

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

CONTRACT DOCUMENTS

**CONTRACT 2018.09**

BRIDGE REPAIRS

RUNNING HILL ROAD UNDERPASS (MILE 45.4)

BLACKSTRAP ROAD UNDERPASS (MILE 58.3)

WEYMOUTH ROAD UNDERPASS (MILE 66.2)

SUPERSTRUCTURE REPLACEMENT

DUTTON HILL ROAD UNDERPASS (MILE 59.9)

ACCESS ROAD

FOREST LAKE ROAD

NOTICE TO CONTRACTORS

PROPOSAL

CONTRACT AGREEMENT

CONTRACT BOND

FINAL LIEN AND CLAIM WAIVER AND AFFIDAVIT

SPECIFICATIONS

MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

The Specifications are divided into two parts:  
Part I, Supplemental Specifications and Part II, Special  
Provisions.

The Maine Turnpike Supplemental Specifications are additions  
and alterations to the 2014 Maine Department of  
Transportation Standard Specifications. See Subsection 100.1.

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MAINE TURNPIKE AUTHORITY

NOTICE TO CONTRACTORS

Sealed Proposals will be received by the Maine Turnpike Authority for:

CONTRACT 2018.09

BRIDGE REPAIRS

RUNNING HILL ROAD UNDERPASS (MILE 45.4)

BLACKSTRAP ROAD UNDERPASS (MILE 58.3)

WEYMOUTH ROAD UNDERPASS (MILE 66.2)

SUPERSTRUCTURE REPLACEMENT

DUTTON HILL ROAD UNDERPASS (MILE 59.9)

at the office of the Maine Turnpike Authority, 2360 Congress Street, Portland, ME, until 11:00 a.m., prevailing time as determined by the Authority on December 19, 2017 at which time and place the Proposals will be publicly opened and read. Bids will be accepted from Contractors **prequalified** by the Maine Department of Transportation for Bridge Construction Projects. All other bids may be rejected. This Project includes a wage determination developed by the State of Maine Department of Labor.

The work consists of bridge repairs to the Running Hill Road Underpass bridge in the City of South Portland, Maine, bridge repairs to the Blackstrap Road Underpass bridge in the Town of Cumberland, Maine, bridge repairs to the Weymouth Road Underpass bridge in the Town of Gray, Maine, and replacing the Dutton Hill Road Underpass bridge superstructure over the Maine Turnpike in the Town of Gray, Maine. The work includes bridge pavement and membrane replacement, approach work and paving, deck expansion joint modification, bridge drain grate modification, bearing repairs, and miscellaneous superstructure and substructure repairs for Running Hill Road Underpass and Blackstrap Road Underpass Bridge. The work includes raising the existing superstructure, bridge pavement and membrane replacement, approach work and paving, deck expansion joint modification, bridge drain grate modification, bearing replacement, and miscellaneous superstructure and substructure repairs for Weymouth Road Underpass Bridge. The work also includes concrete deck and steel girder replacement, concrete substructure modifications and repairs, approach work and paving, guardrail and bridge rails, and access road construction for Dutton Hill Road Underpass Bridge as well as maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications.

Plans and Contract Documents may be examined by prospective Bidders weekdays between 8:00 a.m. and 4:30 p.m. at the office of the Maine Turnpike Authority, 2360 Congress Street, Portland, Maine. **The full size Plans** and Contract Documents may be obtained from the Authority upon payment of One Hundred (\$100.00) Dollars for each set, which payment will not be returned. **The half size Plans** and Contract Documents may be obtained from the Authority upon payment of Fifty (\$50.00) Dollars for each set, which payment will not be returned. Checks shall be made payable to: Maine Turnpike Authority. The Plans and Contract Documents may also be downloaded

from a link on our website at <http://www.maineturnpike.com/project-and-planning/Construction-Contracts.aspx>.

For general information regarding Bidding and Contracting procedures, contact Nate Carll, Purchasing Manager, at (207)482-8115. For information regarding Schedule of Items, plan holders list and bid results, visit our website at <http://www.maineturnpike.com/project-and-planning/Construction-Contracts.aspx>. For Project specific information, fax all questions to Nate Carll, Purchasing Manager, at (207) 871-7739 or email [ncarll@maineturnpike.com](mailto:ncarll@maineturnpike.com). Responses will not be prepared for questions received by telephone. Bidders shall not contact any other Authority staff or Consultants for clarification of Contract provisions, and the Authority will not be responsible for any interpretations so obtained.

