer.
- 14. Demolition of concrete piers of existing bridge will occur within containment such as turbidity curtains.
- 15. If piles are removed by cutting, they must be cut to one foot below the substrate level. If piles are removed by pulling, the work will be completed using a BMP to minimize turbidity.
- 16. Sheet pile installation and removal will be completed using a vibratory hammer.
- 17. To minimize fish stranding inside the cofferdam when dewatering, the Maine DOT environmental staff or similarly qualified consultants will adhere to the Maine DOT's Fish Check Protocol. Closure of the cofferdam will be delayed if any fish are observed inside. The Maine DOT will contact the Service's Maine Fish and Wildlife Complex at 207/902- 1586 (Patrick Dockens) any time an Atlantic salmon is observed.

18. Any concrete in contact with water must have a pH between 6.0 and 8.5, must be within one pH unit of the background pH level of the stream, and must have a turbidity level no greater than the receiving resource. Disposal or treatment of water not meeting release criteria will be addressed in the SEWPCCP. Discharging impounded water to the stream must take place in a manner that does not disturb the stream bottom or cause erosion. The Contractor shall be responsible for monitoring pH with a calibrated meter accurate to 0.1 units. A record of pH measurements shall be kept in the Environmental Field Representative's log. This requirement is applicable to concrete that is placed or spilled (including leakage from forms) as well as indirect contact via tools or equipment.

19. If adult Atlantic salmon are observed within the action area during pile driving, cofferdam construction, or fill or riprap placement in the water; the Maine DOT will follow procedures described in the Maine DOT's Fish Check Protocol to encourage the adult Atlantic salmon to leave the action area.

20. Steel H-pile size is limited to less than 14 inches and steel pipe pile size is limited to less than 30 inches.

21. A vibratory hammer will be used as much as possible for all pile driving activities.

22. Pile driving will occur during the day when fish are less active and Atlantic salmon migrations are minimized.

23. Any use of an impact hammer during pile driving will require the use of passive attenuation measures (changing hammer type, reducing driving duration, reducing force settings) and active measures (cushions and bubble curtains).

24. Hydroacoustic monitoring will be completed for all in-water pile driving with an impact hammer. Preliminary results of monitoring event(s) will be reported to the Service within five business days. Submittal of final data/report will occur within two months.

25. Minimize the adverse effects to and incidental take of Atlantic salmon by employing construction techniques and Atlantic salmon handling methods that avoid or minimize adverse effects to water quality, aquatic and riparian habitats, and all aquatic organisms.

26. Minimize the adverse effects to, and incidental take of Atlantic salmon related to aquatic habitat connectivity and fish passage by ensuring that the project is built as proposed.

27. Ensure the completion of a monitoring, evaluation, and reporting program to monitor project implementation and compliance with conservation and best management practices measures and to confirm that this project has been effective in minimizing incidental take from the FHWA funded and the Corps authorized activity. Efforts to minimize incidental take shall be conducted in accordance with BMPs, conservation measures, and as the action is further described in Section 2 of the BO, and such that the amount of allowable incidental take is not exceeded.

28. Construction impacts shall be confined to the minimum area necessary to complete the project.

29. Fish passage through the project area will be available at all times. The cofferdams or netting will never close off the stream, and flow will continue between the devices on either side of the stream.

30. Movement effects and other effects created from cofferdam use will be minimized by limiting cofferdam placement to the time necessary to complete instream activities, assuring that the cofferdam will be placed in the stream as shown in submitted drawings, and by maintaining a flow channel throughout the instream construction period. The cofferdams will be removed as soon as practicable after the completion of instream construction.

31. All Atlantic salmon mortalities from electrofishing or any other project related activities shall be reported to the Service's Maine Field Office at 207-902-1586 (Patrick Dockens) within 48 hours of occurrence. Any Atlantic salmon death(s) shall be immediately preserved (refrigerate or freeze) for delivery to the Service's office in East Orland, Maine. If the Service is not available, contact the National Marine Fisheries Service in Orono, Maine at 207-866-3755 (Dan Tierney) to arrange for delivery.

32. The Maine DOT Fish Check Protocol will be extended to any actions that lead to fill or riprap placed in the water to review the work area for adult Atlantic salmon before fill or riprap placement activities begin.

#### **Further Information:**

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

- ( ) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
- ( ) Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. 408).
- (X) Section 404 of the Clean Water Act (33 U.S.C. 1344).
- ( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

- a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.
- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from Natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.
- e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

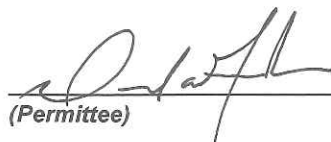
5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interested decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

  
(Permittee)

2/14/2022  
(Date)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Frank J Del  
Giudice

Digitally signed by Frank J Del  
Giudice  
Date: 2022.02.14 11:10:29  
-05'00'

14 FEB 2022

(District Engineer) Frank J. Del Giudice  
Chief, Permits & Enforcement Branch  
Regulatory Division  
For: District Engineer

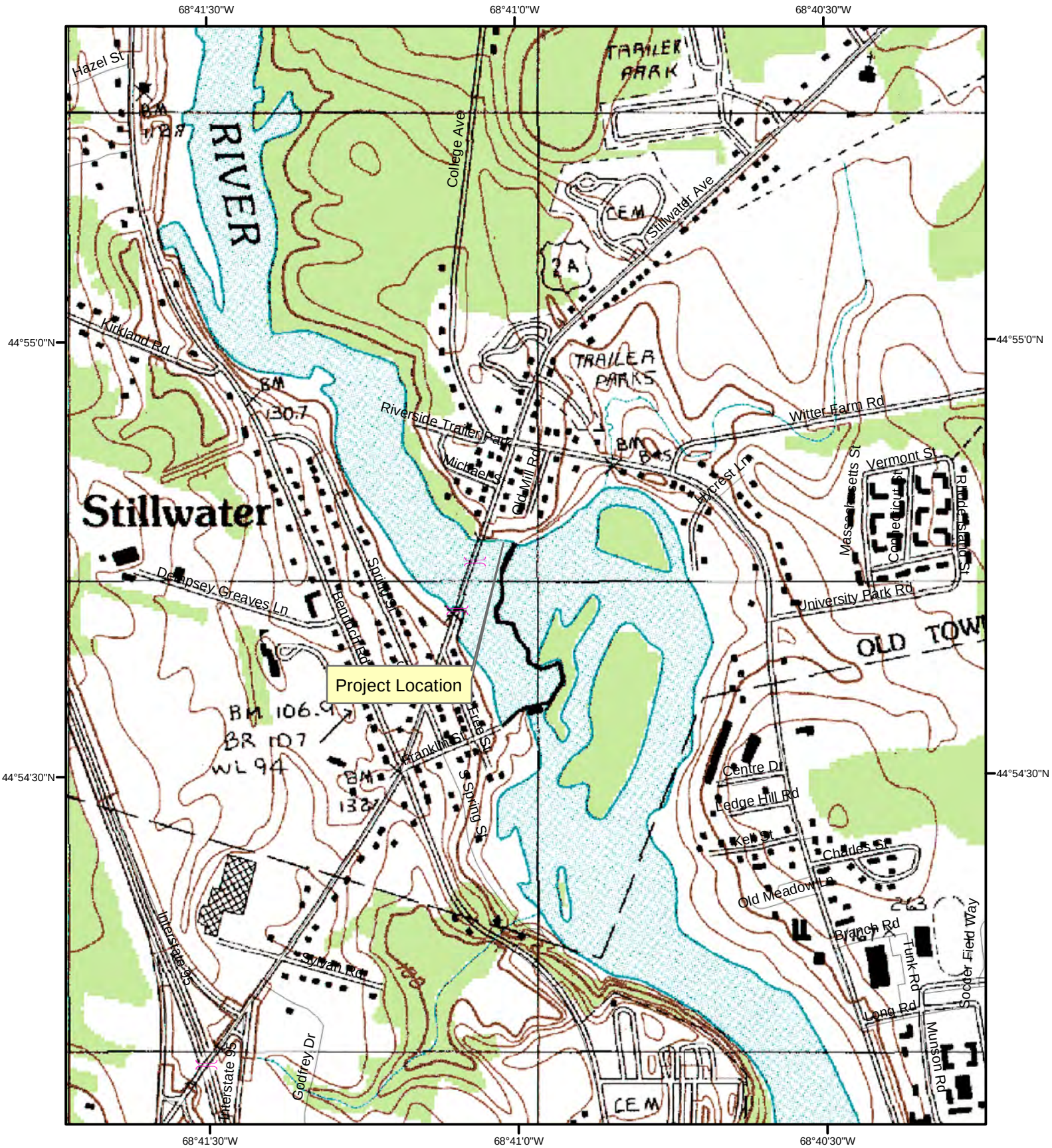
(Date)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(Transferee)

(Date)





-68.68471  
44.91206

0 145 290 580 870 1,160  
Feet

MDOT WIN 202511.00 & 22512.00  
Old Town- Stillwater Bridges  
bridge improvements

