

Updated 9/09/11

STATE 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:

- 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, Federal Express overnight delivery is suggested as the package is delivered directly to the DOT Headquarters Building located at 16 Child Street in Augusta. Other means, such as U.S. Postal Service's Express Mail has proven not to be reliable.

IN ADDITION, FOR FEDERAL AID PROJECTS:

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

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

For complete bidding requirements, refer to Section 102 of the Maine Department of Transportation, Standard Specifications, Revision of December 2002.

NOTICE

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

Prospective bidders, subcontractors or suppliers who wish to download a copy of the bid package and receive a courtesy notification of project specific bid amendments, must provide an email address to Diane Barnes or David Venner at the MDOT Contracts mailbox at: MDOT.contracts@maine.gov. Each bid package will require a separate request.

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

The downloading of bid packages from the MDOT website is not the same as providing an electronic bid to the Department. Electronic bids must be submitted via <http://www.BIDX.com>. For information on electronic bidding contact Patrick Corum at patrick.corum@maine.gov , Rebecca Snowden at rebecca.snowden@maine.gov or Diane Barnes at diane.barnes@maine.gov.

NOTICE

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

Bid Enclosed - Do Not Open

WIN:

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

WIN:

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

WIN:

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 faxing questions and comments concerning specific Contracts that have been Advertised for Bid. Include additional numbered pages as required. Questions are to be faxed to the number listed in the Notice to Contractors. This is the only allowable mechanism for answering Project specific questions. Maine DOT will not be bound to any answers to Project specific questions received during the Bidding phase through other processes.

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/vendorinfo/vss.htm> .

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

Sealed Bids addressed to the Maine Department of Transportation, Augusta, Maine 04333 and endorsed on the wrapper "Bids for Dunn Brook Bridge Culvert Invert Lining in the town of SMYRNA" will be received from contractors at the Reception Desk, Maine DOT Building, Capitol Street, Augusta, Maine, until 11:00 o'clock A.M. (prevailing time) on November 16, 2011 and at that time and place publicly opened and read. Bids will be accepted from all bidders. The lowest responsive bidder must demonstrate previous successful completion of projects of a similar size and scope to be considered for the award of this contract. **We now accept electronic bids for those bid packages posted on the bidx.com website. Electronic bids do not have to be accompanied by paper bids. Please note: the Department will accept a facsimile of the bid bond; however, the original bid bond must then be received at the MDOT Contract Section within 72 hours of the bid opening. Until further notice, dual bids (one paper, one electronic) will be accepted, with the paper copy taking precedence.**

Description: Project No. 017878.00

Location: In Aroostook County, project is located on Route 2 approximately 0.5 mile west of the town line.

Scope of Work: Dunn Brook Bridge Culvert Invert Lining plus other incidental work.

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

Plans, specifications and bid forms may be seen at the Maine DOT Building in Augusta, Maine and at the Department of Transportation's Regional Office in Presque Isle. They may be purchased from the Department between the hours of 8:00 a.m. to 4:30 p.m. by cash, credit card (Visa/Mastercard) or check payable to Treasurer, State of Maine sent to Maine Department of Transportation, Attn.: Mailroom, 16 State House Station, Augusta, Maine 04333-0016. They also may be purchased by telephone at (207) 624-3536 between the hours of 8:00 a.m. to 4:30 p.m. Full size plans \$7.00 (\$10.50 by mail). Half size plans \$3.50 (\$5.75 by mail), Bid Book \$10 (\$13 by mail), Single Sheets \$2, payment in advance, all non-refundable.

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

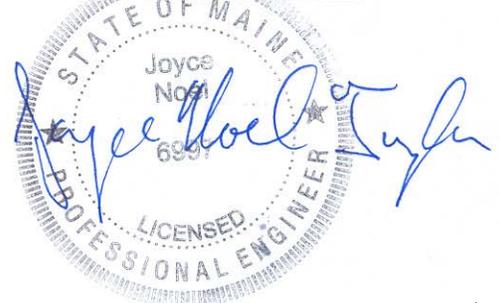
This Contract is subject to all applicable Federal Laws.

All work shall be governed by "State of Maine, Department of Transportation, Standard Specifications, Revision of December 2002", price \$10 [\$13 by mail], and Standard Details, Revision of December 2002, price \$20 [\$25 by mail]. Standard Detail updates can be found at <http://www.maine.gov/mdot/contractors/publications/>.

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

Augusta, Maine
October 26, 2011

JOYCE N. TAYLOR P.E.
DEPUTY CHIEF ENGINEER



SPECIAL PROVISION 102.7.3
ACKNOWLEDGMENT OF BID AMENDMENTS

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

Amendment Number	Date

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

CONTRACTOR

Date

Signature of authorized representative

(Name and Title Printed)

NOTICE TO CONTRACTORS - PREFERRED EMPLOYEES

Sec. 1303. Public Works; minimum wage

In the employment of laborers in the construction of public works, including state highways, by the State or by persons contracting for the construction, preference must first be given to citizens of the State who are qualified to perform the work to which the employment relates and, if they can not be obtained in sufficient numbers, then to citizens of the United States. Every contract for public works construction must contain a provision for employing citizens of this State or the United States. The hourly wage and benefit rate paid to laborers employed in the construction of public works, including state highways, may not be less than the fair minimum rate as determined in accordance with section 1308. Any contractor who knowingly and willfully violates this section is subject to a fine of not less than \$250 per employee violation. Each day that any contractor employs a laborer at less than the wage and benefit minimum stipulated in this section constitutes a separate violation of this section. [1997, c. 757, §1 (amd).]

SCHEDULE OF ITEMS

CONTRACT ID: 017878.00

PROJECT(S): 017878.00

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
SECTION 0001 project items						
0010	502.325 STRUCTURAL CONCRETE CULVERT INVERT LINING	LUMP	LUMP			
0020	502.326 STRUCTURAL CONCRETE - FISH WEIRS	LUMP	LUMP			
0030	503.12 REINFORCING STEEL, FABRICATED AND DELIVERED	2177.000 LB				
0040	503.13 REINFORCING STEEL, PLACING	2177.000 LB				
0050	511.07 COFFERDAM: downstream	LUMP	LUMP			
0060	511.07 COFFERDAM: upstream	LUMP	LUMP			
0070	526.501 PRECAST CONCRETE BARRIER, FISH PASSAGE	LUMP	LUMP			
0080	610.08 PLAIN RIPRAP	48.000 CY				
0090	610.16 HEAVY RIPRAP	59.000 CY				
0100	613.319 EROSION CONTROL BLANKET	30.000 SY				4

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 017878.00

PROJECT(S): 017878.00

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0110	618.1411 SEEDING METHOD NUMBER 3 - PLAN QUANTITY	3.000 UN				
0120	619.1201 MULCH - PLAN QUANTITY	3.000 UN				
0130	619.1401 EROSION CONTROL MIX	10.000 CY				
0140	620.58 EROSION CONTROL GEOTEXTILE	218.000 SY				
0150	629.05 HAND LABOR, STRAIGHT TIME	20.000 HR				
0160	631.12 ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	10.000 HR				
0170	631.172 TRUCK - LARGE (INCLUDING OPERATOR)	10.000 HR				
0180	652.34 CONE	20.000 EA				
0190	652.35 CONSTRUCTION SIGNS	100.000 SF				
0200	652.361 MAINTENANCE OF TRAFFIC CONTROL DEVICES	LUMP	LUMP			
0210	652.38 FLAGGER	200.000 HR				5

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 017878.00

PROJECT(S): 017878.00

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0220	656.75 TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LUMP	LUMP			
0230	659.10 MOBILIZATION	LUMP	LUMP			
	SECTION 0001 TOTAL					
	TOTAL BID					

CONTRACT AGREEMENT, OFFER & AWARD

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

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

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

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, WIN **017878.00** for the **Dunn Brook Bridge Culvert Invert Lining** in the town of **Smyrna**, County of **Aroostook** Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

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

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

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before **October 1, 2012**. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002 and related Special Provisions.

C. Price.

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

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

D. Contract.

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

E. Certifications.

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

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

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of: **WIN 017878.00 Dunn Brook Bridge Culvert Invert Lining Plus Other Incidental Work**, State of Maine, on which bids will be received until the time specified in the “Notice to Contractors” do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached “Schedule of Items”.

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

As Offeror also agrees:

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

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

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

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

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

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

CONTRACTOR

Date

(Signature of Legally Authorized Representative
of the Contractor)

Witness

(Name and Title Printed)

G. Award.

Your offer is hereby accepted.
documents referenced herein.

This award consummates the Contract, and the

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: David Bernhardt, Commissioner

Witness

CONTRACT AGREEMENT, OFFER & AWARD

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

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

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

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, WIN **017878.00** for the **Dunn Brook Bridge Culvert Invert Lining** in the town of **Smyrna**, County of **Aroostook** Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

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

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

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before **October 1, 2012**. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002 and related Special Provisions.

C. Price.

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

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

D. Contract.

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

E. Certifications.

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

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

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of: **WIN 017878.00 Dunn Brook Bridge Culvert Invert Lining Plus Other Incidental Work**, State of Maine, on which bids will be received until the time specified in the “Notice to Contractors” do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached “Schedule of Items”.

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

As Offeror also agrees:

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

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

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

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

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

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

CONTRACTOR

Date

(Signature of Legally Authorized Representative
of the Contractor)

Witness

(Name and Title Printed)

G. Award.

Your offer is hereby accepted.
documents referenced herein.

This award consummates the Contract, and the

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: David Bernhardt, Commissioner

Witness

CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and (Name of the firm bidding the job) a corporation or other legal entity organized under the laws of the State of Maine, with its principal place of business located at (address of the firm bidding the job)

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

A. The Work.

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

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

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

B. Time.

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

C. Price.

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

D. Contract.

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

E. Certifications.

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

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

F. Offer.

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

PIN 1234.00 South Nowhere, Hot Mix Asphalt Overlay,

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

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

As Offeror also agrees:

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

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

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

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

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

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

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

Date

(Witness Sign Here)
Witness

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

(Print Name Here)
(Name and Title Printed)

CONTRACTOR

G. Award.

Your offer is hereby accepted.
documents referenced herein.

This award consummates the Contract, and the

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: David Bernhardt, Commissioner

(Witness)

BOND # _____

CONTRACT PERFORMANCE BOND
(Surety Company Form)

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

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

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

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

WITNESSES:

SIGNATURES:

CONTRACTOR:

Signature.....

.....

Print Name Legibly

Print Name Legibly

SURETY:

Signature

.....

Print Name Legibly

Print Name Legibly

SURETY ADDRESS:

NAME OF LOCAL AGENCY:

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

ADDRESS

TELEPHONE.....

.....

BOND # _____

CONTRACT PAYMENT BOND
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That _____
_____ **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

.....

Maine DOT Map



The Maine Department of Transportation provides this publication for information only. Reliance upon this information is at user risk. It is subject to revision and may be incomplete depending upon changing conditions. The Department assumes no liability if injuries or damages result from this information. This map is not intended to support emergency dispatch. Road names used on this map may not match official road names.

**THIS DOCUMENT MUST BE CLEARLY POSTED AT THE PERTAINING STATE FUNDED PREVAILING
WAGE CONSTRUCTION SITE**

State of Maine
Department of Labor
Bureau of Labor Standards
Technical Services Division
Augusta, Maine 04333-0045
Telephone (207) 623-7906

Wage Determination - In accordance with 26 MRSA §1301 et. seq., this is a determination by the Bureau of Labor Standards, of the fair minimum wage rate to be paid laborers and workers employed on the below titled project.

Title of Project ----- Smyrna, Dunn Brook Bridge Culvert Invert Lining WIN 17878

Location of Project -- Smyrna, Aroostook County

**2011 Fair Minimum Wage Rates
Heavy & Bridge Aroostook County**

<u>Occupation Title</u>	<u>Minimum Wage</u>	<u>Minimum Benefit</u>	<u>Total</u>	<u>Occupation Title</u>	<u>Minimum Wage</u>	<u>Minimum Benefit</u>	<u>Total</u>
Asbestos/Lead Removal Worker	\$17.00	\$0.90	\$17.90	Industrial Truck (Forklift) Operator	\$22.38	\$6.60	\$28.98
Asphalt Raker	\$14.75	\$0.35	\$15.10	Insulation Installer	\$16.00	\$2.69	\$18.69
Backhoe Loader Operator	\$18.25	\$2.00	\$20.25	Ironworker - Reinforcing	\$20.37	\$16.82	\$37.19
Boilermaker	\$32.02	\$7.82	\$39.84	Ironworker - Structural	\$20.37	\$5.49	\$25.86
Boom Truck (Truck Crane) Operator	\$17.00	\$2.04	\$19.04	Laborers (Incl. Helpers & Tenders)	\$13.50	\$2.31	\$15.81
Bricklayer	\$22.05	\$0.00	\$22.05	Laborer - Skilled	\$16.09	\$3.51	\$19.60
Bulldozer Operator	\$16.38	\$3.55	\$19.93	Line Erector - Power	\$19.04	\$9.15	\$28.19
Cable Splicer	\$16.65	\$0.00	\$16.65	Loader Operator - Front-End	\$16.50	\$2.61	\$19.11
Carpenter	\$18.50	\$5.48	\$23.98	Mechanic, Maintenance	\$18.00	\$3.71	\$21.71
Carpenter - Rough	\$16.03	\$6.44	\$22.47	Mechanic, Refrigeration	\$21.82	\$3.71	\$25.53
Cement Mason/Finisher	\$17.50	\$0.92	\$18.42	Millwright	\$24.00	\$8.70	\$32.70
Communication Equip Installer	\$21.00	\$3.88	\$24.88	Painter	\$26.78	\$6.90	\$33.68
Communication Transmission Erector	\$15.73	\$3.12	\$18.85	Paver - Bituminous	\$18.13	\$2.35	\$20.48
Crane Operator <15 Tons	\$20.00	\$4.02	\$24.02	Pile Driver Operator	\$24.53	\$5.21	\$29.74
Crane Operator =>15 Tons)	\$22.00	\$6.89	\$28.89	Pipe/Steam/Sprinkler Fitter	\$24.00	\$6.93	\$30.93
Crusher Plant Operator	\$16.00	\$4.45	\$20.45	Pipelayer	\$20.00	\$5.30	\$25.30
Driller - Rock	\$17.00	\$2.25	\$19.25	Roller Operator - Earth	\$16.13	\$1.22	\$17.35
Electrician - Licensed	\$26.80	\$12.21	\$39.01	Roller Operator - Pavement	\$15.50	\$3.30	\$18.80
Electrician Helper/Cable Puller (Licensed)	\$17.50	\$4.12	\$21.62	Sheet Metal Worker	\$17.91	\$3.31	\$21.22
Excavator Operator	\$19.25	\$2.11	\$21.36	Truck Driver - Light	\$15.00	\$2.35	\$17.35
Flagger	\$14.50	\$5.80	\$20.30	Truck Driver - Medium	\$14.85	\$0.84	\$15.69
Grader/Scraper Operator	\$17.50	\$2.56	\$20.06	Truck Driver - Heavy	\$12.88	\$1.77	\$14.65
Hot Top Plant Operator	\$18.93	\$6.21	\$25.14	Truck Driver - Tractor Trailer	\$16.00	\$1.91	\$17.91

The Laborer classifications include a wide range of work duties. Therefore, if any specific occupation to be employed on this project is not listed in this determination, call the Bureau of Labor Standards at the above number for further clarification.

Welders are classified in the trade to which the welding is incidental.

Apprentices - The minimum wage rate for registered apprentices are those set forth in the standards and policies of the Maine State Apprenticeship and Training Council for approved apprenticeship programs.

Posting of Schedule - Posting of this schedule is required in accordance with 26 MRSA §1301 et. seq., by any contractor holding a State contract for construction valued at \$50,000 or more and any subcontractors to such a contractor.

Appeal - Any person affected by the determination of these rates may appeal to the Commissioner of Labor by filing a written notice with the Commissioner stating the specific grounds of the objection within ten (10) days from the filing of these rates with the Secretary of State.

Determination No: HB-026-2011

A true copy

Filing Date: October 18, 2011

Attest:



Expiration Date: 12-31-2011

Richard V Snow
Director
Bureau of Labor Standards

SPECIAL PROVISIONS
SECTION 104
Utilities

MEETING

A Preconstruction Utility Conference, as defined in Subsection 104.4.6 of the Standard Specifications is not required.

GENERAL INFORMATION

These Special Provisions outline the arrangements that have been made by the Department for utility and/or railroad work to be undertaken in conjunction with this project. The following list identifies all known utilities or railroads having facilities presently located within the limits of this project or intending to install facilities during project construction.

The approximate locations of major items of existing and proposed (permanent and temporary) utility plan are shown on the highway construction plans.

All utility crossings over highways will provide not less than 20 feet vertical clearance over existing ground in cut or over finished grade in fill, during construction of this project.

Unless otherwise provided, utilities will not be required to make underground installations in frozen ground.

Any times and dates mentioned are estimates only and are dependent upon favorable weather, working conditions and freedom from emergencies. The Contractors shall have no claim against the Department if they are exceeded.

Utility working days are Monday through Friday conditions permitting. Times are estimated on the basis of a single crew for each utility.

In all cases, the utilities shall be advised well in advance (generally three weeks) before work, dependent upon other work to be done by the Contractor, in any particular area, is to be commenced by them.

Overview:

Utility/Railroad	Aerial	Underground
Maine Public Service Company	X	None
Montreal, Maine & Atlantic Railway	None	X
Northland Telephone (FairPoint)	None	X

Utility Contact Information:

Maine Public Service Company – Chris Nicholas 760-2526 cnicholas@mainepublicservice.com
Montreal, Maine & Atlantic Railway – Tom Tardif 848-4246 ttardif@mmarail.com
Northland Telephone (FairPoint) – Dwayne Hartin 463-9950 dhartin@fairpoint.com

"The utility contact information is provided as part of contract documents for utility correspondence after contract award. If the Contractor has any questions regarding the utility work or relocations associated with the Project during bidding, the Contractor shall submit questions through the Request for Information process outlined in the contract documents."

AERIAL

Maine Public Service Company has facilities located within the area but should not be involved in the project at this time.

UNDERGROUND

Northland Telephone (FairPoint) has facilities located within the area but should not be involved in the project at this time.

RAILROAD

Montreal, Maine & Atlantic Railway has facilities located within the area but should not be involved in the project at this time.

BLASTING

In addition to any other notice which may be required, the Contractor shall notify an authorized representative of each utility that have plant close to the site not later than 3:00 p.m. on the working day (Monday through Friday) before the Contractor intends to blast. Notice shall state the approximate time of the blast.

UTILITY SPECIFIC ISSUES

Any tree removal or tree trimming required within ten feet of electrical conductors must be done by a qualified contractor. A list of tree removal contractors qualified to remove trees or limbs within ten feet of the electrical conductors may be obtained from the power company.

DIG SAFE

The contractor will be responsible for determining the presence of underground utility facilities prior to commencing any excavation work and shall notify utilities of proposed excavation in accordance with **M.R.S.A. Title 23 §3360-A, Maine "Dig Safe" System. Call 1-888-344-7233.**

SAFE PRACTICES AROUND UTILITY FACILITIES

The Contractor shall be responsible for complying with M.R.S.A. Title 35-A, Chapter 7-A-Sections 751-761 Overhead High-Voltage Line Safety Act. Prior to commencing any work that may come within ten (10) feet of any aerial electrical line; the Contractor shall notify the aerial utilities as per Section 757 of the above act.

THE CONTRACTOR SHALL PLAN AND CONDUCT HIS WORK ACCORDINGLY.

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

In-Water work consists of any activity conducted below the normal high water mark of a river, stream, brook, lake, pond or “Coastal Wetland” areas that are subject to tidal action during the highest tide level for the year which an activity is proposed as identified in the tide tables published by the National Ocean Service. <http://www.oceanservice.noaa.gov/> For the full definition of “Coastal Wetlands”, please refer to 38 MRSA 480-B(2)

I. In-Water Work shall not be allowed between the dates of 10/2 and 7/14.
(In-Water work is allowed from 7/15 to 10/1.)

II. In-Water work window applies to the following water bodies at the following station #'s:
1. Dunn Brook

III. Special Conditions:
1. See ACOE Permit Page 2 for special conditions

IV. Approvals:
1. Temporary Soil Erosion and Water Pollution Control Plan

V. 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, 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”.

VI. No work is allowed that completely blocks a river, stream, or brook without providing downstream flow.
When working in Tidal streams flow needs to be provided in both directions

NOTE: Regulatory Review and Approval is required to modify the existing In-Water work window.

SPECIAL PROVISION
SECTION 105
LEGAL RELATIONS WITH AND RESPONSIBILITY TO PUBLIC
(NPDES)

105.8.2 Permit Requirements This Section is revised by the addition of the following paragraph:

”The Contractor is advised that the Environmental Protection Agency has issued a final National Pollutant Discharge Elimination System (NPDES) General Permit for storm water discharges from construction sites disturbing more than 2 ha [5 acres]. This permit requires:

- Storm Water Pollution Prevention Plan
- Submission of a Notification of Intent (NOI) at least 48 hours before construction commences
- Submission of a Notification of Termination (NOT) when a site has been finally stabilized and all storm water discharges from construction activities are eliminated.

If the project’s land disturbances is 2 ha [5 acres] or more, the Department will prepare the plan and submit the NOI (and NOT). The Contractor shall prepare plans and submit NOI’s (and NOT’s) for regulated construction activities beyond the project limits (e.g., borrow pits).

The Contractor shall be familiar with and comply with these regulations.”

SPECIAL PROVISION 105
OVERLIMIT PERMITS

Title 29-A § 2382 MRSA Overlimit Movement Permits.

1. Overlimit movement permits issued by State. The Secretary of State, acting under guidelines and advice of the Commissioner of Transportation, may grant permits to move nondivisible objects having a length, width, height or weight greater than specified in this Title over a way or bridge maintained by the Department of Transportation

2. Permit fee. The Secretary of State, with the advice of the Commissioner of Transportation, may set the fee for single trip permits, at not less than \$6, nor more than \$30, based on weight, height, length and width. The Secretary of State may, by rule, implement fees that have been set by the Commissioner of Transportation for multiple trip, long-term overweight movement permits. Rules established pursuant to this section are routine technical rules pursuant to Title 5, chapter 375, subchapter II-A.

3. County and municipal permits. A county commissioner or municipal officer may grant a permit, for a reasonable fee, for travel over a way or bridge maintained by that county or municipality

4. Permits for weight. A vehicle granted a permit for excess weight must first be registered for the maximum gross vehicle weight allowed for that vehicle.

5. Special mobile equipment. The Secretary of State may grant a permit, for no more than one year, to move pneumatic-tire equipment under its own power, including Class A and Class B special mobile equipment, over ways and bridges maintained by the Department of Transportation. The fee for that permit is \$15 for each 30-day period.

6. Scope of permit. A permit is limited to the particular vehicle or object to be moved, the trailer or semitrailer hauling the overlimit object and particular ways and bridges.

7. Construction permits. A permit for a stated period of time may be issued for loads and equipment employed on public way construction projects, United States Government projects or construction of private ways, when within construction areas established by the Department of Transportation. The permit:

A. Must be procured from the municipal officers for a construction area within that municipality;

B. May require the contractor to be responsible for damage to ways used in the construction areas and may provide for:

(1) Withholding by the agency contracting the work of final payment under contract; or

(2) The furnishing of a bond by the contractor to guarantee suitable repair or payment of damages.

The suitability of repairs or the amount of damage is to be determined by the Department of Transportation on state-maintained ways and bridges, otherwise by the municipal officers;

C. May be granted by the Department of Transportation or by the state engineer in charge of the construction contract; and

D. For construction areas, carries no fee and does not come within the scope of this section.

8. Gross vehicle weight permits. The following may grant permits to operate a vehicle having a gross vehicle weight exceeding the prescribed limit:

A. The Secretary of State, with the consent of the Department of Transportation, for state and state aid highways and bridges within city or compact village limits;

B. Municipal officers, for all other ways and bridges within that city and compact village limits; and

C. The county commissioners, for county roads and bridges located in unorganized territory.

9. Pilot vehicles. The following restrictions apply to pilot vehicles.

A. Pilot vehicles required by a permit must be equipped with warning lights and signs as required by the Secretary of State with the advice of the Department of Transportation.

B. Warning lights may be operated and lettering on the signs may be visible on a pilot vehicle only while it is escorting a vehicle with a permit on a public way.

With the advice of the Commissioner of Transportation and the Chief of the State Police, the Secretary of State shall establish rules for the operation of pilot vehicles.

9-A. Police escort. A person may not operate a single vehicle or a combination of vehicles of 125 feet or more in length or 16 feet or more in width on a public way unless the vehicle or combination of vehicles is accompanied by a police escort. The Secretary of State, with the advice of the Commissioner of Transportation, may require a police escort for vehicles of lesser dimensions.

A. The Bureau of State Police shall establish a fee for state police escorts to defray the costs of providing a police escort. A county sheriff or municipal police department may establish a fee to defray the costs of providing police escorts.

B. The Bureau of State Police shall provide a police escort if a request is made by a permittee. A county sheriff or municipal police department may refuse a permittee's request for a police escort.

C. A vehicle or combination of vehicles for which a police escort is required must be accompanied by a state police escort when operating on the interstate highway system.

10. Taxes paid. A permit for a mobile home may not be granted unless the applicant provides reasonable assurance that all property taxes, sewage disposal charges and drain and sewer assessments applicable to the mobile home, including those for the current tax year, have been paid or that the mobile home is exempt from those taxes. A municipality may waive the requirement that those taxes be paid before the issuance of a permit if the mobile home is to be moved from one location in the municipality to another location in the same municipality for purposes not related to the sale of the mobile home.

11. Violation. A person who moves an object over the public way in violation of this section commits a traffic infraction.

Section History:

PL 1993, Ch. 683, §A2 (NEW).

PL 1993, Ch. 683, §B5 (AFF).

PL 1997, Ch. 144, §1,2 (AMD).

PL 1999, Ch. 117, §2 (AMD).

PL 1999, Ch. 125, §1 (AMD).

PL 1999, Ch. 580, §13 (AMD).

PL 2001, Ch. 671, §30 (AMD).

PL 2003, Ch. 166, §13 (AMD).

PL 2003, Ch. 452, §Q73,74 (AMD).

PL 2003, Ch. 452, §X2 (AFF).

SPECIAL PROVISION
SECTION 107
TIME

The specified contract completion date is October 1, 2012.

Once the Contractor commences work on this project the work shall be continuous through completion.

SPECIAL PROVISION

SECTION 107

TIME

(Limitation of Operations)

The Contractor shall plan and conduct his operations in such a manner that Route 2 is a single lane 11 foot (minimum) of alternating traffic for a maximum of 15 Calendar Days.

SPECIAL PROVISION

SECTION 107

TIME

(Scheduling of Work – Projected Payment Schedule)

Description The Contractor shall also provide the Department with a Quarterly Projected Payment Schedule that estimates the value of the Work as scheduled, including requests for payment of Delivered Materials. The Projected Payment Schedule must be in accordance with the Contractor's Schedule of Work and prices submitted by the Contractor's Bid. The Contractor shall submit the Projected Payment Schedule as a condition of Award.

SPECIAL PROVISION
SECTION 107
SCHEDULING OF WORK

Replace Section 107.4.2 with the following:

”107.4.2 Schedule of Work Required Within 21 Days of Contract Execution and before beginning any on-site activities, the Contractor shall provide the Department with its Schedule of Work. The Contractor shall plan the Work, including the activity of Subcontractors, vendors, and suppliers, such that all Work will be performed in Substantial Conformity with its Schedule of Work. The Schedule must include sufficient time for the Department to perform its functions as indicated in this Contract, including QA inspection and testing, approval of the Contractor's TCP, SEWPCP and QCP, and review of Working Drawings.

At a minimum, the Schedule of Work shall include a bar chart which shows the major Work activities, milestones, durations, and a timeline. Milestones to be included in the schedule include: (A) start of Work, (B) beginning and ending of planned Work suspensions, (C) Completion of Physical Work, and (D) Completion. If the Contractor Plans to Complete the Work before the specified Completion date, the Schedule shall so indicate.

Any restrictions that affect the Schedule of Work such as paving restrictions or In-Stream Work windows must be charted with the related activities to demonstrate that the Schedule of Work complies with the Contract.

The Department will review the Schedule of Work and provide comments to the Contractor within 20 days of receipt of the schedule. The Contractor will make the requested changes to the schedule and issue the finalized version to the Department.”

SPECIAL PROVISION
SECTION 109.5
ADJUSTMENTS FOR DELAY
(Delays due to Flooding)

Subsection 109.5.1, Definitions- Types of Delays, is replaced with the following:

109.5.1 Definitions - Types of Delays Delays are defined as follows and may be divided into more than one type depending upon cause.

A. Excusable Delay Except as expressly provided otherwise by this Contract, an "Excusable Delay" is a Delay to the Critical Path that is directly and solely caused by: (1) an Uncontrollable Event, or (2) a flooding event at the affected location of the Project that results in a Q25 headwater elevation (**EL. 522.3 ft. NAVD88**), or greater, but less than a Q50 headwater elevation. Actual flood headwater elevations will be determined by the Contractor and verified by the Department.

B. Compensable Delay A "Compensable Delay" is a Delay to the Critical Path that is directly and solely caused by: (1) a weather related Uncontrollable Event of such an unusually severe nature that a Federal Emergency Disaster is declared. The Contractor will only be entitled to an Equitable Adjustment if the Project falls within the geographic boundaries prescribed under the disaster declaration (2) an Uncontrollable Event caused by a Utility Company or other third party (not Subcontractors) Working on Project-related Work within the Project Limits if, and only if, the Utility Company or such other third party offers the Department reimbursement for such Delay; (3) acts by the Department that are in violation of applicable laws or the Contract, or (4) a flooding event at the effected location of the Project that results in a Q50 headwater elevation (**EL. 523.4 ft. NAVD88**), or greater. Actual Q50 flood headwater elevations will be determined by the Contractor and verified by the Department.