All work shall be governed by the Specifications entitled "State of Maine, Department of Transportation, Standard Specifications, Revision of November 2014", "Standard Details, Revision of November 2014" and "Best Management Practices for Erosion and Sediment Control", latest issue. Copies and recent updates to these publications can be downloaded at: <http://www.maine.gov/mdot/contractors/publications/>.

Proposals must be accompanied by an original bid bond, certified or cashier's check payable to the Maine Turnpike Authority in an amount not less than Five (5%) Percent of the Total Amount in the Proposal, but not less than \$500.00. The Bidder to whom a Contract is awarded will be required to furnish a Surety Corporation Bond, satisfactory to the Authority, on the standard Contract Bond form of the Authority, for a sum not less than the Total Amount of the Proposal.

Proposals must be made upon the Proposal Forms furnished by the Authority separately with the Contract Documents, and must be enclosed in the sealed special addressed envelope provided therefore bearing the name and address of the Bidder, the name of the Contract, and the date and time of Proposal opening on the outside.

A pre-bid conference will be held on December 5, 2017 at 10:00 a.m. at the Maine Turnpike Authority, 2360 Congress Street, Portland, Maine.

The Authority reserves the unqualified right to reject any or all Proposals and to accept that Proposal which in its sole judgment will under all circumstances serve its best interest.

MAINE TURNPIKE AUTHORITY

Nate Carll  
Purchasing Manager  
Maine Turnpike Authority

Portland, Maine

Maine Turnpike Authority

MAINE TURNPIKE

PROPOSAL

CONTRACT 2018.09

BRIDGE REPAIRS

RUNNING HILL ROAD UNDERPASS (MILE 45.4)

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SUPERSTRUCTURE REPLACEMENT

DUTTON HILL ROAD UNDERPASS (MILE 59.9)

ACCESS ROAD

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MAINE TURNPIKE AUTHORITY

PROPOSAL

CONTRACT 2018.09

BRIDGE REPAIRS

RUNNING HILL ROAD UNDERPASS (MILE 45.4)

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SUPERSTRUCTURE REPLACEMENT

DUTTON HILL ROAD UNDERPASS (MILE 59.9)

ACCESS ROAD

FOREST LAKE ROAD

TO MAINE TURNPIKE AUTHORITY:

The work consists of bridge repairs to the Running Hill Road Underpass bridge in the City of South Portland, Maine, bridge repairs to the Blackstrap Road Underpass bridge in the Town of Cumberland, Maine, bridge repairs to the Weymouth Road Underpass bridge in the Town of Gray, Maine, and replacing the Dutton Hill Road Underpass bridge superstructure over the Maine Turnpike in the Town of Gray, Maine. The work includes bridge pavement and membrane replacement, approach work and paving, deck expansion joint modification, bridge drain grate modification, bearing repairs, and miscellaneous superstructure and substructure repairs for Running Hill Road Underpass and Blackstrap Road Underpass Bridge. The work includes raising the existing superstructure, bridge pavement and membrane replacement, approach work and paving, deck expansion joint modification, bridge drain grate modification, bearing replacement, and miscellaneous superstructure and substructure repairs for Weymouth Road Underpass Bridge. The work also includes concrete deck and steel girder replacement, concrete substructure modifications and repairs, approach work and paving, guardrail and bridge rails, and access road construction for Dutton Hill Road Underpass Bridge as well as maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications.

This Work will be done under a Contract known as Contract 2018.09 according to the Plans and Specifications which are on file in the office of the Maine Turnpike Authority, 2360 Congress Street, Portland, Maine.

On the acceptance of this Proposal for said Work, the undersigned will give the required bond with good security conditioned for the faithful performance of said Work, according to said Plans and Specifications, and the doing of all other work required by said Specifications for the consideration herein named and with the further condition that the Maine Turnpike Authority shall be saved harmless from any and all damages that might accrue to any person, persons or property by reason of the carrying out of said Work, or any part thereof, or by reason of negligence of the undersigned, or any person or persons under his employment and engaged in said Work.

The undersigned hereby declares that he/she has carefully examined the Plans, Specifications and other Contract Documents, and that he/she will contract to carry out and complete the said Work

as specified and delineated at the price per unit of measure for each scheduled item of Work stated in the Schedule of Prices as follows:

It is understood that the TOTAL AMOUNT stated by the undersigned in the following Schedule of Prices is based on approximate quantities and will be used solely for the comparison of bids, and that the quantities stated in the Schedule of Prices for the various items are estimates only and may be increased or decreased all as provided in the Specifications.