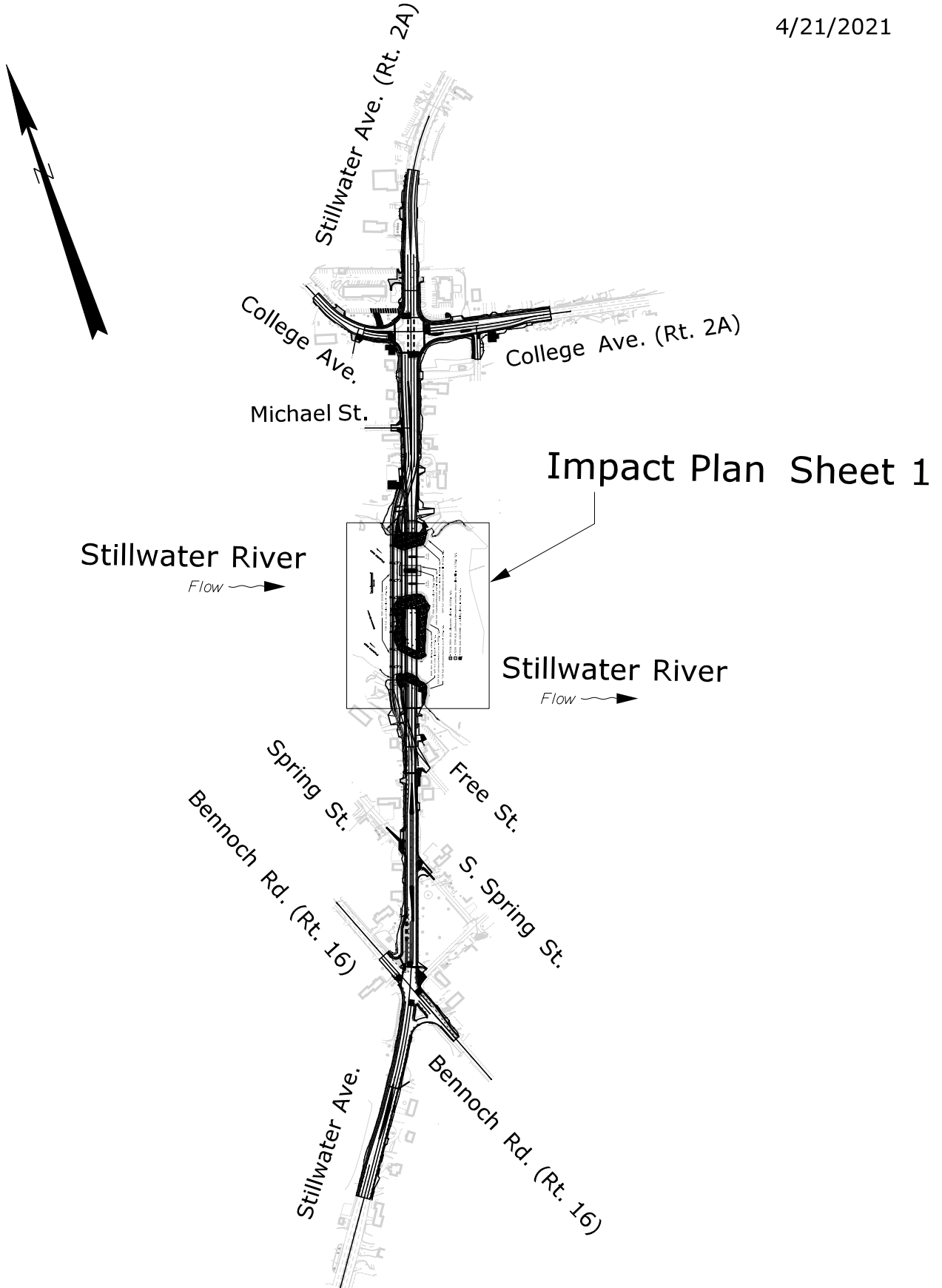


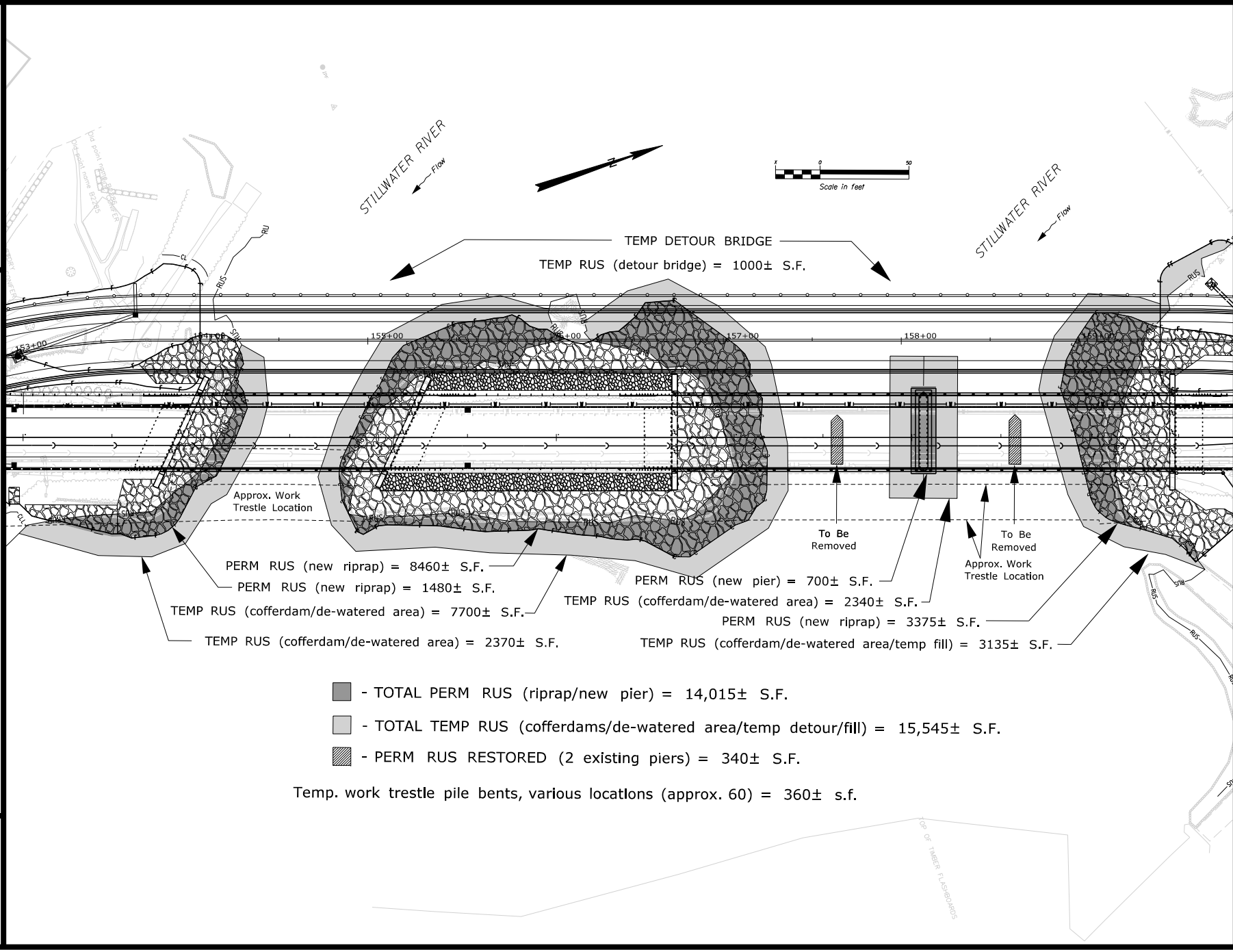


# Old Town - Stillwater Bridges

WIN 22511.00 / 22512.00

4/21/2021





Date:5/12/2021

Username: kwentworth

Division: HIGHWAY

Filename: ... \00\BRIDGE\MSTA\001\_ Title.dgn

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION



PLANS PREPARED BY:



500 Southborough Drive, Suite 105B  
South Portland, Maine 04106

SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Ninth Edition 2020.

DESIGN LOADING

Live Load ..... HL - 93 Maine Modified for Strength I

TRAFFIC DATA

Current (2023) AADT ..... 16360  
Future (2043) AADT ..... 18000  
DHV - % of AADT ..... 11%  
Design Hour Volume ..... 1907  
% Heavy Trucks (AADT) ..... 5%  
% Heavy Trucks (DHV) ..... 3%  
Directional Distribution (DHV) ..... 51%  
18 kip Equivalent P 2.0 ..... 339  
18 kip Equivalent P 2.5 ..... 323  
Design Speed (mph) ..... 25  
Functional Class ..... Minor Arterial  
Highway Corridor Priority ..... 2

HYDROLOGIC DATA

Drainage Area ..... 326 sq mi  
Design Discharge (Q50) ..... 43,050 cfs  
Check Discharge (Q100) ..... 52,540 cfs  
Headwater Elevation (Q1.1) ..... 93.7 ft  
Headwater Elevation (Q25) ..... 98.4 ft  
Headwater Elevation (Q50) ..... 98.6-98.7 ft  
Headwater Elevation (Q100) ..... 100.2-100.3 ft  
Discharge Velocity (Q1.1) ..... 5.6-5.9 fps  
Discharge Velocity (Q50) ..... 14.3-16.0 fps  
Discharge Velocity (Q100) ..... 16.2-17.7 fps

MATERIALS

Concrete:  
Curbs, Sidewalks, and Pier Subfooting ..... Class "S"  
All Other ..... Class "A"  
Reinforcing Steel:  
Mild Stainless ..... ASTM A615/A615M, Grade 60  
Stainless ..... ASTM A955/A995M, Grade 75  
Structural Steel:  
All Material (except as noted) ..... ASTM A709, Grade 50 (Metallized)  
High Strength Bolts ..... ASTM F3125, Grade A325, Type 3

BASIC DESIGN STRESSES

Class "S" Concrete ..... f 'c = 3000 psi  
Class "A" Concrete ..... f 'c = 4000 psi  
Mild Reinforcing Steel ..... f y = 60,000 psi  
Stainless Reinforcing Steel ..... f y = 75,000 psi

Structural Steel:  
ASTM A 709, Grade 50 ..... F y = 50,000 psi  
ASTM F 3125, Grade A 325 ..... F u = 120,000 psi

85% SUBMISSION  
NOT FOR  
CONSTRUCTION  
5/12/2021

OLD TOWN  
PENOBSCOT COUNTY  
STILLWATER BRIDGES  
OVER  
STILLWATER RIVER  
STILLWATER AVENUE

FEDERAL AID PROJECT NO.  
STP-02251(100) & STP-02251(200)

PROJECT LENGTH 0.106 mi.  
BRIDGE REPLACEMENTS  
BRIDGE NO.1 (1472)  
&  
BRIDGE NO.2 (2806)

|                  |                                                                                                                                                                                                                                        |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PROJECT LOCATION | Bridges are located 0.69 miles north east of I-95 Exit 193 N and Stillwater Ave.<br>Bridge No. 1 Coordinates of Latitude 44°54'41.50"N Longitude 68°41'5.70"W<br>Bridge No. 2 Coordinates of Latitude 44°54'45"N Longitude 68°41'4.0"W |
| PROGRAM AREA     | Bridge Program "Highway Bridges - Traditional"                                                                                                                                                                                         |
| OUTLINE OF WORK  | Bridge Construction: Bridge replacement and related approach work.                                                                                                                                                                     |

Description

Title Sheet ..... 1  
Estimated Quantities ..... 2  
General Notes ..... 3  
General Plan ..... 4  
Profile (2 Sheets) ..... 5-6  
Interpretive Subsurface Details (Bridge No. 1) (3 Sheets) ..... 7-9  
Interpretive Subsurface Details (Bridge No. 2) (3 Sheets) ..... 10-12  
Boring Logs (NOT INCLUDED IN SUBMISSION) ..... 13-14  
Highway Typical Sections ..... 15  
Temporary Bridge Plan (2 Sheets) ..... 16-17

BRIDGE NO. 1  
Abutment Typical Section and Notes ..... 18  
Pile Details ..... 19  
Abutment 1 Plan and Elevation ..... 20  
Abutment 1 Reinforcing Elevation ..... 21  
Abutment 1 Reinforcing Sections ..... 22  
Abutment 2 Plan and Elevation ..... 23  
Abutment 2 Reinforcing Elevation ..... 24  
Superstructure Sections and Notes ..... 25  
Framing Plan & Girder Elevation ..... 26  
Structural Steel Details ..... 27  
Structural Steel Notes, Camber Diagram, and Tables ..... 28  
Deck and Railing Layout Plan ..... 29  
Deck Reinforcement Plan and Section ..... 30  
Reinforcing Schedule ..... 31

BRIDGE NO. 2  
Abutment Typical Section and Notes ..... 32  
Pile Details ..... 33  
Abutment 1 Plan and Elevation ..... 34  
Abutment 1 Reinforcing Elevation ..... 35  
Abutment 1 Reinforcing Sections ..... 36  
Abutment 2 Plan and Elevation ..... 37  
Abutment 2 Reinforcing Elevation ..... 38  
Pier Plan, Elevation, and Section ..... 39  
Pier Reinforcing Details ..... 40  
Pier Bearing Details ..... 41  
Superstructure Sections and Notes ..... 42  
Framing Plans ..... 43  
Structural Steel Details ..... 44  
Girder Splice Details (NOT INCLUDED IN SUBMISSION) ..... 45  
Structural Steel Notes, Camber Diagram, and Tables ..... 46  
Deck and Railing Layout Plan ..... 47  
Deck Reinforcement Plan ..... 48  
Deck Reinforcement Sections ..... 49  
Reinforcing Schedule ..... 50  
ROW Plans (NOT INCLUDED IN SUBMISSION) ..... 51

UTILITIES

Emera Maine  
Fairpoint Communications  
Old Town Water and Sewer District  
Spectrum  
Maine Fiber

MAINTENANCE OF TRAFFIC

Temporary two-lane bridge with a minimum curb to curb width of 30'-0" on the upstream side of proposed bridges, with temporary 5'-0" sidewalk on west side of temporary bridge.

WIN 022512.00  
WIN 022511.00

OLD TOWN  
STILLWATER BRIDGES  
TITLE SHEET

SHEET NUMBER

1

PRELIMINARY  
NOT FOR  
CONSTRUCTION  
5/12/2021

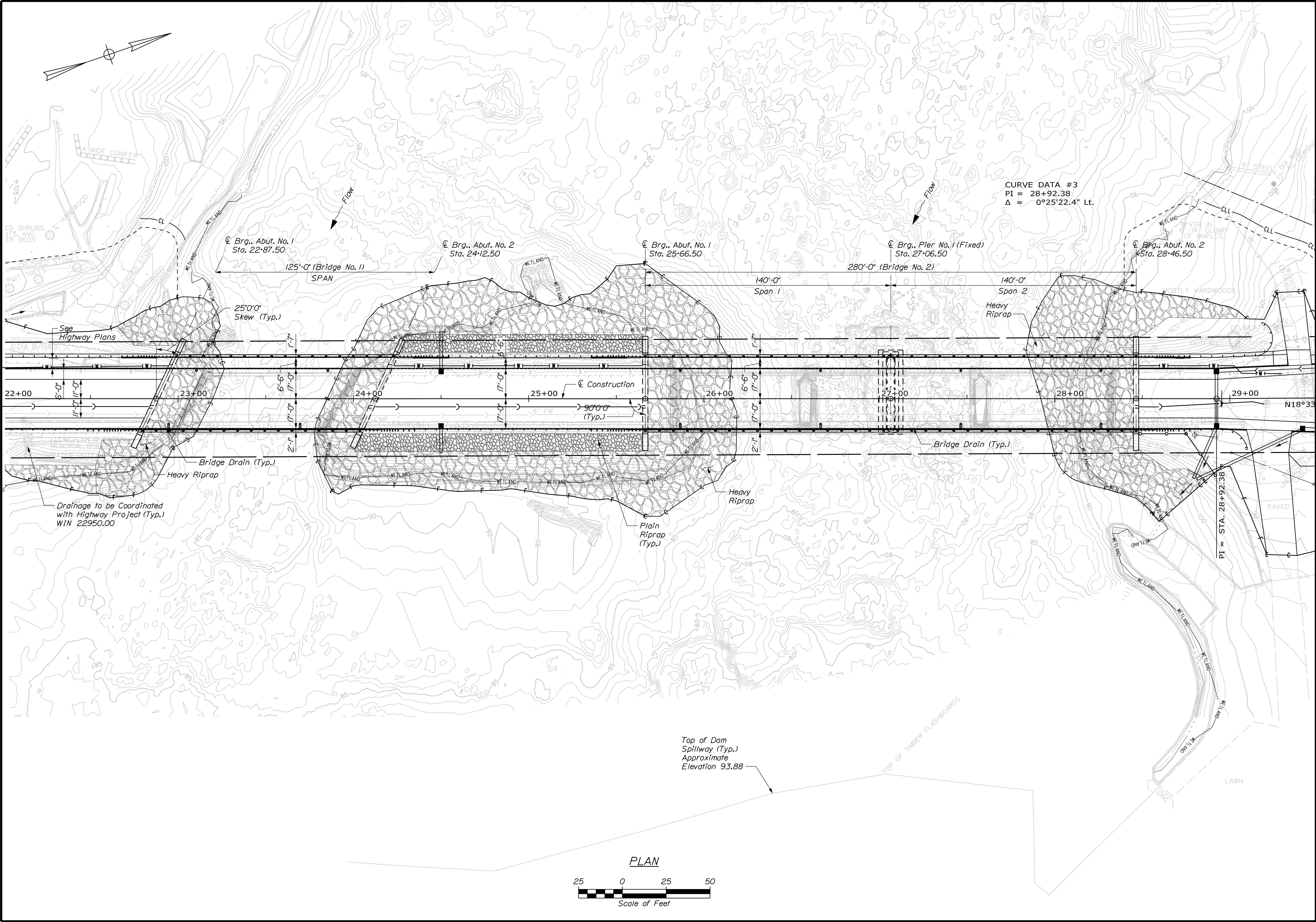
| PROJECT INFORMATION     |               |
|-------------------------|---------------|
| PROGRAM                 | BRIDGE        |
| PROJECT MANAGER         | MICHAEL WIGHT |
| DESIGNER                | ROBERT BLUNT  |
| CONSULTANT              | vhb           |
| PROJECT RESIDENT        |               |
| CONTRACTOR              |               |
| PROJECT COMPLETION DATE |               |

|                                                |               |      |                 |
|------------------------------------------------|---------------|------|-----------------|
| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | APPROVED      | DATE |                 |
|                                                |               |      |                 |
|                                                | COMMISSIONER: |      |                 |
|                                                |               |      | CHIEF ENGINEER: |