C. Inexcusable Delay "Inexcusable Delays" are all Delays that are not Excusable Delays or Compensable Delays.

For a related provision, see Section 101.2 - Definition of Uncontrollable Event.

SPECIAL PROVISION
SECTION 203
EXCAVATION AND EMBANKMENT
(Dredge Materials)

Description: Dredge Material (See MaineDOT Standard Specifications § 101.2) is regulated as a Special Waste.

Work associated with the Dunn Brook Bridge Culvert Rehabilitation initiative will require the excavation of select Dredge Material. It is anticipated that less than 100-cubic yards of Dredge Material will be excavated. There is onsite Beneficial Use for all of the Dredge Materials.

It is acknowledged that the excavation of Dredge for this work may include some boulders. The Maine Department of Environmental Protection has determined that sound boulders (rock 12-inches or more in diameter), that are free of adhering sediment or other contaminants, shall be deemed to be Inert Fill material and shall not be included in the Dredge Material Quantities.

The contractor shall Beneficially Use all Dredge Material excavated at the Dunn Brook Bridge Culvert Rehabilitation project in an area adjacent to and draining into the dredged water body. No more than 100-cubic yards of Dredge Material may be excavated.

CONSTRUCTION REQUIREMENTS

Management: The contractor shall Beneficially Use all Dredge Material excavated at the individual culvert sites in areas adjacent to and draining into the dredged water body. No more than 100-cubic yards of Dredge Material may be excavated at any of the individual culvert sites.

Method of Measurement: Dredge Material will be measured by the cubic yard of material removed.

Basis of Payment: Payment for the Beneficial Use of Dredge Material will be incidental to the Contract Pay Items.

Payment shall be full compensation for excavation, dewatering, managing, transporting, and placement of the Dredge Materials.

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

CLASS OF CONCRETE	ITEM NUMBER	DESCRIPTION	P	METHOD
A	All	All Class A concrete	-	C

P values listed above reflect the price per cubic yard (CY) for all pay adjustment purposes.

The quantity used for Pay Adjustment purposes shall be the actual quantity of cast in place concrete placed and accepted. This quantity shall be computed by the Contractor and submitted to the Resident for approval.

Sublot size shall be determined by the resident based on an anticipated quantity of concrete for each class of concrete.

SPECIAL PROVISION
SECTION 502
STRUCTURAL CONCRETE CULVERT INVERT LINING
(Cast-in-place Method)

Description The work shall include preparation of existing surfaces, installation of machine bolts or studs, spot painting of corroded areas, placement of concrete, and the application of emulsified asphalt.

The Contractor has the option of using either a shotcrete lining method or a composite lining method for this culvert repair in lieu of this cast in place method. If the Contractor chooses a shotcrete or composite method, the appropriate special provision must be followed.

Materials Concrete for the culvert repair shall be Class "A" Concrete. The concrete mix shall include a chemical accelerator and shall be submitted to the Resident for prior approval.

Construction Requirements All work shall be in conformity with applicable requirements of Section 502.

Stud welded shear connectors or machine bolts meeting ASTM A307 shall be installed in accordance with Section 505 of the Standard Specifications with the following changes, Section 505.04 shall be ignored and the first paragraph of Section 505.05 is replaced in with the following:

Studs shall be inspected for a full 360 degree weld. Any stud that is found not to have the full weld shall be marked for re-welding.

All reinforcement shall be secured in place to prevent displacement during the concrete placement.

Finish the entire length of the invert with a broom surface finish.

The horizontal interfaces (joint between the top of the concrete invert lining and the corrugated metal culvert) shall be sealed with an asphalt emulsion (roofing tar) which extends onto the metal culvert at least 25 mm [1 in].

All areas of steel section loss above the concrete liner shall be sandblasted and painted with a MC Zinc Primer and a MC Urethane with Mox Tar Topcoat.

The Contractor shall sandblast all areas from 25 mm [1 in] below the top of concrete lining to 150 mm [6 in] below lowest row of shear connectors. The Contractor shall remove all loose materials, rust, scale, oil and deleterious material from all remaining surfaces to receive concrete by methods acceptable to the Resident. In areas where the metal is non-existent, a preliminary concrete placement shall be made utilizing forms where required, to fill voids

and establish the former extremity lines of the metal. The final placement is to be made over this preliminary placement. No concrete shall be placed on frozen surfaces.

An approved curing cover (or compound) shall be applied within 18 hours after finishing. Finished concrete shall be cured for a minimum of 48 hours before flushed with water, unless otherwise directed by the Resident, and flush water must be collected as per Section 656.

Method of Measurement The structural concrete for the culvert invert lining, satisfactorily placed and accepted in accordance with the dimensions shown on the plans, will be measured as one lump sum unit.

Basis of Payment The accepted structural concrete for the culvert invert lining will be paid for at the contract lump sum price for Structural Concrete Culvert Invert Lining. The contract lump sum price shall be full compensation for preparing surfaces, installing machine bolts or studs, spot painting of corroded areas with an MC Zinc Primer and MC Urethane with a Mox Tar Topcoat, placing concrete, applying of asphalt emulsion and furnishing all materials, equipment, labor and incidentals necessary to complete the work.

Concrete admixtures including silica fume will not be paid for directly, but shall be incidental to the related contract item.

The containment and disposal of pollutants during surface preparation will not be paid for directly, but shall be incidental to the related contract item and included in the Contractor's SEWPCP.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
502.325 Structural Concrete Culvert Invert Lining	Lump Sum

SPECIAL PROVISION
SECTION 502.325
STRUCTURAL CULVERT INVERT LINING
(Composites Method)

Introduction This specification covers the rehabilitation and fish weirs for culvert structures through the use of glass fiber reinforced polymer (FRP) liner segments.

The Contractor has the option of using either a shotcrete lining method or a cast in place lining method for this culvert repair in lieu of this composites method. If the Contractor chooses a shotcrete or cast in place method, the appropriate special provision must be followed.

DEFINITIONS

For the purpose of this specification, the following definitions apply:

E-glass	Alumo-borosilicate glass with an alkali content of maximum one weight percent, when expressed as sodium oxide (Na ₂ O)
Effective length of unit	The distance between planes normal to the unit axis and passing through the end points of the lining unit
Liner segment	A discrete length of culvert lining which may be either a single pipe lining unit or a combined pair of segmental lining units
Vinyl ester resin	A resin produced by the esterification of an epoxy resin with an unsaturated monocarboxylic acid – the reaction product is then dissolved in a reactive solvent, such as styrene, to a 35 - 45 percent content by weight

MATERIALS

Glass Mat A layer of E-glass fiber constructed as either chopped strand mat (CSM) or continuous filament mat (CFM) that provides a resin rich FRP layer near the corrosion/erosion exposed surface. All glass fiber reinforcement shall have a surface treatment (binder) compatible with the lining manufacturing process and the matrix resins. A stitched material laminate is also acceptable.

Glass fiber Reinforcement All glass fiber reinforcement shall be E-glass or better and have a surface treatment compatible with the lining manufacturing process and the matrix resins. Unidirectional (UD) reinforcement areal weight shall not exceed 55 oz/yd² in any single ply. A layer of CSM or CFM shall separate layers of UD fabric where applicable to maintain laminar shear strength. The E-glass material shall not contain more than 0.2% moisture by weight as supplied; it shall be uncontaminated and protected to the point of use.

Grout Grout having a 28-day compressive strength of at least 5,000 psi at the desired water content for optimum placement shall be used. The permissible mixing and placement

temperature range per the manufacturer's recommendations shall not be lower than 40°F or higher than 90°F. The non-shrink grout shall have a Hardened Height Change per ASTM C1090 of 0.0 to 0.3%.

Resin Vinyl ester corrosion resistant resin shall be used with a catalyzation process applied in accordance with the resin manufacturer's instructions. The resin shall have a viscosity suitable for vacuum infusion. The gel time shall be adequate for the given environmental conditions present during the manufacturing process. The gel time must allow for the elimination of wedging within the part. Resin promotion should allow for adequate cure during manufacture. Resin must achieve 80+% of manufacturer's Barcol value without post curing.

Cured resins, as cast singly without reinforcement, shall have an elongation at break greater than 5% when tested in accordance with ASTM D790. In addition, the Barcol Hardness as determined by ASTM D2503 shall be at least 30. Resins "flexibilised" by the addition of plasticisers shall not be used.

Coating Dyes, pigments, or additives shall be introduced as necessary in the resin to provide resistance to ultra-violet light degradation and a uniform, muted appearance.

Fasteners Carbon steel fasteners and washers with a minimum 0.2 mil zinc coating shall be used. Fasteners shall have a minimum shank diameter of 0.138 inches and washers shall have a diameter of between ¾ to 1 inch.

CONSTRUCTION REQUIREMENTS

General All culvert linings shall be manufactured with the following elements:

- A corrosion and abrasion resistant barrier layer
- A reinforcement layer comprised of double bias and unidirectional fabric
- A rough backing to provide a bond between the lining and annulus grout
- A nailing flange that is offset from the general liner radius

The manufacturing facility shall have a Certified Composites Technician (CCT) certified in the Vacuum Infusion Process (VIP) on staff to supervise or perform the layup and infusion of all composite components. The design of the composite liner shall be completed by a composites engineer and be verified by a Professional Engineer.

Barrier Layer (BL) The BL shall be manufactured from a vinyl ester resin system reinforced with E-glass CSM or CFM between 40-50% content by weight. The BL shall be a minimum of 0.12 inches thick.

Glass reinforcement The structural layer shall be made up of vinyl ester resin impregnated layers of E-glass fiber. The two outer plies shall be double bias (± 45) stitched or woven fabric having an areal weight of at least 24 oz/yd². The inner plies shall be made up of

unidirectional (UD) E-glass with the fiber direction oriented in the circumferential (hoop) direction of the liner. The areal weight of the UD plies shall be selected by analysis and test to satisfy strength and stiffness requirements. The structural layer shall have a fiber content of between 55%-65% by weight.

Liner fabrication Each fabric layer comprising the FRP liner shall be placed in a mold having the same nominal inner radius as the culvert minus 1 inch to avoid contact with the culvert bolts. A nailing flange shall transition outward to the nominal inner radius of the culvert extending a minimum of 2 times the number of fastener rows plus 1 inch. A gradual transition shall exist between the two liner radii extending between 3 to 6 inches depending on liner radius. The extent of the liner in the circumferential dimension shall be as shown on the Plans.

Rough backing A clean, dry aggregate shall be bonded to the back of the FRP liner to promote a mechanical bond between the liner and grout filler. It shall consist of an angular, inert material, such as crushed granite, nominally 1/8 to 1/4 inch in size uniformly distributed over the external surface. A CSM layer with an areal weight at least 1.5 oz/ft² shall be hand laid on to the back of the liner using vinyl ester resin and rollers to provide a resin-rich embedment layer for the aggregate. Once the resin has cured, a stiff broom shall be passed over the surface to remove any loose or poorly bonded aggregate. The aggregate must uniformly cover 50% or more of the total surface area of the back of the panel.

Weir Fabrication Weirs shall be fabricated from E-glass fabric and vinyl ester resin using the materials described above. The size, shape, and elevation of the weir features shall be as shown on the Plans. Wall thickness shall be at least 1/2 inch. Wall thickness may need to increase based on panel radius. Allowable stresses as per RTP1-2007.

Edges and ends The edges and ends of all trimmed lining segments and sections shall be sealed with a vinyl ester resin to prevent the exposure of glass fibers. The resin shall be pigmented to match the color and performance of the laminating resin.

INSTALLATION

General

Flow Diversion Flow shall be rerouted or dammed prior to culvert cleaning and until after the liner, grout, and weirs have been installed. The presence of some groundwater is acceptable as long as flow is prevented along the length of the culvert. Any water propagating through the corroded invert of the culvert must be contained prior to panel installation. No grout dilution is allowable.

Cleaning and Preparation Debris shall be removed from the culvert and disposed of in accordance with state and local environmental requirements. The invert shall be pressure washed to remove soil and loose, corroded material from the culvert. All debris should be removed by mechanical means. Any holes in the steel culvert shall be sealed with hydraulic cement. Bolts that protrude more than 1 inch above the crest of corrugations shall be trimmed

prior to placing the FRP liner. Bolts should be cut off flush with the top of the nut. The nut must not be compromised.

All areas of culvert section loss above the composite liner shall be sandblasted and painted with a MC Zinc Primer and a MC Urethane with a Mox Tar Topcoat.

LINERS

Attachment The exact position of the first liner segment placed at one end of the culvert shall be determined based on the segment length and the overall length of the culvert such that the first and last liner segments shall be at least 5 feet long.

Liner segments shall be secured to sound steel using powder-actuated galvanized steel fasteners. The frequency and spacing of the fasteners shall be determined by engineering analysis of the seam strength requirements. Fasteners shall be driven with enough energy to ensure the head and washer are seated tight against the FRP and that contact is maintained between the FRP and steel while avoiding excess force that may cause cupping of the washer or damage to the FRP. Jacking poles may be used to hold the FRP against the steel in places where sudden geometry changes prevent contact under dead weight. The allowance of any gap between the FRP and steel is at the discretion of the engineer and shall be minimized.

Trimming Liner segments placed at the culvert ends shall be trimmed to match the taper of the existing steel culvert. The ends shall be sealed with a mixture of resin and fiber to contain the annular grout. All trimmed edges shall be treated in accordance with 4.6.

Joining All joining of panels shall be designed as per RTP1-2007 standards and specifications. Reference sections 3A-800 Secondary Bond Shear Stress and subpart 3B Design by Stress Analysis sections 3B-100 through 3B-700 to determine proper joint design. Refer to RTP1-2007 Mandatory Appendix M-5 Qualification of Laminators and Secondary Bonders for the required standards and practices. See section M-5 for required procedures to properly manufacture and test shear bond strength specimens.

FISH WEIRS

Size and Location The number, size, geometry, and location/elevation of all fish weirs internal and external shall be as shown on the plans.

Fitting Each fish weir shall be fabricated oversized and trimmed to fit in the required location. All trimmed edges shall be treated in accordance with the Construction Requirements above. The final weir channel elevation of the trimmed part shall be verified by the Resident prior to attachment.

Attachment The internal weirs shall be attached to the liner through the use of a methacrylate adhesive capable of bridging a gap of at least 0.250". The weir must be 100% edge sealed with the adhesive. The adhesive must be allowed to completely cure prior to installing the final weld kit. The final weld kit shall be installed on the upstream side of the weir and across

the top seams on both sides. The weld kit shall be in accordance with ASME RTP-1 specifications. Glass used shall be E-glass and consist of a combination of 1.5 oz CSM and 24 oz Woven Roving. All weld kits must be final coated and leave no exposed areas.

External Fish Weirs External fish weirs should be pre-assembled on a jig and placed as a complete unit in the prepared location. The Site should be excavated to a depth as shown on the Plans to allow for the installation of a Geotextile stabilization fabric followed by a minimum of 12" of $\frac{3}{4}$ " stone. The entire stone bed must be leveled to within $\frac{1}{4}$ " of an inch prior to placement. The top of the stone must allow for the critical surfaces of the weirs and spouts to be at the proper final elevation.

Forming of the weirs must allow for the complete encapsulation of the weirs and spouts. Installation and placement of rebar shall be in accordance with all customer specifications. External edges must be softened to assure that there are no 90° drop offs.

QUALITY ASSURANCE

As part of the quality assurance procedures, the manufacturer shall keep records of the following against each batch of output product:

- raw material batch details, including source, acceptance test records, purchase dates and shelf-life at time of use
- resin mixing records
- initiator level
- mold pressure at commencement of infusion
- mold temperature
- resin temperature
- ambient temperature of the shop
- infusion start and stop time
- visual inspection results of the cured part
- final Barcol readings
- technician names and date of manufacture

Appearance and surface condition The surface of the lining material shall be free from tackiness and defects such as protruding fibers, air voids, crazes, cracks, blisters or foreign matter that might impair the performance in service. The internal surface of the lining shall be textured. The surface of the panels shall be finished with a pigmented UV resistant final coat. Pigment must be compatible with the resin system.

Joints The liner and joint shall be designed so that the resulting lap joint is flush with the interior surface of the liner segments. The flexible or rigid joints are required to provide a permanent seal between liner segments to protect the integrity of the grout and prevent water ingress. Rigid setting or flexible compounds used to caulk or seal the gap between liner segments shall be resistant to the environment for which they are intended, and shall be suitable for installation within a confined space taking safety aspects into consideration.

Upon complete cure of the sealing compound the joint should be finished with a weld kit designed in accordance with ASME RTP-1 specifications and final coated.

Performance requirements A composites engineer shall determine the appropriate reinforcing ply thickness to satisfy all strength, stiffness, and seam strength requirements assuming the corroded invert does not provide any residual strength to the system. Mechanical testing performed by a certified (ISO 9000 or equivalent) testing laboratory shall be conducted to verify predicted material properties for final design and provide quality control data. All calculations supporting the design shall be submitted for approval by the Department prior to beginning construction.

Type tests Coupon tests to verify predicted mechanical properties used during preliminary design shall be performed before completing the detail design. These tests shall include flexural strength and modulus per ASTM D790 and compressive strength and modulus per ASTM D6641. Component level tests shall be performed to verify the predicted buckling strength of the FRP/grout system and the shear capacity of the connection. The acceptable design value for strength is the mean minus two standard deviations. The acceptable design value for modulus is the mean.

QUALITY CONTROL TESTS

General The following test requirements are necessary in order to demonstrate a continuing satisfactory level of production quality in day to day production. The manufacturer shall establish a quality system to meet the requirements of ISO 9001 or ASME RTP-1. Witness panels fabricated at the same time using the same materials as the liner or cut-outs from the liner segment shall be used to conduct verification tests for every tenth panel fabricated.

Dimensions Wall thickness and resin rich layer thickness shall be determined at a minimum of three locations in each test sample using a method of measurement accurate to the nearest 0.005 inches by measuring cut surfaces through the lining wall. The cut surfaces shall be smoothed sufficiently for the different layers to be delineated. Generally the locations of cores shall include:

- A point towards the center of the test sample and points near each end of the test sample, but not at a joint.

Resin cure The surfaces shall not be tacky to the touch. Each test specimen shall be tested in accordance with the method described in ASTM D2503 at a minimum of three points and shall have a hardness not less than the minimum declared in 3.4. Post curing is permissible if necessary to achieve the desired results.

Analysis of construction The disposition of the laminates or layers and the constituents within them shall correspond to those of the type tested liners. The percentage by weight of the constituents and the weight of glass per unit area shall not deviate from the declared control values by more than $\pm 10\%$ (of each numerical value).

Appearance The internal and external surfaces of each lining unit shall be examined visually and be free from defects. Where practicable this shall occur prior to application of any bed mat backing or pigmented, UV resistant final surface coating.

Mechanical Properties The coupon tests described in 6.4 shall be conducted on test samples. The Quality Control Test results are acceptable if the calculated design values (as described in 6.4) are not less than 95% of the Type Test values.

CONTROL OF TEST CONDITIONS

Test conditions Unless otherwise required by this specification the test measurements shall be conducted at a temperature of $72 \pm 10^{\circ}\text{F}$ and relative humidity of $50 \pm 10\%$.

Specimen conditioning For Type Testing, specimens shall be kept in air $72 \pm 10^{\circ}\text{F}$ and $50 \pm 10\%$ RH for not less than 72 hours prior to testing.

For Quality Control Testing, specimens shall be kept in air at $72 \pm 10^{\circ}\text{F}$ and $50 \pm 10\%$ RH for not less than 24 hours after they are considered to be cured.

NOTE The preferred temperature for conditioning and testing composite materials is 72°F and 50% RH.

Test specimen preparation Test specimens shall be prepared in accordance with the applicable ASTM standards.

WORKMANSHIP, INSPECTION AND CERTIFICATION

Manufacturing Process FRP liners shall be manufactured using vacuum assisted resin transfer molding (VARTM) to ensure the production of high quality components and repeatability of physical and mechanical properties.

All layers of the FRP liner shall be produced in a single-injection process whereby barrier elements and reinforcing layers are formed in a singular resin infusion step.

All raw materials shall be tested at a frequency sufficient to ensure consistency and compliance with this specification. The manufacturer shall adequately supervise all stages of production and keep records of the raw material batches used and products made each work shift or day. Manufacture shall be under environmental conditions compatible with producing satisfactory liners and raw materials shall be stored and used in compliance with the recommendations of their manufacturers.

Reinforcement materials shall be stored in dry conditions. The liner manufacturer shall be familiar with the changes in viscosity, gel times, etc., which may occur during storage of the resin, and make appropriate allowances in the lining manufacturing process. Resin stored in

original unopened containers shall not be used after the resin manufacturer's stated expiration date.

Inspection In addition to the manufacturer's own inspection and supervision, the purchaser or his appointed inspecting authority shall have access at all reasonable times to inspect parts and all relevant test records.

Certification The manufacturer shall, on request, furnish the purchaser or purchaser's representative, with copies of a signed certificate for each size of liner stating that the construction and testing of liner segments supplied comply with the requirements of this specification and given details of minimum performance parameters agreed with the purchaser. If required by the purchaser, the quality control test results or a suitable summary shall be provided with the certificate.

PROTECTION OF LINING UNITS

Liner segments shall be handled, stored and transported in such a way as to prevent damage before receipt by the purchaser.

METHOD OF MEASUREMENT

Composite invert lining and/or fish weirs satisfactorily placed and accepted in accordance with the dimensions shown on the plans, will be measured as one lump sum unit.

BASIS OF PAYMENT

The accepted structural composite invert lining and/or composite fish weirs will be paid for at the contract lump sum price under the related Structural Concrete Culvert Invert Lining and Structural Concrete Fish Weir items. The contract lump sum price shall be full compensation for preparing surfaces, spot painting of corroded areas with a MC Zinc Primer and a MC Urethane with a Mox Tar Topcoat, placing composite segments and furnishing all other materials, equipment, labor and incidentals necessary to complete the work.

The containment and disposal of pollutants during surface preparation will not be paid for directly, but shall be incidental to the related contract item and included in the Contractor's SEWPCP.

Payment will be made under:

<u>Pay Items</u>	<u>Pay Unit</u>
502.325 Structural Concrete Culvert Invert Lining	Lump Sum

SPECIAL PROVISION
SECTION 502
STRUCTURAL CONCRETE CULVERT INVERT LINING
(Shotcrete Method)

Description The work shall include preparation of existing surfaces, installation of machine bolts or studs, spot painting of corroded areas, application by pneumatic pressure of a shotcrete mix, furnishing test panels, extracting cores, and application of asphalt emulsion as indicated on the plans, and in accordance with this specification.

The Contractor has the option of using either a cast in place lining method or a composite lining method for this culvert repair in lieu of this shotcrete method. If the Contractor chooses a cast in place or composite method, the appropriate special provision must be followed.

Shotcrete shall conform to all requirements of ACI 506.2 “Specifications for Materials, Proportioning, and Application of Shotcrete”, published by the American Concrete Institute, Detroit, Michigan, except as modified by the requirements of this project specification. Shotcrete shall consist of an application of one or more layers of mortar or concrete conveyed through a hose and pneumatically projected at a high velocity against a prepared surface.

Shotcrete shall be produced by either a dry-mix or a wet-mix process. The wet-mix process consists of thoroughly mixing all the ingredients except accelerating admixtures but including the mixing water, introducing the mixture into the delivery equipment and delivering it, by positive displacement, to the nozzle. The wet-mix shotcrete shall then be air jetted from the nozzle at high velocity onto the surface. Dry-mix process is shotcrete without mixing water which is conveyed through the hose pneumatically and the mixing water is introduced at the nozzle. For additional descriptive information, the Contractor’s attention is directed to the American Concrete Institute Standard “Guide to Shotcrete (ACI 506R-90)”.

Qualifications The work shall be performed by fully qualified personnel experienced in this type of work.

1. The foreman shall have at least five years of shotcrete experience and at least two years as a nozzleman.
2. The nozzleman shall have at least two years recent experience of satisfactory work as a nozzleman.
3. Evidence of the foreman and nozzleman’s experience of satisfactory work in similar capacities elsewhere shall be provided.

Materials All materials for shotcrete shall conform to the following requirements.

Cement	AASHTO M-85, ASTM C150, Type I, II, III or IV.
Fine Aggregate	AASHTO M-6, ASTM C33 clean, natural.

Coarse Aggregate	AASHTO M-80, Class B for quality.
Water	Potable, clean, and free from substances deleterious to concrete and steel or elements that would stain.
Chemical Admixtures	ASTM C1141 and the following:
Water-reducer	AASHTO M-194, Type A, D, F, G or
Superplasticizer	ASTM C494 Type A, D, F, G
Air-Entraining Agent	AASHTO M-194/ASTM C260
Plasticizers	AASHTO M-194 Type A, D, F, G or ASTM C494
Mineral Admixtures	
Fly Ash	AASHTO M-295, ASTM C618 Type F or C
Silica Fume	ASTM C1240, 90% minimum silicon dioxide solids content, not to exceed 12% by weight of cement. In addition, silica fume shall conform to the requirements of Section 502.
Polypropylene Fibers	ACI Standard, Polypropylene Fibers, 1 inches in length, 1½ lb/yd ³
Steel Fibers	ASTM A820 Type I, II, or III, Deformed, Steel Fibers, 1 in to 1 ⅜ inches in length, minimum aspect ratio of 60.
Curing Compounds	AASHTO M-148 Type 1 D of Type 2
Pre-packaged Shotcrete	ASTM C928

The use of other admixtures shall not be used unless approved by the Resident. Admixtures used to entrain air, to reduce water-cement ratio, to retard or accelerate setting time, or to accelerate the development of strength, shall be thoroughly mixed into the shotcrete at the rate specified by the manufacturer unless specified otherwise. Accelerating additives shall be compatible with the cement used, be non-corrosive to steel and shall not promote other detrimental effects such as cracking or excessive shrinkage. The maximum allowable chloride ion content of all ingredients shall not exceed 0.10% when tested to AASHTO T260.

Premixed and pre-packaged concrete products specifically manufactured as a shotcrete product may be provided for on-site mixed shotcrete if approved by the Resident. The packages shall contain materials conforming to the materials portion of this specification.

Stud welded shear connectors or machine bolts meeting ASTM A307 shall be installed in accordance with Section 505 of the Standard Specifications with the following changes, Section 505.04 shall be ignored and the first paragraph of Section 505.05 is replaced in with the following:

Studs shall be inspected for a full 360 degree weld. Any stud that is found not to have the full weld shall be marked for re-welding.

Materials Storage and Handling Materials shall be delivered, stored, and handled to prevent contamination, segregation, corrosion, or damage. Liquid admixtures shall be stored to prevent evaporation and freezing.

Cement shall be adequately stored to prevent moisture degradation and partial hydration. Cement that has become caked or lumpy shall not be used.

Aggregates shall be stored so that segregation and the inclusion of foreign materials are prevented. The bottom 6 in of aggregate piles in contact with the ground shall not be used.

Submittals The following submittals shall be provided by the Contractor for the Resident's review and approval. The Contractor will not be allowed to begin culvert repairs until all submittal requirements are satisfied and found acceptable to the Resident. Changes or deviations from the approved submittals must be resubmitted for approval. Adjustments in contract time will not be allowed for incomplete submittals.

At least 21 calendar days prior to initiating the work, the Contractor shall submit to the Resident the following:

1. Written documentation of the foreman's and nozzleman's qualifications and the proposed method of shotcrete placement.
2. Shotcrete mix design including:
 - a) Brand and type of Portland Cement used.
 - b) Source, gradation, and quality of aggregates as specified herein.
 - c) Proportions of mix by weight.
 - d) Proposed admixture, manufacturer, dosage, technical literature (when admixture allowed).
 - e) Compressive strength test results from the manufacturer's records, no older than six months, verifying the 28 day compressive strength.

Shotcrete Mix Design Aggregate for shotcrete shall meet the strength and durability requirement of AASHTO M-80 and M-43 and shall meet the following gradation requirements.

<u>Sieve Size</u>	<u>% Passing by Weight</u>
3/8 in	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
FM	2.3 to 3.1

- A. Proportioning Shotcrete shall be proportioned and delivered with a minimum cement content of 650 lb/yd³.
- B. Strength Requirements Shotcrete shall be proportioned to produce a mix capable of attaining 5000 psi compressive strength in 28 days. The average compressive strength of each set of three cores extracted from the test panels shall equal or exceed the specified

compressive strength, with no individual core less than 75 percent of the specified compressive strength, in accordance with ACI 506.2R-95.

Mixing and Batching Mixing equipment shall be capable of thoroughly mixing the materials in sufficient quantity to maintain the placing continuity. Shotcrete shall be batched, delivered and placed within 90 minutes of mixing.

Field Quality Control Production test panels shall be required. Qualified personnel shall perform shotcreting and coring of the test panels with the Department's personnel present. The Contractor shall provide equipment, materials and personnel as necessary to obtain shotcrete cores for testing including construction of test panel boxes, field curing requirements and coring. The Department will perform compressive strength testing. Shotcrete final acceptance will be based on obtaining the specified 28 day compressive strength.

Shotcreting may commence upon initial approval of the design mix and nozzlemen.

Production Test Panels At least one production test panel shall be furnished during each day of production of shotcrete. The production test panels shall be constructed simultaneously with the shotcrete facing installation at times designated by the Resident. Production test panels shall be made with the minimum dimensions of 18 x 18 inch and at least 6 inch thick.

Test Panel Curing, Test Specimen Extraction and Testing Immediately after shooting, the test panels shall be field moist cured by covering and tightly wrapping with a sheet of material meeting the requirements of ASTM C 171 until delivered to the testing lab or test specimens are extracted. The test panels shall not be immersed in water. The test panels for the first 24 hours after shooting shall not be disturbed.