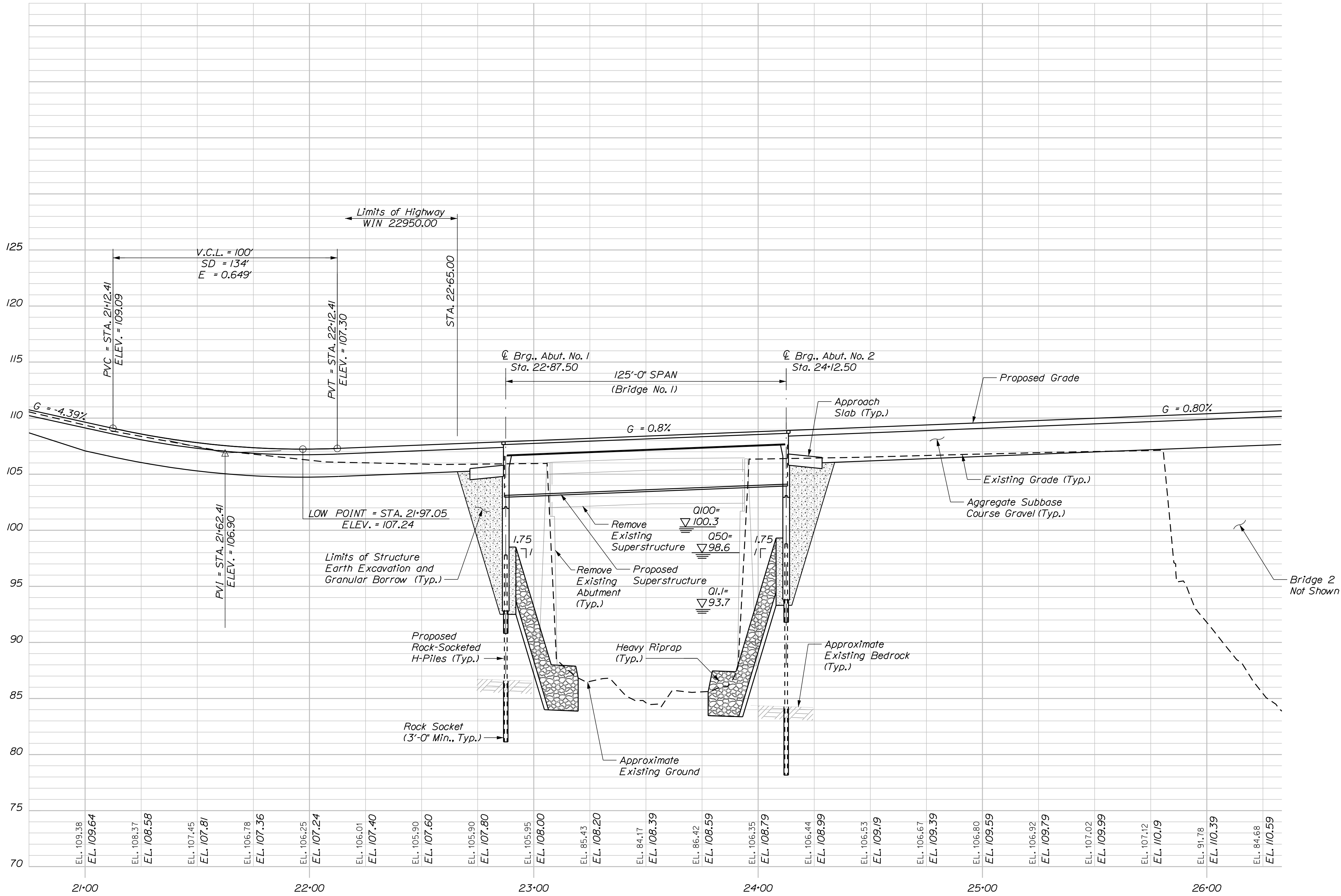
Date: 5/12/2021

Filename: ... \BRIDGE\MSTA\004\_BDPlan\_1.dgn Division: HIGHWAY

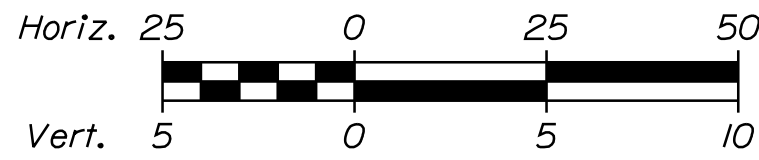


|                                                                             |  |                                                     |  |                                    |  |                                                                                                                                                        |  |                            |  |
|-----------------------------------------------------------------------------|--|-----------------------------------------------------|--|------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------|--|
| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION                              |  | PRELIMINARY<br>NOT FOR<br>CONSTRUCTION<br>5/12/2021 |  | BRIDGE NO. 1472<br>BRIDGE NO. 2806 |  | WIN 022512.00<br>WIN 022511.00                                                                                                                         |  | BRIDGE PLANS               |  |
| STILLWATER BRIDGES<br>OVER STILLWATER RIVER<br>OLD TOWN<br>PENOBSCOT COUNTY |  | DATE<br>5/12/21<br>5/12/21                          |  | BY<br>P. DONOVAN<br>RS. BLUNT      |  | DESIGN-DETAILED<br>CHECKED-REVIEWED<br>DESIGN-DETAILED<br>DESIGN-DETAILED<br>REVISIONS 1<br>REVISIONS 2<br>REVISIONS 3<br>REVISIONS 4<br>FIELD CHANGES |  | SHEET NUMBER<br>4<br>OF 51 |  |



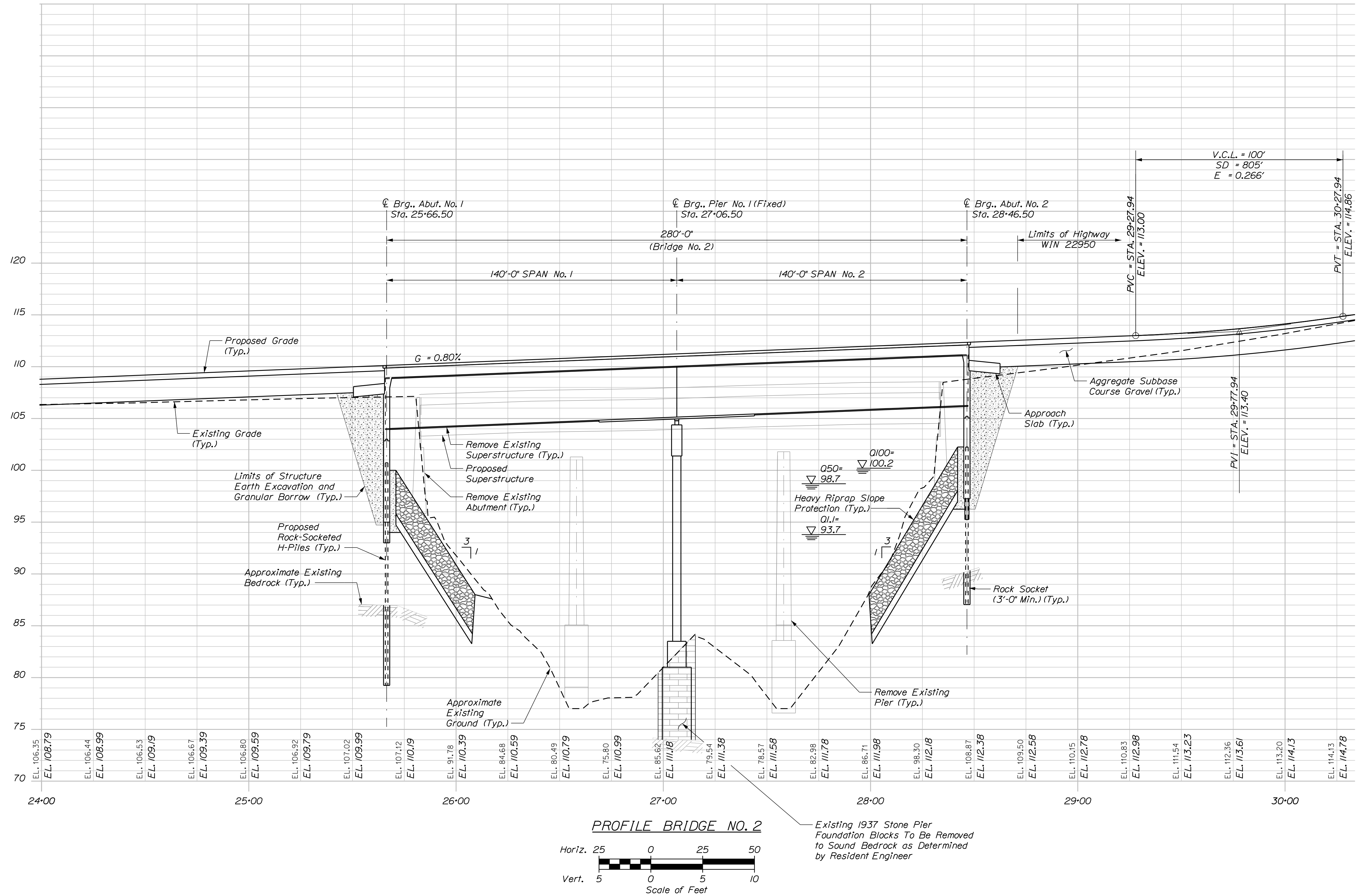


PROFILE BRIDGE NO. 1



|                |  |  |                                                                               |  |  |                               |  |  |          |  |  |          |  |  |                                                             |  |  |                                                |  |  |              |  |  |
|----------------|--|--|-------------------------------------------------------------------------------|--|--|-------------------------------|--|--|----------|--|--|----------|--|--|-------------------------------------------------------------|--|--|------------------------------------------------|--|--|--------------|--|--|
| SHEET NUMBER   |  |  | STILLWATER BRIDGES<br>OVER STILLWATER RIVER<br>OLD TOWN      PENOBSCOT COUNTY |  |  | PROJ. MANAGER   MICHAEL WIGHT |  |  | BY       |  |  | DATE     |  |  | PRELIMINARY<br><br>NOT FOR<br>CONSTRUCTION<br><br>5/12/2021 |  |  | STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION |  |  |              |  |  |
| 5<br><br>OF 51 |  |  | PROFILE (1 OF 2)                                                              |  |  | DESIGN-DETAILED               |  |  | TJ COOK  |  |  | 5/12/21  |  |  |                                                             |  |  |                                                |  |  |              |  |  |
|                |  |  |                                                                               |  |  | CHECKED-REVIEWED              |  |  | CT AYERS |  |  | RS BLUNT |  |  |                                                             |  |  | 5/12/21                                        |  |  |              |  |  |
|                |  |  |                                                                               |  |  | DESIGN-DETAILED2              |  |  |          |  |  |          |  |  |                                                             |  |  |                                                |  |  |              |  |  |
|                |  |  |                                                                               |  |  | DESIGN-DETAILED3              |  |  |          |  |  |          |  |  |                                                             |  |  |                                                |  |  |              |  |  |
|                |  |  |                                                                               |  |  | REVISIONS 1                   |  |  |          |  |  |          |  |  |                                                             |  |  |                                                |  |  |              |  |  |
|                |  |  |                                                                               |  |  | REVISIONS 2                   |  |  |          |  |  |          |  |  |                                                             |  |  |                                                |  |  |              |  |  |
|                |  |  |                                                                               |  |  | REVISIONS 3                   |  |  |          |  |  |          |  |  |                                                             |  |  |                                                |  |  |              |  |  |
|                |  |  |                                                                               |  |  | REVISIONS 4                   |  |  |          |  |  |          |  |  |                                                             |  |  |                                                |  |  |              |  |  |
|                |  |  |                                                                               |  |  | FIELD CHANGES                 |  |  |          |  |  |          |  |  |                                                             |  |  |                                                |  |  |              |  |  |
|                |  |  |                                                                               |  |  |                               |  |  |          |  |  |          |  |  | BRIDGE NO. 1472<br>BRIDGE NO. 2806                          |  |  | WIN 022512.00<br>WIN 022511.00                 |  |  | BRIDGE PLANS |  |  |



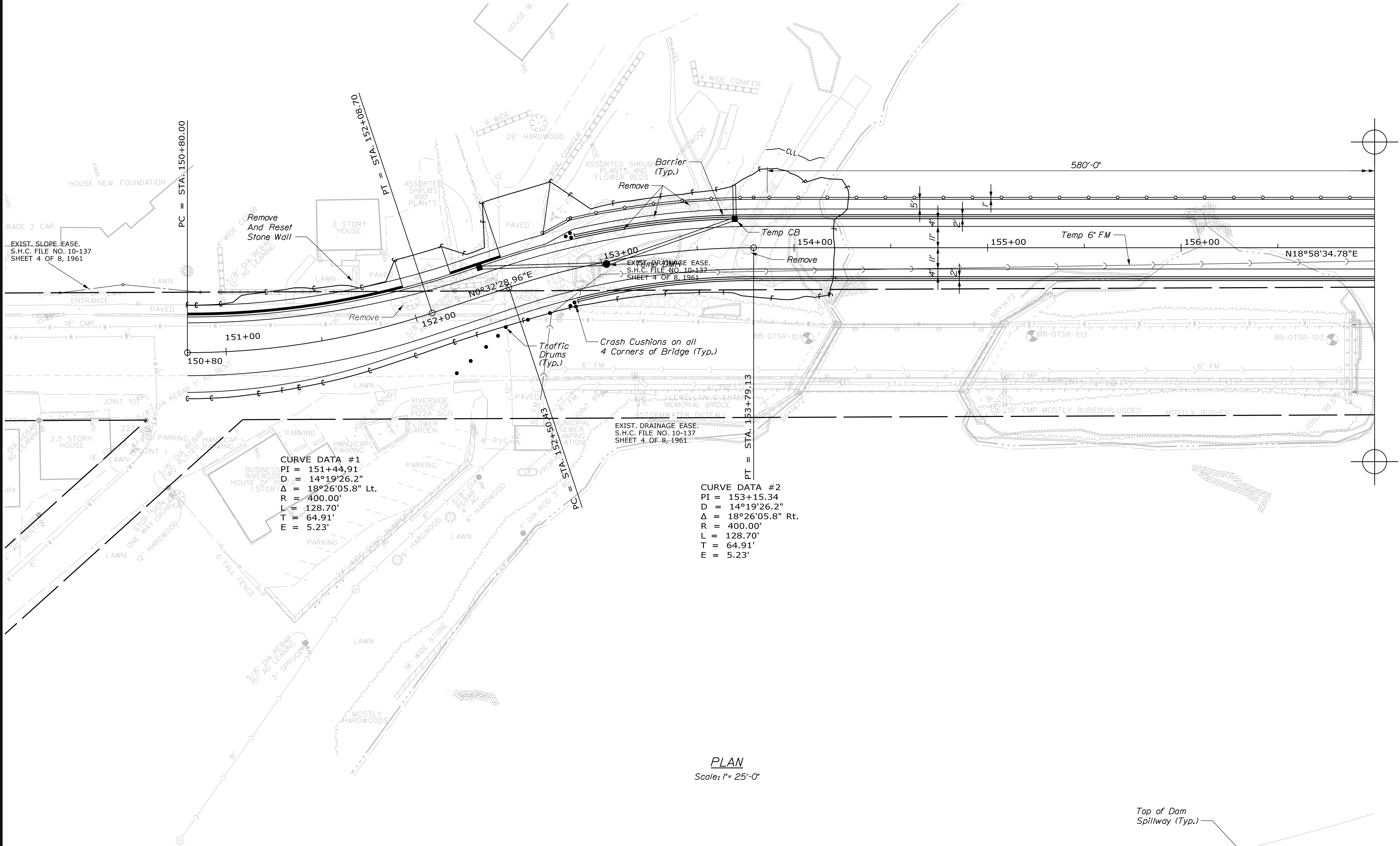




Date:5/12/2021

Division: HIGHWAY

Filename: ... \BRIDGE\MSTA\016\_Temp-Brg1.dgn



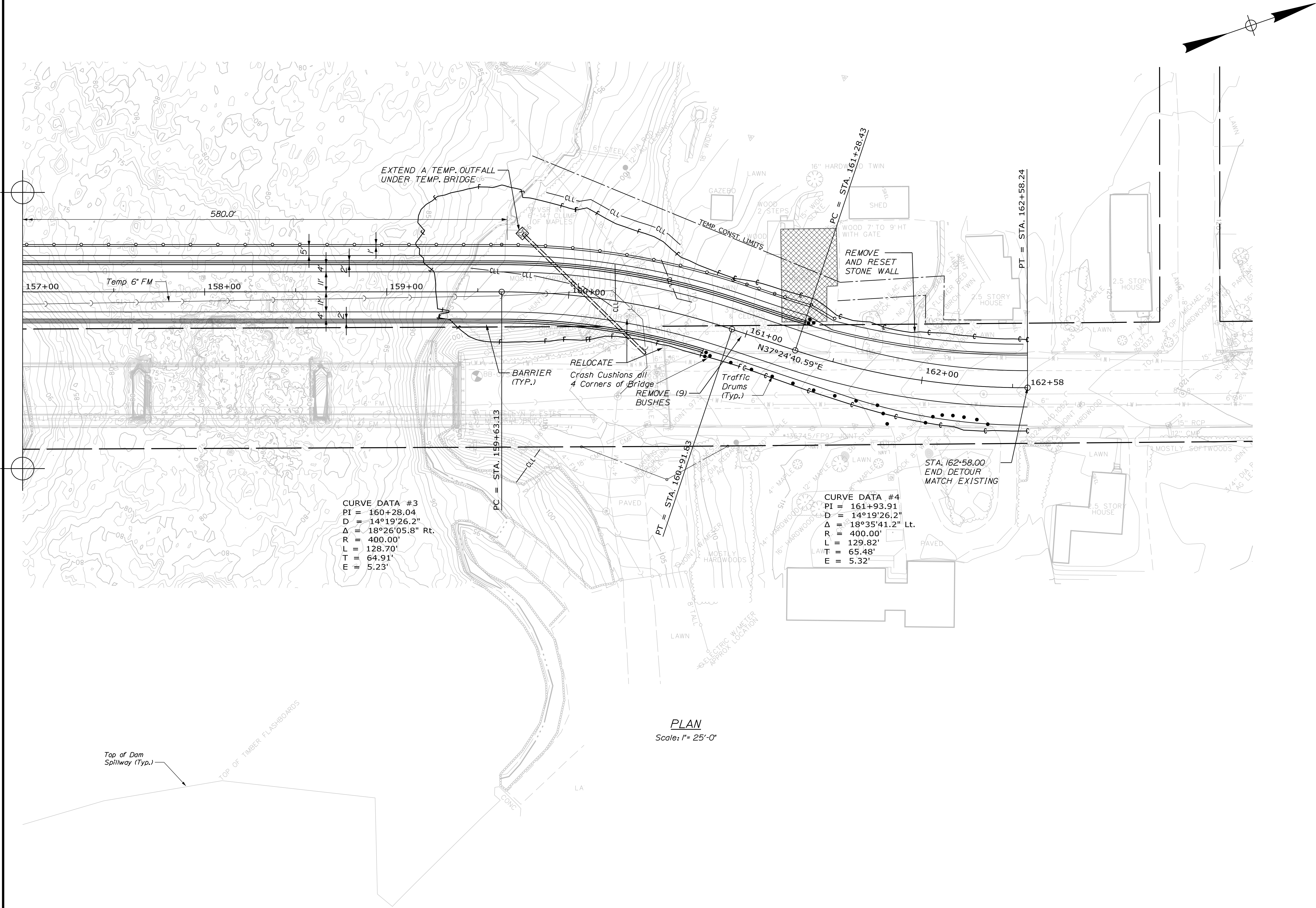
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|-----------------------|--|------------------------------|--|------------------------------------|--|--------------------------------|--|--------------|--|
| STATE OF MAINE        |  | DEPARTMENT OF TRANSPORTATION |  | BRIDGE NO. 1472<br>BRIDGE NO. 2806 |  | WIN 022512.00<br>WIN 022511.00 |  | BRIDGE PLANS |  |
| PRELIMINARY           |  | NOT FOR CONSTRUCTION         |  | 5/12/2021                          |  |                                |  |              |  |
| STILLWATER BRIDGES    |  | OVER STILLWATER RIVER        |  | PENOBSCOT COUNTY                   |  | OLD TOWN                       |  | SHEET NUMBER |  |
| TEMPORARY BRIDGE PLAN |  | (1 OF 2)                     |  |                                    |  |                                |  | 16           |  |
|                       |  |                              |  |                                    |  |                                |  | OF 51        |  |



Date:5/12/2021

Division: HIGHWAY

Filename: ... \BRIDGE\MSTA\017\_Temp-Brg2.dgn



|                                                                               |  |  |                                |          |            |         |
|-------------------------------------------------------------------------------|--|--|--------------------------------|----------|------------|---------|
| STILLWATER BRIDGES<br>OVER STILLWATER RIVER<br>OLD TOWN      PENOBSCOT COUNTY |  |  | PROJ. MANAGER   MICHAEL WRIGHT |          | BY         | DATE    |
| TEMPORARY BRIDGE PLAN<br>(2 OF 2)                                             |  |  | DESIGN-DETAILED                | TJ COOK  | P. DONOVAN | 5/12/21 |
|                                                                               |  |  | CHECKED-REVIEWED               | CT AYERS | RS BLUNT   | 5/12/21 |
|                                                                               |  |  | DESIGN2-DETAILED2              |          |            |         |
|                                                                               |  |  | DESIGN3-DETAILED3              |          |            |         |
|                                                                               |  |  | REVISIONS 1                    |          |            |         |
|                                                                               |  |  | REVISIONS 2                    |          |            |         |
|                                                                               |  |  | REVISIONS 3                    |          |            |         |
|                                                                               |  |  | REVISIONS 4                    |          |            |         |
| FIELD CHANGES                                                                 |  |  |                                |          |            |         |
| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION                                |  |  |                                |          |            |         |
| PRELIMINARY<br>NOT FOR<br>CONSTRUCTION<br>5/12/2021                           |  |  |                                |          |            |         |
| BRIDGE NO. 1472<br>BRIDGE NO. 2806                                            |  |  |                                |          |            |         |
| WIN 022512.00<br>WIN 022511.00                                                |  |  |                                |          |            |         |
| BRIDGE PLANS                                                                  |  |  |                                |          |            |         |



**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**PERMIT BY RULE NOTIFICATION FORM**

(For use with DEP Regulation, Natural Resources Protection Act - Permit by Rule Standards, Chapter 305)

| APPLICANT INFORMATION (Owner)                |                                                                                                                                                                                                                                                                 |                            |                                                                        | AGENT INFORMATION (If Applying on Behalf of Owner)     |                                                             |                     |                  |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------|---------------------|------------------|
| Name:                                        | MaineDOT                                                                                                                                                                                                                                                        |                            |                                                                        | Name:                                                  | Andrea Brady, MaineDOT ENV                                  |                     |                  |
| Mailing Address:                             | 15 Station House Station                                                                                                                                                                                                                                        |                            |                                                                        | Mailing Address:                                       |                                                             |                     |                  |
| Mailing Address:                             |                                                                                                                                                                                                                                                                 |                            |                                                                        | Mailing Address:                                       |                                                             |                     |                  |
| Town/State/Zip:                              | Augusta, ME 04344                                                                                                                                                                                                                                               |                            |                                                                        | Town/State/Zip:                                        |                                                             |                     |                  |
| Daytime Phone #:                             | (207) 624-3000                                                                                                                                                                                                                                                  | Ext:                       |                                                                        | Daytime Phone #:                                       | (207) 592-0523                                              | Ext:                |                  |
| Email Address:                               | Andrea.F.Brady@maine.gov                                                                                                                                                                                                                                        |                            |                                                                        | Email Address:                                         | andrea.f.brady@maine.gov                                    |                     |                  |
| PROJECT INFORMATION                          |                                                                                                                                                                                                                                                                 |                            |                                                                        |                                                        |                                                             |                     |                  |
| Part of a larger project? (check 1):         | <input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No                                                                                                                                                                                          | After the Fact? (check 1): | <input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No | Project involves work below mean low water? (check 1): | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | Name of waterbody:  | Stillwater River |
| Project Town:                                | Oldtown, ME                                                                                                                                                                                                                                                     | Town Email Address:        |                                                                        |                                                        |                                                             | Map and Lot Number: |                  |
| Brief Project Description:                   | Replacement of 2 structurally deficient bridges with a 125 ft span on Bridge 1 and 2 140-ft spans on Bridge 2. Traffic will be maintained via a 2-lane temp bridge on the upstream side. Temporary work trestle supported by temp pile bents on downstream side |                            |                                                                        |                                                        |                                                             |                     |                  |
| Project Location & Brief Directions to Site: | Stillwater Bridges #1472 & 2806, carrying Stillwater Avenue over the Stillwater River, located 0.69 miles north east of I-95 Exit 193 N and Stillwater Ave.                                                                                                     |                            |                                                                        |                                                        |                                                             |                     |                  |

**PERMIT BY RULE (PBR) SECTIONS (Check at least one):** I am filing notice of my intent to carry out work that meets the requirements for Permit-by-Rule (PBR) under DEP Rules, [Chapter 305](#). I and my agent(s), if any, have read and will comply with all of the standards in the Sections checked below.

- |                                                                   |                                                                               |                                                                     |
|-------------------------------------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------|
| <input type="checkbox"/> Sec. (2) Act. Adj. to Prot. Natural Res. | <input type="checkbox"/> Sec. (9) Utility Crossing                            | <input type="checkbox"/> Sec. (16) Coastal Sand Dune Projects       |
| <input type="checkbox"/> Sec. (3) Intake Pipes                    | <input type="checkbox"/> Sec. (10) Stream Crossing                            | <input type="checkbox"/> Sec. (17) Transfer/Permit Extension        |
| <input type="checkbox"/> Sec. (4) Replacement of Structures       | <input checked="" type="checkbox"/> Sec. (11) State Transportation Facilities | <input type="checkbox"/> Sec. (18) Maintenance Dredging             |
| <input type="checkbox"/> Sec. (6) Movement of Rocks or Veg.       | <input type="checkbox"/> Sec. (12) Restoration of Natural Areas               | <input type="checkbox"/> Sec. (19) Act. Near SVP Habitat            |
| <input type="checkbox"/> Sec. (7) Outfall Pipes                   | <input type="checkbox"/> Sec. (13) F&W Creat./Water Qual. Improv.             | <input type="checkbox"/> Sec. (20) Act. Near Waterfowl/Bird Habitat |
| <input type="checkbox"/> Sec. (8) Shoreline Stabilization         | <input type="checkbox"/> Sec. (15) Public Boat Ramps                          |                                                                     |

**NOTE: Municipal permits also may be required. Contact your local code enforcement office for information. Federal permits may be required for stream crossings and for projects involving wetland fill. Contact the Army Corps of Engineers at the Maine Project Office for information.**

**NOTIFICATION FORMS CANNOT BE ACCEPTED WITHOUT THE NECESSARY ATTACHMENTS AND FEE**

- ☒ **Attach** all required submissions for the PBR Section(s) checked above. The required submissions for each PBR Section are outlined in Chapter 305 and may differ depending on the Section you are submitting under.
- ☒ **Attach** a location map that clearly identifies the site (U.S.G.S. topo map, Maine Atlas & Gazetteer, or similar).
- ☐ **Attach** Proof of Legal Name if applicant is a corporation, LLC, or other legal entity. Provide a copy of Secretary of State's registration information (available at <http://icrs.informe.org/nei-sos-icrs/ICRS?MainPage=x>). Individuals and municipalities are not required to provide any proof of identity.