At least three 3 inch diameter core samples shall be cut from each unreinforced production test panel for compressive strength testing. The Contractor shall extract the test specimens from test panels in the field within 48 hours of shooting the panel. The panels shall be kept in their forms when transported.

Cores shall not be taken from the outer 6 inch of test panels measured in from the outside edges of the panel's form.

The cores and container shall be clearly marked to identify the core locations. For production testing, the production section of the unformed superstructure repair represented by the production test panel cores shall be marked on the cores and the container. Immediately wrap cores in wet burlap or material in accordance with the requirements of ASTM C 171 and seal in a plastic bag. The Department shall take possession of the cores immediately after extraction. The remainder of the panels shall become the property of the Contractor. The Department will perform the compressive strength testing.

Upon delivery to the testing lab, samples will be placed in the moist room until the time of test. When the test length of a core is less than twice the diameter, the correction factors given in AASHTO T 24/ASTM C 42 will be applied to obtain the compressive strength of individual cores. Three cores will be tested at 28 days for compressive strength per AASHTO T 24/ASTM C 42.

Construction Requirements

The construction sequence shall be in accordance with the approved submittal, unless otherwise approved by the Resident.

A. Equipment

1. The shotcreting equipment selected must be capable of metering the mix through a hose to the nozzle for projecting at high velocity onto the surface to be shotcreted.
2. The gun shall be either the double chamber or the rotary type capable of continuous delivery of material. Gaskets in the equipment must be kept in good condition to avoid reduced pressure and consequent reduced velocity of material through the hose.
3. The air compressor may be any standard type capable of sufficient pressures and volume of air to convey the material through the longest hose delivery. The air compressor capacity must have allowance for air used in removing rebound and other incidental work. The air hose shall be equipped with filters to prevent any oil or grease from contaminating the shotcrete.
4. Water pressure shall be maintained at a minimum 15 psi higher than the highest air pressure required for placing the material. Both air and water pressure shall be uniformly steady.

B. Surface Preparation The Contractor shall remove all loose materials, rust, scale, oil, and deleterious material from all surfaces to receive shotcrete by methods acceptable to the Resident. The removal shall be accomplished in such a manner as not to loosen, crack, or shatter the surfaces to receive the shotcrete. Any surface material, which in the opinion of the Resident, is so loosened or damaged shall be removed to a sufficient depth to provide a base that is suitable to receive the shotcrete. The Contractor shall clean all surfaces to receive shotcrete by methods acceptable to the Resident. Material that loosens as the shotcrete is applied shall be removed. No shotcrete shall be placed on frozen surfaces.

All areas of section loss above the concrete liner shall be sandblasted and painted with a MC Zinc Primer and a MC Urethane with Mox Tar Topcoat.

C. Shotcrete Alignment Control The Contractor shall ensure that the thickness of shotcrete satisfies the minimum thickness shown on the design drawings using alignment wires, thickness control pins, or other means acceptable to the Resident.

- D. Delivery and Application In the areas of the culvert, where voids are present a preliminary placement of shotcrete shall be made to fill all voids adjacent to the extremity of the lines of the structure face. The final placement is to be made over this preliminary placement to full depth.

The shotcrete shall be applied from the lower part of the work area upwards to prevent accumulation of rebound on uncovered surfaces. Rebound shall not be worked back into the placement nor shall the rebound be salvaged. Rebound which does not fall clear of the working area shall be removed. The nozzle shall be held at an angle approximately perpendicular to the working face and at a distance so that rebound will be minimal and compaction will be maximized. Thickness, methods of support, air pressure, and rate of placement of shotcrete shall be controlled to prevent sagging or sloughing of freshly applied shotcrete.

The shotcreting procedure may be corrected by adjusting the nozzle distance and orientation perpendicular to the surface, adjusting the water content of the shotcrete mix or other means acceptable to the Resident. Retempering of the mix will not be permitted. The shotcreted surface shall be broomed and roughened to insure proper bond of subsequent layers.

All horizontal edges of exposed concrete (joint between the top of the concrete invert lining and the corrugated metal culvert) shall be sealed with an asphalt emulsion (roofing tar) which extends onto the culvert at least 1 in.

- E. Defective Shotcrete Surface defects shall be repaired as soon as possible after initial placement of the shotcrete. All shotcrete which lacks uniformity, which exhibits segregation, sagging, honeycombing, or lamination, or which contains any voids or sand pockets shall be removed and replaced with fresh shotcrete by the Contractor in accordance with this specification and to the satisfaction of the Resident.

A clearly defined pattern of continuous horizontal or vertical ridges or depressions at the reinforcing elements after they are covered will be considered an indication of insufficient cover of reinforcement or poor application and probable void. In this case, the application of shotcrete shall be immediately suspended and the work carefully inspected by the Resident. The Contractor shall implement and complete corrective measures prior to resuming the shotcrete operations.

Reinforcement All reinforcement shall be secured in place to prevent displacement during the shotcrete application.

- F. Finish Shotcrete finish shall be a natural gun finish. Scraping or cutting to remove high spots shall not be done until the shotcrete has become stiff enough to withstand the pull of the cutting device.

- G. Weather Limitations Shotcrete shall not be placed without cold weather protection when the ambient temperature is below 40° F and falling and/or when the shotcrete is likely to be subjected to freezing temperatures before a minimum strength of 700 psi. Cold weather protection shall be maintained until the strength of the in-place shotcrete is greater than 750 psi. Cold weather protection shall include heating under tents, blankets, or other means acceptable to the Resident. The temperature of the shotcrete, when deposited, shall be above 50° F but less than 90° F.

Shotcrete application shall also be suspended during high winds and heavy rains when, in the opinion of the Resident, the quality of the application is not acceptable. Newly placed shotcrete exposed to rain that washes out cement or otherwise makes the shotcrete unacceptable to the Resident shall be removed and replaced. The Contractor shall provide adequately secured polyethylene sheeting or equivalent when adverse exposure to weather is anticipated.

- H. Curing An approved curing cover (or compound) shall be applied within 18 hours after finishing. After surface water has evaporated from the finished surface, shotcrete exposed to sunlight shall be immediately treated for curing. Finished shotcrete shall be cured for a minimum of 48 hours before flushed with water, unless otherwise directed by the Resident, and flush water must be collected as per Section 656.

Safety Requirements Appropriate eye and dust protection equipment shall be used during shotcrete application. Cement and other admixtures are caustic and may cause eye, skin, and respiratory irritation unless safety measures are taken. Adequate ventilation shall be required. Nozzlemen and helpers shall as a minimum be equipped with gloves, respirators, eye protection and adequate protective clothing during the application of shotcrete. The Contractor is responsible for meeting all Federal, State, and Local Safety Code Requirements.

Method of Measurement The shotcrete for the culvert invert lining, satisfactorily applied and accepted in accordance with the dimensions shown on the plans, will be measured as one lump sum unit.

Basis of Payment The accepted shotcrete for the culvert invert lining will be paid for at the contract lump sum price for Structural Concrete Culvert Invert Lining. The contract lump sum price shall be full compensation for preparing surfaces, installing machine bolts or studs, spot painting of corroded areas with an Zinc rich Primer and MC Urethane with a Mox Tar Topcoat, applying shotcrete, applying of asphalt emulsion, constructing test panels, extracting cores, and furnishing all materials, equipment, labor, and incidentals necessary to complete the work.

Shotcrete admixtures including silica fume will not be paid for directly, but shall be incidental to the related contract item.

Smyrna
Dunn Brook Bridge
WIN 17878.00
August 24, 2011

The containment and disposal of pollutants during surface preparation and during shotcrete application will not be paid for directly, but shall be incidental to the related contract item and included in the Contractor's SEWPCP.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
502.325 Structural Concrete Culvert Invert Lining	Lump Sum

SPECIAL PROVISION
SECTION 502
STRUCTURAL CONCRETE
(Fish Weirs)

Description This work shall consist of forming and placing reinforced concrete fish weirs and any incidental construction in accordance with these specifications as called for on the plans or as designated by the Resident. All work shall be in conformity with the Standard Specifications and other Special Provisions.

Materials Concrete shall be Class A using Testing Method C; Reinforcing Steel shall be ASTM A615/A615M Grade 60; Anchor Bolts and anchor rods shall conform to ASTM A307 and all fastener components shall be galvanized. The HDPE plate shall meet the following requirements:

Solid wall High Density Polyethylene (Snaptite or Equiv.) with the Cell Classification meeting ASTM D-3350-02 and shall have the Plastic Pipe Institute ASTM Material Designation PE3408

Composites may be used for the internal fish weirs and may be placed at the same time as the invert lining, upon the Resident's approval. If the fish weirs are made from composite material, the requirements of Special Provision 509.73 Composite Invert Lining Option shall be followed.

CONSTRUCTION REQUIREMENTS

General The fish weir(s), including the vertical walls and channel bottom for the entire length between the weirs as shown on the plans shall be formed, cast, and stripped in the conventional manner; shotcrete will not be allowed for the formation of the weir(s), vertical walls, or floor between the weirs.

The Contractor shall supply the Department with two extra HDPE plates. The notches in the top of the HDPE plates shall be cut by the Department.

Method of Measurement Reinforced concrete fish weirs satisfactorily placed and accepted will be measured for payment as one lump sum unit acceptably covered in accordance with the plans and this special provision.

Basis of Payment Reinforced concrete fish weirs will be paid for at the contract lump sum price. Payment shall be full compensation for forming, placing and finishing the concrete; fabrication, delivery and placing reinforcing steel; furnishing and installing anchor rods, furnishing and installation of HDPE plates all equipment and labor, and all other incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
502.326 Structural Concrete Fish Weirs	Lump Sum

SPECIAL PROVISION
SECTION 502
STRUCTURAL CONCRETE
(Quality Level Analysis)

502.01 Description In second sentence, replace "...METHOD B Small Quantity Product Verification..." with "...METHOD B Statistical Acceptance..."

502.05 Composition and Proportioning Delete Table 1 and replace with the following;

TABLE 1- Methods A, B, and C

Concrete CLASS	Compressive Strength (PSI)		Permeability (COULOMBS)		Entrained Air (%)		Notes
	LSL	USL	LSL	USL	LSL	USL	
S	2,900	N/A	N/A	N/A	6.0	8.5	1, 5
A	4,350	-----	-----	2,400	6.0	8.5	1,2,5,6
P	-----	-----	-----	-----	5 ½	7 ½	1,2,3,4,5
LP	5,075	-----	-----	2,000	6.0	8.5	1,2,5,6
Fill	2,900	N/A	N/A	N/A	N/A	N/A	6

502.503 Delete and replace with the following;

“502.0503 Quality Assurance METHOD B The Department will determine the acceptability of the concrete through a quality assurance program.

The Department will take Quality Assurance samples a minimum of once per subplot on a statistically random basis. Quality Assurance tests will include compressive strength, air content and permeability.

Concrete sampling for quality assurance tests will be taken at the discharge point, with pumped concrete sampling taken at the discharge end of the pump line.

Lot Size A lot size shall consist of the total quantity represented by each class of concrete in the Contract, except in the case when the same class of concrete is paid for under both lump sum items and unit price items in the Contract; in this case, the lump sum item quantities shall comprise 1 lot and the unit price item quantities shall comprise a separate lot. A lot shall consist of a minimum of 3 and a maximum of 10 sublots. If a lot is comprised of more than 10 sublots, sized in accordance with Table #3, then this quantity shall be divided equally into 2, or more, lots such that there is a minimum of 3 and a maximum of 10 sublots per lot. If there is insufficient quantity in a lot to meet the recommended minimum subplot size, then the lot shall be divided into 3 equal sublots.

Sublot Size, General The size of each subplot shall be determined in accordance with Table #3. The Resident may vary subplot sizes based on placement sizes and sequence.

Sublot Size, Unit Price Items Sublot sizes will initially be determined from estimated quantities. When the actual final quantity of concrete is determined: If there is less than one-half the estimated subplot quantity in the remaining quantity, then this quantity shall be combined with the previous subplot, and no further Acceptance testing will be performed; if there is more than one-half the estimated subplot quantity in the remaining quantity, then this quantity shall constitute the last subplot and shall be represented by Acceptance test results. If it becomes apparent part way through a lot that, due to an underrun in quantity, there will be an insufficient quantity of concrete to comprise three sublots, then the Resident may adjust the sizes of the remaining sublots and select new sample locations based on the revised estimated quantity of concrete remaining in the lot.

Sublot Size, Lump Sum Items Each lot shall be divided into sublots of equal size, based on the estimated quantity of concrete.

TABLE 3

Quantity m ³ [cy]	Recommended Sublot Size m ³ [cy]
0-400 [0-500]	40 [50]
401-800 [501-1000]	60 [75]
801-1600 [1001-2000]	80 [100]
1601 [2001] or greater	200 [250]

Determination of the concrete cover over reinforcing steel for structural concrete shall be made prior to concrete being placed in the forms. Bar supports, chairs, slab bolsters, and side form spacers shall meet the requirements of Concrete Reinforcing Steel Institute (CRSI) Manual of Standard Practice, Chapter 3 Section 2.5 Class 1, Section 2.6 Class 1A, or Section 4. All supports shall meet the requirements for type and spacing as stated in the CRSI Manual of Standard Practice, Chapter 3. Concrete will not be placed until the placing of the reinforcing steel and supports have been approved by the Resident. If the Contractor fails to secure Department approval prior to placement, the Contractor's failure shall be cause for removal and replacement at the Contractor's expense. The Contractor shall notify the Resident, at least 48 hours prior to the placement, when the reinforcing steel will be ready for checking. Sufficient time must be allowed for the checking process and any needed repairs.

Evaluation of materials will be made using the specification limits in Table 1.

Compressive strength tests will be completed by the Department in accordance with AASHTO-T22 at ≥ 28 days, except that no slump will be taken. The average of two concrete cylinders per subplot will constitute a test result and this average will be used to determine the compressive strength for pay adjustment computations.

Testing for Entrained Air in concrete, at the rate of one test per subplot, shall be in accordance with AASHTO T152.

Rapid Chloride Permeability test specimens will be completed by the Resident in accordance with AASHTO T-277 at an age \geq 56 days. Two 100 mm x 200 mm [4 in x 8 in] cylinders will be taken per subplot placed.

Surface Tolerance, Alignment and Trueness, Plumb and Batter, and Finish will be measured as described in Section 502.0502.

Rejection by Resident For an individual subplot with a calculated pay factor of less than 0.80, the Department will, at its sole discretion:

A. Require the Contractor to remove and replace the entire affected placement with concrete meeting the Contract requirements at no additional expense to the Department, or

B. Accept the material, at a reduced payment as determined by the Department. (See also Section 502.191)

For a lot in progress, the Contractor shall discontinue operations whenever one or more of the following occurs:

A. The pay factor for any property drops below 1.00 and the Contractor is taking no corrective action

B. The pay factor for any property is less than 0.90

C. The Contractor fails to follow the QC Plan”

502.18 Method of Measurement Under Section E. make the following change from “...Method A, and under Section 502.19...” to “...Method A, Section 502.0503- Quality Assurance Method B, and under Section 502.19...”

502.19 Basis of Payment Modify the first sentence of the seventh paragraph from “...accepted under Method A.” to “...accepted under Method A and Method B.”

502.191 Pay Adjustment for Compressive Strength Add the following as the second sentence to the first paragraph; “Pay factors (PF) for pay adjustments for compressive strength will be determined using the Quality Level Analysis as specified in Section 106.”

502.192 Pay Adjustment for Chloride Permeability Delete and replace with the following;

“Pay factors (PF) for pay adjustments for Chloride Permeability will be determined using the Quality Level Analysis as specified in Section 106.

Values greater than 4000 coulombs shall be subject to rejection and replacement at no additional cost to the Department.”

502.193 Pay Adjustment for Air Content Delete and replace with the following;

“Pay factors (PF) for pay adjustments for air content will be determined using the Quality Level Analysis as specified in Section 106.”

Add the following Section;

“502.195 Pay Adjustments for Compressive Strength, Chloride Permeability and Air Content The Composite Pay Factor (CPF) for each lot of concrete shall be computed as follows:

$$\text{CPF} = [(\text{Compressive Strength PF}-1)(0.20)] + [(\text{Air Content PF}-1)(0.40)] \\ + [(\text{Chloride Permeability PF}-1)(0.40)]$$

The pay adjustment for each lot of concrete shall be computed as follows:

$$\text{Lot Pay Adjustment} = P \times \text{CPF} \times \text{Lot Size}$$

There will be no positive pay adjustments for Method B Concrete.”

SPECIAL PROVISION
SECTION 511
Coffer Dam

511.01 Description This work shall consist of the complete design, construction, maintenance and removal of cofferdams and other related work, including dewatering and inspection, required to allow for the excavation of foundation units, to permit and protect the construction of bridge or other structural units and to protect adjacent Roadways, embankments or other structural units, in accordance with the Contract.

511.02 Materials As specified in the cofferdam Working Drawings.

511.03 Cofferdam Construction

A. Working Drawings The Contractor shall submit Working Drawings, showing the materials to be used and the proposed method of construction of cofferdams to the Department. Construction shall not start on cofferdams until such Working Drawings have been submitted. Any review of or comment on, or any lack of review of or comment on, these Working Drawings by the Department shall not result in any liability upon the Department and it shall not relieve the Contractor of the responsibility for the satisfactory functioning of the cofferdam.

B. Construction Construct cofferdams in conformance with the submitted Working Drawings. Cofferdams shall, in general, be carried below the elevation of the bottom of footings to adequate depths to ensure stability and adequate heights to seal off water. Cofferdams shall be braced to withstand pressure without buckling, secured in place to prevent tipping or movement and be as watertight as necessary for the safe and proper construction of the substructure Work inside them. With the exception of construction of a concrete foundation seal placed under water, the interior dimensions of cofferdams shall provide sufficient clearance for the construction and inspection of forms and to permit pumping outside of forms. The Contractor shall be responsible for the righting and resetting of cofferdams that have tilted or moved laterally, as required for construction.

During the placing and curing of seal concrete, maintain the water level inside the cofferdam at the same level as the water outside the cofferdam, to prevent flow through the concrete.

No timber or bracing shall be used in cofferdams in such a way as to remain in the substructure Work.

Cofferdams shall be constructed to protect fresh concrete against damage from the sudden rising of the water body, to prevent damage by erosion and to prevent damage to adjacent Roadways, embankments or other structural units.

Unless otherwise noted, cofferdams, including all sheeting and bracing involved, shall be removed after the completion of the substructure Work in a manner that prevents disturbance or injury to the finished Work.

Cofferdams shall be constructed, dewatered and removed in accordance with the requirements of Section 656 - Temporary Soil Erosion and Water Pollution Control and related Special Provisions.

C. Inspection of Seal Cofferdams Seal cofferdam excavations shall initially be inspected and approved by the Contractor.

For each seal cofferdam excavation, the Contractor shall submit a written procedure to the Resident for sediment/overburden removal and excavation inspection. For cofferdams where seal concrete is to be placed on bedrock, the inspection procedure shall describe the Contractor's final cleaning and inspection process for attaining cleanliness of each cofferdam excavation. For cofferdams where seal concrete is not excavated to bedrock, the procedure shall describe the Contractor's final cleaning and inspection process for attaining the bottom of seal elevation shown on the Plans.

The Contractor shall notify the Resident at least 48 hours prior to when each seal cofferdam excavation will be ready for final inspection by the Department. The Contractor shall allow adequate time for each occurrence of cofferdam excavation inspection by the Department. The Contractor shall provide and maintain access and equipment, such as steel probes, for the Resident and/or the Department's Dive Team to independently inspect each cofferdam excavation.

No seal concrete placement shall begin until the Department has approved the cofferdam excavation.

511.04 Pumping Pumping from the interior of any cofferdam shall be done in such a manner as to prevent any current of water that would carry away or segregate the concrete.

Pumping to dewater a sealed cofferdam shall not commence until the seal concrete has set sufficiently to withstand the hydrostatic pressure and meets the following minimum curing time, after the completion of the installation of the seal concrete:

1. When the temperature of the water body outside the cofferdam is greater than 40°F, a minimum of 5 days.
2. When the temperature of the water body outside the cofferdam is less than 40°F, a minimum of 7 days.

Procedures for the removal of all water and materials from cofferdams shall be described in the Soil Erosion and Water Pollution Control Plan as required in Section 656 Temporary Soil Erosion and Water Pollution Control and related Special Provisions.

511.05 Method of Measurement Cofferdams will be measured as one lump sum unit, as indicated on the Plans or called for in the Contract.

511.06 Basis of Payment The accepted quantity of cofferdam will be paid for at the Contract lump sum price for the respective cofferdam items, which price shall be full compensation for design, construction, maintenance, inspection and removal.

When required, the elevation of the bottom of the footing of any substructure unit may be lowered, without change in the price to be paid for cofferdams. However, if the average elevation of more than 25% of the area of the excavation is more than 3 feet below the elevation shown on the Plans, and if requested by the Contractor, then the additional costs incurred that are included in the cofferdam Pay Item will be paid for in accordance with Section 109.7 - Equitable Adjustments to Compensation. The Contractor shall immediately notify the Department when these additional costs commence. Failure of the Contractor to provide this notification will result in undocumented additional work that will be non-reimbursable. The Department will evaluate this additional work to determine an appropriate time extension, if warranted.

All costs for sedimentation control practices, including, but not limited to, constructing, maintaining, and removing sedimentation control structures, and pumping or transporting water and other materials for sedimentation control will not be paid for directly, but will be considered incidental to the cofferdam Pay Item(s).

All costs for related temporary soil erosion and water pollution controls, including inspection and maintenance, will not be paid for directly, but will be considered incidental to the cofferdam Pay Item(s).

All costs associated with preparation of Working Drawings, design calculations, written procedure for sediment/overburden removal and excavation inspection, and the inspection of the seal cofferdam excavation shall be considered incidental to the cofferdam Pay Item(s). There shall be no additional payment for repeated inspection by the Department of the same cofferdam excavation.

All costs for cofferdams and related temporary soil erosion and water pollution controls, including inspection and maintenance, will be considered incidental to related Pay Items, when a specific Pay Item for cofferdams is not included in the Contract.

Seal concrete will be evaluated under Section 502.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
511.07 Cofferdam	Lump Sum

SPECIAL PROVISION
SECTION 526
Precast Concrete Barrier
(Fish Passage)

Description. This work shall consist of furnishing and installing precast concrete barriers as part of a fish passage as shown on the project plans. The work shall be done in accordance with the applicable provisions of the plans, standard specifications, supplemental specifications and special provisions, except as otherwise indicated in this special provision. This work shall also include any excavation and backfilling necessary to install the precast concrete barriers.

Materials. Precast concrete barriers shall be fabricated in conformance to MaineDOT Standard Detail, 526. Contractor may opt to use recycled/re-used precast concrete barriers in lieu of newly furnished concrete barriers upon approval by the Resident. Any protruding metal will be removed to a depth of 2” below the concrete surface. Holes or damage in precast concrete barrier(s) surface shall be patched using approved methods.

CONSTRUCTION REQUIREMENTS

General. Precast concrete barriers are to be installed onto a level, stable, compacted and suitable bedding material. The existing ground material may be used as bedding material if deemed suitable by the Resident. If necessary, a minimum of 12” of bedding material shall be excavated for, placed and included as part of this precast concrete barrier item. Any installed bedding material shall meet specification requirements of granular borrow, underwater backfill. Critical to the functionality of the fish passage, care shall be taken to set the precast barrier(s) so the top elevations are as specified on the project plans.

Method of Measurement. Precast concrete barrier, fish passage, will be measured for payment as one lump sum unit acceptably constructed in accordance with the plans and this special provision.

Basis of Payment. The precast concrete barrier, fish passage, item will be paid for at the contract lump sum price. Payment shall be full compensation for all labor, equipment, materials and incidentals necessary to complete the work, including furnishing the precast concrete barriers, excavation, backfilling and the installation of the precast concrete barriers. Payment will be made under:

Pay Item		Pay Unit
526.501	Precast Concrete Barrier, Fish Weir	Lump Sum

SPECIAL PROVISION
SECTION 652
MAINTENANCE OF TRAFFIC

Approaches Approach signing shall include the following signs as a minimum. Field conditions may warrant the use of additional signs as determined by the Resident.

- Road work Next x Miles
- Road work 500 Feet
- End Road Work

Work Area At each work site, signs and channelizing devices shall be used as directed by the Resident. Signs include:

- Road Work xxxx ¹
- One Lane Road Ahead
- Flagger Sign

Other typical signs include:

- Be Prepared to Stop
- Low Shoulder
- Bump
- Pavement Ends

The above lists of Approach signs and Work Area signs are representative of the contract Requirements. Other sign legends may be required.

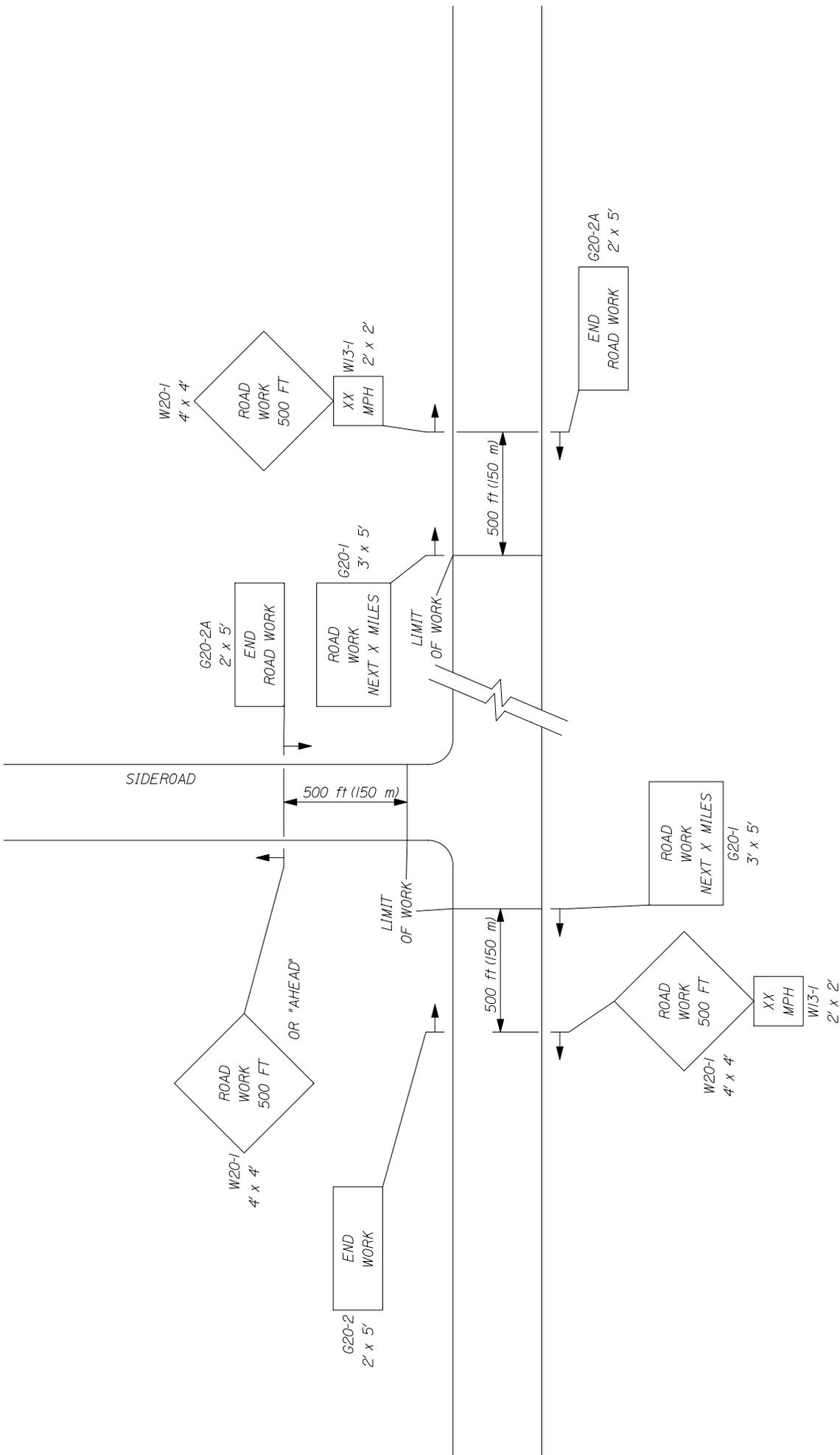
The Contractor shall conduct their operations in such a manner that the roadway will not be restricted to one lane for more than 800 m [2,500 ft] at each work area. To encourage quality paving in warm-weather conditions, the length can be extended to 4,000 ft depending on the traffic impacts. Where more than one work area restricts traffic to one lane operation, these work areas shall be separated by at least 1.6 km [1 mile] of two way operation.

Temporary Centerline A temporary centerline shall be placed each day on all new pavement to be used by traffic. The temporary centerline, when specified of reflectorized traffic paint, shall conform to the standard marking patterns used for permanent markings.

Failure to apply a temporary centerline daily will result in a Traffic Control Violation and suspension of paving operations until temporary markers are applied to all previously placed pavement.

¹ “Road Work Ahead” to be used in mobile operations and “Road Work xx ft” to be used in stationary operations as directed by the Resident.

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-- PROJECT APPROACH SIGNING --
TWO WAY TRAFFIC

* Formulas for L are as follows:

For speed limits of 40 mph (60 km/h) or less:

$$L = \frac{WS^2}{60} \quad (L = \frac{WS^2}{155})$$

For speed limits of 45 mph (70 km/h) or greater:

$$L = WS \quad (L = \frac{WS}{1.6})$$

* Formulas for L are as follows:

A minimum of 5 channelization devices shall be used in the taper.

TYPE OF TAPER	TAPER LENGTH (L)*
Merging Taper	at least L
Shifting Taper	at least 0.5L
Shoulder Taper	at least 0.33L
One-Lane, Two-Way Traffic Taper	100 ft (30 m) maximum
Downstream Taper	100 ft (30 m) per lane

CHANNELIZATION DEVICE SPACING

The spacing of channelization devices shall not exceed a distance equal to 1.0 times the speed limit in mph when used for taper channelization, and a distance in feet of 2.0 times the speed limit in mph when used for tangent channelization.

GENERAL NOTES;

1. Final placement of signs and devices may be changed to fit field conditions as approved by the Resident.

Road Type	Distance Between Signs**		
	A	B	C
Urban 30 mph (50 km/h) or less	100 (30)	100 (30)	100 (30)
Urban 35 mph (55 km/h) and greater	350 (100)	350 (100)	350 (100)
Rural	500 (150)	500 (150)	500 (150)
Expressway / Urban Parkway	2,640 (800)	1,500 (450)	1000 (300)

**Distances are shown in feet (meters).

SUGGESTED BUFFER ZONE LENGTHS

Speed (mph)	Length (feet)	Speed (mph)	Length (feet)
20	115	40	325
25	155	45	360
30	200	50	425
35	250	55	495

SPECIAL PROVISION
SECTION 652
MAINTENANCE OF TRAFFIC
(Traffic Control)

Failure by the contractor to follow the Contracts 652 Special Provisions and Standard Specification and/or The Manual on Uniform Traffic Control Devices (MUTCD) and/or The Contractors own Traffic Control Plan will result in a violation letter and result in a reduction in payment as shown in the schedule below. The Departments Resident or any other representative of The Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item. Any reduction in payment under this Special Provision will be in addition to forfeiting payment of maintenance of traffic control devices for that day.

ORIGINAL CONTRACT AMOUNT		Amount of Penalty
from	Up to and	
<u>More Than</u>	<u>Including</u>	<u>Damages per Violation</u>
\$0	\$100,000	\$250
\$100,000	\$300,000	\$500
\$300,000	\$500,000	\$750
\$500,000	\$1,000,000	\$1,500
\$1,000,000	\$2,000,000	\$2,500
\$2,000,000	\$4,000,000	\$5,000
\$4,000,000	and more	\$10,000

SPECIAL PROVISION
SECTION 652
MAINTENANCE OF TRAFFIC
Construction Sign Sheeting Material

Super high intensity fluorescent retroreflective sheeting, ASTM D 4956 - Type VII, Type VIII, or Type IX (prismatic), is required for all construction signs.

SPECIAL PROVISION
SECTION 656
Temporary Soil Erosion and Water Pollution Control

The following is added to Section 656 regarding Project Specific Information and Requirements. All references to the Maine Department of Transportation Best Management Practices for Erosion and Sedimentation Control (a.k.a. Best Management Practices manual or BMP Manual) are a reference to the latest revision of said manual. The latest version is dated "February 2008" and is available at;

<http://www.maine.gov/mdot/environmental-office-homepage/surface-water-resources.php>

Procedures specified shall be according to the BMP Manual unless stated otherwise.

Project Specific Information and Requirements

The following information and requirements apply specifically to this Project. The temporary soil erosion and water pollution control measures associated with this work shall be addressed in the Soil Erosion and Water Pollution Control Plan (SEWPCP.)

- 1) This project is located within the Meduxnekeag River watershed, which has been classified as Class B. The project is **NOT SENSITIVE** as defined by the MDOT BMP Manual, but due to the proximity to the resource, strict erosion and sediment controls are necessary
- 2) Newly disturbed earth shall be mulched by the end of each workday. Mulch shall be maintained on a daily basis.
- 3) The SEWPCP shall describe the location and method of temporary erosion and sediment control for existing and proposed catch basins, outlet areas and culvert inlets and outlets.
- 4) Dust control items other than those under Standard Specification 637 and Special Provision 637, if applicable, shall be included in the plan.
- 5) Permanent slope stabilization measures shall be applied within one week of the last soil disturbance.
- 6) Permanent seeding shall be done in accordance with *Special Provision, Section 618, Seeding* unless the Contract states otherwise.
- 7) Culvert inlet and outlet protection shall be installed within 48 hours of culvert installation, or prior to a storm event, whichever is sooner.
- 8) After November 1 the Contractor shall use winter stabilization methods, such as Wood Waste Erosion Control Mix as specified in Special Provision § 617. If required, spring procedures for permanent stabilization shall also be described in the plan. Use of this product for over-winter temporary erosion control will be incidental to the contract and be paid for as part of Pay Item 656.75.

SPECIAL PROVISION
SECTION 656
Temporary Soil Erosion and Water Pollution Control

- 9) All disturbed ditches shall be stabilized by the end of each workday. Stabilization shall be maintained on a daily basis.
- 10) Erosion control blanket shall be installed in the bottoms of all ditches except where a stone lining is planned. Seed shall be applied prior to the placement of the blanket.
- 11) If check dams are used, they shall be constructed of stone in accordance with BMP Manual, Section 9.
- 12) Demolition debris (including debris from wearing surface removal, saw cut slurry, dust, etc.) shall be contained and shall not be allowed to discharge to any resource. All demolition debris shall be disposed of in accordance with *Standard Specifications, Section 202.03, Removing Existing Superstructure, Structural Concrete, Railings, Curbs, Sidewalks and Bridges*. Containment and disposal of demolition debris shall be addressed in the Contractor's SEWPCP.
- 13) **CLEARING LIMIT LINES SHALL BE MINIMIZED.** Clearing shall be minimized as shown on the design plans.
- 14) Stream flow shall be maintained at all times.
- 15) The stream shall not directly contact concrete placed during construction until the concrete has been flushed of excess lime and the following has occurred.
- a) With the cofferdams still in place, water shall be flushed over the concrete to remove excess lime. The flush water may be drawn from the stream provided there is adequate flow.
 - b) The flush water shall be collected in a downstream cofferdam or a sedimentation basin.
 - c) Monitor the pH of the impounded water within the cofferdam or sedimentation basin until the pH factor is between 6.0 and 8.5 and is within one pH unit of background pH levels in the stream (away from where work is taking place).
 - d) The impounded water may be bled back into the stream as long as its turbidity is no greater than the receiving resource and resulting stream pH downstream of the release is between 6.0 and 8.5 and within one pH unit of background stream pH.
 - e) This requirement is applicable to concrete that is placed or spilled (including leakage from forms) as well as indirect contact via tools or equipment. Water not meeting release criteria shall 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.
- This monitoring and release to the stream protocol also pertains to all water within the cofferdams.
- 16) A cofferdam sedimentation basin is required if cofferdams are used. The basin shall be located in an upland area where the water can settle and seep into the ground or be released slowly to the resource in a manner that will not cause erosion. The location of such a cofferdam sedimentation basin shall be addressed in the SEWPCP.

SPECIAL PROVISION
SECTION 703
AGGREGATES

Add the following paragraph to Section 703:

Definitions (ASTM D 2488, Table 1)

Angular: Particles have sharp edges and relatively plane sides with unpolished surfaces

Subrounded: Particles have nearly plane sides but have well-rounded corners and edges

Rounded: Particles have smoothly curved sides and no edges

Replace subsections 703.25 through 703.28 with the following:

703.25 Stone Fill Stones for stone fill shall consist of hard, sound, durable rock that will not disintegrate by exposure to water or weather. Stone for stone fill shall be angular, rough, unhewn quarry stone. Rounded, subrounded, or long thin stones will not be allowed. The maximum allowable length to thickness ratio will be 3:1. The minimum stone size (10 lbs) would be retained on a 6 inch screen, and the maximum stone size (500 lbs) shall have a maximum dimension of approximately 36 inches. Larger stones may be used if approved by the Resident. Fifty percent of the stones shall have average dimension of 12 inches (200 lbs).

703.26 Plain and Hand Laid Riprap Stone for riprap shall consist of hard, sound durable rock which will not disintegrate by exposure to water or weather. Stone for riprap shall be angular, rough, unhewn quarry stone. Rounded, subrounded or long thin stones will not be allowed. The maximum allowable length to width ratio will be 3:1. The riprap surface stones shall be chinked with smaller stone from the same source. Rounded boulders or cobbles will not be permitted. The minimum stone size (10 lbs) would be retained on a 6 inch screen, and the maximum stone (200 lbs) shall have an average dimension of approximately 12 inches. Larger stones may be used if approved by the Resident. Fifty percent of the stones shall have an average dimension greater than 9 inches (50 lbs).

703.27 Stone Blanket Stones for stone blanket shall consist of sound durable rock which will not disintegrate by exposure to water or weather. Stone for stone blanket shall be angular, rough, unhewn quarry stone. Rounded or subrounded boulders or cobbles will not be permitted. The minimum stone size (300 lbs) shall have minimum dimension of 14 inches, and the maximum stone size (3000 lbs) shall have a maximum dimension of approximately 66 inches. Fifty percent of the stones shall have average dimension greater than 24 inches (1000 lbs).

703.28 Heavy Riprap Stone for heavy riprap shall consist of hard, sound, durable rock which will not disintegrate by exposure to water or weather. Stone for heavy riprap shall be angular, rough, unhewn quarry stone may be used. Rounded or subrounded boulders or cobbles, or thin, flat stones will not be permitted; the maximum allowable length to width ratio will be 3. The riprap surface stones shall be chinked with smaller stone from the same source. The minimum stone size (500 lbs) shall have minimum dimension of 15 inches, and at least fifty percent of the stones shall have an average dimension greater than 24 inches (1000 lbs).

STANDARD DETAIL UPDATES

Standard Details and Standard Detail updates are available at:

http://www.maine.gov/mdot/contractor-consultant-information/ss_standard_details_updates.php

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

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

535(02)	Precast Superstructure - Curb Key & Drip Notch	5/20/08
535(05)	Precast Superstructure - Post Tensioning	5/20/08
502(03)	Concrete Curb - Bituminous Wearing Surface	2/2/09
502(03)A	Concrete Curb - Concrete Wearing Surface	2/2/09
502(07)	Precast Concrete Deck Panels - Layout Plan	2/2/09
502(07)A	Precast Concrete Deck Panels - Layout Plan	2/2/09
502(08)	Precast Concrete Deck Panels - Panel Plan	2/2/09
502(09)	Precast Concrete Deck Panels - Blocking Detail	2/2/09
502(10)	Precast Concrete Deck Panels	2/2/09
502(11)	Precast Concrete Deck Panels	2/2/09
502(12)	Precast Concrete Deck Panels - Notes	2/2/09
502(12)A	Precast Concrete Deck Panels - Notes	2/2/09
526(06)	Permanent Concrete Barrier	2/2/09
526(08)	Permanent Concrete Barrier – Type IIIA	2/2/09
526(08)A	Permanent Concrete Barrier – Type IIIA	2/2/09
526(13)	Permanent Concrete Barrier – Type IIIB	2/2/09
526(14)	Permanent Concrete Barrier – Type IIIB	2/2/09
526(21)	Concrete Transition Barrier	2/2/09
526(39)	Texas Classic Rail – Between Window	2/2/09
526(40)	Texas Classic Rail – Through Window	2/2/09
526(41)	Texas Classic Rail – Through Post	2/2/09
526(42)	Texas Classic Rail – Through Nose	2/2/09
606(20)	Guardrail - Type 3 - Single Rail - Bridge Mounted	2/2/09

606(21)	Guardrail - Type 3 - Single Rail - Bridge Mounted	2/2/09
606(22)	Guardrail - Type 3 - Single Rail - Bridge Mounted	2/2/09
606(23)	Guardrail - Type 3 - Single Rail - Bridge Mounted	2/2/09
609(06)	Vertical Bridge Curb	2/2/09
609(08)	Precast Concrete Transition Curb	2/2/09
502(12)	Precast Concrete Desk Panels	9/09
504(22)	Diaphragm & Crossframe Notes	9/09
626(09)	Electrical Junction Box for Traffic Signals and Lighting	8/20/10
526(08)	Permanent Concrete Barrier	12/7/10
526(08)A	Permanent Concrete Barrier	12/7/10
504(15)	Diaphragms	5/19/11
507(09)	Steel Bridge Railing	5/19/11
507(09)A	Steel Bridge Railing	5/19/11
610(02)	Stone Scour Protection	5/19/11
610(03)	Stone Scour Protection	5/19/11
610(04)	Stone Scour Protection	5/19/11
620(05)	Geotextile Placement for Protection of Slopes Adjacent to Stream & Tidal Areas	5/19/11
502(03)	Concrete Curb	8/8/11
610(02)	Stone Scour Protection	8/9/11

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

SECTION 101
CONTRACT INTERPRETATION

101.2 Definitions

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

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

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

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

SECTION 102
DELIVERY OF BIDS

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

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

SECTION 103
AWARD AND CONTRACTING

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

SECTION 104
GENERAL RIGHTS AND RESPONSIBILITIES

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

SECTION 105 GENERAL SCOPE OF WORK

Delete the entire Section 105.6 and replace with the following:

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

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

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

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

105.6.3 Survey Quality Assurance It is the Department's prerogative to perform construction survey quality assurance. Construction survey quality assurance may, or may not, be performed by the Department. Construction survey quality assurance is generally defined as an independent check of the construction survey quality control. The construction survey

quality assurance process may involve physically checking the Contractor's construction survey layout using independent survey data, or may simply involve reviewing the construction survey quality control written documentation. If the Department elects to physically check the Contractor's survey layout, the Contractor's designated surveyor may be required to be present. The Department will provide a minimum notice of 48 hours to the Contractor, whenever possible, if the Contractor's designated surveyor's presence is required. Any errors discovered through the quality assurance process shall be corrected by the Contractor, at no additional cost to the Department.

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

SECTION 106 QUALITY

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

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

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

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

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

SECTION 107 TIME

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

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

From	Up to and	Amount of Liquidated
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<u>More Than</u>	<u>Including</u>	<u>Damages per Calendar Day</u>
\$0	\$100,000	\$225
\$100,000	\$250,000	\$350
\$250,000	\$500,000	\$475
\$500,000	\$1,000,000	\$675
\$1,000,000	\$2,000,000	\$900
\$2,000,000	\$4,000,000	\$1,000
\$4,000,000	and more	\$2,100

SECTION 108 PAYMENT

Remove Section 108.4 and replace with the following:

“108.4 Payment for Materials Obtained and Stored Acting upon a request from the Contractor and accompanied by bills or receipted bills, the Department will pay for all or part of the value of acceptable, non-perishable Materials that are to be incorporated in the Work, including Materials that are to be incorporated into the Work, not delivered on the Work site, and stored at places acceptable to the Department. Examples of such Materials include steel piles, stone masonry, curbing, timber and lumber, metal Culverts, stone and sand, gravel, and other Materials. The Department will not make payment on living or perishable Materials until acceptably planted in their final locations.

If payment for Materials is made to the Contractor based on bills, only, then the Contractor must provide receipted bills to the Department for these Materials within 14 days of the date the Contractor receives payment for the Materials. Failure of the Contractor to provide receipted bills for these Materials within 14 days of the date the Contractor receives payment will result in the paid amount being withheld from the subsequent progress payment, or payments, until such time the receipted bills are received by the Department.

Materials paid for by the Department are the property of the Department, but the risk of loss shall remain with the Contractor. Payment for Materials does not constitute Acceptance of the Material. If Materials for which the Department has paid are later found to be unacceptable, then the Department may withhold amounts reflecting such unacceptable Materials from payments otherwise due the Contractor.

In the event of Default, the Department may use or cause to be used all paid-for Materials in any manner that is in the best interest of the Department.”

SECTION 109 CHANGES

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

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

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

109.5.1 Definitions - Types of Delays

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

109.7.2 Basis of Payment Replace with the following: “Adjustments will be established by mutual Agreement based upon Unit or Lump Sum Prices. These agreed Unit or Lump Sum prices will be full compensation and no additions or mark-ups are allowed. If Agreement cannot be reached, the Contractor shall accept payment on a Force Account basis as provided in Section 109.7.5 - Force Account Work, as full and complete compensation for all Work relating to the Equitable Adjustment.”

109.7.3 Compensable Items Delete this Section entirely.

109.7.4 Non-Compensable Items Replace with the following: “The Contractor is not entitled to compensation or reimbursement for any of the following items:

- A. Total profit or home office overhead in excess of 15%,
- B.”

109.7.5 Force Account Work

C. Equipment

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

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

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

Add the following section;

“F. Subcontractor Work When accomplishing Force Account Work that utilizes Subcontractors, the Contractor will be allowed a maximum markup of 5% for profit and overhead on the Subcontractor’s portion of the Force Account Work. If the Department does not accept the Subcontractor quote, then the Subcontractor work will be subject to the Force Account provisions with a 5% markup for profit & overhead..”

SECTION 110 INDEMNIFICATION, BONDING, AND INSURANCE

Delete the entire Section 110.2.3 and replace with the following:

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

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

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

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

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

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

SECTION 202 REMOVING STRUCTURES AND OBSTRUCTIONS

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

SECTION 203 EXCAVATION AND EMBANKMENT

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

Delete the entire Section 203.041 and replace with the following:

“203.041 Salvage of Existing Hot Mix Asphalt Pavement All existing hot mix asphalt pavement designated to be removed under this contract must be salvaged for utilization. Existing hot mix asphalt pavement material shall not be deposited in any waste area or be placed below subgrade in any embankment.

Methods of utilization may be any of the following:

1. Used as a replacement for untreated aggregate surface course on entrances provided the material contains no particles greater than 50 mm [2 in] in any dimension. Payment will be made under Pay Item 411.09, Untreated Aggregate Surface Course or 411.10, Untreated Aggregate Surface Course, Truck Measure. Material shall be placed, shaped, compacted and stabilized as directed by the Resident.

2. Used as the top 3” of gravel. Recycled Asphalt Pavement (RAP) shall be process to 1½” minus and blending will not be allowed. When this method is utilized, a surcharge will not be required

3. Stockpiled at commercial or approved sites for commercial or MaineDOT use.

4. Other approved methods proposed by the Contractor, and approved by the Resident which will assure proper use of the existing hot mix asphalt pavement.

The cost of salvaging hot mix asphalt material will be included for payment under the applicable pay item, with no additional allowances made, which will be full compensation for removing, temporarily stockpiling, and rehandling, if necessary, and utilizing the material in entrances or other approved uses, or stockpiling at an approved site as described above. The material will also be measured and paid for under the applicable Pay Item if it is reused for aggregate in entrances, or other approved uses.”

SECTION 502 STRUCTURAL CONCRETE

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

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

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

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

502.10 Forms and False work

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

502.11 Placing Concrete

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

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

Second paragraph; delete the first two sentences.

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

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

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

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

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

SECTION 503 REINFORCING STEEL

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

SECTION 504

STRUCTURAL STEEL

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

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

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

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

SECTION 535

PRECAST, PRESTRESSED CONCRETE SUPERSTRUCTURE

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

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

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

SECTION 603

PIPE CULVERTS AND STORM DRAINS

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

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

42	39.30	1050	982.54
48	44.92	1200	1122.90

SECTION 604
MANHOLES, INLETS, AND CATCH BASINS

604.02 Materials Add the following:

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

SECTION 605
UNDERDRAINS

605.05 Underdrain Outlets Make the following change:

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

SECTION 606
GUARDRAIL

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

606.09 Basis of Payment First paragraph; delete the second and third sentence in their entirety and replace with “Butterfly-type guardrail reflectorized delineators shall be mounted on all W-beam guardrail at an interval of every 10 posts [62.5 ft] on tangents sections and every 5 posts [31.25 ft] on curved sections as directed by the Resident. On divided highways, the delineators shall be yellow on the left hand side and silver/white on the right hand side. On two-way roadways, the delineators shall be silver/white on the right hand side. All delineators shall have retroreflective sheeting applied to only the traffic facing side. Reflectorized guardrail delineators will not be paid for directly, but will be considered incidental to the guardrail items.”

SECTION 609
CURB

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

SECTION 610
STONE FILL, RIPRAP, STONE BLANKET,

AND STONE DITCH PROTECTION

Add the following paragraph to Section 610.02:

“Materials shall meet the requirements of the following Sections of Special Provision 703:

Stone Fill	703.25
Plain and Hand Laid Riprap	703.26
Stone Blanket	703.27
Heavy Riprap	703.28
Definitions	703.32”

Add the following paragraph to Section 610.032.a.

“Stone fill and stone blanket shall be placed on the slope in a well-knit, compact and uniform layer. The surface stones shall be chinked with smaller stone from the same source.”

Add the following paragraph to Section 610.032.b:

“Riprap shall be placed on the slope in a well-knit, compact and uniform layer. The surface stones shall be chinked with smaller stone from the same source.”

Add the following to Section 610.032: “Section 610.032.d. The grading of riprap, stone fill, stone blanket and stone ditch protection shall be determined by the Resident by visual inspection of the load before it is dumped into place, or, if ordered by the Resident, by dumping individual loads on a flat surface and sorting and measuring the individual rocks contained in the load. A separate, reference pile of stone with the required gradation will be placed by the Contractor at a convenient location where the Resident can see and judge by eye the suitability of the rock being placed during the duration of the project. The Resident reserves the right to reject stone at the job site or stockpile, and in place. Stone rejected at the job site or in place shall be removed from the site at no additional cost to the Department.”

SECTION 615

LOAM

615.02 Materials Make the following change:

Organic Content

Percent by Volume

Humus

“5% - 10%”, as determined by Ignition Test

SECTION 618

SEEDING

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

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

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

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

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

SECTION 620 GEOTEXTILES

620.03 Placement Section (c)

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

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

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

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

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

620.09 Basis of Payment

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

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

SECTION 621 LANDSCAPING

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

SECTION 626 HIGHWAY SIGNING

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

SECTION 627 PAVEMENT MARKINGS

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

SECTION 637

DUST CONTROL

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

SECTION 639 ENGINEERING FACILITIES

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

Description Change “Floor Area” to “Floor Area (Outside Dimension)”. Change Type B floor area from “15 (160)” to “20 (217)”.

639.09 Telephone Paragraph 1 is amended as follows:
“The contractor shall provide **two** telephone lines and two telephones,....”

Add- “In addition the contractor will supply one computer broadband connection, modem lease and router. The router shall have wireless access and be 802.11n or 802.11g capable and wireless. The type of connection supplied will be contingent upon the availability of services (i.e. DSL or Cable Broadband). It shall be the contractor’s option to provide dynamic or static IP addresses through the service. **The selected service will have a minimum downstream connection of 1.5 Mbps and 384 Kbps upstream.** The contractor shall be responsible for the installation charges and all reinstallation charges following suspended periods. Monthly service and maintenance charges shall be billed by the Internet Service Provider (ISP) directly to the contractor.”

SECTION 652 MAINTENANCE OF TRAFFIC

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

FAP units shall meet requirements of the current Manual on Uniform Traffic Control Devices (MUTCD) for Type “C” panels as described in Section 6F.56 - Temporary Traffic Control

Devices. An FAP shall have matrix of a minimum of 15 low-glare, sealed beam, Par 46 elements capable of either flashing or sequential displays as well as the various operating modes as described in the MUTCD, Chapter 6-F. If an FAP consisting of a bulb matrix is used, each element should be recess-mounted or equipped with an upper hood of not less than 180 degrees. The color presented by the elements shall be yellow.

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

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

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

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

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

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

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

652.2.4 Other Devices Delete the last paragraph and add the following:

“652.2.5 Portable Changeable Message Sign Trailer mounted Portable Changeable Message Signs (PCMS) must be of a type that has been submitted to AASHTO’s National Transportation Product Evaluation Program (NTPEP) for evaluation and placed on the Maine Department of Transportation’s Approved Products List of Portable Changeable Message Signs & Flashing Arrow Panels. The PCMS unit shall meet or exceed the current specifications of the Manual on Uniform Traffic Control Devices (MUTCD), 6F.55.

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

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

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

The control system shall include a display screen upon which messages can be reviewed before being displayed on the message sign. The control system shall be capable of maintaining memory when power is unavailable. Message must be changeable with either a notebook computer or an on-board keypad. The controller shall have the capability to store a minimum of 200 user-defined and 200 pre-programmed messages. Controller and battery compartments shall be enclosed in lockable, weather-tight boxes.

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

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

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

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

Add the follow to the list of requirements: "k. The plan for unexpected nighttime work along with a list of emergency nighttime equipment available on-site."

In the last paragraph add the following as the second sentence: "The Department will review and provide comments to the Contractor within 14 days of receipt of the TCP." Add the following as the last sentence: "The creation and modification of the TCP will be considered incidental to the related 652 items."

652.3.5 Installation of Traffic Control Devices In the first paragraph, first sentence; change "Signs shall be erected..." to "Portable signs shall be erected.." In the third sentence; change

“Signs must be erected so that the sign face...” to “Post-mounted signs must also be erected so that the sign face...”

652.4 Flaggers Replace the first paragraph with the following; “The Contractor shall furnish flaggers as required by the TCP or as otherwise specified by the Resident. All flaggers must have successfully completed a flagger test approved by the Department and administered by a Department-approved Flagger-Certifier who is employing that flagger. All flaggers must carry an official certification card with them while flagging that has been issued by their employer. Flaggers shall wear safety apparel meeting ANSI 107-2004 Class 2 risk exposure that clearly identifies the wearer as a person, and is visible at a minimum distance of 300 m [1000 ft], and shall wear a hardhat with 360° retro-reflectivity. For nighttime conditions, Class 3 apparel, meeting ANSI 107-2004, shall be worn along with a hardhat with 360° retro-reflectivity. Retro-reflective or flashing SLOW/STOP paddles shall be used, and the flagger station shall be illuminated to assure visibility in accordance with 652.6.2.”

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

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

Add the following:

“652.5.1 Rumble Strip Crossing When lane shifts or lane closures require traffic to cross a permanent longitudinal rumble strip for 7 calendar days or less, the Contractor shall install warning signs that read “RUMBLE STRIP CROSSING” with a supplemental Motorcycle Plaque, (W8-15P).

When lane shifts or lane closures require traffic to cross a permanent longitudinal rumble strip for more than 7 calendar days, the Contractor shall pave in the rumble strips in the area that traffic will cross, unless otherwise directed by the Resident. Rumble strips shall be replaced prior to the end of the project, when it is no longer necessary to cross them.”

652.6 Nightwork Delete this section entirely and replace with the following:

“652.6.1 Daylight Work Times Unless otherwise described in the Contract, the Contractor is allowed to commence work and end work daily according to the Sunrise/Sunset Table at: <http://www.sunrisesunset.com/usa/Maine.asp> . If the Project town is not listed, the closest town on the list will be used as agreed at the Preconstruction Meeting. Any work conducted before sunrise or after sunset will be considered Night Work.

652.6.2 Night Work When Night Work occurs (either scheduled or unscheduled), the Contractor shall provide and maintain lighting on all equipment and at all work stations.

The lighting facilities shall be capable of providing light of sufficient intensity to permit good workmanship, safety and proper inspection at all times. The lighting shall be cut off and arranged on stanchions at a height that will provide perimeter lighting for each piece of equipment and will not interfere with traffic, including commercial vehicles, approaching the work site from either direction.

The Contractor shall have available portable floodlights for special areas.

The Contractor shall utilize padding, shielding or other insulation of mechanical and electrical equipment, if necessary, to minimize noise, and shall provide sufficient fuel, spare lamps, generators, etc. to maintain lighting of the work site.

The Contractor shall submit, as a subset of the Traffic Control Plan, a lighting plan at the Preconstruction Conference, showing the type and location of lights to be used for night work. The Resident may require modifications be made to the lighting set up in actual field conditions.

Prior to beginning any Night Work, the Contractor shall furnish a light meter for the Residents use that is capable of measuring the range of light levels from 5 to 20 foot-candles.

Horizontal illumination, for activities on the ground, shall be measured with the photometer parallel to the road surface. For purposes of roadway lighting, the photometer is placed on the pavement. Vertical illumination, for overhead activities, shall be measured with the photometer perpendicular to the road surface. Measurements shall be taken at the height and location of the overhead activity.

Night Work lighting requirements:

Mobile Operations: For mobile-type operations, each piece of equipment (paver, roller, milling machine, etc) will carry indirect (i.e. balloon type) lights capable of producing at least 10 foot-candles of lighting around the work area of the equipment.

Fixed Operations: For fixed-type operations (flaggers, curb, bridge, pipes, etc.), direct (i.e. tower) lighting will be utilized capable of illuminating the work area with at least 10 foot-candles of light.

Hybrid Operations: For hybrid-type operations (guardrail, sweeping, Inslope excavation, etc.), either direct or indirect lighting may be utilized. The chosen lights must be capable of producing at least 10 foot-candles of light around the work area of the equipment

Inspection Operations: Areas required to be inspected by the Department will require a minimum of 5 foot-candles of lighting. This may be accomplished through direct or indirect means.

All workers shall wear safety apparel labeled as meeting the ANSI 107-2004 standard performance for Class 3 risk exposure.

The Contractor shall apply 2- inch wide retro-reflective tape, with alternating red and white segments, to outline the front back and sides of construction vehicles and equipment, to define

their shape and size to the extent practicable. Pickup trucks and personal vehicles are exempt from this requirement. The Contractor shall furnish approved signs reading "Construction Vehicle - Keep Back" to be used on trucks hauling to the project when such signs are deemed necessary by the Resident. The signs shall be a minimum of 30 inches by 60 inches, Black and Orange, ASTM D 4956 - Type VII, Type VIII, or Type IX (prismatic).

All vehicles used on the project, including pickup trucks and personal vehicles, shall be equipped with amber flashing lights, visible from both front and rear, or by means of single, approved type, revolving, flashing or strobe lights mounted so as to be visible 360°. The vehicle flashing system shall be in continuous operation while the vehicle is on any part of the project.

The Resident or any other representative of the Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item. Failure to follow the approved Lighting Plan will result in a Traffic Control violation.

Payment for lighting, vehicle mounted signs and other costs accrued because of night work will not be made directly but will be considered incidental to the related contract items."