**FEE:** Pay by credit card at the [Payment Portal](#). The Permit-by-Rule fee may be found here <https://www.maine.gov/dep/feeschedule.pdf> and is currently \$256.

- ☐ **Attach** payment confirmation from the Payment Portal when filing this notification form.

*Internal Billing-State Agency :  
WIN 22511\_22512*

**Signature & Certification:**

- I authorize staff of the Departments of Environmental Protection, Inland Fisheries & Wildlife, and Marine Resources to access the project site for the purpose of determining compliance with the rules.
- I understand that this PBR becomes effective 14 calendar days after receipt by the Department of this completed form, the required submissions, and fee, *unless the Department approves or denies the PBR prior to that date.*

**By signing this Notification Form, I represent that the project meets all applicability requirements and standards in Chapter 305 rule and that the applicant has sufficient title, right, or interest in the property where the activity takes place.**

Signature of Agent or Applicant (may be typed):

*Andrea F. Brady*

Date:

8/27/2021

**Keep a copy as a record of permit.** Email this completed form with attachments to DEP at: [DEP.PBRNotification@maine.gov](mailto:DEP.PBRNotification@maine.gov). DEP will send a copy to the Town Office as evidence of DEP's receipt of notification. No further authorization will be issued by DEP after receipt of notice. A PBR is valid for two years, except Section 4, "Replacement of Structures," are valid for three years. **Work carried out in violation of the Natural Resources Protection Act or any provision in Chapter 305 is subject to enforcement.**

*Just A. Cull*

Accepted 9/12/2021

## **11. State transportation facilities**

### **A. Applicability**

- (1) This section applies to the maintenance, repair, reconstruction, rehabilitation, replacement or minor construction of a State Transportation Facility carried out by, or under the authority of, the Maine Department of Transportation (MaineDOT) or the Maine Turnpike Authority, including any testing or preconstruction engineering, and associated technical support services.
- (2) This section does not apply to an activity within a coastal sand dune system.

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NOTE: The construction of a transportation facility other than roads and associated facilities may be subject to the Storm Water Management Law, 38 M.R.S.A. Section 420-D.

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### **B. Standards**

- (1) Photographs of the area to be altered by the activity must be taken before work on the site begins. The photographs must be kept on file and be made available at the request of the DEP.
- (2) The activity must be reviewed by the Department of Inland Fisheries and Wildlife and the Department of Marine Resources, as applicable. The applicant must coordinate with the reviewing agencies and incorporate any recommendations from those agencies into the performance of the activity.
- (3) All construction activities undertaken must be detailed in a site-specific Soil Erosion and Water Pollution Control Plan and conducted in accordance with MaineDOT's Best Management Practices for Erosion and Sediment Control, dated January 2000, and Standard Specifications, dated December 2002.
- (4) Alignment changes may not exceed a distance of 200 feet between the old and new center lines in any natural resource.
- (5) The activity may not alter more than 300 feet of shoreline (both shores added together) within a mile stretch of any river, stream or brook, including any bridge width or length of culvert.
- (6) The activity may not alter more than 150 feet of shoreline (both shores added together) within a mile stretch of any outstanding river segment identified in 38 M.R.S.A. 480-P, including any bridge width or length of culvert.
- (7) The activity must minimize wetland intrusion. The activity is exempt from the provisions of Chapter 310, the Wetland and Waterbodies Protection Rules, if the activity alters less than 15,000 square feet of natural resources per mile of roadway (centerline measurement) provided that the following impacts are not exceeded within the 15,000 square foot area:
  - (a) 1,000 square feet of coastal wetland consisting of salt tolerant vegetation or shellfish habitat; or

(b) 5,000 square feet of coastal wetland not containing salt tolerant vegetation or shellfish habitat; or

(c) 1,000 square feet of a great pond.

All other activities must be performed in compliance with all sections of Chapter 310, the Wetland Protection Rules, except 310.2(C), 5(A), 9(A), 9(B) and 9(C).

- (8) The activity may not permanently block any fish passage in any watercourse containing fish. The applicant must coordinate with the reviewing agencies listed in paragraph 2 above to improve fish passage and incorporate any recommendations from those agencies into the performance of the activity.

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NOTE: For guidance on meeting the design objectives for fish passage, including peak flow, maximum velocity, mining depth and gradient, see the MaineDOT Waterbody and Wildlife Crossing Policy and Design Guide (July 2008), developed in conjunction with state and federal resource and regulatory agencies.

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- (9) Rocks may not be removed from below the normal high water line of any coastal wetland, freshwater wetland, great pond, river, stream or brook except to the minimum extent necessary for completion of work within the limits of construction.
- (10) If work is performed in a river, stream or brook that is less than three feet deep at the time and location of the activity, the applicant must isolate the work area from the resource and divert stream flows around the work area, maintaining downstream flows while work is in progress.
- (11) Wheeled or tracked equipment may not operate in the water. Equipment operating on the shore may reach into the water with a bucket or similar extension. Equipment may cross streams on rock, gravel or ledge bottom. If avoiding the operation of wheeled or tracked equipment in the water is not possible, the applicant must explain the need to operate in the water. Approval from the DEP to operate in the water must be in writing, and any recommendations from the DEP must be incorporated into the performance of the activity.
- (12) All wheeled or tracked equipment that must travel or work in a vegetated wetland area must travel and work on mats or platforms.
- (13) Any debris or excavated material must be stockpiled either outside the wetland or on mats or platforms. Erosion and sediment control best management practices must be used, where necessary, to prevent sedimentation. Any debris generated during the activity must be prevented from washing downstream and must be removed from the wetland or water body. Disposal of debris must be in conformance with the Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. Section 1301 *et seq.*
- (14) Work below the normal high water line of a great pond, river, stream or brook must be done at low water except for emergency work or work agreed to by the resource agencies listed in paragraph 2 above.
- (15) Perimeter controls must be installed before the work starts. Disturbance of natural resources beyond the construction limits shown on the plans is not allowed under this rule.

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NOTE: Guidance on the location of construction limits can be obtained from the on site Construction Manager.

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- (16) The use of untreated lumber is preferred. Lumber pressure treated with chromated copper arsenate (CCA) may be used only if necessary and only if use is allowed under federal law and not prohibited from sale under 38 M.R.S.A. 1682, and provided it is cured on dry land in a manner that exposes all surfaces to the air for a period of at least 21 days prior to construction. Wood treated with creosote or pentachlorophenol may not be used where it will contact water.
- (17) A temporary road for equipment access must be constructed of crushed stone, blasted ledge, or similar materials that will not cause sedimentation or restrict fish passage. Such roads must be completely removed at the completion of the activity. In addition, any such temporary roads which are in rivers, streams or brooks, must allow for a passage of stormwater flows associated with a 10-year storm.
- (18) Non-native species may not be planted in restored areas.
- (19) Disposal of debris must be in conformance with Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. Sections 1301 *et seq.*
- (20) Disturbance of vegetation must be avoided, if possible. Where vegetation is disturbed outside of the area covered by any road or structure construction, it must be reestablished immediately upon completion of the activity and must be maintained.
- (21) A vegetated area at least 25 feet wide must be established and maintained between any new stormwater outfall structure and the high water line of any open water body. A velocity reducing structure must be constructed at the outlet of the stormwater outfall that will create sheet flow of stormwater, and prevent erosion of soil within the vegetated buffer. If the 25 foot vegetated buffer is not practicable, the applicant must explain the reason for a lesser setback in writing. Approval from the DEP must be in writing and any recommendations must be incorporated into the activity.

**C. Definitions.** The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

- (1) Diversion. The rerouting of a river, stream or brook around a construction site and then back to the downstream channel.
- (2) Fill. a. (verb) To put into or upon, supply to, or allow to enter a water body or wetland any earth, rock, gravel, sand, silt, clay, peat, or debris; b. (noun) Material, other than structures, placed in or immediately adjacent to a wetland or water body.
- (3) Floodplain wetlands. Freshwater wetlands that are inundated with flood water during a 100-year flood event based on flood insurance maps produced by the Federal Emergency Agency or other site specific information.
- (4) Riprap. Heavy, irregularly shaped rocks that are fit into place, without mortar, on a slope as defined in the MaineDOT Standard Specifications, dated **November 2014**.

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

Work within stream (“In Stream Work,” see MaineDOT Standard Specifications 101.2 Definitions) requires special conditions to minimize impacts. The following special conditions shall apply to this project:

I. In-Water Work is allowed for specific activities as follows:

| Activity                                      | In-Water Work Window |
|-----------------------------------------------|----------------------|
| Temporary fill placement for temporary bridge | July 1 to March 30   |
| Installation of work trestle                  | July 1 to March 30   |
| Pier demolition                               | July 1 to March 30   |
| Pile driving                                  | July 1 to March 30   |
| Cofferdam construction                        | July 1 to March 30   |
| Work within cofferdam                         | Any time             |
| Cofferdam removal                             | Any time             |
| Permanent placement of riprap (no excavation) | Any time             |
| Temporary fill removal                        | Any time             |
| Temporary structure removal                   | Any time             |

II. In-Water work window applies to the following water bodies at the following station #'s:

1. Stillwater River at proposed bridge replacement project

III. Additional Requirements for In-Water Pile Driving

1. Piles driven by impact hammer may not exceed the following pile sizes:
  - i. Pipe pile: 30 inch
  - ii. Steel H-pile: 14-inch
2. The contractor shall contact Eric Ham of MaineDOT Environmental Office (207-215-7356) at least two weeks prior to pile driving with an impact hammer to coordinate monitoring for presence of Atlantic Salmon during pile driving activities.
3. The MaineDOT will implement its **Fish Check Protocol (appended to this Special Provision)** to review the work area for adult Atlantic salmon before pile driving activities begin.
4. The contractor shall use a vibratory hammer for all pile driving activities as much as practicable.
5. Pile driving shall occur during the day
6. Any use of an impact hammer during pile driving shall require the use of passive attenuation measures (changing hammer type, reducing driving duration, reducing force settings) and active measures (cushions and bubble curtains).
7. The contractor shall employ a bubble curtain for all in-water impact pile driving. The bubble curtain shall meet the design specifications and performance requirements in the attached **Bubble Curtain Specification (appended to this Special Provision)**. The contractor shall complete a performance test of the bubble curtain prior to any impact pile driving. The performance test shall confirm the calculated pressures and flow rates at each manifold ring.
8. **Hydroacoustic monitoring for impact pile driving shall be completed as follows for at least two piles:**
  - i. **Largest pile driven in-water (in at least two feet of water)**
  - ii. **A minimum of three hydrophones must be used, located approximately 33, 66, and 100 feet from the in-water sound producing activity.**
9. The Contractor shall retain the services of a qualified person or firm to prepare and implement a hydroacoustic monitoring plan following the attached “**Underwater Noise Monitoring Plan**” template (appended to this Special Provision). The Contractor shall provide MaineDOT a completed draft

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hydroacoustic monitoring plan at least 45 days prior to implementation for review. **No in-stream noise-generating activities may commence until MaineDOT has approved the monitoring protocol.**

10. The Contractor shall provide Hydroacoustic monitoring data to the Department. A preliminary data report shall be submitted within 5 business days of pile driving activity. A final summary report of all of the data must be submitted within 2 months of completion of in-water construction.
11. The contractor shall be responsible for implementing noise monitoring and noise attenuation as described above. Payment shall be made as a lump sum under Pay Item 501.237.