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

SECTION 653 POLYSTYRENE PLASTIC INSULATION

653.05 Placing Backfill In the second sentence; change "...shall be not less than 150 mm [6 in] loose measure." to "...shall be not less than 250 mm [10 in] loose measure." In the third sentence; change "...crawler type bulldozer of not more than 390 kg/m² [80 lb/ft²] ground contact pressure..." to "...crawler type bulldozer of not more than 4875 kg/m² [2000 lb/ft²] ground contact pressure..."

653.06 Compaction In the last sentence; change "...not more than 390 kg/m² [80 lb/ft²] ground contact..." to "...not more than 4875 kg/m² [2000 lb/ft²] ground contact..."

SECTION 656 TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL

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

SECTION 701
STRUCTURAL CONCRETE RELATED MATERIALS

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

SECTION 703
AGGREGATES

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

703.06 Aggregate for Base and Subbase Delete the first paragraph: “The material shall have...” and replace with “The material shall have a minimum degradation value of 15 as determined by Washington State DOT Test Method T113, Method of Test for Determination of Degradation Value (January 2009 version), except that the reported degradation value will be the result of testing a single specimen from that portion of a sample that passes the 12.5 mm [½ in] sieve and is retained on the 2.00 mm [No. 10] sieve, minus any reclaimed asphalt pavement used.”

703.07 Aggregates for HMA Pavements Delete the forth paragraph: “The composite blend shall have...” and replace with “The composite blend, minus any reclaimed asphalt pavement used, shall have a Micro-Deval value of 18.0 or less as determined by AASHTO T 327. In the event the material exceeds the Micro Deval limit, a Washington Degradation test shall be performed. The material shall be acceptable if it has a value of 30 or more as determined by Washington State DOT Test Method T 113, Method of Test for Determination of Degradation Value (January 2009 version) except that the reported degradation value will be the result of testing a single composite specimen from that portion of the sample that passes the 12.5mm [1/2 inch] sieve and is retained on the 2.00mm [No 10] sieve, minus any reclaimed asphalt pavement used.”

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

AGGREGATE GRADATION CONTROL POINTS

SIEVE SIZE	Nominal Maximum Aggregate Size---Control Points (Percent Passing)				
	TYPE 25 mm	TYPE 19 mm	TYPE 12.5 mm	TYPE 9.5 mm	TYPE 4.75 mm

PERCENT BY WEIGHT PASSING - COMBINED AGGREGATE					
37.5 mm	100				
25 mm	90-100	100			
19 mm	-90	90-100	100		
12.5 mm		-90	90-100	100	100
9.5 mm		-	-90	90-100	95-100
4.75 mm		-	-	-90	80-100
2.36 mm	19-45	23-49	28-58	32-67	40 - 80
1.18 mm		-	-	-	-
600 µm		-	-	-	-
300 µm		-	-	-	-
75 µm	1-7	2-8	2-10	2-10	2-10

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

GRADATION CLASSIFICATION

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

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

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

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

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

Replace subsections 703.25 through 703.28 with the following:

703.25 Stone Fill Stones for stone fill shall consist of hard, sound, durable rock that will not disintegrate by exposure to water or weather. Stone for stone fill shall be angular and rough. Rounded, subrounded, or long thin stones will not be allowed. Stone for stone fill may be obtained from quarries or by screening oversized rock from earth borrow pits. The maximum allowable length to thickness ratio will be 3:1. The minimum stone size (10 lbs) shall have an average dimension of 5 inches. The maximum stone size (500 lbs) shall have a maximum dimension of approximately 36 inches. Larger stones may be used if approved by the Resident. Fifty percent of the stones by volume shall have an average dimension of 12 inches (200 lbs).

703.26 Plain and Hand Laid Riprap Stone for riprap shall consist of hard, sound durable rock that will not disintegrate by exposure to water or weather. Stone for riprap shall be angular and rough. Rounded, subrounded or long thin stones will not be allowed. The maximum allowable length to width ratio will be 3:1. Stone for riprap may be obtained from quarries or by screening oversized rock from earth borrow pits. The minimum stone size (10 lbs) shall have an average dimension of 5 inches. The maximum stone size (200 lbs) shall have an average dimension of approximately 12 inches. Larger stones may be used if approved by the Resident. Fifty percent of the stones by volume shall have an average dimension greater than 9 inches (50 lbs).

703.27 Stone Blanket Stones for stone blanket shall consist of sound durable rock that will not disintegrate by exposure to water or weather. Stone for stone blanket shall be angular and rough. Rounded or subrounded stones will not be allowed. Stones may be obtained from quarries or by screening oversized rock from earth borrow pits. The minimum stone size (300 lbs) shall have minimum dimension of 14 inches, and the maximum stone size (3000 lbs) shall have a maximum dimension of approximately 66 inches. Fifty percent of the stones by volume shall have average dimension greater than 24 inches (1000 lbs).

703.28 Heavy Riprap Stone for heavy riprap shall consist of hard, sound, durable rock that will not disintegrate by exposure to water or weather. Stone for heavy riprap shall be angular and rough. Rounded, subrounded, or thin, flat stones will not be allowed. The maximum allowable length to width ratio will be 3:1. Stone for heavy riprap may be obtained from quarries or by screening oversized rock from earth borrow pits. The minimum stone size (500 lbs) shall have minimum dimension of 15 inches, and at least fifty percent of the stones by volume shall have an average dimension greater than 24 inches (1000 lbs)."

Add the following paragraph:

703.32 Definitions (ASTM D 2488, Table 1).

Angular: Particles have sharp edges and relatively plane sides with unpolished surfaces

Subrounded: Particles have nearly plane sides but have well-rounded corners and edges

Rounded: Particles have smoothly curved sides and no edges"

SECTION 706
NON-METALLIC PIPE

706.06 Corrugated Polyethylene Pipe for Underdrain, Option I and Option III Culvert Pipe Change the first sentence from "...300 mm diameters to 900 mm" to "...300 mm diameters to 1200 mm" Delete, in it's entirety, the last sentence which begins "This pipe and resins..." and replace with the following; "Manufacturers of corrugated polyethylene pipe must participate in, and maintain compliance with, AASHTO's National Transportation Product Evaluation Program (www.ntpep.org) which audits producers of plastic pipe. A certificate of compliance must be provided with each shipment."

SECTION 709 REINFORCING STEEL AND WELDED STEEL WIRE FABIC

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

SECTION 710 FENCE AND GUARDRAIL

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

710.04 Metal Beam Rail Replace with the following: "Galvanized steel rail elements shall conform to the requirements of AASHTO M 180, Class A, Type II.

When corrosion resistant steel is specified, rail shall conform to AASHTO M 180, Class A, Type IV. Beams of corrosion resistant steel shall not be painted or galvanized. They shall be so handled and stored that the traffic face of these beams, used in a continuous run of guardrail, shall not show a distinctive color differential.

When metal beam rail is to be installed on a curve having a radius of curvature of 150 ft. or less, the beam sections shall be fabricated on an arc to the required radius and permanently stamped or embossed with the designated radius.

The engineer may take one piece of guardrail, a backup plate, and end or buffer section from each 200 pieces in a lot, or from each lot if less than 200 pieces are included therein for determination of compliance with specification requirements. If one piece fails to conform to the requirements of this specification, two other pieces shall be tested. If either of these pieces fails to conform to the requirements of this specification, the lot of material represented by these samples shall be rejected. A lot shall be considered that quantity of material offered for inspection at one time that bears the same heat and coating identification."

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

SECTION 712 MISCELLANEOUS HIGHWAY MATERIALS

712.04 Stone Curbing and Edging Delete the existing and replace with the following: “Stone for curbing and edging shall be approved granite from acceptable sources. The stone shall be hard and durable, predominantly gray in color, free from seams that would be likely to impair its structural integrity, and of a smooth splitting character. Natural grain size and color variations characteristic of the source deposit will be permitted. Such natural variations may include bands or clusters of mineral crystallization provided they do not impair the structural integrity of the curb stone. The Contractor shall submit for approval the name of the quarry that is the proposed source of the granite for curb materials along with full scale color photos of the granite. Such submission shall be made sufficiently in advance of ordering so that the Resident may have an opportunity to judge the stone, both as to quality and appearance. Samples of curbing shall be submitted for approval only when requested by the Resident. The dimensions, shape, and other details shall be as shown on the plans.”

712.06 Precast Concrete Units In the first paragraph, change “...ASTM C478M...” to “...AASHTO M199...” Delete the second paragraph and replace with the following; “Approved structural fibers may be used as a replacement of 6 x 6 #10 gauge welded wire fabric when used at an approved dosage rate for the construction of manhole and catch basin units. The material used shall be one of the products listed on the Maine Department of Transportation’s Approved Product List of Structural Fiber Reinforcement.” Delete the fifth paragraph and replace with the following; “The concrete mix design shall be approved by the Department. Concrete shall contain 6% air content, plus or minus 1½% tolerance when tested according to AASHTO T152. All concrete shall develop a minimum compressive strength of 28 MPa [4000 psi] in 28 days when tested according to AASHTO T22. The absorption of a specimen, when tested according to AASHTO T280, Test Method “A”, shall not exceed nine percent of the dry mass.”

Add the following:

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

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

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

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

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

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

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

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

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

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

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

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

(b) Battery operated flashing lights shall be self-illuminated by an electric lamp behind the lens. These lights shall also be externally illuminated by reflex-reflective elements built into the lens to enable it to be seen by reflex-reflection of the light from the headlights of oncoming traffic. The batteries must be entirely enclosed in a case. A locking device must secure the case. The light shall have a flash rate of not less than 50 nor more than 60 flashes per minute from minus 30 °C [minus 20 °F] to plus 65 °C [plus 150 °F]. The light shall have an on time of not less than 10 percent of the flash cycle. The light beam projected upon a surface perpendicular to the axis of the light beam shall produce a lighted rectangular projection whose minimum horizontal dimension shall be 5 degrees each side of the horizontal axis. The effective intensity shall not have an initial value greater than 15.0 candelas or drop below 4.0 candelas during the first 336 hours of continuous flashing. The illuminated lens shall appear to be uniformly bright over its entire illuminated surface when viewed from any point within an angle of 9 degrees each side of the vertical axis and 5 degrees each side of the horizontal axis. The lens shall not be less than 175 mm [7 in] in diameter including a reflex-reflector ring of 13 mm [½ in] minimum width around the periphery. The lens shall be yellow in color and have a minimum relative luminous transmittance of 0.440 with a luminance of 2854° Kelvin. The lens shall be one-piece construction. The lens material shall be plastic and meet the luminous transmission requirements of this specification. The case containing the batteries and circuitry shall be constructed of a material capable of withstanding abuse equal to or greater than 1.21 mm thick steel [No. 18 U.S. Standard Gage Steel]. The housing and the lens frame, if of metal shall be properly cleaned, degreased and

pretreated to promote adhesion. It shall be given one or more coats of enamel which, when dry shall completely obscure the metal. The enamel coating shall be of such quality that when the coated case is struck a light blow with a sharp tool, the paint will not chip or crack and if scratched with a knife will not powder. The case shall be so constructed and closed as to exclude moisture that would affect the proper operation of light. The case shall have a weep hole to allow the escape of moisture from condensation. Photoelectric controls, if provided, shall keep the light operating whenever the ambient light falls below 215 lx [20 foot candles]. Each light shall be plainly marked as to the manufacturer's name and model number.

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

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

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

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

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

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

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

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

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

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

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

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

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

The granite slabs shall be scabble dressed or sawed to an approximately true plane having no projections or depressions over 13 mm [$\frac{1}{2}$ in] under a 600 mm [2 ft] straightedge or over 25 mm [1 in] under a 1200 mm [4 ft] straightedge. The arris at the intersection of the top surface and exposed front face shall be pitched so that the arris line is uniform throughout the length of the installed slabs. The sides shall be square to the exposed face unless the slabs are to be set on a radius or other special condition which requires that the joints be cut to fit, but in any case shall be so finished that when the stones are placed side by side no space more than 20 mm [$\frac{3}{4}$ in] shall show in the joint for the full exposed height.

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

SECTION 717 ROADSIDE IMPROVEMENT MATERIAL

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

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

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

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

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

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

SECTION 722 GEOTEXTILES

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

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

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

**DEPARTMENT OF ENVIRONMENTAL PROTECTION
PERMIT BY RULE NOTIFICATION FORM**

(For use with DEP Regulation, Chapter 305)

PLEASE TYPE OR PRINT IN **BLACK INK ONLY**

Name of Applicant: (owner)	Maine Department of Transportation	Name of Agent:	Laurie Rowe		
Applicant Mailing Address:	16 State House Station	Agent Phone # (include area code):	(207) 624-3100 Laurie.rowe@maine.gov		
Town/City:	Augusta	PROJECT Information Name of Town/City:	Smyrna		
		MDOT PIN:	17878.00		
State and Zip code:	ME 04344	Name of Wetland or Waterbody:	Dunn Brook		
Daytime Phone # (include area code):	(207) 624-3100	Map #:		Lot #:	
Detailed Directions to Site:	Dunn Brook bridge culvert (#5837) which carries US #2 over Dunn Brook in Smyrna.				
		UTM Northing: (if known)		UTM Easting: (if known)	
Description of Project:	Project scope is to invertline existing pipe arch and install 4 internal wiers and and 2 external wiers.				
Part of a larger project? (check one)→	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	After the Fact? (check one)→	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Check one → This project <input checked="" type="checkbox"/> does (or) <input type="checkbox"/> does not involve work below mean low water (average low water).	

PERMIT BY RULE (PBR) SECTIONS: (Check at least one)

I am filing notice of my intent to carry out work which meets the requirements for Permit By Rule (PBR) under DEP Rules, Chapter 305. I and my agents, 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 Protected Natural Res. | <input type="checkbox"/> Sec.(10) Stream Crossing | <input type="checkbox"/> Sec. (17) Transfers/Permit Extension |
| <input type="checkbox"/> Sec. (3) Intake Pipes | <input checked="" type="checkbox"/> Sec. (11) State Transportation Facil. | <input type="checkbox"/> Sec. (18) Maintenance Dredging |
| <input type="checkbox"/> Sec. (4) Replacement of Structures | <input type="checkbox"/> Sec. (12) Restoration of Natural Areas | <input type="checkbox"/> Sec. (19) Activities in/on/over significant vernal pool habitat |
| <input type="checkbox"/> Sec. (5) REPEALED | <input type="checkbox"/> Sec. (13) F&W Creation/Enhance/Water Quality Improvement | <input type="checkbox"/> Sec. (20) Activities in existing dev. areas located in/on/over high or moderate value inland waterfowl & wading bird habitat or shorebird nesting, feeding & staging areas |
| <input type="checkbox"/> Sec. (6) Movement of Rocks or Vegetation | <input type="checkbox"/> Sec. (14) REPEALED | |
| <input type="checkbox"/> Sec. (7) Outfall Pipes | <input type="checkbox"/> Sec. (15) Public Boat Ramps | |
| <input type="checkbox"/> Sec. (8) Shoreline stabilization | <input type="checkbox"/> Sec. (16) Coastal Sand Dune Projects | |
| <input type="checkbox"/> Sec. (9) Utility Crossing | | |

I have attached the following required submittals. **NOTIFICATION FORMS CANNOT BE ACCEPTED WITHOUT THE NECESSARY ATTACHMENTS:**

- Attach** a check for \$65 made payable to: "Treasurer, State of Maine".
- Attach** a U.S.G.S. topo map or Maine Atlas & Gazetteer map with the project site clearly marked.
- Attach Proof of Legal Name.** If applicant is **not** an individual or municipality, provide a copy of Secretary of State's registration information (available at <http://icrs.informe.org/nei-sos-icrs/ICRS?MainPage=x>)
- Attach photos of the proposed site where activity will take place as outlined in PBR Sections checked above.**
- Attach** all other required submissions as outlined in the PBR Sections checked above.

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 also understand that **this permit is not valid until approved by the Department or 14 days after receipt by the Department, whichever is less.**

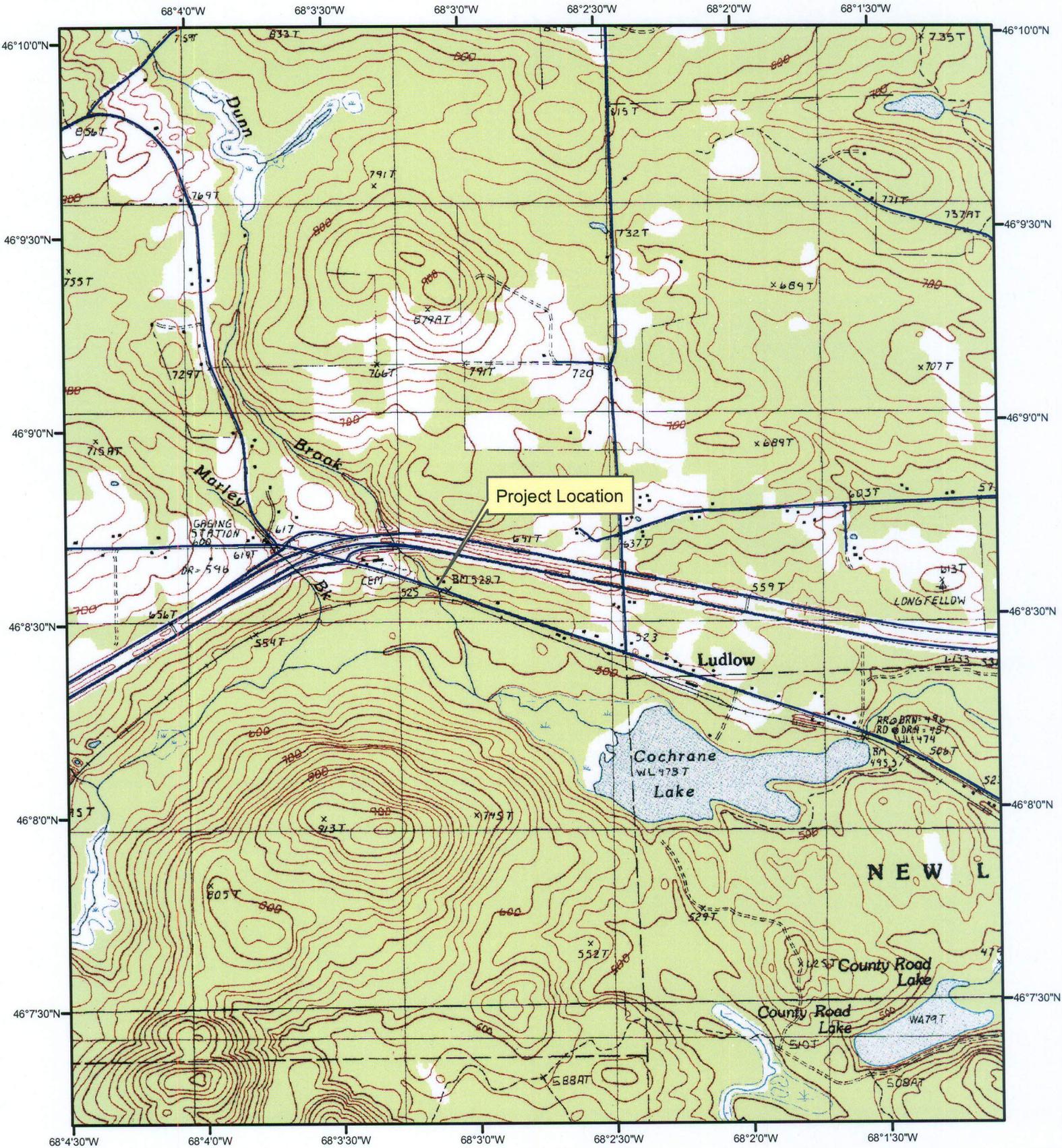
By signing this Notification Form, I represent that the project meets all applicability requirements and standards in the rule and that the applicant has sufficient title, right, or interest in the property where the activity takes place.

Signature of Agent or Applicant:	<i>Judy C. Gatis</i>	Date:	<i>2/19/2011</i>
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Keep a copy as a record of permit. Send the form with attachments via certified mail or hand deliver to the Maine Dept. of Environmental Protection **at the appropriate regional office listed below.** The DEP will send a copy to the Town Office as evidence of the DEP's receipt of notification. No further authorization by DEP will be issued after receipt of notice. Permits are valid for two years. **Work carried out in violation of any standard is subject to enforcement action.**

AUGUSTA DEP 17 STATE HOUSE STATION AUGUSTA, ME 04333-0017 (207)287-3901	PORTLAND DEP 312 CANCO ROAD PORTLAND, ME 04103 (207)822-6300	BANGOR DEP 106 HOGAN ROAD BANGOR, ME 04401 (207)941-4570	PRESQUE ISLE DEP 1235 CENTRAL DRIVE PRESQUE ISLE, ME 04769 (207)764-0477
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OFFICE USE ONLY	Ck.#	Date	Staff	Staff	After Photos
PBR #	FP		Acc. Date	Def. Date	



MDOT PIN 17878.00
 Dunn Bk Bridge (#05837)
 Smyrna

46.142974°
 -68.051914°

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 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.

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.

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, the Department of Marine Resources, and the Atlantic Salmon Authority. The activity must be performed according to any recommendations from these authorities.
- (3) The activity must be performed in accordance with erosion control measures conforming with the State of Maine Department of Transportation Standard Specifications for Highways and Bridges Revision of April 1995 and with the Department of Transportation's Best Management Practices for Erosion and Sediment Control, September 1997.

NOTE: Guidance on the use of erosion control best management practices can be obtained from the on site Construction Manager.

- (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 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(1), 9(B) and 9(C).

- (8) The activity may not permanently block any fish passage in any watercourse containing fish. The applicant must improve passage beyond what restriction may already exist unless the Department of Inland Fisheries and Wildlife, the Department of Marine Resources, and the Atlantic Salmon Authority concur that the improvement is not necessary.
- (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, with the exception of culvert installation, the applicant must divert flow away from the activity while work is in progress.
 - (a) Diversion may be accomplished by the use of stable, inert material. No more than two thirds (2/3) of stream width may be diverted at one time.
 - (b) Any material used to divert water flow must be completely removed upon completion of the activity, and the stream bottom must be restored to its original condition.
 - (c) A pump may be operated, where necessary, for a temporary diversion. The pump outlet must be located and operated such that erosion or the discharge of sediment to the water is prevented.

NOTE: Guidance on the appropriate location of a diversion and materials which should be used for a stream diversion can be obtained from the on site Construction Manager.

- (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.
- (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. Hay bales or silt fence 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. Measures, such as a silt boom or staked fencing, must be employed to reduce and isolate turbidity.
- (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.

NOTE: Guidance on the location of construction limits can be obtained from the on site Construction Manager.

- (16) The use of untreated lumber is preferred. Lumber pressure treated with chromated copper arsenate (CCA) may be used, 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) Soil may not be disturbed during any period when soils are saturated due to rain or snow melt, except as necessary to protect work in progress or as required for bridge maintenance activities. Areas where soils are saturated (i.e. water drips from the soil when squeezed by hand, or the soil is capable of being rolled into a rod 1/8th inch in diameter that does not crumble) must be immediately mulched if they are disturbed.
- (19) Disturbed soil must be protected within one week from the time it was last actively worked, and prior to any storm event, using temporary or permanent measures such as the placement of riprap, sod, mulch, erosion control blankets, or other comparable measures.
- (20) Hay bale or straw mulch, where used, must be applied at a rate of at least one bale per 500 square feet (1 to 2 tons per acre).
- (21) If mulch is likely to be moved because of steep slopes or wind exposure, it must be anchored with netting, peg and twine, binder or other suitable method and must be maintained until a catch of vegetation is established over the entire disturbed area.
- (22) In addition to the placement of riprap, sod, erosion control blankets or mulch, additional steps must be taken where necessary to prevent sedimentation of the water. Evidence of sedimentation includes visible sheet, rill or gully erosion, discoloration of water by suspended particles and/or slumping of banks. Silt fences, staked hay bales and other sedimentation control measures, where planned for, must be in place

prior to the commencement of an activity, but must also be installed whenever necessary to prevent erosion and sedimentation.

NOTE: Guidance on the location and proper installation of erosion control measures can be obtained from the on site Construction Manager.

- (23) Temporary erosion control measures must be maintained and inspected weekly until the site is permanently stabilized with vegetation or other permanent control measures. Erosion control measures must also be inspected immediately prior to and following storms.
- (24) Permanent erosion control measures protecting all disturbed areas must be implemented within 30 days from the time the areas were last actively worked, or for fall and winter activities by the following June 15, except where precluded by the type of activity (e.g. riprap, road surfaces, etc.). The permanent erosion control measures must be maintained.
- (25) The applicant shall immediately take appropriate measures to prevent erosion or sedimentation from occurring or to correct any existing problems, regardless of the time of year.
- (26) Non-native species may not be planted in restored areas.
- (27) 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.*
- (28) 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.
- (29) 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. A rerouting of a river, stream or brook to a location outside of its established 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. Rocks that are fit into place, usually without mortar, on a slope as defined in the State of Maine, Department of Transportation, Standard Specifications for Highway and Bridges, revision of April 1995.



DEPARTMENT OF THE ARMY
 NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
 696 VIRGINIA ROAD
 CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

**MAINE GENERAL PERMIT (GP)
 AUTHORIZATION LETTER AND SCREENING SUMMARY**

OFFICE OF ENVIRONMENTAL SERVICES
 MAINE DEPT. OF TRANSPORTATION
 16 STATE HOUSE STATION
 AUGUSTA, MAINE 04333

CORPS PERMIT # NAE-2011-01429
 CORPS PGP ID# 11-230
 STATE ID# PBR

DESCRIPTION OF WORK:

Place temporary and permanent fill below the ordinary high water line of Dunn Brook and in adjacent freshwater wetlands at Smyrna, Maine in order to repair an existing deteriorated culvert beneath Route 2 using and invert liner. Approximately 983 s.f. (0.022 acres) of wetland and river bed will be permanently impacted by the project and another 419 s.f. (0.009 acres) of river bed will be temporarily impacted. This

Project Description Continued on Page 2

LAT/LONG COORDINATES : 46.1430338° N 68.0519029° W USGS QUAD: LUDLOW, ME

I. CORPS DETERMINATION:

Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. **Your work is therefore authorized by the U.S. Army Corps of Engineers under the enclosed Federal Permit, the Maine General Permit (GP).** Accordingly, we do not plan to take any further action on this project.

You must perform the activity authorized herein in compliance with all the terms and conditions of the GP [including any attached Additional Conditions and any conditions placed on the State 401 Water Quality Certification including any required mitigation]. Please review the enclosed GP carefully, including the GP conditions beginning on page 5, to familiarize yourself with its contents. You are responsible for complying with all of the GP requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

Condition 41 of the GP (page 18) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the GP on October 12, 2015. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by October 12, 2016.

This authorization presumes the work shown on your plans noted above is in waters of the U.S. Should you desire to appeal our jurisdiction, please submit a request for an approved jurisdictional determination in writing to the undersigned.

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. **This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.**

II. STATE ACTIONS: PENDING [X], ISSUED[], DENIED [] DATE: _____

APPLICATION TYPE: PBR: X, TIER 1: _____, TIER 2: _____, TIER 3: _____, LURC: _____, DMR LEASE: _____, NA: _____

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: 8/4/11 LEVEL OF REVIEW: CATEGORY 1: _____ CATEGORY 2: X

AUTHORITY (Based on a review of plans and/or State/Federal applications): SEC 10 _____, 404 X 10/404 _____, 103 _____

EXCLUSIONS: The exclusionary criteria identified in the general permit do not apply to this project.

FEDERAL RESOURCE AGENCY OBJECTIONS: EPA NO, USF&WS NO, NMFS NO

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Manchester, Maine Project Office. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at <http://per2.nwp.usace.army.mil/survey.html>

JAY L. CLEMENT
 SENIOR PROJECT MANAGER
 MAINE PROJECT OFFICE

FRANK J. DEL GIUDICE
 CHIEF, PERMITS & ENFORCEMENT BRANCH
 REGULATORY DIVISION
 DATE 9/1/11



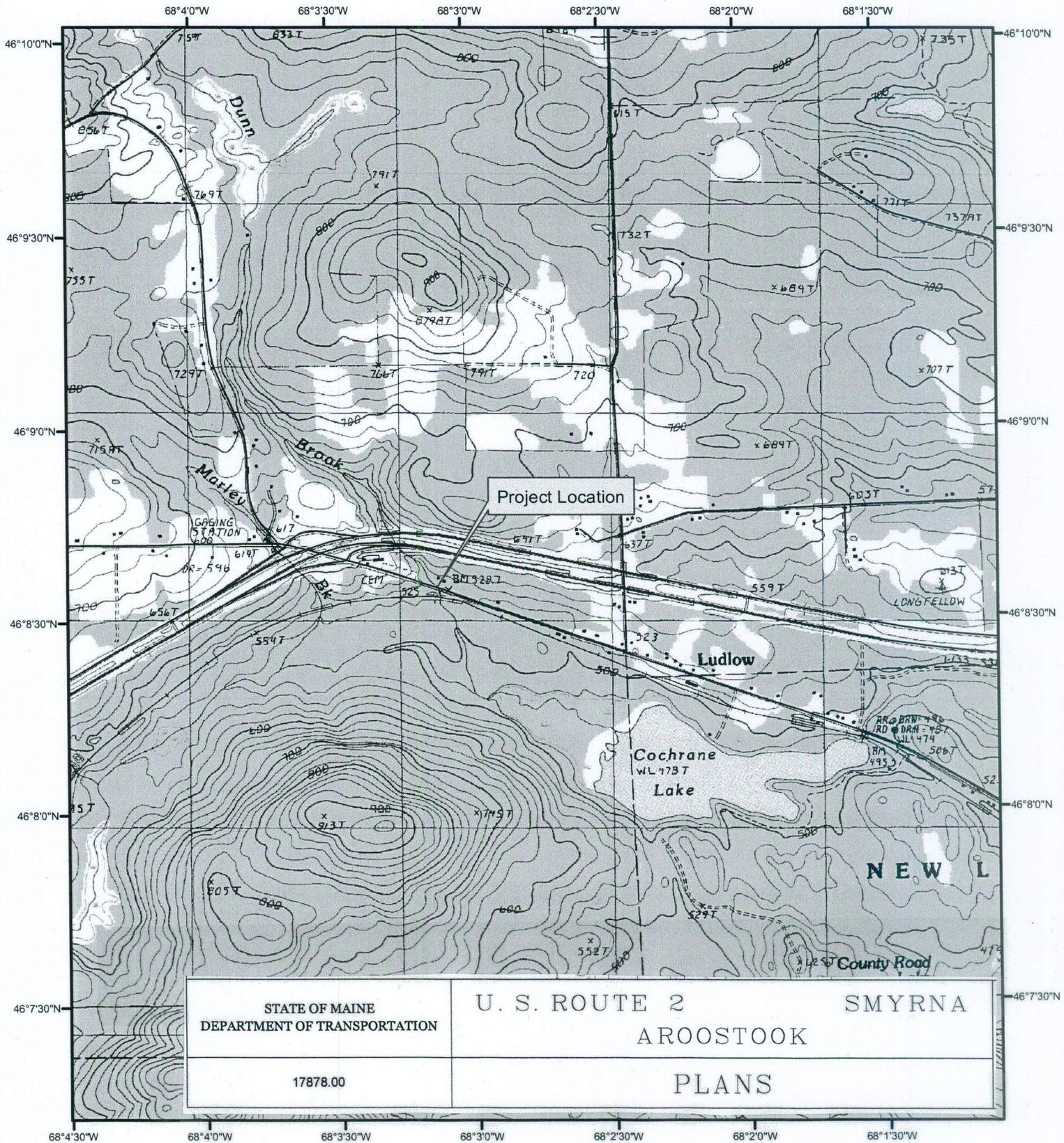
Project Description Continued from Page 1

work is shown on the attached plans entitled "U.S. ROUTE 2, SMYRNA, AROOSTOOK" in two sheets undated and "DUNN BROOK BRIDGE, LITTLE MADAWASKA, SMYRNA, AROOSTOOK COUNTY" in two sheets undated.