#### IV. Special Conditions:

1. Special Conditions of Army Corps of Engineers (ACOE) Individual Permit apply (see permit and other conditions in this SP 105).
2. Special Conditions of Formal Endangered Species Act (Section 7) Consultation with U.S. Fish and Wildlife Service for Atlantic Salmon apply (summarized in this Special Provision 105 and ACOE permit).
3. Special Conditions of Formal Endangered Species Act (Section 7) Consultation with U.S. Fish and Wildlife Service for Northern Long-Eared Bat apply (summarized in this Special Provision 105).
4. The Contractor shall hold a pre-construction meeting with appropriate MaineDOT Environmental Office staff, other MaineDOT staff, and the Contractor(s) to review all procedures and requirements for avoiding and minimizing effects to Atlantic salmon (ATS) and Northern Long-Eared Bat. The following individuals/agencies shall be invited: ACOE (Richard Kristoff, [Richard.C.Kristoff@usace.army.mil](mailto:Richard.C.Kristoff@usace.army.mil)); FHWA (Rachel LeVee, [Rachel.leeve@dot.gov](mailto:Rachel.leeve@dot.gov); Gary Scholze, [gary.scholze@dot.gov](mailto:gary.scholze@dot.gov)) U.S. Fish and Wildlife Service (Patrick Dockens, [patrick\\_dockens@fws.gov](mailto:patrick_dockens@fws.gov); Nicole Pauley, [nicole\\_pauley@fws.gov](mailto:nicole_pauley@fws.gov)).
5. Construction of temporary approaches and abutments will be contained within turbidity curtains.
6. The Contractor shall contact Eric Ham of MaineDOT Environmental Office (207-215-7356, [eric.ham@maine.gov](mailto:eric.ham@maine.gov)) at least two weeks prior to installation of cofferdams to coordinate fish evacuation.
  - a. To minimize fish stranding inside the cofferdam when dewatering, the MaineDOT environmental staff or similarly qualified consultants will inspect the cofferdams after completion and before a seal placement for presence of adult Atlantic salmon. If adult Atlantic salmon are observed during active construction, all activities will cease and the MaineDOT environmental staff or similarly qualified consultants will immediately contact the Service's Maine Fish and Wildlife Complex 207/469-7300.
7. Sheet pile installation and removal shall be completed using a vibratory hammer.
8. All in-water excavation shall be completed in a cofferdam.
9. Fill for temporary approaches will be limited to no more than 25 percent of the width of the river.
10. Temporary fill will consist of non-erodible material on top of a geotextile fabric filter layer.
11. All areas of temporary stream or wetland fill must be within the specified limits on the plans and shall be restored to their original contour and character upon completion of the project. Temporary fill includes fill that received authorization and fill that mistakenly enters a resource (i.e., from slope failures, accidental broken sandbag cofferdams, miscellaneous construction materials, etc.)
12. Demolition and debris removal and disposal will comply with Section 202.03 of the MaineDOT's Standard Specifications. The Contractor will contain all demolition debris, including debris from wearing surface removal, saw cut slurry, dust, etc., and will not allow it to discharge to any resource. The Contractor will dispose of debris in accordance with the Maine Solid Waste Law (Title 38 M.R.S.A., Section 1301 et. seq.). The demolition plan, containment, and disposal of demolition debris will be addressed in the Contractor's Soil Erosion and Water Pollution Control Plan (SEWPCP).
13. Demolition of concrete piers of existing bridge will occur within containment such as turbidity curtains.
14. Temporary bridge piles will be removed with a vibratory hammer.
15. If piles are removed by cutting, they must be cut to one foot below the substrate level. If piles are removed by pulling, the work will be completed using a BMP to minimize turbidity.
16. Any concrete that has been in contact with water must have a pH between 6.0 and 8.5, must be within one pH unit of the background pH level of the stream, and must have a turbidity level no greater than the receiving resource. Disposal or treatment of water not meeting release criteria will be addressed in the SEWPCP. Discharging impounded water to the stream must take place in a manner that does not disturb the stream bottom or cause erosion. The Contractor shall be responsible for monitoring pH with a calibrated

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meter accurate to 0.1 units. A record of pH measurements shall be kept in the Environmental Field Representative's log.

17. The Contractor shall conduct all construction activities in accordance with the MEDOT-approved SEWPCP.
18. No equipment, materials, or machinery shall be stored, cleaned, fueled, or repaired within any wetland or stream resource. These activities shall occur more than 100 feet from any wetland or stream resource and shall follow the specifications of the SEWPCP.
19. All pumps and generators required for in-stream work shall be cleaned of external oil, grease, dirt, and mud such that turbid water does not drain to any wetland or stream. Any leaks of this equipment shall be fixed prior to entering streams or areas that drain directly to streams or wetlands. Operation shall follow the specifications of the SEWPCP.
20. The contractor shall minimize vegetation clearing and soil disturbance adjacent to the river to the maximum extent practicable. Areas of disturbed soil adjacent to the waterways will be stabilized and re-vegetated with a seed mix appropriate for riparian areas in Maine.
21. All off-road equipment working within 25-feet of a stream (RUS) shall be cleaned to remove all soil, seeds, vegetation, or other debris that could contain seeds or reproductive portions of plants prior to entering the area to minimize the spread of noxious weeds. All equipment shall be inspected prior to offloading to ensure they are clean.
22. The contractor shall fully remove all cofferdams from the stream immediately following completion of in-stream work using techniques to minimize turbidity releases.
23. To minimize the spread of noxious weeds into the riparian zone, all off-road equipment and vehicles (operating off of existing open and maintained roads) shall be cleaned prior to entering the construction site to remove all soil, seeds, vegetation, or other debris that could contain seeds or reproductive portions of plants. All equipment shall be inspected prior to off-loading to ensure that they are clean.
24. The contractor and MaineDOT must adhere to the following special conditions (Conservation Measures and Terms & Conditions specified in the Northern Long-Eared Bat BO). If any conservation measures cannot be implemented or require modification, MaineDOT will contact the USFWS for further discussion before proceeding.
  - a. During the preconstruction meeting, MaineDOT will notify contractors and construction staff of conservation measures and ensure compliance with these measures.
  - b. The Contractor shall report any sick, injured, and/or dead bats (regardless of species) located in the project action area during construction, operations, maintenance, or monitoring activities immediately to the MaineDOT Resident and/or Environmental Staff, who will report to the USFWS Maine Ecological Services Field Office (Nicole Pauley; nicole\_pauley@fws.gov, (207) 272-2883).
  - c. Injured bats must be cared for by a licensed veterinarian or other qualified persons. Dead individuals must be sealed in a resealable plastic bag containing a paper with the date and time when the animal was found, the location where it was found, and the name of the person who found it, and the bag containing the specimen frozen in a freezer located in a secure site, until instructions are received from the Service regarding the disposition of the dead specimen.

#### V. Approvals:

1. Temporary Soil Erosion and Water Pollution Control Plan
2. Permitted Resource Impacts (square feet), see ACOE permit for locations:

Stream:

*Permanent RUS: 14,015*

*Temporary RUS: 15,905*

Wetland: None

VI. All activities are prohibited (including placement and removal of cofferdams unless otherwise permitted by Regulatory Agencies) below the normal high water mark if outside the prescribed in-water work window (see Section I), except for the following:

1. Work within a cofferdam constructed according to MaineDOT's Standard Specifications and in adherence with the contractors approved "Soil Erosion and Water Pollution Control Plan".

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VI. No work is allowed that completely blocks a river, stream, or brook without providing downstream flow.

NOTE: Regulatory Review and Approval is required to modify the existing In-Water work window. Requests for work window extensions must be submitted to the MaineDOT Environmental Office. Approval of requests for work window extensions is not guaranteed and may result in delays in construction schedule that are the sole responsibility of the contractor.



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**SPECIAL PROVISION 105 - ATTACHMENTS:**

**FISH CHECK PROTOCOL**

**BUBBLE CURTAIN SPECIFICATION**

**UNDERWATER NOISE MONITORING PLAN (TEMPLATE)**

### **FISH CHECK PROTOCOL**

1. Contractor shall supply MaineDOT with a boat and a driver to survey the bridge area for the presence of Atlantic salmon. The boat should be safe for the driver and two staff members from MaineDOT to be aboard.
2. MaineDOT will provide a sonar device to search for fish with the appropriate power.
3. The team will search 250 feet around the planned activity for 15 minutes prior to being able to begin. The activities that require a search are as follows:
  - a. Pile driving with an impact hammer
  - b. Removal of old pier elements
  - c. Closure of sheetpile cofferdam
4. Searches will take place prior to each of the activities listed above. If there is a 4-hour lapse because any of the noise producing events, the search must be completed again prior to the event.
5. In the event that an Atlantic salmon is found in the work area, MaineDOT staff will immediately contact USFWS. The contractor will then be asked to undertake activities to scare the Atlantic salmon out of the work site by using tactics such as running a vibratory hammer attached to a pile or completing other activities that could startle a fish but not result in injury.

**Appendix I—Bubble Curtain Specification**

These specifications are verbatim from National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS), Western Washington Fish and Wildlife Office Impact Pile Driving Sound Attenuation Specification

Unconfined Bubble Curtain Specifications:

1. General - An unconfined bubble curtain is composed of an air compressor(s), supply lines to deliver the air, distribution manifolds or headers, perforated aeration pipe, and a frame. The frame facilitates transport and placement of the system, keeps the aeration pipes stable, and provides ballast to counteract the buoyancy of the aeration pipes in operation.
2. The aeration pipe system shall consist of multiple layers of perforated pipe rings, stacked vertically in accordance with the following:

| Water Depth (m)    | No. of Layers |
|--------------------|---------------|
| 0 to less than 5   | 2             |
| 5 to less than 10  | 4             |
| 10 to less than 15 | 7             |
| 15 to less than 20 | 10            |
| 20 to less than 25 | 13            |

3. The pipes in all layers shall be arranged in a geometric pattern which shall allow for the pile being driven to be completely enclosed by bubbles for the full depth of the water column and with a radial dimension such that the rings are no more than 0.5 meters from the outside surface of the pile.
4. The lowest layer of perforated aeration pipe shall be designed to ensure contact with the substrate without burial and shall accommodate sloped conditions.
5. Air holes shall be 1.6 mm (1/16-inch) in diameter and shall be spaced approximately 20 mm (3/4 inch) apart. Air holes with this size and spacing shall be placed in four adjacent rows along the pipe to provide uniform bubble flux.
6. The system shall provide a bubble flux of 3.0 cubic meters per minute per linear meter of pipe in each layer (32.91 cubic feet per minute per linear foot of pipe in each layer). The total volume of air per layer is the product of the bubble flux and the circumference of the ring:

$$V_t = 3.0 \text{ m}^3/\text{min}/\text{m} * \text{Circum of the aeration ring in m}$$

or

$$V_t = 32.91 \text{ ft}^3/\text{min}/\text{ft} * \text{Circum of the aeration ring in ft}$$

7. Meters shall be provided as follows:

- a. Pressure meters shall be installed at all inlets to aeration pipelines and at points of lowest pressure in each branch of the aeration pipeline.
- b. Flow meters shall be installed in the main line at each compressor and at each branch of the aeration pipelines at each inlet. In applications where the feed line from the compressor is continuous from the compressor to the aeration pipe inlet the flow meter at the compressor can be eliminated.
- c. Flow meters shall be installed according to the manufactures recommendation based on either laminar flow or non-laminar flow.

#### Confined Bubble Curtain Specifications:

1. General - A confined bubble curtain is composed of an air compressor(s), supply lines to deliver the air, distribution manifolds or headers, perforated aeration pipe(s), and a means of confining the bubbles.
  - a. The confinement (e.g. fabric, plastic or metal sleeve, or equivalent) shall extend from the substrate to a sufficient elevation above the maximum water level expected during pile installation such that when the air delivery system is adjusted properly, the bubble curtain does not act as a water pump (i.e., little or no water should be pumped out of the top of the confinement system).
  - b. The confinement shall contain resilient pile guides that prevent the pile and the confinement from coming into contact with each other and do not transmit vibrations to the confinement sleeve and into the water column (e.g. rubber spacers, air filled cushions).
2. In water less than 15 meters deep, the system shall have a single aeration ring at the substrate level. In waters greater than 15 meters deep, the system shall have at least two rings, one at the substrate level and the other at mid-depth.
3. The lowest layer of perforated aeration pipe shall be designed to ensure contact with the substrate without sinking into the substrate and shall accommodate for sloped conditions.
4. Air holes shall be 1.6 mm (1/16-inch) in diameter and shall be spaced approximately 20 mm (3/4 inch) apart. Air holes with this size and spacing shall be placed in four adjacent rows along the pipe to provide uniform bubble flux.
8. The system shall provide a bubble flux of 3.0 cubic meters per minute per linear meter of pipe in each layer (32.91 cubic feet per minute per linear foot of pipe in each layer). The total volume of air per layer is the product of the bubble flux and the circumference of the ring:

$$V_t = 3.0 \text{ m}^3/\text{min}/\text{m} * \text{Circ of the aeration ring in m}$$

or

$$V_t = 32.91 \text{ ft}^3/\text{min}/\text{ft} * \text{Circ of the aeration ring in ft}$$

5. Meters shall be provided as follows:
  - a. Pressure meters shall be installed at all inlets to aeration pipelines and at points of lowest pressure in each branch of the aeration pipeline.
  - b. Flow meters shall be installed in the main line at each compressor and at each branch of the aeration pipelines at each inlet. In applications where the feed line from the compressor is continuous from the compressor to the aeration pipe inlet the flow meter at the compressor can be eliminated.
  - c. Flow meters shall be installed according to the manufactures recommendation based on either laminar flow or non-laminar flow.

# UNDERWATER NOISE MONITORING PLAN

## **\*\**TEMPLATE*\*\***

*Replace underlined blue italic text with project information.*

*Blue italic text is guidance.*

**Plain, black text is template language.**

*All blue italic text should be replaced or omitted for final production.*

*Prepared by:*

*Name and full contact information*

*Signature Block*

*Date*

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## INTRODUCTION *(This section will be project specific)*

The full agency name proposes to detailed project description. See vicinity map (Figure 1).

Figure 1. Vicinity map of name project.

## PROJECT AREA *(This section will be project specific)*

*Describe the location of the project, including all water bodies that are affected. Identify the USGS hydrologic unit, both the name and code, where the project is located. Include detailed maps and figures, when available, relative to environmental features that influence monitoring (e.g., geology, bathymetry, etc.).*

## PERMIT/ESA CONDITIONS *(This section will be project specific and is applicable only when the ESA consultation is complete or Federal/State/local permits have been issued. Each agency should modify this section to reflect the various types of permit/ESA conditions that they see.)*

*Summarize the Federal/State/local permit conditions and the ESA requirements that relate to the underwater noise. Permit conditions include monitoring requirements, timing restrictions, etc. The ESA requirements are found in the Incidental Take Statement and Terms and Conditions sections of the biological opinion. These requirements vary between biological opinions, but can include monitoring requirements, timing restrictions, limits on cumulative sound exposure level (cSEL) at a given distance, description of the area where the thresholds must not be exceeded, the allowable number of piles driven per day, the allowable number of pile strikes per day, or a limit on the single strike SEL.*

## PILE INSTALLATION LOCATION *(This section will be project specific)*

Figure 2 indicates the location of the provide location of the structure(s) in need of pile driving. There will be a total of XX piles driven as part of the name structure(s).

Figure 2. Location of name structure(s) where pile driving activity will take place. *This information must be in enough detail to allow the reader to assess the monitoring locations.*

## PILE INSTALLATION

### ***Impact Pile Driving for Fish Consultations***

*Provide pile installation information. For example:*

Hydroacoustic monitoring will be conducted for X piles struck with an impact hammer. Piles chosen to be monitored are driven in water depths that are representative of mid-channel or typical water depths at the project location where piles will be driven.

*The number of piles to be monitored will depend on a variety of factors – some projects may require that all piles be monitored, while others may require a representative sample of piles be monitored. If a sample of piles is to be monitored, provide the considerations taken and the rationale used in choosing a representative number of piles, such as, bathymetry, total number of piles to be driven, substrate type, depth of water, distance from shore, river, or stream bank, and any other considerations, as appropriate. When monitoring a subset, a minimum of 5 piles should be monitored. Additional monitoring to produce a representative sample may be warranted when projects are driving a large number of piles, driving multiple piles of varying diameters in differing substrates, driving different types of piles, or driving piles in widely differing depths.*

Hydroacoustic monitoring of type of pile with impact driving will include:



- Monitoring *X piles, out of a total of Y piles driven for the project.*
- Testing sound attenuation system effectiveness.

Figure 3 indicates the location of the piles to be monitored and the approximate hydrophone locations for each pile being monitored. All hydrophones will be placed at least 1 m (3.3 feet) below the surface. *If only one hydrophone at one distance is to be used it is acceptable for the hydrophone to be placed 10 meters from the pile at midwater depth. If hydrophones will be placed at more than one distance from the pile and used to calculate transmission loss over distance, water depth should be at least 4m (13 ft) and it is suggested that the additional hydrophone nearest the pile be placed at least 3H from the pile where H is the water depth at the pile and at 0.7 to 0.85H depth from the surface. In waters less than 4m (13 ft) deep, a single hydrophone at midwater depth is sufficient<sup>1</sup>.* Hydrophones will be located *X* meters from each pile with a clear acoustic line-of-sight between the pile and the hydrophone. *Additional distances measured concurrently are desirable, if possible, to estimate the site specific range to the threshold boundary. Include any additional distances or depths where hydrophones will be located. If airborne noise monitoring is required, the primary measurement microphone shall be placed 50 feet (e.g. 15 meters) from the pile at least 6 feet above the ground or water, and shall have an unobstructed view of the length of the pile.*

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<sup>1</sup> Some projects may need or require more than one hydrophone to collect real time measurements at multiple locations or multiple distances. In these situations multiple hydrophones can be placed at midwater depths.



Table 1 lists the [name structure\(s\)](#) to be installed, the water depth, and the number and size of piles that will be installed.

**Table 1**  
**Depth, Number Piles to be Monitored**

| Structure                      | Water Depth                      | Structural Components Installed                   |
|--------------------------------|----------------------------------|---------------------------------------------------|
| <a href="#">Name structure</a> | <a href="#">X feet to X feet</a> | <a href="#">X - XX-inch diameter type of pile</a> |

## CONTRACTOR REQUIREMENTS

The contractor will submit a detailed description of their qualifications, which must include a minimum of a bachelor's degree in a related field<sup>2</sup> and 3 years' experience in noise monitoring and analysis, and monitoring plan based on this template for approval by [\[INSERT AGENCY NAME\]](#). A list of the contractors' proposed sound level monitoring equipment shall be included along with specifications and a description of the purpose. The measurement range in terms of amplitude (in dB referenced to one micropascal (re: 1 uPa)), sensitivity and frequency shall be stated. A minimum frequency range of 20 Hz to 20 kHz and a minimum sampling rate of 48,000 Hz will be used when monitoring. Sampling rates higher than 48 kHz are preferred. Table 2 describes the minimum requirements of the equipment to be used. In addition to the equipment selection, quality control/quality assurance procedures should be described (e.g., how will system responses be verified and how will data be managed).

**Table 2.**

**Equipment for underwater sound monitoring (hydrophone, signal amplifier, and calibrator). All have current National Institute of Standards and Technology (NIST) traceable calibration. *This table is intended as a guideline and exact specifications can be adjusted to meet the needs of the individual project or contractors' equipment.***

| Item                       | Specifications                                              | Minimum Quantity  | Usage                                                                                                                                              |
|----------------------------|-------------------------------------------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">Hydrophone</a> | <a href="#">Receiving Sensitivity-<br/>-211dB re 1V/μPa</a> | <a href="#">1</a> | <a href="#">Capture underwater sound pressures near the source and convert to voltages that can be recorded/analyzed by other equipment.</a>       |
| <a href="#">Hydrophone</a> | <a href="#">Receiving Sensitivity –<br/>-200dB re 1/μPa</a> | <a href="#">1</a> | <a href="#">Capture underwater sound pressures for background levels and convert to voltages that can be recorded/analyzed by other equipment.</a> |

<sup>2</sup> This can include Institute of Noise Control Engineering of the USA (INCE/USA) certification or related fields such as acoustics, physics, oceanography, geology or other physical sciences that have required coursework in physics.

|                                                                      |                                                                                                                           |                     |                                                                                      |
|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------|
| <u>Signal Conditioning Amplifier</u>                                 | <u>Amplifier Gain-</u><br><u>0.1 mV/pC to 10 V/pC</u><br><u>Transducer Sensitivity Range-</u><br><u>10-12 to 103 C/MU</u> | <u>1</u>            | <u>Adjust signals from hydrophone to levels compatible with recording equipment.</u> |
| <u>Calibrator (pistonphone-type)</u>                                 | <u>Accuracy-</u><br><u>IEC 942 (1988) Class 1</u>                                                                         | <u>1</u>            | <u>Calibration check of hydrophone in the field.</u>                                 |
| <u>Digital Signal Analyzer</u>                                       | <u>Sampling Rate-</u><br><u>48kHz or greater</u>                                                                          | <u>1</u>            | <u>Analyzes and transfers digital data to laptop hard drive.</u>                     |
| <u>Microphone (free field type)</u>                                  | <u>Range- 30 – 120 dBA</u><br><u>Sensitivity-</u><br><u>-29 dB ± 3 dB (0 dB = 1 V/Pa)</u><br><u>Wind Screen</u>           | <u>1</u>            | <u>Monitoring airborne sounds from pile driving activities (if not raining).</u>     |
| <u>If water velocity ~&gt; 1m/s, Flow shield</u>                     | <u>Open cell foam cover or functional equivalent</u>                                                                      | <u>1/hydrophone</u> | <u>Eliminate flow noise contamination.</u>                                           |
| <u>Laptop computer</u><br><u>or</u><br><u>Digital Audio Recorder</u> | <u>Compatible with digital signal analyzer</u>                                                                            | <u>1</u>            | <u>Record digital data on hard drive or digital tape.</u>                            |
| <u>Real Time and Post-analysis software</u>                          | <u>=</u>                                                                                                                  | <u>1</u>            | <u>Monitor real-time signal and post-analysis of sound signals.</u>                  |

To facilitate further analysis of data full bandwidth, time-series underwater signal shall be recorded as a text file (.txt) or wave file (.wav) or similar format. Recorded data shall not use data compression algorithms or technologies (e.g. MP3, compressed .wav, etc.).

## METHODOLOGY

### **Impact Pile Driving for Fish Consultations (and listed US FWS, diving sea bird, if relevant)**

*Underwater background sound level measurements are optional, however, if desired then the NMFS (2012a) guidance should be followed.*

*If one hydrophone at one distance is to be used it is acceptable for the hydrophone to be placed 10 meters from the pile and at midwater depth. If hydrophones will be placed at more than one distance from the pile it is suggested that the hydrophone nearest the pile be placed at least 3H from the pile where H is the water depth at the pile and 0.7 to 0.85H depth from the surface. The hydrophone(s) will be placed at X meters depth at a distance of X meters from each pile being monitored, in waters of X meters depth. If water velocity is 1 meter/second or greater, 1-3 meters off the bottom may be recommended for near field hydrophones and greater than 5 meters from the surface may be recommended for any far field hydrophones. A weighted tape measure will be used to determine the depth of the water. The hydrophone(s) will be attached to a nylon cord, a steel chain, or other proven anti-strum features if the current is swift enough to cause strumming of the line. The nylon cord or chain will be attached to an anchor that will keep the line the appropriate distance from each pile. The nylon cord or chain will be attached to a float or tied*

to a static line at the surface. The distances will be measured by a tape measure, where possible, or a range-finder. The acoustic path (line of sight) between the pile and the hydrophone(s) should be unobstructed in all cases.

*When collecting sound measurements in an area with currents (i.e., in rivers or tidally influenced areas), appropriate measures will be taken, when necessary, to ensure that the flow-induced noise at the hydrophone will not interfere with the recording and analysis of the relevant sounds (NMFS, 2012a). As a general rule, current speeds of 1.5 meters/second or greater are expected to generate significant flow-induced noise, which may interfere with the detection and analysis of low-level sounds such as the sounds from a distant pile driver or background sounds. If such measures are necessary, include a description of those measures. For example:*

*If it becomes necessary to reduce the flow-induced noise at the hydrophone, a flow shield will be described and installed around the hydrophone to provide a barrier between the irregular, turbulent flow and the hydrophone. If no flow shield is used in these situations, the current velocity will be measured and a correlation between the levels of the relevant sounds (background or pile driving) and current speed will be made to determine whether the data is valid and can be included in the analysis.*

The hydrophone calibration(s) will be checked at the beginning of each day of monitoring activity. *The method of calibration and calibration equipment used will be described.* NIST traceable calibration forms shall be provided for all relevant monitoring equipment. Prior to the initiation of pile driving, the hydrophone will be placed at the appropriate distance and depth as described above.

The onsite inspector/contractor will inform the acoustics specialist when pile driving is about to start to ensure that the monitoring equipment is operational. Underwater sound levels will be continuously monitored during the entire duration of each pile being driven with a minimum one-third octave band frequency resolution. The wideband instantaneous absolute peak pressure and Sound Exposure Level (SEL) values of each strike, and daily cumulative SEL should be monitored in real time during construction to ensure that the project does not exceed its authorized take level. Peak and rms pressures will be reported in dB (re:1  $\mu$ Pa). SEL will be reported in dB (re: 1  $\mu$ Pa<sup>2</sup>·sec). Wideband time series recording is strongly recommended during all impact pile driving.

Prior to, and during, the pile driving activity, environmental data will be gathered, such as water depth and tidal level, wave height, and other factors that could contribute to influencing the underwater sound levels (e.g. aircraft, boats, etc.). Start and stop time of each pile driving event and the time at which the bubble curtain or functional equivalent<sup>3</sup> is turned on and off will be logged.

The contractor or agency will provide the following information, in writing, to the contractor conducting the hydroacoustic monitoring for inclusion in the final monitoring report: a description of the substrate composition, approximate depth of significant substrate layers, hammer model and size, pile cap or cushion type, hammer energy settings and any changes to those settings during the piles being monitored, depth pile driven, blows per foot for the piles monitored, and total number of strikes to drive each pile that is monitored.

## **Sound Attenuation Monitoring**

All monitored piles may be tested with the sound attenuation system on and off (or presence and absence) to test its effectiveness<sup>4</sup>. To account for varying resistance as the pile is driven; the sound attenuation device will be turned off

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<sup>3</sup> A functional equivalent must function as well as or better than the attenuation device that was proposed during consultation or required by the ESA consultation or applicable permits. It must achieve the same or better sound level reductions that were used in the calculations during ESA consultation or the permitting process.

<sup>4</sup> Note: There may be circumstances where the U.S. Fish and Wildlife Service determines that unattenuated pile driving (striking the pile with the bubble curtain turned off) would pose a significant risk of injury to species. In those situations, the Service may request that unattenuated pile driving does not occur and that hydroacoustic monitoring be conducted to determine the extent at which certain thresholds are met instead. This will need to be determined on a case by case basis for projects that may affect listed species.

for *(describe schedule for turning on and off)* periods during the beginning, the middle third, and near the end of the drive. After turning off the attenuation system, pile driving should not resume for at least 2 minutes to allow time for air bubbles to completely disperse. *For piles that require less than 5 minutes to drive, pile driving should occur for only two periods with the bubbles off, one near the beginning and once near the end of the drive.*

## SIGNAL PROCESSING

### ***Impact Pile Driving for Fish Consultations (and any US FWS listed, diving sea bird)***

Post-analysis of the underwater pile driving sounds will include:

- Number of pile strikes per pile and per day.
- For each recorded strike (or each strike from a subset), determine the following:
  - The peak pressure, defined as the maximum absolute value of the instantaneous pressure (overpressure or underpressure).
  - The root mean squared sound pressure across 90% of the strikes energy (RMS<sub>90%</sub>).
  - Sound exposure level, measured across 90% of the accumulated sound energy (SEL<sub>90%</sub>). Calculation methodology is provided in Appendix A.
- Maximum, mean, and range of the peak pressure, with, and if applicable, without attenuation.
- Maximum, mean, range, and Cumulative Distribution Function (CDF) of the RMS<sub>90%</sub>, both with and if applicable, without attenuation where the CDF is used to report the percentage of RMS<sub>90%</sub> values above the thresholds.
- Maximum, mean, and range of the SEL<sub>90%</sub>, both with and if applicable, without attenuation.
- Cumulative SEL (cSEL) across all of the pile strikes. If SEL was calculated for all strikes, cSEL is estimated as indicated in Appendix A. If SEL was calculated for a subset of strikes, cSEL is estimated as follows:  $cSEL = SEL_{mean} + 10 \cdot \log(\text{total \# strikes})$ .
- Where surrogate piles are monitored to represent a larger project, an estimate of the cSEL during a typical day of construction driving must be reported by summing the SEL over the expected number of pile strikes in a typical day for the larger project:  $cSEL = SEL_{mean} + 10 \cdot \log(\#strikes)$ . The SEL<sub>mean</sub> used in this calculation must correspond with the actual sound attenuation measures that will be used during construction of the larger project.
- A frequency spectrum both with and, *if applicable*, without attenuation, between a minimum of 20 and 20 kHz for up to eight successive strikes with similar sound levels.