DOT PIN: 17878.00

**PLEASE NOTE THE FOLLOWING CONDITIONS FOR
DEPARTMENT OF THE ARMY
GENERAL PERMIT
NO. NAE-2011-01429**

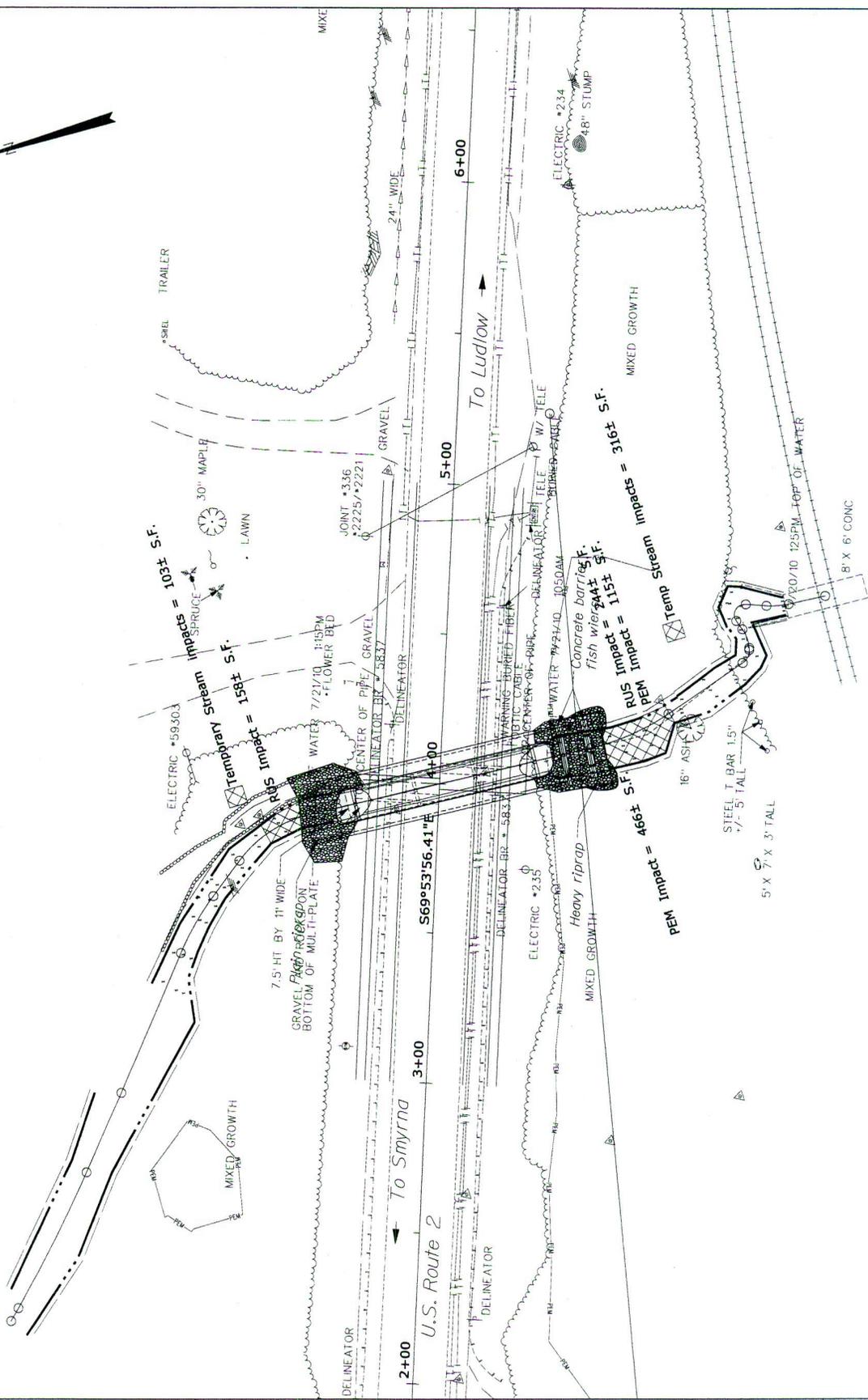
1. This authorization requires you to 1) notify us before beginning work so we may inspect the project, and 2) submit a Compliance Certification Form. You must complete and return the enclosed Work Start Notification Form(s) to this office at least two weeks before the anticipated starting date. You must complete and return the enclosed Compliance Certification Form within one month following the completion of the authorized work and any required mitigation (but not mitigation monitoring, which requires separate submittals).
2. The permittee shall assure that a copy of this permit is at the work site whenever work is being performed and that all personnel performing work at the site of the work authorized by this permit are fully aware of the terms and conditions of the permit. This permit, including its drawings and any appendices and other attachments, shall be made a part of any and all contracts and sub-contracts for work which affects areas of Corps of Engineers' jurisdiction at the site of the work authorized by this permit. This shall be done by including the entire permit in the specifications for the work. If the permit is issued after construction specifications but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. The term "entire permit" includes permit amendments. 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 of the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps of Engineers jurisdiction.
3. Adequate sedimentation and erosion control devices, such as geotextile 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.
4. All exposed soils resulting from the construction will be promptly seeded and mulched in order to achieve vegetative stabilization.
5. All areas of temporary fill shall be removed upon completion of the project and restored to their original contour and character.
6. The permittee shall ensure that the placement/replacement of culverts conforms to the provisions of the current Maine DOT Fish Passage & Design Guide.
7. Instream work shall be confined to July 15 to October 1 in order to minimize potential adverse impacts to fisheries and local water quality.



0 337.5675 1,350 2,025 2,700 Feet

MDOT PIN 17878.00
Dunn Bk Bridge (#05837)
Smyrna

46.142974°
-68.051914°



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

17878.00

U. S. ROUTE 2
SMYRNA
AROOSTOOK

PLANS

SHEET NUMBER

1
OF 1

**DEPARTMENT OF THE ARMY
GENERAL PERMIT
STATE OF MAINE**

The New England District of the U.S. Army Corps of Engineers (Corps) hereby issues this General Permit (GP) for activities in waters of the United States (U.S.) that have no more than minimal individual, secondary, and cumulative adverse effects on the aquatic environment in waters of the U.S. within the boundaries of and off the coast of the State of Maine.

I. GENERAL CRITERIA

In order for activities to qualify for this GP, they must meet the GP's terms and eligibility criteria (Pages 1 – 4), general conditions (GC) (Pages 5 – 18), and Appendix A - Definition of Categories.

Under this GP, projects may qualify for the following:

- Category 1: Category 1 Notification Form required.
(Submittal of the Category 1 Notification Form at Appendix B to the Corps is required.)
- Category 2: Application required.
(Submittal of an application to the Corps is required and written approval from the Corps must be received.)

If your project is ineligible for Category 1, it may qualify for Category 2 or an Individual Permit and you must submit an application (see Page 3). The thresholds for Categories 1 and 2 are defined in Appendix A. This GP does not affect the Corps Individual Permit review process or activities exempt from Corps regulation.

II. ACTIVITIES COVERED:

- Work and structures that are located in, under or over any navigable water of the U.S.¹ that affect the course, location, condition, or capacity of such waters; or the excavating from or depositing of material in such waters. The Corps regulates this under Section 10 of the Rivers and Harbors Act of 1899);
- The discharge of dredged or fill material into waters of the U.S.². The Corps regulates this under Section 404 of the Clean Water Act (CWA).³
- The transportation of dredged material for the purpose of disposal in the ocean. The Corps regulates this under Section 103 of the Marine Protection, Research and Sanctuaries Act.

¹ Defined at 33 CFR 329 and Appendix A, Page 4.

² Defined at 33 CFR 328

³ When there is a regulated discharge of dredged or fill material into waters of the U.S., the Corps will also consider secondary impacts, which are defined at Appendix A, Endnote/Definition 2.

III. PROCEDURES:

1. State Approvals

Applicants are responsible for applying for and obtaining any of the required state or local approvals (see GC 1, Page 5). Federal and state jurisdictions may differ in some instances. State permits may be required for specific projects regardless of the general permit category.

In order for authorizations under this GP to be valid, when any of the following state approvals or statutorily-required reviews is also required, the approvals must be obtained prior to the commencement of work in Corps jurisdiction.

- Maine Department of Environmental Protection (DEP): Natural Resources Protection Act (NRPA) permit, including permit-by-rule and general permit authorizations; Site Location of Development Act permit; and Maine Waterway Development and Conservation Act permit.
- Maine Department of Conservation: Land Use Regulation Commission (LURC) permit.
- Maine Department of Marine Resources: Aquaculture Leases.
- Maine Department of Conservation, Bureau of Parks and Lands, Submerged Lands: Lease

NOTE: This GP may authorize projects that are not regulated by the State of Maine (e.g., seasonal floats or moorings).

2. Corps Authorizations

a. Category 1 (Submission of Category 1 Notification Form required)

Eligibility Criteria

Activities in Maine that:

- Are subject to Corps jurisdiction (see GC 2, Page 5),
- Meet the terms and eligibility criteria of this GP (Pages 1 - 4),
- Meet all GCs of this GP (Pages 5 – 18), and
- Meet the definition of Category 1 in Appendix A - Definition of Categories,

may proceed without application to the Corps provided:

- The Category 1 Notification Form (Appendix B) is submitted to the Corps before starting the work authorized by this GP.

Consultation with the Corps and/or outside experts may be necessary to ensure compliance with this GP's general conditions (starting on Page 5) and related federal laws such as the National Historic Preservation Act, the Endangered Species Act (ESA), and the Wild and Scenic Rivers Act. For example, experts on historic resources may include the agencies and tribes referenced in GC 8, while experts on endangered species include the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS). Project proponents are encouraged to contact the Corps with Category 1 eligibility questions.

Work that is not regulated by the State of Maine, but is subject to Corps jurisdiction, is eligible for Category 1 authorization under this GP. The Maine DEP and LURC have waived WQC for projects authorized under Categories 1 and 2 of this GP. The state has concurred with the determination that projects authorized under Categories 1 and 2 of this GP are consistent with the enforceable policies of the Maine CZM Program.

b. Category 2 (Application to and written approval from the Corps required)

Eligibility Criteria

Activities in Maine that:

- Are subject to Corps jurisdiction (see GC 2, Page 5),
- Meet the terms of this GP (Pages 1 - 4),
- Meet all GCs of this GP (Pages 5 - 18),
- Meet the definition of Category 2 in Appendix A - Definition of Categories,

require an application to and written approval from the Corps. The Corps will coordinate review of Category 2 activities with federal and state agencies, as appropriate. To be eligible and subsequently authorized, an activity must result in no more than minimal impacts to the aquatic environment as determined by the Corps based on comments from the review team and the criteria listed above. This may require project modifications involving avoidance, minimization or compensatory mitigation for unavoidable impacts to ensure the net effects of a project are minimal. Compensatory mitigation for waterway/wetland impacts may take the form of wetland preservation, restoration, enhancement, creation, and/or “in-lieu fee” for inclusion into the Natural Resources Mitigation Fund. See www.nae.usace.army.mil/reg, “Mitigation” and then “Maine” for more information.

Work that is not regulated by the State of Maine, but is subject to Corps jurisdiction, is eligible for Category 2 authorization under this GP. The Maine DEP and LURC have waived WQC for projects authorized under Categories 1 and 2 of this GP. The state has concurred with the determination that projects authorized under Categories 1 and 2 of this GP are consistent with the enforceable policies of the Maine CZM Program.

3. Applying for a Permit

All applicants for Category 2 projects must:

- a.** Apply directly to the Corps using the state application form or the Corps application form (ENG Form 4345¹), and apply directly to the state (DEP, LURC, BPL or DMR) as applicable using the appropriate state form, if the work is regulated by the Corps and the state.
- b.** Apply directly to the Corps using the Corps application form (ENG Form 4345¹) if the work is regulated by the Corps but not the state (DEP, LURC, BPL or DMR).
- c.** Provide application information (see “Information Typically Required” in Appendix C) to help ensure the application is complete and to speed project review.
- d.** Submit a copy of their application materials to the Maine Historic Preservation Commission (MHPC) and the five Indian tribes listed at Appendix D, at the same time, or before, they apply to the state (DEP or LURC) or the Corps, to be reviewed for the presence of historic, archaeological or tribal resources in the permit area that the proposed work may affect. Submittals to the DEP or Corps shall include information to indicate that this has been done (a copy of the applicant’s cover letter to MHPC and tribes or a copy of the MHPC and tribal response letters is acceptable).

¹ Located at www.nae.usace.army.mil/reg under “Forms.”

4. Review Procedures

The Corps will coordinate review of all Category 2 activities with federal and state agencies, as appropriate, to ensure that the work will result in no more than a minimal impact to the aquatic environment. Applicants are responsible for applying for the appropriate state and local approvals listed on Page 2.

Emergency Procedures: 33 CFR 325.2(e)4 states that an “emergency” is a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process the application under standard procedures.” The Corps will work with all applicable agencies to expedite authorization according to established procedures in emergency situations.

Individual Permit Procedures: Proponents of work that does not meet the terms and general conditions of this GP must submit the Corps application form and the appropriate application materials to the Corps at the earliest possible date in order to expedite the Individual Permit review process. General information and application forms can be obtained at our website or by calling us (see Appendix D). Individual WQC and CZM consistency concurrence are required when applicable from the State of Maine before Corps permit issuance. The Corps encourages applicants to concurrently apply for a Corps Individual Permit and state permits.

5. Approval Process

Applicants for Category 2 activities may not proceed with work in Corps jurisdiction until written authorization is received from the Corps. If the Corps determines that the Category 2 activity is eligible for the GP, the Corps will send an authorization letter directly to the applicant. The Corps will attempt to issue a written eligibility determination within the state’s review period. If the Corps determines that the activity is not eligible under the GP or that additional information is required, the Corps will notify the applicant in writing and send a copy to the DEP or LURC. Applicants are responsible for obtaining all applicable approvals listed on Page 2 from the appropriate state and local agencies before commencing work in Corps jurisdiction.

V. GENERAL PERMIT CONDITIONS:

The following conditions apply to activities authorized under this Maine GP, unless otherwise specified, including all Category 1 (notification required) and Category 2 (application required) activities:

1. Other Permits. Authorization under this GP does not obviate the need to obtain other federal, state, or local authorizations required by law. This includes, but is not limited to, the project proponent obtaining a Flood Hazard Development Permit issued by the town, if necessary. Inquiries may be directed to the municipality or to the Maine Floodplain Management Coordinator at (207) 287-8063. See www.maine.gov/spo/flood.

2. Federal Jurisdictional Boundaries.

(a) Applicability of this GP shall be evaluated with reference to federal jurisdictional boundaries. Applicants are responsible for ensuring that the boundaries used satisfy the federal criteria defined at 33 CFR 328 “Waters of the U.S.” and 33 CFR 329 “Navigable Waters of the U.S.”

Note: Waters of the U.S. include the subcategories “navigable waters of the U.S.” and “wetlands.”

(b) For Category 1 projects, proponents are not required to delineate the waters of the U.S. that they plan to impact, but must approximate the square footage of impacts in order to determine the review category (1 or 2 or Individual Permit). For projects filling <15,000 SF of waters of the U.S. that do not qualify for Category 1 (e.g., vernal pool, secondary or endangered species impacts, etc.) and therefore require an application to the Corps, and for those filling \geq 15,000 SF, applicants shall delineate all waters of the U.S. that will be filled (direct impacts) in accordance with the Corps of Engineers Wetlands Delineation Manual and the most recent regional supplements (see Appendix E). In addition, applicants shall approximately identify all waters of the U.S. on the property and known waters adjacent to the property in order for the Corps to evaluate secondary impacts. The waters of the U.S. shall be clearly shown on the project plans submitted with the application. This includes all waters of the U.S. in areas under DEP or LURC jurisdiction regardless of whether they’re shown on LURC zoning maps.

(c) On a case-by-case basis, the Corps may modify/refine the above delineation and identification requirements for waters of the U.S.

3. Minimal Direct, Secondary and Cumulative Impacts.

(a) Projects authorized by this GP shall have no more than minimal direct, secondary and cumulative adverse environmental impacts. Category 2 applicants should provide information on secondary and cumulative impacts as stated in Appendix C. Compensatory mitigation may be required to offset unavoidable impacts (see GC 16) and to ensure that they are no more than minimal. Compensatory mitigation requirements will be determined on a case-by-case basis.

(b) Secondary impacts to waterway and/or wetland areas, (e.g., areas drained, flooded, cleared, excavated or fragmented) shall be added to the total fill area when determining whether the project qualifies for Category 1 or 2. Direct, secondary and cumulative impacts are defined at Appendix A, Endnote 2.

(c) Site clearing, grading and construction activities in the upland habitat surrounding vernal pools (“Vernal Pool Management Areas”) are secondary impacts. See GC 28 for avoidance and minimization requirements and recommendations.

4. Discretionary Authority. Notwithstanding compliance with the terms and conditions of this permit, the Corps retains discretionary authority to require Category 2 or Individual Permit review based on concerns for the aquatic environment or for any other factor of the public interest [33 CFR

320.4(a)]. This authority is invoked on a case-by-case basis whenever the Corps determines that the potential consequences of the proposal warrant a higher level of review based on the concerns stated above. This authority may be invoked for projects that may contribute to cumulative environmental impacts that are more than minimal or if there is a special resource or concern associated with a particular project that is not already covered by the remaining conditions of the GP and that warrants greater review. Whenever the Corps notifies an applicant that an Individual Permit may be required, the project is not authorized under this GP and no work may be conducted until an Individual Permit is obtained or until the Corps notifies the applicant that further review has demonstrated that the work may proceed under this GP.

5. Single and Complete Projects.

(a) This GP shall not be used to piecemeal work and shall be applied to single and complete projects¹. When determining the review category in Appendix A (Category 1 or 2) for a single and complete project, proponents must include any permanent historic fill placed since October 1995 that is associated with that project and all currently proposed temporary and permanent impact areas.

(b) A single and complete project must have independent utility¹.

(c) Unless the Corps determines the activity has independent utility¹:

i. This GP shall not be used for any activity that is part of an overall project for which an Individual Permit is required,

ii. All components of a single project and/or all planned phases of a multi-phased project (e.g., subdivisions should include all work such as roads, utilities, and lot development) shall be treated together as constituting one single and complete project¹.

(d) For linear projects, such as power lines or pipelines with multiple crossings, the single and complete project¹ is all crossings of a single water of the U.S. (i.e., single waterbody) at a specific location. For linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly-shaped wetland or lake, etc., are not separate waterbodies and crossings of such features cannot be considered separately. If any crossing requires a Category 2 activity, then the entire linear project shall be reviewed as one project under Category 2.

6. Permit On-Site. For Category 2 projects, the permittee shall ensure that a copy of this GP and the accompanying authorization letter are at the work site (and the project office) authorized by this GP whenever work is being performed, and that all personnel with operation control of the site ensure that all appropriate personnel performing work are fully aware of its terms and conditions. The entire permit authorization 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 GP. This shall be achieved by including the entire permit authorization in the specifications for work. The term “entire permit authorization” means this GP and the authorization letter (including its drawings, plans, appendices and other attachments) and also includes permit modifications. If the authorization letter is issued after the construction specifications, but before receipt of bids or quotes, the entire permit authorization shall be included as an addendum to the specifications. If the authorization letter is issued after receipt of bids or quotes, the entire permit authorization 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 GP authorization, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps jurisdiction.

¹ Single and Complete Project and Independent Utility are defined at Appendix E.

7. St. John/St. Croix Rivers. Work within the Saint John and Saint Croix River basins that requires approval of the International Joint Commission is not eligible for Category 1 and an application to the Corps is required if any temporary or permanent use, obstruction or diversion of international boundary waters could affect the natural flow or levels of waters on the Canadian side of the line; or if any construction or maintenance of remedial works, protective works, dams, or other obstructions in waters downstream from boundary waters could raise the natural level of water on the Canadian side of the boundary.

8. Historic Properties. No activity otherwise authorized by this GP shall result in effects (as that term is defined at 36 C.F.R. § 800.16(i)) on properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties, unless and until the Corps or another federal agency has satisfied the consultation requirements of Section 106 of the National Historic Preservation Act. Work is not eligible for Category 1 and an application to the Corps is required if the activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. Work is eligible for Category 1 if a no effect or no adverse effect determination has been made for that work by another federal action agency in its Section 106 consultation with the Maine Historic Preservation Commission (MHPC) and the five federally recognized Indian tribes listed at Appendix D. Information on the location and existence of known historic resources can be obtained from the MHPC, the National Register of Historic Places, and the five tribes listed in Appendix D. Historic properties include those that are eligible for inclusion, but not necessarily listed on the National Register. If the permittee, either prior to construction or during construction of the work authorized herein, encounters a previously unidentified archaeological or other cultural resource within the area subject to Corps jurisdiction that might be eligible for listing in the National Register of Historic Places, he/she shall stop work and immediately notify the Corps and the MHPC and/or applicable tribe(s).

9. National Lands. None of the following work is eligible as a Category 1 project:

(a) Activities that impinge upon the value of any National Wildlife Refuge, National Forest, National Marine Sanctuary, National Park or any other area administered by the National Park Service, U.S. Fish and Wildlife Service (USFWS) or U.S. Forest Service.

(b) Work on Corps properties and Corps-controlled easements. Contact the Corps, Real Estate Division (978) 318-8585 to initiate reviews about both Corps holdings and permit requirements.

(c) Any proposed temporary or permanent modification or use of a federal project (including but not limited to a levee, dike, floodwall, channel, sea wall, bulkhead, jetty, wharf, pier, or other work built but not necessarily owned by the United States), which would obstruct or impair the usefulness of the federal project in any manner, and/or would involve changes to the authorized federal project's scope, purpose, and/or functioning that go beyond minor modifications required for normal operation and maintenance (requires review and approval by the Corps pursuant to 33 USC 408). Federal projects in Maine as of October 2010 are shown at Appendix F. This map may not be inclusive of all projects.

10. Endangered Species.

(a) No activity may be authorized under Category 1 of this GP which:

i. "May affect" a threatened or endangered species, a species proposed for listing as threatened or endangered, or designated or proposed critical habitat (all herein referred to as "listed species or habitat") as identified under the federal Endangered Species Act (ESA) (unless specified in a programmatic agreement with NMFS or USFWS),

- ii. Results in a “take” of any federally-listed threatened or endangered species of fish or wildlife, or
- iii. Results in any other violation of Section 9 of the ESA protecting threatened or endangered species of plants.

(b) Work in Inland Waters and Wetlands¹ and the non-tidal portions of Navigable Waters² (e.g., the Penobscot River, Kennebec River) is not eligible for Category 1 if:

- i. The project action area occurs within a watershed occupied by listed Atlantic salmon or shortnose sturgeon. Project proponents must check the site in Footnote 3 below.
- ii. In areas outside these watersheds contact the USFWS (see Appendix D, Page 1 for contact information) to check for the presence of other listed species.

(c) Work in the tidal portions of Navigable Waters may be eligible for Category 1. Reference Appendix A, II. Navigable Waters, Pages 4 – 9, and the other terms and general conditions (GC 11 is particularly relevant) of this GP to determine Category 1 eligibility. Project proponents must contact the USFWS (see Appendix D, Page 1 for contact information) to ensure that work in all tidal portions of Navigable Waters² is not in critical habitat or areas occupied by listed species other than Atlantic salmon or shortnose sturgeon.

(d) Although some work is excluded from Category 1 as stated in (b) and (c) above, work may qualify for Category 1 if a no effect determination has been made for that work by a federal action agency such as the Corps.

(e) Proponents must submit an application to the Corps if any of the activities in 10(a)-10(c) that do not qualify for Category 1 may occur and provide information on federally-listed species or habitat to allow the Corps to conduct any required consultation under Section 7 of the ESA.

(f) The Corps review may consider species listed as endangered and threatened pursuant to Maine state law.

11. Essential Fish Habitat. Any work in the following rivers and streams, including all tributaries to the extent that they are currently or were historically accessible for salmon migration, shall not be authorized under Category 1 of the GP and must be screened for potential impacts to EFH (see Appendix E for more information).

Androscoggin River	Aroostook River	Boyden River	Dennys River
Ducktrap River	East Machias River	Hobart Stream	Kennebec River
Machias River	Narraguagus River	Orland River	Passagassawaukeag River
Patten Stream	Penobscot River	Pleasant River	Presumpscot River
Saco River	Sheepscoot River	St. Croix River	Tunk Stream
			Union River

The above does not apply to the following activities which may qualify for Category 1 work:

- Exploratory drilling and borings for bridges.
- Moorings (see Appendix A, Page 6 for Category 1 thresholds and requirements)
- Structures and floats (see Appendix A, Page 7 for Category 1 thresholds and requirements)
- Other activities specified in a programmatic agreement with NMFS.

¹ See Appendix A, Page 1 for definition.

² See Appendix A, Page 4 for definition.

³ For areas considered occupied by listed Atlantic salmon and/or shortnose sturgeon in Inland Waters and Wetlands, and in Navigable Waters, see: www.nero.noaa.gov/prot_res/altsalmon/dpsmaps.html. Tidal portions of navigable waters occupied by listed Atlantic salmon are more specifically described as those waters from the Kennebec River to its mouth at Merrymeeting Bay, northeast to the Dennys River, including the Androscoggin River upstream to the Brunswick Dam, and other streams northeast of this line to the limit of their tidal reaches.

12. Wild and Scenic Rivers. Any activity that occurs in the designated main stem of, within 0.25 mile up or downstream of the designated main stem of, or in tributaries within .25 miles of the designated main stem of a National Wild and Scenic River, or in “bordering and contiguous wetlands” (see Appendix A, Endnote 1) that are adjacent to the designated main stem of a National Wild and Scenic River, or that has the potential to alter flows within a river within the National Wild and Scenic River System, is not eligible for Category 1 regardless of size of the impacts. This condition applies to both designated Wild and Scenic Rivers and rivers officially designated by Congress as study rivers for possible inclusion while such rivers are in an official study status. National Wild and Scenic Rivers System segments for Maine as of October 2010 include: Allagash River beginning at Telos Dam continuing to Allagash checkpoint at Eliza Hole Rapids, approximately 3 miles upstream of the confluence with the St. John River (length = 92 miles).

13. Federal Navigation Project. Any structure or work that extends closer to the horizontal limits of any Corps Federal Navigation Project (see Appendix F) than a distance of three times the project’s authorized depth shall be subject to removal at the owner’s expense prior to any future Corps dredging or the performance of periodic hydrographic surveys. This is applicable to Category 1 and 2. Reference Appendix A, Page 6 (Mooring) and Page 7 (Structure and Floats).

14. Navigation.

(a) There shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein and no attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized herein.

(b) The permittee understands and agrees that, if future U.S. operations require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the U.S. No claim shall be made against the U.S. on account of any such removal or alteration.

15. 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 U.S. 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.

16. Avoidance, Minimization and Compensatory Mitigation.

Discharges of dredged or fill material into waters of the U.S., including wetlands, shall be avoided and minimized to the maximum extent practicable through consideration of alternatives. The Corps may require compensatory mitigation of unavoidable direct and secondary impacts associated with Category 2 projects on a case-by-case basis (see Appendix E).

17. Heavy Equipment in Wetlands. Operating heavy equipment other than fixed equipment (drill rigs, fixed cranes, etc.) within wetlands shall be minimized, and such equipment shall not be stored, maintained or repaired in wetlands, to the maximum extent practicable. Where construction requires heavy equipment operation in wetlands, the equipment shall either have low ground pressure

(typically <3 psi), or it shall be placed on swamp/construction/timber mats (herein referred to as “construction mats” and defined at Appendix A, Endnote 4) that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation. Construction mats are to be placed in the wetland from the upland or from equipment positioned on swamp mats if working within a wetland. Dragging construction mats into position is prohibited. Other support structures that are capable of safely supporting equipment may be used with written Corps authorization (Category 2 authorization or Individual Permit). Similarly, the permittee may request written authorization from the Corps to waive use of mats during frozen, dry or other conditions. An adequate supply of spill containment equipment shall be maintained on site.

18. Temporary Fill.

Temporary fill that qualifies for Category 1 (e.g., <15,000 SF of combined temporary and permanent fill associated with the single and complete project) or is authorized in writing under Category 2, shall adhere to the following:

- (a) All temporary fill shall be stabilized to prevent its eroding into portions of waters of the U.S., including wetlands, where it is not authorized.
- (b) Unconfined temporary fill authorized for discharge into waters of the U.S., including wetlands, shall consist of material that minimizes impacts to water quality (e.g. sandbags, clean gravel, stone, aggregate, etc.).
- (c) Temporary fill authorized for discharge into wetlands should be placed on geotextile fabric or other material (e.g., straw) laid on the pre-construction wetland grade where practicable to minimize impacts.
- (d) Temporary fill shall be removed as soon as it is no longer needed, disposed of at an upland site, and suitably contained to prevent subsequent erosion into waters of the U.S, including wetlands. To qualify for Category 1, temporary fill placed during the:
 - i. Growing season must be removed before the beginning of the next growing season.
 - ii. Non-growing season may remain throughout the following growing season, but must be removed before the beginning of the next growing season.
- (e) Waters of the U.S., including wetlands, where temporary fill was discharged shall be restored (see GC 19).
- (f) Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must be placed in a manner that will not be eroded by expected high flows (see GC 21).
- (g) Construction mats and corduroy roads (see GC 17 above) are considered as temporary fill when they are removed immediately upon work completion. The area must be restored (see GC 19).

19. Work Site Restoration.

- (a) Wetland areas where permanent disturbance is not authorized shall be restored to their original condition and elevation, which under no circumstances shall be higher than the pre-construction elevation. Original condition means careful protection and/or removal of existing soil and vegetation, and replacement back to the original location such that the original soil layering and vegetation schemes are approximately the same, unless otherwise authorized.
- (b) Upon completion of construction, all disturbed wetland areas (the disturbance of these areas must be authorized) shall be properly stabilized. Any seed mix shall contain only plant species native to New England and shall not contain any species listed in the “Invasive and Other Unacceptable Plant Species” Appendix in the “New England District Compensatory Mitigation Guidance” (see Appendix E, Paragraph 6). This list may be updated periodically.
- (c) In areas of authorized temporary disturbance, if trees are cut they shall be cut at ground level and

not uprooted in order to prevent disruption to the wetland soil structure and to allow stump sprouts to revegetate the work area, unless otherwise authorized.

20. Bank Stabilization.

(a) Projects involving construction or reconstruction/maintenance of bank stabilization structures within Corps jurisdiction shall be designed to minimize environmental effects, effects to neighboring properties, scour, etc. to the maximum extent practicable.

(b) Project proponents must design and construct bank stabilization projects using this sequential minimization process: avoidance of aquatic resource impacts, diversion of overland flow, vegetative stabilization, stone-sloped surfaces, and walls/bulkheads. Vertical walls/bulkheads shall only be used in situations where reflected wave energy can be tolerated. Refer to Appendix E for design guidance.

(c) Inland Water bank stabilization activities necessary for erosion prevention must meet all of the following criteria: (i) No material is placed in excess of the minimum needed for erosion protection; (ii) The activity is no more than 500 feet in length along the bank; (iii) The activity will not exceed an average of one cubic yard per running foot placed along the bank below the plane of the ordinary high water mark; (iv) Structures angled steeper than 1H:1V and any material other than angular or subangular stone or fiber roll revetments require at least a Category 2 review. (v) The activity does not involve discharges of dredged or fill material into special aquatic sites; (vi) No material is of the type, or is placed in any location, or in any manner, to impair surface water flow into or out of any water of the U.S.; (vii) No material is placed in a manner that will be eroded by normal or expected high flows (properly anchored trees and treetops may be used in low energy areas); and, (viii) The activity is not a stream channelization activity.

(d) Navigable Water bank stabilization activities are provided at Appendix A, Page 4.

21. Sedimentation and Erosion Control.

(a) Adequate sedimentation and erosion control management measures, practices and devices, such as phased construction, installation of sediment control barriers (i.e. silt fence, vegetated filter strips, geotextile silt fences, erosion control mixes, hay bales or other devices) downhill of all exposed areas, retention of existing vegetated buffers, application of temporary mulching during construction, and permanent seeding and stabilization shall be installed and properly maintained to reduce erosion and retain sediment on-site during and after construction. They shall be capable of preventing erosion, of collecting sediment, suspended and floating materials, and of filtering fine sediment.

(b) Temporary sediment control barriers shall be removed upon completion of work, but not until all disturbed areas are permanently stabilized. The sediment collected by these sediment barriers shall be removed and placed at an upland location and stabilized to prevent its later erosion into a waterway or wetland.

(c) All exposed soil and other fills shall be permanently stabilized at the earliest practicable date (see GC 19).

22. Stream Work and Crossings¹.

Notes:

(a) GC 22(a) and (b) apply to Inland Waters and Wetlands (see Appendix A, Page 1 for definition) and Navigable Waters (see Appendix A, Page 4 for definition). GC 22(c)-(l) only apply to Inland Waters and Wetlands that are streams. All new and replacement crossings in Navigable Waters require an application to the Corps and at least a Category 2 review.

(b) In-stream work in a watershed occupied by listed Atlantic salmon or shortnose sturgeon [see GC 10(b)] and some stream work such as crossings on EFH waters (see GC 11) is not eligible for Category 1.

(c) “High-Quality Stream Segments” are shown at www.maine.gov/dep/gis/datamaps and may be useful in evaluating impacts to fisheries. GIS shape files are under “Other Google Earth Interactive Maps” and PDFs by county are under “DEP GIS Maps.” See Appendix E, 8(b) for more information.

Conditions:

(a) All permanent crossings of rivers, streams, brooks, etc. (hereon referred to as “streams”) shall be suitably culverted, bridged, or otherwise designed to **i**) withstand and to prevent the restriction of high flows to qualify for Category 1, and **ii**) not obstruct the movement of or not substantially disrupt the necessary life-cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, beyond the actual duration of construction unless the activity’s primary purpose is to impound water to qualify for Category 1 or 2. (NOTE: Areas of fill and/or cofferdams must be included in total waterway/wetlands impacts to determine applicability of this GP).

(b) Any work that temporarily or permanently impacts upstream or downstream flood conditions, or permanently impacts wetlands in excess of Category 1 thresholds, must be reviewed at least under Category 2. See the documents referenced in Appendix E, 8(c) and (d) for guidance.

(c) New Stream Crossings. For new stream crossings to qualify for Category 1:

i. Must ensure compliance with GC 22(a) and GC 22(b) above.

ii. Shall be designed and constructed in accordance with the Corps General Stream Crossing Standards provided on Page 14 and the stream simulation document listed at Appendix E, 8(a).

(d) Replacement Stream Crossings. For replacement stream crossings to qualify for Category 1:

i. Must ensure compliance with GC 22(a) and GC 22(b) above.

ii. Shall be designed and constructed in accordance with the Corps General Stream Crossing Standards provided on Page 14 and the stream simulation document listed at Appendix E, 8(a).

(e) Culvert Extensions. Culvert extensions on culverts that do not meet the Corps General Stream Crossing Standards do not qualify for Category 1 and require an application to the Corps at least as a Category 2 project.

(f) Temporary Stream Crossings.

Note: The General Stream Crossing Standards don’t apply to temporary stream crossings.

i. Temporary stream crossings or cofferdams shall be used for equipment access across streams [see Appendix E, 8(e)]. Note: Areas of fill and/or cofferdams must be included in total waterway/wetlands impacts to determine the review category in Appendix A.

ii. Temporary stream crossings shall be removed within 180 days to qualify for Category 1.

iii. Temporary stream crossings that are not spans² (typically culverts) must be designed in accordance with 1-6 below to qualify for Category 1. Category 2 applications should include information demonstrating 2-6 below:

¹ This condition does not apply to non-tidal drainage systems and irrigation ditches excavated on dry land.

² For the purposes of this GP, spans are bridges, three-sided box culverts, open-bottom culverts or arches that span the stream with footings landward of bankfull width.

1. Installed and removed during the low flow period specified in GC 22(l) below.
2. Placed on geotextile fabric or other material where practicable to ensure restoration to the original grade. Soil may not be used to construct or stabilize these structures and rock must be large enough to allow for easy removal without disrupting the streambed.
3. Designed and maintained to withstand and pass high flows. Water height should be no higher than the top of the culvert's inlet. A minimum culvert diameter of two feet is required to pass debris. Culverts must be aligned to prevent bank erosion or streambed scour.
4. Equipped with energy dissipating devices installed downstream if necessary to prevent scour.
5. Designed and maintained to prevent soil from entering the waterbody.
6. Removed upon the completion of work. Impacts to the streambed or banks requires restoration to their original condition using stream simulation methods¹.

(g) Slip Lining. Work using slip lining (retrofitting an existing culvert by inserting a smaller diameter pipe), invert lining, or resulting in decreased diameter, do not qualify for Category 1, either as new work or maintenance activities.

(h) Work in Flowing Waters. To qualify for Category 1, no unconfined fill [see GC 18(b)] or excavation in flowing waters is allowed. To accomplish this:

i. Bank stabilization work below ordinary high water (OHW) shall utilize erosion controls such as inflatable cofferdams, jersey barrier, silt screen, turbidity curtain, etc. where practicable to prevent sediment input to the stream and to minimize turbidity and sedimentation impacts for sensitive life stages. Bank stabilization above OHW must utilize erosion controls.

ii. Management techniques such as temporary flume pipes, culverts, cofferdams, etc. must be used to maintain normal flows within the stream boundary's confines, or water diversions may be used immediately up and downstream of the work footprint (see Appendix A, Endnote 6) or work must be performed in the dry under no flow conditions, or under very low flow conditions following the practices in GC 22(a).

(i) Minimization. In order to make the Category 2 review process more efficient and result in a faster decision, new and replacement stream crossings should be designed using the least intrusive and environmentally damaging method following this sequential minimization process: 1) spans with no stream impacts, 2) spans with stream impacts, and 3) embedded culverts with stream simulation or low-slope design.

(j) Maintenance Requirements. The permittee shall maintain the work authorized herein in good condition and in conformance with the terms and general conditions of this permit to facilitate aquatic life passage as stated in GC 22(a). Culverts that develop "hanging" inlets or outlets, result in bed washout, or a stream that doesn't match the characteristics of the substrate in the natural stream channel such as mobility, slope, stability confinement will require maintenance or repair to comply with this GC. This does not apply to GC 22(f) above.

(k) Maintenance and Replacement Information. An existing stream crossing must be authorized and in compliance with all conditions of its authorization(s) to qualify for maintenance not subject to regulation. See Appendix A, Endnote 7. A non-serviceable crossing is not eligible for maintenance and is therefore considered as a replacement crossing [see 22(d)].

(l) Work Window. For projects that otherwise meet the terms of Category 1, in-stream construction work shall be conducted during the low flow period July 15 - October 1 in any year. Projects that are not to be conducted during that time period are ineligible for Category 1 and shall be screened pursuant to Category 2, regardless of the waterway and wetland fill and/or impact area.

(See next page for Corps General Stream Crossing Standards.)

¹ Design and construction shall be in accordance with the stream simulation document listed at Appendix E, 8(a).

Corps General Stream Crossing Standards (required for Category 1, recommended for Category 2):

(a) Culverts must be embedded:

- ≥ 2 feet for box culverts and other culverts with smooth internal walls,
- ≥ 1 foot for corrugated pipe arches
- ≥ 1 foot and at least 25 percent for corrugated round pipe culverts

(b) For new crossings, spans¹ are required to avoid or cause minimal disruption to the streambed and to meet the requirements of General Condition 22(a) and 22(b). Footings and abutments must be landward of 1.2 times bankfull width. To the greatest extent practicable, work in the stream shall be minimized, and design and construction shall allow the streambed's natural structure and integrity to remain intact. Any fill or excavation of the streambed below bankfull width other than footings, support pilings, or work specified in 22(h)ii requires Category 2 review and, unless demonstrated otherwise, stream simulation² to establish substrate and banks in the span structure and work area as specified in (d) and (e) below.

(c) For replacement crossings, spans¹ are required to meet the requirements of General Condition 22(a) and 22(b). Footings and abutments shall be landward of 1.2 times bankfull width. Unless demonstrated otherwise, stream simulation² is required to establish substrate and banks in the span structure and work area as specified in (d) and (e) below.

(d) Crossings must have a natural bottom substrate within the structure matching the characteristics of the substrate in the natural stream channel and the banks (mobility, slope, stability, confinement, grain and rock size)² at the time of construction and over time as the structure has had the opportunity to pass significant flood events. To allow terrestrial passage for wildlife and prevent undermining the footings, crossings shall have a bank on both sides of the stream matching the horizontal profile of the existing stream and banks².

(e) Crossings must be designed and constructed² with appropriate bed forms and streambed characteristics so that water depths and velocities are comparable to those found in the natural channel at a variety of flows. In order to provide appropriate water depths and velocities at a variety of flows and especially low flows, it is usually necessary to reconstruct the streambed or preserve the natural channel within the structure. Otherwise, the width of the structure needed to accommodate higher flows will create conditions that are too shallow at low flows. The grain and rock size, and arrangement of streambed materials within the structure should be in accordance with (d) above. Flows could go subsurface within the structure if only large material is used without smaller material filling the voids.

23. Wetland Crossings.

(a) All temporary and permanent crossings of wetlands shall be suitably culverted, bridged, or otherwise designed to: **i)** Withstand and prevent the restriction of high flows, **ii)** Not obstruct the movement of or not substantially disrupt the necessary life-cycle movements of those species of aquatic life indigenous to the wetland, including those species that normally migrate through the area, beyond the actual duration of construction unless the activity's primary purpose is to impound water. See Appendix E for the Maine DEP's crossing standards.

(b) To qualify for Category 1, new and replacement wetland crossings that are permanent shall be culverted, spanned or bridged in such a manner as to preserve hydraulic and ecological connectivity, at its present level, between the wetlands on either side of the road. To meet this requirement, we

¹ For the purposes of this GP, spans are bridges, three-sided box culverts, open-bottom culverts or arches that span the stream with footings landward of bankfull width.

² Design and construction shall be in accordance with the stream simulation document listed at Appendix E, 8(a).

recommend that culverts, spans or bridges be placed at least every 50 feet with an opening at least 2 feet high and 3 feet wide at ground level where practicable. Closed bottom culverts shall be embedded at least 6 inches with a natural bottom.

(c) In the case of non-compliance, the permittee shall take necessary measures to correct wetland damage due to lack of hydraulic and ecological connectivity.

(d) Any work that results in flooding, results in impacts to wetlands on either side of the wetland crossing in excess of Category 1 thresholds, or impacts wetland drainage from the upgradient side of the wetland crossing does not qualify for Category 1.

24. Discharge of Pollutants.

(a) All activities involving any discharge of pollutants into waters of the U.S., including wetlands, authorized under this GP shall be consistent with applicable water quality standards, effluent limitations, standards of performance, prohibitions, and pretreatment standards and management practices established pursuant to the Clean Water Act (CWA) (33 USC 1251), and applicable state and local laws. If applicable water quality standards, limitations, etc., are revised or modified during the term of this GP, the authorized work shall be modified to conform with these standards within six months of the effective date of such revision or modification, or within a longer period of time deemed reasonable by the Corps in consultation with the EPA. Issuance of a LURC or DEP NRPA permit confirms that state water quality standards are met.

(b) All projects authorized by this GP shall be designed, constructed and operated to minimize or eliminate the discharge of pollutants.

(c) All activities involving any discharge of pollutants into waters of the U.S., including wetlands, authorized under this GP must comply with Section 402 [33 U.S.C. 1342] of the CWA and the requirements of the National Pollutant Discharge Elimination System (40 CFR 122).

25. Spawning, Breeding and Migratory Areas. Activities and impacts such as excavations, discharges of dredged or fill material, and/or suspended sediment producing activities, in fish migratory areas, fish and shellfish spawning or nursery areas, or amphibian and migratory bird breeding areas, during spawning or breeding seasons shall be avoided and minimized to the maximum extent practicable.

26. Storage of Seasonal Structures. Coastal structures, such as pier sections and floats, that are removed from the waterway for a portion of the year (often referred to as seasonal structures) shall be stored in an upland location located above mean high water (MHW) and not in tidal wetlands or mudflats. These seasonal structures may be stored on the fixed, pile-supported portion of the structure that is seaward of MHW. This is intended to prevent structures from being stored on the marsh substrate, mudflats, or the substrate seaward of MHW. Seasonal storage of structures in navigable waters, e.g., in a protected cove on a mooring, requires Corps and local harbormaster approval.

27. Environmental Functions and Values. The permittee shall make every reasonable effort to carry out the construction or operation of the work authorized herein in a manner that maintains as much as is practicable, and minimize any adverse impacts on existing fish, wildlife, and natural environmental functions and values.

28. Protection of Vernal Pools (VPs).

(a) Impacts to VP Management Areas¹ for all VPs on, and known VPs surrounding, the project site shall be minimized to the maximum extent practicable.

(b) The following management practices must be followed for all work within the VP Management Area (750' of a VP's edge) of all VPs in order to qualify for Category 1 when there is fill placed in a water of the U.S., including wetlands:

i. Similar to the DEP's Significant Wildlife Habitat regulations²:

1. No disturbance within the VP Depression or VP Envelope (area within 100 feet of the VP Depression's edge)³;
2. Maintain a minimum of 75% of the Critical Terrestrial Habitat (area within 100-750 feet of the VP Depression's edge) as unfragmented forest with at least a partly-closed canopy of overstory trees to provide shade, deep litter and woody debris³;
3. Maintain or restore forest corridors connecting wetlands and significant vernal pools;
4. Minimize forest floor disturbance; and
5. Maintain native understory vegetation and downed woody debris.

ii. Cape Cod style-curbings or no curbing options shall be used on new roads to facilitate amphibian passage².

(c) For work not complying with the requirements in (b) above, applicants shall submit an application to the Corps for at least Category 2 review with information on directional buffers in accordance with the VP Directional Buffer Guidance document². Conservation of the unimpacted area within the VP Management Area will often be required.

(d) GC 2 requires applicants to delineate or approximately identify on the project plans all waters of the U.S., which include vernal pools. Appendix A, Page 1 lists VP Category 1 thresholds.

29. Invasive Species.

(a) The introduction, spread, or the increased risk of invasion of invasive plant or animal species on the project site, into new or disturbed areas, or areas adjacent to the project site caused by the site work is prohibited (see Appendix E, Paragraph 6).

(b) Unless otherwise directed by the Corps, all applications for Category 2 inland projects and Category 2 coastal fill projects proposing fill in Corps jurisdiction shall include an Invasive Species Control Plan (ISCP) (see Appendix E, Paragraph 6).

30. Cranberry Development Projects. For cranberry development projects authorized under the GP, the following conditions apply:

(a) If a cranberry bog is abandoned for any reason, the area must be allowed to revert to natural wetlands unless an Individual Permit is obtained from the Corps allowing the discharge of fill for an alternate use.

¹ The Corps VP Management Area, which includes the VP and a 750' radius from the VP's edge, is defined at Appendix A, Endnote 5.

² Appendix E, 10(a)-(d) provides links to the state's Significant Wildlife Habitat regulations and references that provide impact minimization measures to reference when designing projects.

³ The no disturbance requirement in the VP envelope [see (b)(i)(1)], and (b)(i)(2), do not apply to temporary impacts associated with construction mats in previously disturbed areas of existing utility project (e.g., transmission lines, gas pipelines) or linear transportation project (e.g., roads, highways, railways, trails, airport runways and taxiways) right-of-ways provided there is a Vegetation Management Plan that avoids, minimizes and mitigates impacts to aquatic resources.

(b) No stream diversion shall be allowed under Category 1 of this GP.

(c) No impoundments of intermittent or perennial streams shall be allowed under Category 1 and an application to the Corps is required for at least Category 2 review.

(d) The project shall be designed and constructed to not cause flood damage on adjacent properties.

31. Inspections. The permittee shall allow the Corps to make periodic inspections at any time deemed necessary in order to ensure that the work is being or has been performed in accordance with the terms and conditions of this GP. The Corps may also require post-construction engineering drawings for completed work or post-dredging survey drawings for any dredging work.

To facilitate these inspections, the permittee shall complete and return to the Corps:

- For Category 1 projects, the Category 1 Notification Form (Appendix B).
- For Category 2 projects, the 1) Work-Start Notification Form and 2) Compliance Certification Form whenever either is provided with a Category 2 authorization letter.

32. Maintenance.

(a) The permittee shall maintain the work authorized herein in good condition and in conformance with the terms and general conditions of this permit.

(b) This does not include maintenance of dredging projects. Each maintenance dredging event exceeding the Category 1 thresholds (see Appendix A, Page 6) requires a new written Corps authorization unless an unexpired, written Corps authorization specifies that the permittee may “dredge and maintain” an area for a particular time period. Category 1 or 2 maintenance dredging includes only those areas and depths previously authorized and dredged.

(c) Some maintenance activities may not be subject to regulation under Section 404 in accordance with 33 CFR 323.4(a)(2) (see Appendix A, Endnote 7).

33. Property Rights. This PGP does not convey any property rights, either in real estate or material, or any exclusive privileges, nor does it authorize any injury to property or invasion of rights or any infringement of Federal, State, or local laws or regulations.

34. Transfer of GP Verifications. When the structures or work authorized by this GP are still in existence at the time the property is transferred, the terms and conditions of this GP, including any special conditions, will continue to be binding on the entity or individual who received the GP verification, as well as the new owner(s) of the property. The permittee may transfer responsibilities and obligations under the GP verification to the new owner by submitting a letter to the Corps (see Appendix D for address) to validate the transfer. A copy of the GP verification must be attached to the letter and the letter must contain the following statement and signature: “When the structures or work authorized by this GP are still in existence at the time the property is transferred, the terms and conditions of this GP, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this GP and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

35. Modification, Suspension, and Revocation. This GP or any work authorized under Category 1 or 2 may be either modified, suspended, or revoked, in whole or in part, pursuant to the policies and procedures of 33 CFR 325.7. Any such action shall not be the basis for any claim for damages against the United States.

36. Restoration Directive. The permittee, upon receipt of a notice of revocation of authorization under this GP, shall restore the wetland or waterway to its former condition without expense to the United States and as directed by the Secretary of the Army or his authorized representative. If the permittee fails

to comply with such a directive, the Secretary or his designee may restore the wetland or waterway to its former condition, by contract or otherwise, and recover the cost from the permittee.

37. Special Conditions. The Corps may independently, or at the request of the Federal resource agencies, impose other special conditions on a project authorized pursuant to this GP that are determined necessary to minimize adverse navigational and/or environmental effects or based on any other factor of the public interest. Failure to comply with all conditions of the authorization, including special conditions, constitutes a permit violation and may subject the permittee to criminal, civil, or administrative penalties and/or an ordered restoration.

38. False or Incomplete Information. If the Corps makes a determination regarding the eligibility of a project under this GP and subsequently discovers that it has relied on false, incomplete, or inaccurate information provided by the permittee, the GP authorization shall not be valid and the U.S. government may institute appropriate legal proceedings.

39. Abandonment. If the permittee decides to abandon the activity authorized under this GP, unless such abandonment is merely the transfer of property to a third party, he/she may be required to restore the area to the satisfaction of the Corps.

40. Enforcement Cases. This GP does not apply to any existing or proposed activity in Corps jurisdiction associated with an on-going Corps or EPA enforcement action, until such time as the enforcement action is resolved or the Corps and/or EPA as appropriate determines that the activity may proceed independently without compromising the enforcement action.

41. Duration of Authorization. This GP expires on October 11, 2015. Activities authorized under this GP that have commenced (i.e., are under construction) or are under contract to commence before this GP expires will have until October 11, 2016 to complete the activity under the terms and conditions of the current GP.

42. Previously Authorized Activities.

(a) Projects that have received authorization (Category 1 or 2) from the Corps and that were completed under the previous PGPs, nationwide permits, regional general permits or letters of permission, shall remain authorized.

(b) Activities authorized pursuant to 33 CFR Part 330.3 (“Activities occurring before certain dates”) are not affected by this GP.

(c) Any work not commenced nor completed that was authorized in a written letter from the Corps under the PGP in effect between October 11, 2005 and October 11, 2010 remains authorized subject to the terms and general conditions of this GP along with any special conditions in the authorizing written letter.

43. NEPA Compliance. The Maine PGP was authorized in full compliance with Council for Environmental Quality (“CEQ”) NEPA regulations. The Corps has determined that individual permit actions taken under the terms and conditions of the PGP are not a major federal action significantly affecting the quality of the human environment.


District Engineer
10/12/10
Date

APPENDIX A: DEFINITION OF CATEGORIES

<p>A. INLAND WATERS AND WETLANDS</p>	<p>Inland Waters and Wetlands: Waters that are regulated under Section 404 of the Clean Water Act, including rivers, streams, lakes, ponds and wetlands, and excluding Section 10 Navigable Waters of the U.S. The jurisdictional limits are the ordinary high water (OHW) mark in the absence of adjacent wetlands, beyond the OHW mark to the limit of adjacent wetlands when adjacent wetlands are present, and the wetland limit when only wetlands are present. For the purposes of this GP, fill placed in the area between the mean high water (MHW) and the high tide line (HTL), and in the bordering and contiguous wetlands¹ to tidal waters are reviewed in the Navigable Waters section. (See II. Navigable Waters on page 4 below.)</p>
<p>ACTIVITY</p>	<p>Projects not meeting Category 1 require an application for review as a Category 2 or Individual Permit project. All Category 1 and 2 projects must comply with all of this GP's applicable terms (Pages 1 – 4) and general conditions (Pages 5–18).</p>
<p>(a) NEW FILL/ EXCAVATION DISCHARGES (You must reference (b) – (e) below for other thresholds that may be relevant to your project.)</p>	<p align="center">CATEGORY 1</p> <p>1. <15,000 square feet (SF) (in LURC or DEP territories) of inland waterway and/or wetland fill and associated secondary impacts² (e.g., areas drained, flooded, fragmented, mechanically cleared or excavated). Fill area includes all temporary and permanent fill, and regulated discharges associated with excavation. Construction mats are considered as fill. [See General Condition (GC) 18(g.) <u>Provided:</u></p> <ul style="list-style-type: none"> • Historic fill + proposed impact area <15,000 SF and subdivision fill complies with GC 5, Single and Complete Projects. • No work in special aquatic sites (SAS)⁴ other than wetlands. <p>2. Construction mats⁴ of any area necessary to conduct activities that were previously authorized, authorized under Category 1, or not subject to regulation (see Endnote 7). Authorized construction mats must be in place for <3 months, removed immediately upon work completion, and the wetlands must be restored (see GC 19).</p> <p>3. For work in Vernal Pool (VP) Management Areas (includes VPs)⁵:</p> <ul style="list-style-type: none"> • See GC 2 and Appendix C for VP delineation requirements. • See GC 28 to determine if work qualifies for Category 1 or 2. • See Appendix E, Page 3 for VP documents providing mitigation guidance.
<p>(b) OTHER</p>	<p align="center">CATEGORY 2</p> <p>1. ≥15,000 square feet (SF) (in LURC or DEP territories) to <3 acres of inland waterway and/or wetland fill and associated secondary impacts (e.g., areas drained, flooded, fragmented, or excavated). Fill area includes all temporary and permanent fill, and regulated discharges associated with excavation. Mechanical clearing without grubbing or other soil disturbance >3 acres as a secondary impact may still be eligible for Category 2 at the discretion of the Corps.</p> <p>2. Specific activities with impacts of any area ≥15,000 SF required to affect the containment, stabilization, or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority. Wetlands must be restored in place.</p> <p>3. Temporary structures, work, and discharges (including construction mats⁴) ≥15,000 SF necessary for construction activities or access fills or dewatering of construction sites, provided that the associated primary activity is authorized by the Corps, authorized under Category 1, or not subject to Corps regulation. GCs 16 -19 are particularly relevant.</p> <p align="center">See GC 2 and Appendix C for wetland delineation requirements.</p>

ACTIVITY	CATEGORY 1	CATEGORY 2
<p>(b) BANK STABILIZATION PROJECTS</p>	<p>1. Inland bank stabilization <500 FT long and <1 CY of fill per linear foot below OHW, provided:</p> <ul style="list-style-type: none"> • ≤1 cubic yard of fill per linear foot placed along the bank waterward of ordinary high water. • Work complies with the GCs (GC 20 in particular), including: <ul style="list-style-type: none"> ○ No structures angled steeper than 1H:1V allowed. Only rough-faced stone or fiber roll revetments allowed. ○ No in-stream work involving fill or excavation in flowing waters (see GC 22(h)). • In-stream work limited to Jul 15 - Oct 1 [see GC 22 (l)]. • No work in vernal pools⁵ or SAS³. • GC 10 Endangered Species and GC 11 Essential Fish Habitat are particularly relevant. 	<p>1. Inland bank stabilization ≥500 FT long and/or ≥1 CY of fill per linear foot, or any amount with fill in wetlands.</p>
<p>(c) RIVER/ STREAM/ BROOK WORK & CROSSINGS and WETLAND CROSSINGS</p>	<p>1. River, stream and brook work and crossings:</p> <ul style="list-style-type: none"> • Must comply with GC 22 in particular, including: <ul style="list-style-type: none"> ○ No slip lining [see GC 22 (g)]. ○ No in-stream work involving fill or excavation in flowing waters [see GC 22(h)]. ○ In-stream work limited to Jul 15 - Oct 1 [see GC 22 (l)]. • No work in riffles and pools³. • No stream relocations. • No dams or dikes⁶. • Work in areas designated as Atlantic salmon critical habitat or occupied by listed Atlantic salmon, or any other area occupied by a listed species is not eligible for Category 1 (see GC 10). • No work in EFH streams except for the activities stated in GC 11. <p>2. Wetland crossings must comply with the particularly relevant GC 23.</p>	<p>1. Work not qualifying for Category 1.</p>