*If airborne noise monitoring is required, both A-weighted and unweighted measurements will be acquired. Broadband back-to-back RMS  $L_{max}$  (peak) and  $L_{eq}$  (average) 5-minute measurements will be made over the duration of pile driving.  $L_{max}$  measurements should be taken with a portable analyzer set for “fast” response (125 msec). For at least one full pile sequence of each pile size and substrate type, frequency spectrum measurements ( $L_{max}$  and  $L_{eq}$ ) using a minimum resolution of one-third octave bands shall be taken to show the spectral content of the impact pile. If measuring background sound levels in the absence of construction is not possible, then report the  $L_{95}$  statistic.*

## ANALYSIS

### ***Impact Pile Driving for Fish Consultations***

Analysis of the data from the San Francisco-Oakland Bay Bridge Pile Installation Demonstration project (PIDP) indicated that 90 percent of the acoustic energy for most pile driving impulses occurred over a 50 to 100 millisecond period with most of the energy concentrated in the first 30 to 50 milliseconds (Illingworth and Rodkin, 2001). The RMS values computed for this project will be computed over the duration between where 5% and 95% of the energy of the pulse occurs. The SEL energy plot will assist in interpretation of the single strike waveform. The single strike

SEL associated with the highest absolute peak strike along with the total number of strikes per pile and per day will be used to calculate the cumulative SEL for each pile and each 24-hour period.

In addition a waveform analysis of the individual absolute peak pile strikes will be performed to determine any changes to the waveform with the [name type of noise attenuation device](#). A comparison of the frequency content with and without noise attenuation will be conducted. Units of underwater sound pressure levels will be dB (re:1  $\mu\text{Pa}$ ) and units of SEL will be re:1  $\mu\text{Pa}^2\cdot\text{sec}$ .

## REPORTING

*If sound attenuation devices are used during the monitoring, include the following text and analysis:*

An analysis of the change in the waveform and sound levels with and without the [name type of noise attenuation device for impact driving](#) operating will be conducted.

Preliminary results for the daily monitoring activities, if required, will be submitted/reported to the primary point of contact<sup>5</sup> at each of the Services within [X hours](#) after monitoring concludes for the day. In addition a final draft report including data collected and summarized from all monitoring locations will be submitted to the Services within 90 days of the completion of hydroacoustic monitoring. The results will be summarized in graphical form and include summary statistics and time histories of impact sound values for each pile. A final report will be prepared and submitted to the Services within 30 days following receipt of comments on the draft report from the Services. The report shall include:

1. Size and type of piles.
2. A detailed description of the [name type of noise attenuation device](#), including design specifications (*if applicable*).
3. The impact hammer energy rating used to drive the piles, make and model of the hammer.
4. A description of the sound monitoring equipment.
5. The distance between hydrophone(s) or microphone(s) and pile.
6. The depth of the hydrophone(s) and depth of water at hydrophone locations.
7. The distance from the pile to the water's edge.
8. The depth of water in which the pile was driven.
9. The depth into the substrate that the pile was driven.
10. The physical characteristics of the bottom substrate into which the piles were driven.
11. The total number of strikes to drive each pile and for all piles driven during a 24-hour period.
12. The underwater wideband background sound pressure level reported as the 50% CDF (*if applicable*).
13. The results of the hydroacoustic monitoring, as described under Signal Processing. An example table is provided in Appendix C for reporting the results of the monitoring.
14. The distance at which peak, cSEL, and rms values exceed the respective threshold values.
15. A description of any observable fish, marine mammal, or bird behavior in the immediate area will and, if possible, correlation to underwater sound levels occurring at that time.
16. *If airborne noise monitoring is required, broadband A-weighted and unweighted maximum, minimum, and average  $L_{\text{max}}$  and  $L_{\text{eq}}$  levels shall be tabulated for every pile. For each pile size and substrate type*

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<sup>5</sup> The primary point of contact is the biologist that conducted the Section 7 consultation for the Service(s). In the event that the consulting biologist is not available, communication regarding monitoring results and reports should be addressed to the manager of the consultation branch or division with a reference to the consultation title.

*frequency spectra (one-third octave minimum frequency resolution) charts will be included to show the frequency content of  $L_{max}$  and  $L_{eq}$  signatures. The frequency content of airborne noise background levels shall also be shown. Background sound levels or  $L_{95}$  surrogate for background sound shall be reported.*



## REFERENCES

- Illingworth and Rodkin, Inc. 2001. Noise and Vibration Measurements Associated with the Pile Installation Demonstration Project for the San Francisco-Oakland Bay Bridge East Span, Final Data Report, Task Order 2, Contract No. 43A0063.
- NMFS, 2012a. Guidance Document: Data Collection Methods to Characterize Underwater Background Sound Relevant to Marine Mammals in Coastal Nearshore Waters and Rivers of Washington and Oregon. Memorandum: NMFS Northwest Fisheries Science Center – Conservation Biology Division and Northwest Regional Office – Protected Resources Division, January 31, 2012.
- NMFS, 2012b. Guidance Document: Data Collection Methods to Characterize Impact and Vibratory Pile Driving Source Levels Relevant to Marine Mammals. Memorandum: NMFS Northwest Fisheries Science Center – Conservation Biology Division and Northwest Regional Office – Protected Resources Division, January 31, 2012.
- NMFS, 2012c. Guidance Document: Sound Propagation Modeling to Characterize Pile Driving Sounds Relevant to Marine Mammals. Memorandum: NMFS Northwest Fisheries Science Center – Conservation Biology Division and Northwest Regional Office – Protected Resources Division, January 31, 2012.
- Southall, B.L., A.E. Bowles, W.T. Ellison, J.J. Finneran, R.L. Gentry, C.R. Greene, D. Kastak, D.R. Ketten, J.H. Miller, P.E. Nachtigall, W.J. Richardson, J.A. Thomas, and P.L. Tyack. 2007. Marine Mammal Noise Exposure Criteria: Initial Scientific Recommendations. *Aquatic Mammals* 33(4): 411-521.

## APPENDIX A

### *Calculation of Cumulative SEL*

An estimation of individual SEL values can be calculated for each pile strike by calculating the following integral, where T is T<sub>90</sub>, the period containing 90% of the cumulative energy of the pulse (eq. 1).

$$SEL = 10 \log \left( \int_0^T \frac{p^2(t)}{p_0^2} dt \right) \quad dB \quad (\text{eq. 1})$$

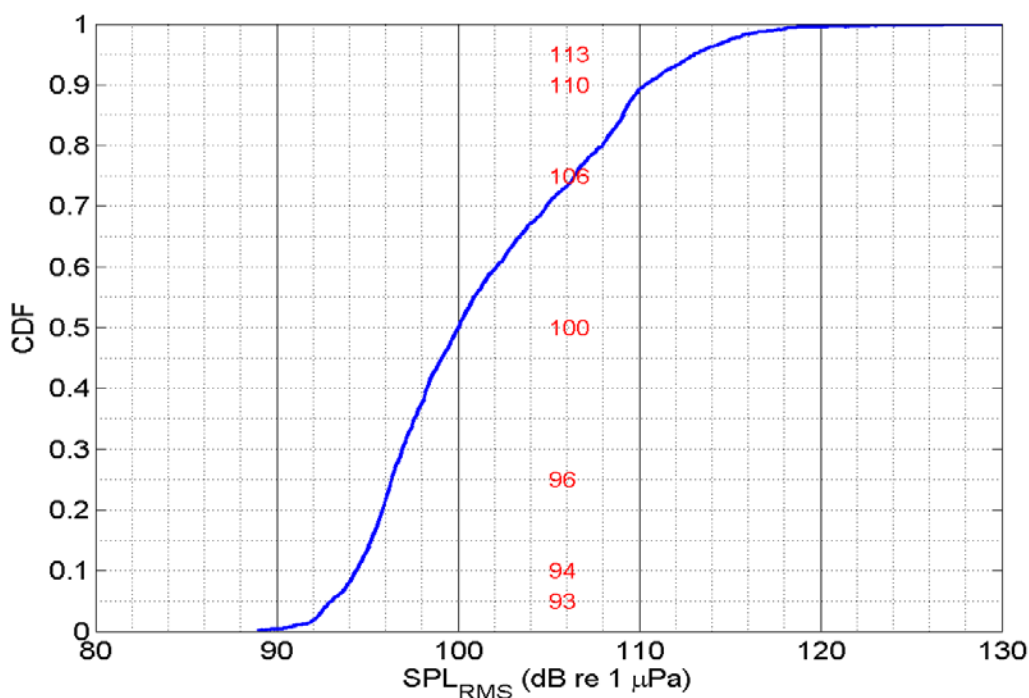
Calculating a cumulative SEL from individual SEL values cannot be accomplished simply by adding each SEL decibel level arithmetically. Because these values are logarithms they must first be converted to antilogs and then accumulated. Note, first, that if the single strike SEL is very close to a constant value (within 1 dB), then cumulative SEL = single strike SEL + 10 times log base 10 of the number of strikes N, i.e, 10Log<sub>10</sub>(N). However if the single strike SEL varies over the sequence of strikes, then a linear sum of the energies for all the different strikes needs to be computed. This is done as follows: divide each SEL decibel level by 10 and then take the antilog. This will convert the decibels to linear units (or uPa<sup>2</sup>•s). Next compute the sum of the linear units and convert this sum back into dB by taking 10Log<sub>10</sub> of the value. This will be the cumulative SEL for all of the pile strikes.

## APPENDIX B

### ***Calculation of a Cumulative Distribution Function and Plot for Background Sound Level Analysis***

Data from three full 24-hour underwater measurement cycles (minimum) are used to calculate a 30-second Root Mean Square (RMS) value for each 30-second period for the entire dataset. The RMS should be calculated for both the full frequency range recorded as well as a separate dataset which has been passed through a high pass filter thus eliminating those frequencies below 1000 Hz. These datasets are then grouped into 24-hour periods. To determine if the data is approximately log-normal in distribution, each 24-hour period is plotted as a Probability Density Function (PDF). Each 24-hour period can be plotted on the same PDF plot. The plots should be approximately log normal in distribution and thus can be used in the further analysis. Each day of data should have an approximately Gaussian sigmoid shape, the differences between them and the ideal might be hard to spot, but the sigmoid from day to day will show noticeable variation. Data which does not approximate a log normal distribution should be excluded from further analysis.

The Cumulative Distribution Function (CDF) plot is obtained by plotting the normalized cumulative sum vs. the bin location. You can also get the PDF from plotting the normalized bin count vs. the bin location. The normalized bin count is obtained by dividing the count column by (number of data points multiplied by the space between 2 consecutive bins). This provides the integral of the PDF equal to 1. For instructions on creating a histogram in Microsoft Excel, see: <http://www.vertex42.com/ExcelArticles/mc/Histogram.html>



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## APPENDIX C

Table 1. Example table for required information for reporting the results of hydroacoustic monitoring of pile driving.

[illegible]

**SPECIAL PROVISION**  
**SECTION 203**  
**EXCAVATION AND EMBANKMENT**  
**(Dredge Materials)**

**Management and Disposal:** Dredge Material (See MaineDOT Standard Specifications § 101.2 Definitions) is regulated as a Special Waste.

In accordance with CMR 418, 500-cubic yards or less of Dredge Material Beneficially Used in the area(s) adjacent to and draining into the dredged water body is exempt from Beneficial Use Permits. Work associated with the Stillwater Bridge (#2806) replacement initiative will require the excavation of select Dredge Material from the Stillwater River. It is anticipated that approximately 16-cubic yards of dredge will be excavated. There may be onsite Beneficial Use for a portion of this Dredge Material, as directed by the Resident; the remaining Dredge Material shall be disposed of at an appropriately licensed facility.

The Contractor shall dispose of project Dredge Material that is not Beneficially Used at the site of generation, at a facility licensed by the Maine Department of Environmental Protection (MDEP) for the management of Special Waste. The Contractor shall be responsible for making all necessary arrangements for dewatering and proper management of the Dredge Material, including any laboratory testing, in accordance with the facility's license. The Contractor shall provide documentation to the Resident demonstrating that Dredge Material was managed as specified. Submitted documentation shall consist of truck manifests, waybills, or related documentation acceptable to the Resident, and shall clearly document the management site location and quantity of Dredge Material.

It is acknowledged that excavation of Dredge for this work may include some boulders. The MDEP has determined that sound boulders (rock 12-inches or more in diameter), that are free of adhering sediment or other contaminants, shall be deemed as Inert Fill material and shall not be included in Dredge Material Quantities.

**Method of Measurement:** Excavation of Dredge material will be measured for payment under related Contract Items.

**Basis of Payment:** The accepted quantity of Dredge Material properly disposed of, as Special Waste, will be paid for at the contract unit price bid for Disposal of Special Waste.

Payment shall be full compensation for dewatering, testing, stockpiling, loading, managing, transporting, disposal, and all associated fees.

Payment will be made under:

| <u>Pay Item</u> |                           | <u>Pay Unit</u> |
|-----------------|---------------------------|-----------------|
| 203.2318        | Disposal of Special Waste | Ton             |