ACTIVITY	CATEGORY 1	CATEGORY 2
(d) REPAIR, REPLACEMENT, & MAINTENANCE OF AUTHORIZED FILLS	<p>1. Repair or maintenance of existing, currently serviceable, authorized fills with no expansion or change in use:</p> <ul style="list-style-type: none"> • Conditions of the original authorization apply • Minor deviations in fill design allowed.⁷ • The repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events is authorized, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. 	<p>2. Replacement of non-serviceable fills, or repair/maintenance of serviceable fill, with expansion <3 acres, or with a change in use.</p>
(e) MISCELL-ANEOUS	<p>1. Activities required for the containment and cleanup of oil and hazardous substances that are subject to the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300) provided that the work is done in accordance with the Spill Control and Countermeasure Plan required by 40 CFR 112.3 and any existing state contingency plan and provided that the Regional Response Team (if one exists in the area) concurs with the proposed containment and cleanup action. SAS³ must typically be restored in place at the same elevation.</p> <p>2. Scientific measurement devices whose purpose is to measure and record scientific data, such as staff gages, water recording devices, water quality testing and improvement devices, and similar structures. This excludes any biological sampling devices. Structures may not restrict movement of aquatic organisms.</p> <p>3. Survey activities, such as core sampling, seismic exploratory operations, plugging of seismic shot holes and other exploratory-type bore holes, exploratory trenching, soil surveys, sampling, and historic resources surveys (but not recovery). Exploratory trenches must be restored in accordance with GC 19. The construction of temporary pads is authorized provided the discharge doesn't exceed 25 CY. This doesn't authorize permanent structures or the drilling and the discharge of excavated material from test wells for oil and gas exploration (the plugging of such wells is authorized).</p> <p>4. Any work not commenced nor completed that was authorized in a written letter from the Corps under the PGP in effect between October 11, 2005 and October 11, 2010. The terms and general conditions of this GP apply along with any special conditions in the written authorization.</p>	<p>1. Aquatic habitat restoration, establishment, and enhancement of wetlands and riparian areas and the restoration and enhancement of streams and other open waters with impacts of any area $\geq 15,000$ SF, provided those activities result in net increase in overall aquatic resource functions and services.⁸</p> <p>2. Projects where an EIS is required by the Corps are not eligible for Category 2.</p>

<p>II. NAVIGABLE WATERS</p>	<p>Navigable Waters of the United States: Waters that are subject to the ebb and flow of the tide and/or the tidal and non-tidal portions of the Federally designated navigable waters (the Penobscot River, Kennebec River, and Lake Umbagog) (Section 10 Rivers and Harbors Act of 1899). The jurisdictional limits are the mean high water (MHW) line in tidal waters and the ordinary high water (OHW) mark in non-tidal portions of the federally designated navigable rivers. For the purposes of this GP, fill placed in the area between the mean high water (MHW) and the high tide line (HTL), and in the bordering and contiguous wetlands¹ to tidal waters are also reviewed in this Navigable Waters section.</p> <p>Projects not meeting Category 1 require an application for review as a Category 2 or Individual Permit project.</p> <p>All Category 1 and 2 projects must comply with all of this GP's applicable terms (Pages 1 - 4) and general conditions (Pages 5 - 18).</p>	
<p>ACTIVITY</p>	<p>CATEGORY 1</p>	<p>CATEGORY 2</p>
<p>(a) FILL</p>	<p>1. Discharges of dredged or fill material incidental to the construction of bridges across navigable waters of the U.S., including cofferdams, abutments, foundation seals, piers, and temporary construction and access fills provided the U.S. Coast Guard authorizes such discharges as part of the bridge permit or appropriate approval. Causeways and approach fills are not included in this category and require Category 2 or Individual Permit authorization.</p> <p>2. Bank stabilization projects <200 linear feet:</p> <ul style="list-style-type: none"> • ≤1 cubic yard of fill per linear foot placed along the bank waterward of high tide line. No fill or equipment will occur in SAS³. • Work conducted in the intertidal zone must be conducted in-the-dry during low water, or between Nov. 8 – Apr. 9. • No structures angled steeper than 1H:1V and only rough-faced stone or fiber roll revetments allowed. • No driving of piles or sheeting. <p>3. For 1 and 2 above:</p> <ul style="list-style-type: none"> • Project proponents must contact the USFWS for work on coastal beaches to ensure no impacts to piping plovers, roseate terns or their habitat [see GC 10(b)iii]. 	<p>1. <1 acre temporary or permanent fill, excavation and/or secondary impacts (e.g., areas drained, flooded, fragmented or mechanically cleared). Fill area includes all temporary and permanent waterway fills, provided:</p> <ul style="list-style-type: none"> • Temporary or permanent fill in eelgrass¹⁴ <1000 SF. • Permanent fill in SAS (excluding eelgrass¹⁴) <4300 SF.
<p>(b) STREAM WORK & CROSSINGS, and WETLAND CROSSINGS</p>	<p>1. No new fill for crossings allowed.</p>	<p>1. New crossings or replacement crossings that do not fit the (c) Repair and Maintenance activity below.</p>

ACTIVITY	CATEGORY 1	CATEGORY 2
<p>(c) REPAIR AND MAINTENANCE WORK</p>	<p>1. Repair, replacement in-kind, or maintenance⁷ of existing, currently serviceable⁷, authorized structures or fills:</p> <ul style="list-style-type: none"> • Conditions of the original authorization apply. • No substantial expansion or change in use. • Must be rebuilt in same footprint, however minor deviations in structure design allowed⁷. • The repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events is authorized, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. Minor deviations for work involving piles shall adhere to one of the 4 methods in a - d below: <ul style="list-style-type: none"> a. Piles installed in-the-dry during low water or in-water between Nov. 8th - Apr. 9th, or b. Must be drilled and pinned to ledge, or c. Vibratory hammers used to install any size and quantity of wood, concrete or steel piles, or d. Impact hammers limited to one hammer and <50 piles installed/day with the following: wood piles of any size, concrete piles ≤18-inches diameter, steel piles <12-inches diameter if the hammer is ≤3000 lbs and a wood cushion is used between the hammer and steel pile, and <ul style="list-style-type: none"> • For b – d above: <ul style="list-style-type: none"> ○ In-water noise levels shall not exceed >187dB SEL re 1μPa or 206dB peak re 1μPa at a distance >10m from the pile being installed, and ○ In-water noise levels >155dB peak re 1μPa shall not exceed 12 consecutive hours on any given day and a 12 hour recovery period (i.e., in-water noise below 155dB peak re 1μPa) must be provided between work days. • For a – d above: <ul style="list-style-type: none"> ○ Work is not eligible for Category 1 if conducted in tidal portions of the Penobscot river upstream of a line extending from Turner point in Castine to Moose Point (formerly squaw point) on Cape Jellison in Stockton Springs or in tidal portions of the Kennebec or Androscoggin Rivers upstream of a line extending from Doubling point in Arrowsic to Hospital Point in West Bath. 	<p>CATEGORY 2</p> <p>1. Replacement of non-serviceable structures and fills or repair/maintenance of serviceable structures or fills, with fill, replacement or expansion <1 acre, or with a change in use.</p>

ACTIVITY	CATEGORY 1	CATEGORY 2
<p>(d) DREDGING AND ASSOCIATED DISPOSAL</p>	<p>1. Maintenance dredging¹⁰ for navigational purposes <1,000 CY with upland disposal. Includes return water from upland contained disposal area, provided:</p> <ul style="list-style-type: none"> • Proper siltation controls are used. • Dredging & disposal operation limited to Nov. 8 – Apr. 9. • No impact to SAS³. • No dredging in intertidal areas. • No dredging in areas considered occupied by listed Atlantic salmon [see GC 10(b)(ii)]. • For dredging in waters outside of Atlantic salmon critical habitat, applicants must contact NMFS (Appendix D) to ensure no impacts to listed species such as shortnose sturgeon. • Project proponents must contact the USFWS for work on coastal beaches to ensure no impacts to piping plovers, roseate terns or their habitat [see GC 10(c)]. 	<p>1. Maintenance dredging¹⁰ ≥1,000 CY, new dredging <25,000 CY, or projects not meeting Category 1. Includes return water from upland contained disposal areas. Disposal includes:</p> <ul style="list-style-type: none"> • Upland. • Beach nourishment (above mean high water) of any area provided dredging's primary purpose is navigation or sand is from an upland source. • Open water & confined aquatic disposal, if Corps finds the material suitable. <p>2. Beach nourishment associated with dredging when the primary purpose is not navigation requires at least a Category 2 review.</p> <p>3. Maintenance or new dredging¹⁰ and/or disposal in or affecting a SAS³ requires an Individual Permit. See II(a) above for dredge disposal in wetlands or waters.</p>
<p>(e) MOORINGS</p>	<p>1. Private, non-commercial, non-rental, single-boat moorings, provided:</p> <ul style="list-style-type: none"> • Authorized by the local harbormaster/town. • Not associated with any boating facility.¹¹ • Boat or mooring not located in a Federal Navigation Project¹² other than a Federal Anchorage¹². Moorings in Federal Anchorage not associated with a boating facility¹¹ and are not for rent. • No interference with navigation. • No new moorings located in SAS³. Prior to installation of moorings, a site-specific eelgrass survey should be conducted to document that eelgrass is not present. • When existing, authorized moorings in SAS³ are going to be replaced, they shall be replaced with elastic mooring systems that prevent mooring chains from resting or dragging on the bottom substrate at all tides and helical anchors, or equivalent SAS protection systems where practicable. <p>2. Minor relocation of previously authorized moorings and moored floats, provided:</p> <ul style="list-style-type: none"> • Authorized by the local harbormaster/town. • Not located in SAS³ • No interference with navigation. • Cannot be relocated into a Federal Navigation Project¹² other than a Federal Anchorage¹² 	<p>1. Moorings associated with a boating facility¹¹. An eelgrass¹⁴ survey may be required.</p> <p>2. Moorings that don't meet the terms in Category 1 and don't require an Individual Permit. This includes private moorings with no harbormaster or means of local approval.</p> <p>3. Moorings located such that they, and/or vessels docked or moored at them, are within the buffer zone of the horizontal limits¹³ of a Federal Channel¹². (See Appendix F.) The buffer zone is equal to 3 times the authorized depth of that channel.</p> <p>4. An IP is required for moorings within the horizontal limits¹¹, or with moored vessels that extend, into the horizontal limits of a Federal Navigation Project¹², except those in Federal Anchorages¹².</p> <p>For 1-4 above, siting of new individual moorings in SAS³, including eelgrass¹⁴, should be avoided to the maximum extent practicable. If SAS³ cannot be avoided, plans should show elastic mooring systems that prevent mooring chains from resting or dragging on the bottom substrate at all tides and helical anchors, or equivalent SAS protection systems, where practicable.</p>

ACTIVITY (f) STRUCTURES AND FLOATS	CATEGORY 1	CATEGORY 2
	<p>1. Reconfiguration of existing, authorized structures or floats.</p> <p><u>Provided:</u></p> <p>a. Piles shall adhere to one of the 4 methods in (i) –(iv) below:</p> <ul style="list-style-type: none"> i. Piles installed in-the-dry during low water or in-water between Nov. 8th - Apr. 9th, or ii. Must be drilled and pinned to ledge, or iii. Vibratory hammers used to install any size and quantity of wood, concrete or steel piles, or iv. Impact hammers limited to one hammer and <50 piles installed/day with the following: wood piles of any size, concrete piles ≤18-inches diameter, steel piles <12-inches diameter if the hammer is ≤3000 lbs and a wood cushion is used between the hammer and steel pile. <p>b. For (ii) – (iv) above:</p> <ul style="list-style-type: none"> i. In-water noise levels shall not exceed > 187dB SEL re 1µPa or 206dB peak re 1µPa at a distance >10m from the pile being installed, and ii. In-water noise levels >155dB peak re 1µPa shall not exceed 12 consecutive hours on any given day and a 12 hour recovery period (i.e., in-water noise below 155dB peak re 1µPa) must be provided between work days. <p>c. For (i) –(iv) above:</p> <ul style="list-style-type: none"> i. Work is not eligible for Category 1 if conducted in tidal portions of the Penobscot river upstream of a line extending from Turner point in Castine to Moose Point (formerly squaw point) on Cape Jellison in Stockton Springs or in tidal portions of the Kennebec or Androscoggin Rivers upstream of a line extending from Doubling point in Arrowsic to Hospital Point in West Bath. 	<p>CATEGORY 2</p> <p>1. Private structures or floats, including floatways/skidways, built to access waterway (seasonal and permanent)</p> <p>2. Expansions to existing boating facilities¹¹.</p> <p>For 1 & 2 above, compliance with the following design standards is not required but recommended:</p> <ul style="list-style-type: none"> ● Pile-supported structures <400 SF, with attached floats totaling ≤200 SF. ● Bottom anchored floats ≤200 SF. ● Structures are ≤4’ wide and have at least a 1:1 height:width ratio¹¹. ● Floats supported a minimum of 18” above the substrate during all tides. ● Structures & floats not located within 25’ of any eelgrass⁸. ● Moored vessels not positioned over SAS⁴. ● No structure located within 25’ of the riparian property boundary without written approval from the abutter(s). ● No structure extends across >25% of the waterway width at mean low water. ● Not located within the buffer zone of the horizontal limits¹³ of a Corps Federal Navigation Project (FNP) (App. F). The buffer zone is equal to three times the authorized depth of that FNP. <p>3. An Individual Permit is required for structures or floats, including floatways/skidways, located such that they and/or vessels docked or moored at them are within the horizontal limits¹³ of a Corps Federal Navigation Project¹² (see App. F).</p> <p>4. An Individual Permit is required for structures & floats associated with a new or previously unauthorized boating facility¹¹.</p>

ACTIVITY	CATEGORY 1	CATEGORY 2
(g) MISCELL- ANEOUS	<p>1. Temporary buoys, markers, floats, etc. for recreational use during specific events, provided they are removed within 30 days after use is discontinued.</p> <p>2. The placement of aids to navigation and regulatory markers which are approved by and installed in accordance with the requirements of the U.S. Coast Guard. (See 33 CFR 66, Chapter I, subchapter C).”</p> <p>3. Activities required for the containment and cleanup of oil and hazardous substances that are subject to the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300) provided that the work is done in accordance with the Spill Control and Countermeasure Plan required by 40 CFR 112.3 and any existing state contingency plan and provided that the Regional Response Team (if one exists in the area) concurs with the proposed containment and cleanup action. SAS³ must typically be restored in place at the same elevation.</p> <p>4. Fish and wildlife harvesting, enhancement, and attraction devices and activities such as pound nets, crab traps, crab dredging, eel pots, lobster traps, and clam and oyster digging, and small fish attraction devices such as open water fish concentrators (sea kites, etc.). This does not authorize artificial reefs or impoundments and semi-impoundments of waters of the U.S. for the culture or holding of motile species such as lobster, or the use of covered oyster trays or clam racks. No activity that results in a hazard to navigation. Note: A Category 1 Notification Form is not required for these devices and activities.</p> <p>5. Scientific measurement devices whose purpose is to measure and record scientific data, such as staff gages, water recording devices, water quality testing and improvement devices, and similar structures. Structures may not restrict movement of aquatic organisms. No activity results in a hazard to navigation.</p> <p>6. Survey activities such as exploratory drilling, surveying and sampling activities, excluding any biological sampling devices. Does not include oil and gas exploration and fill for roads or construction pads. No activity results in a hazard to navigation. Applicants must contact NMFS to ensure no impacts to listed species.</p>	<p>1. Structures or work in or affecting tidal or navigable waters, that are not defined under any of the previous headings listed above. Includes, but is not limited to, utility lines, aerial transmission lines, pipelines, outfalls, boat ramps, floatways/skidways, bridges, tunnels and horizontal directional drilling activities seaward of the mean high water line.</p> <p>2. Shellfish/finfish (other than Atlantic salmon), or other aquaculture facilities with no more than minimal individual and cumulative impacts to environmental resources or navigation. –Aquaculture guidelines are provided at: www.maine.gov/dmr/aquaculture/index.htm.</p> <p>3. Specific activities with impacts of any area required to affect the containment, stabilization, or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority. Wetlands must typically be restored in place at the same elevation to qualify.</p> <p>4. Aquatic habitat restoration, establishment and enhancement provided those activities are proactive and result in net increases in aquatic resource functions and services.⁸</p> <p>5. Projects where an EIS is required by the Corps are not eligible for Category 2.</p>

ACTIVITY	CATEGORY 1	CATEGORY 2
(g) MISCELL-ANEIOUS (continued)	<p>7. Shellfish seeding (brushing the flats⁹) projects.</p> <p>8. Marine railway work not eligible for maintenance⁷ (i.e. not currently serviceable⁷ or in non-compliance) may be replaced “in-kind” with minor deviations⁷ provided:</p> <ul style="list-style-type: none"> • Work is in the intertidal zone • No fill expansion below high tide line. • Work conducted in-the-dry during low water or in-water between Nov. 8 – Apr. 9. <p>9. Test plots <100 SF for the planting of wetland species native to the area. No grading, no structures, no plant growing devices and no interference with navigation, which require at least Category 2 review.</p> <p>10. Any work not commenced nor completed that was authorized in a written letter from the Corps under the PGP in effect between October 11, 2005 and October 11, 2010. The terms and general conditions of this GP apply along with any special conditions in the written authorization</p>	

Endnotes/Definitions

¹ **Bordering and Contiguous Wetlands:** A bordering wetland is immediately next to its adjacent waterbody and may lie at, or below, the ordinary high water mark (mean high water in navigable waters) of that waterbody and is directly influenced by its hydrologic regime. Contiguous wetlands extend landward from their adjacent waterbody to a point where a natural or manmade discontinuity exists. Contiguous wetlands include bordering wetlands as well as wetlands that are situated immediately above the ordinary highwater mark and above the normal hydrologic influence of their adjacent waterbody. Note, with respect to the federally designated navigable rivers, the wetlands bordering and contiguous to the tidally influenced portions of those rivers are reviewed under “II. Navigable Waters.”

² **Direct, Secondary, and Cumulative Impacts/Effects:**

Direct Impacts: The immediate loss of aquatic ecosystem within the footprint of the fill.

Secondary Impacts: These are effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material. Information about secondary effects on aquatic ecosystems shall be considered prior to the time final section 404 action is taken by permitting authorities. Some examples of secondary effects on an aquatic ecosystem are a) fluctuating water levels in all impoundment and downstream associated with the operation of a dam, b) septic tank leaching and surface runoff from residential or commercial developments on fill, and c) leachate and runoff from a sanitary landfill located in waters of the U.S. Put another way, secondary effects are those impacts outside the footprint of the fill that arise from and are associated with the discharge of dredged or fill material, including the operation of an activity or facility associated with the discharge. Examples may include habitat fragmentation; interruption of travel corridors for wildlife (for example, for amphibians that migrate to and from seasonal or vernal pools used as breeding habitat); hydrologic regime changes; and impacts from operation and maintenance activities for constructed facilities; such as noise/lighting, storm water runoff, and road kill of wetland dependent wildlife. Using the directions contained in the guidelines, we consider the circumstances of a proposed discharge and the project of which it is a part to evaluate the scope, extent, severity, and permanence of direct, secondary, and cumulative adverse effects upon the aquatic ecosystem.

Cumulative Impacts: The extent of past, present, and foreseeable developments in the area may be an important consideration in evaluating the significance of a particular project's impacts. Although the impacts associated with a particular discharge may be minor, the cumulative effect of numerous similar discharges can result in a large impact. Cumulative impacts should be estimated only to the extent that they are reasonable and practical.

³**Special Aquatic Sites:** Includes wetlands and saltmarsh, mudflats, riffles and pools, and vegetated shallows (predominantly comprised of eelgrass in Maine).

⁴**Construction Mats:** Constructions, swamp and timber mats (herein referred to as "construction mats") are generic terms used to describe structures that distribute equipment weight to prevent wetland damage while facilitating passage and providing work platforms for workers and equipment. They are comprised of sheets or mats made from a variety of materials in various sizes. A timber mat consists of large timbers bolted or cabled together. Corduroy roads, which are not considered to be construction mats, are cut trees and/or saplings with the crowns and branches removed, and the trunks lined up next to one another. Corduroy roads are typically installed as permanent structures. Like construction mats, they are considered as fill whether they're installed temporarily or permanently.

⁵**Vernal Pools:** A vernal pool, also referred to as a seasonal forest pool, is a temporary to semi-permanent body of water occurring in a shallow depression that typically fills during the spring or fall and may dry during the summer. Vernal pools have no permanent inlet or outlet and no viable populations of predatory fish. A vernal pool may provide the primary breeding habitat for wood frogs (*Rana sylvatica*), spotted salamanders (*Ambystoma maculatum*), blue-spotted salamanders (*Ambystoma laterale*), and fairy shrimp (*Eubranchipus* sp.), as well as valuable habitat for other plants and wildlife, including several rare, threatened, and endangered species. A vernal pool intentionally created for the purposes of compensatory mitigation is included in this definition. For the purposes of this GP, the presence of any of the following species in any life stage in any abundance level/quantity would designate the waterbody as a vernal pool: fairy shrimp, blue spotted salamanders, spotted salamanders or wood frogs. The Corps may determine during a Category 2 review that a waterbody should not be regulated as a VP based on available evidence. For the purposes of this GP*, the VP Management Areas are the: Vernal Pool Depression (includes the vernal pool depression up to the spring or fall high water mark, and includes any vegetation growing within the depression), Vernal Pool Envelope (area within 100 FT of the VP Depression's edge) and Critical Terrestrial Habitat (area within 100-750 FT of the Vernal Pool Depression's edge). [*Note: Critical Terrestrial Habitat is defined as 100 -750 FT on page 243 of the document "Science and Conservation of Vernal Pools in Northeastern North America," Calhoun and deMaynadier, 2008, which is referenced in Appendix E, page 3, Paragraph 10(b).

⁶**Water Diversions:** Water diversions are activities such as bypass pumping or water withdrawals. Temporary flume pipes, culverts or cofferdams where normal flows are maintained within the stream boundary's confines aren't water diversions. "Normal flows" are defined as no change in flow from pre-project conditions.

⁷**Maintenance:** a) In accordance with 33 CFR 323.4(a)(2), any discharge of dredged or fill material that may result from any of the following activities is not prohibited by or otherwise subject to regulation under Section 404 of the CWA: "Maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, bridge abutments or approaches, and transportation structures. Maintenance does not include any modification that changes the character, scope, or size of the original fill design." Otherwise, the following work is regulated and subject to the Category 1 or 2 thresholds in Appendix A above: The repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3 – "Activities occurring before certain dates," provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification.

b) Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make repair, rehabilitation, or replacement are authorized. **c)** Currently serviceable means useable as is or with some maintenance, but not so degraded as to essentially require reconstruction. **d)** No seaward expansion for bulkheads or any other fill activity is considered Category 1 maintenance. **e)** Only structures or fills that were previously authorized and are in compliance with the terms and condition of the original authorization can be maintained as a non-regulated activity under 33 CFR 323.4(a)(2), or in accordance with the Category 1 or 2 thresholds in Appendix A. **f)** The state's maintenance provisions may differ from the Corps and may require reporting and written authorization from the state. **g)** Contact the Corps to determine whether stream crossing replacements require a written application to the Corps for at least a Category 2 review.

⁸**Aquatic Habitat Restoration, Establishment and Enhancement:** The Corps will decide if a project qualifies and must determine in consultation with federal and state agencies that the net effects are beneficial. The Corps may refer to Nationwide Permit 27 published in the 3/12/07 Federal Register. Activities authorized here may include, but are not limited to: the removal of accumulated sediments; the installation, removal, and maintenance of small water control structures, dikes, and berms; the installation of current deflectors; the enhancement, restoration, or establishment of riffle and pool stream structure; the placement

of in-stream habitat structures; modifications of the stream bed and/or banks to restore or establish stream meanders; the backfilling of artificial channels and drainage ditches; the removal of existing drainage structures; the construction of small nesting islands in inland waters; the construction of open water areas; the construction of native shellfish species habitat over unvegetated bottom for the purpose of habitat protection or restoration in tidal waters; shellfish seeding; activities needed to reestablish vegetation, including plowing or discing for seed bed preparation and the planting of appropriate wetland species; mechanized land clearing to remove non-native invasive, exotic, or nuisance vegetation; and other related activities. Only native plant species should be planted at the site.

⁹ **Brushing the Flats:** The placement of tree boughs, wooden lath structure, or small-mesh fencing on mudflats to enhance recruitment of soft-shell clams (*Mya arenaria*).

¹⁰ **Maintenance Dredging:** This includes only those areas and depths previously authorized by the Corps and dredged.

¹¹ **Boating Facilities:** Facilities that provide for a fee, rent, or sell mooring space, such as marinas, yacht clubs, boat clubs, boat yards, town facilities, dockminiums, etc.

¹² **Federal Navigation Projects (FNPs):** FNPs are comprised of Federal Channels and Federal Anchorages. See Appendix F for their location and contact the Corps for more information. “Horizontal Limits” is the outer edge of an FNP. “Buffer Zone” is equal to three times the authorized depth of that channel.

¹³ **Horizontal Limits:** The outer edge of a Federal Navigation Project (FNP). See Appendix F and contact the Corps for information on FNP’s.

¹⁴ **Eelgrass (*Zostera marina*):** A type of rooted aquatic vegetation that exists in intertidal and shallow subtidal areas known as vegetated shallows. See www.nero.noaa.gov/hcd/ for eelgrass survey guidance.

¹⁵ **Structures:** The height of structures shall at all points be equal to or exceed the width of the deck. For the purpose of this definition, height shall be measured from the marsh substrate to the bottom of the longitudinal support beam.



**US Army Corps
of Engineers**®
New England District

PGP
WORK-START NOTIFICATION FORM
(Minimum Notice: Two weeks before work begins)

* MAIL TO: U.S. Army Corps of Engineers, New England District *
* Policy Analysis/Technical Support Branch *
* Regulatory Division *
* 696 Virginia Road *
* Concord, Massachusetts 01742-2751 *

Corps of Engineers Permit No. [NAE-2011-01429] was issued to [MaineDOT]. This work is located in Dunn Brook in Smyrna Maine. The permit authorized the permittee to place temporary and permanent fill below OHW in order to invert line an existing culvert.

The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

PLEASE PRINT OR TYPE

Name of Person/Firm: _____

Business Address: _____

Telephone Numbers: () _____ () _____

Proposed Work Dates: **Start:** _____ **Finish:** _____

Permittee's Signature: _____ **Date:** _____

Printed Name: _____ **Title:** _____

FOR USE BY THE CORPS OF ENGINEERS

PM: _____ **Submittals Required:** _____

Inspection Recommendation: _____



**US Army Corps
of Engineers**®
New England District

(Minimum Notice: Permittee must sign and return notification
within one month of the completion of work.)

COMPLIANCE CERTIFICATION FORM

USACE Project Number: NAE-2011-01429

Name of Permittee: MaineDOT

Permit Issuance Date: 9/1/11

Please sign this certification and return it to the following address upon completion of the activity and any mitigation required by the permit. You must submit this after the mitigation is complete, but not the mitigation monitoring, which requires separate submittals.

 * MAIL TO: U.S. Army Corps of Engineers, New England District *
 * Policy Analysis/Technical Support Branch, ATTN: Marie Farese *
 * Regulatory Division *
 * 696 Virginia Road *
 * Concord, Massachusetts 01742-2751 *

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

Printed Name

Date of Work Completion

Telephone Number (____) _____



Environmental Summary Sheet

Pin: 17878.00
Town: Smyrna
CPD Team Leader: Laurie Rowe
NEPA Complete: 7/19/11

Date Submitted: 10/6/11

Section 106
SHPO Concurrence- no effect
Special Conditions:

Section 4(f) and 6(f)
Section 4(f)
Review Complete
Section 6(f)
Not Applicable

Maine Department of Inland Fisheries and Wildlife Essential Habitat
Not Applicable **Timing Window: Not Applicable**

Section 7
No Effect
Species of Concern: Lynx

Comments/References: Not Applicable

Maine Department of Conservation/Public Lands, Submerged Land Lease
Not Applicable

Maine Land Use Regulation Commission
Not Applicable

**Applicable Standards and Permits are included with the contract*

Maine Department of Environmental Protection
Permit by Rule (PBR)
**Applicable Standards and Permits 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.
Category 2
Instream work limited from July 15 to October 1

**Applicable Standards and Permits are included with the contract*

Coast Guard
Not Applicable

**Applicable Standards and Permits are included with the contract*

<input checked="" type="checkbox"/> Special Provisions Required		
Special Provision 105-Timing of Work Restriction	N/A <input type="checkbox"/>	Applicable <input checked="" type="checkbox"/>
Special Provision 656-Erosion Control Plan	N/A <input type="checkbox"/>	Applicable <input checked="" type="checkbox"/>
Special Provision 203-Dredge Spec	N/A <input type="checkbox"/>	Applicable <input checked="" type="checkbox"/>
General Note for Hazardous Waste	N/A <input checked="" type="checkbox"/>	Applicable <input type="checkbox"/>
Special Provision 203-Hazardous Waste	N/A <input checked="" type="checkbox"/>	Applicable <input type="checkbox"/>
Special Provision 105.9	N/A <input checked="" type="checkbox"/>	Applicable <input type="checkbox"/>

**All permits and approvals based on plans/scope as of: 7/27/11*