**SCHEDULE OF BID PRICES  
CONTRACT NO. 2018.09**

**BRIDGE REPAIRS - RUNNING HILL ROAD UNDERPASS - MM 45.40  
BRIDGE REPAIRS - BLACKSTRAP ROAD UNDERPASS - MM 58.30  
SUPERSTRUCTURE REPLACEMENT - DUTTON HILL ROAD UNDERPASS - MM 59.90  
BRIDGE REPAIRS - WEYMOUTH ROAD UNDERPASS - MM 66.20**

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
202.10	Removing Existing Superstructure - Property of Contractor	Lump Sum	1				
202.17	Removing Existing Structural Concrete (Dutton Hill Road)	Lump Sum	1				
202.17	Removing Existing Structural Concrete (Weymouth Road)	Lump Sum	1				
202.202	Removing Pavement Surface	Square Yard	3425				
202.203	Pavement Butt Joints	Square Yard	190				
203.20	Common Excavation	Cubic Yard	2880				
203.21	Rock Excavation	Cubic Yard	1150				
203.24	Common Borrow	Cubic Yard	2262				
203.25	Granular Borrow	Cubic Yard	190				
304.10	Aggregate Subbase Course - Gravel	Cubic Yard	2500				
403.208	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size	Ton	96				

**CARRIED FORWARD:**

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
403.209	Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (sidewalks, drives, islands & incidentals)	Ton	12				
403.210	Hot Mix Asphalt, 9.5 mm Nominal Maximum Size	Ton	1070				
403.213	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base Course)	Ton	750				
409.15	Bituminous Tack Coat - Applied	Gallon	452				
411.10	Untreated Aggregate Surface Course, Truck Measure	Cubic Yard	4				
419.30	Sawing Bituminous Pavement	Linear Foot	1940				
502.21	Structural Concrete, Abutments and Retaining Walls	Cubic Yard	81				
502.23	Structural Concrete Piers	Cubic Yard	15				
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges	Lump Sum	1				
502.49	Structural Concrete Curbs and Sidewalks	Lump Sum	1				
502.701	Bridge Drain Grate Modification	Each	8				
502.7011	Bridge Drain Grate Modification (Running Hill Road)	Each	1				

**CARRIED FORWARD:**

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
502.91	Sealing Deck Construction Joints	Linear Foot	73				
503.12	Reinforcing Steel, Fabricated and Delivered	Pounds	440				
503.13	Reinforcing Steel, Placing	Pounds	440				
503.14	Epoxy-Coated Reinforcing Steel, Fabricated and Delivered	Pounds	77400				
503.15	Epoxy-Coated Reinforcing Steel, Placing	Pounds	77400				
504.70	Structural Steel Fabricated and Delivered (Dutton Hill Road)	Lump Sum	1				
504.70	Structural Steel Fabricated and Delivered (Weymouth Road)	Lump Sum	1				
504.71	Structural Steel Erection (Dutton Hill Road)	Lump Sum	1				
504.71	Structural Steel Erection (Weymouth Road)	Lump Sum	1				
505.08	Shear Connectors	Lump Sum	1				
506.9102	Zinc Rich Coating System (Shop Applied)	Lump Sum	1				
506.9103	Zinc Rich Coating System (Field Applied)	Lump Sum	1				

<b>CARRIED FORWARD:</b>
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Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
507.0821	Steel Bridge Railing, 3 Bar	Lump Sum	1				
507.0928	Aluminum Bridge Rail - 3 Bar Post Remove and Reset	Each	1				
507.095	Aluminum Bridge Railing - Splice Retrofit	Each	3				
508.14	High Performance Waterproofing Membrane (Running Hill Road)	Lump Sum	1				
508.14	High Performance Waterproofing Membrane (Blackstrap Road)	Lump Sum	1				
508.14	High Performance Waterproofing Membrane (Dutton Hill Road)	Lump Sum	1				
508.14	High Performance Waterproofing Membrane (Weymouth)	Lump Sum	1				
508.15	Membrane Waterproofing (Dutton Hill Road)	Lump Sum	1				
508.15	Membrane Waterproofing (Weymouth Road)	Lump Sum	1				
509.201	Culvert Sliplining	Linear Foot	67				
514.06	Curing Box for Concrete Cylinders	Each	2				
515.201	Pigmented Protective Coating for Concrete Surfaces	Square Yard	1850				

**CARRIED FORWARD:**

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
515.202	Clear Protective Coating for Concrete Surfaces	Square Yard	1020				
518.10	Abutment Repairs	Square Foot	385				
518.20	Pier Repairs	Square Foot	970				
518.391	Repairing Granite Curb Joint and Bedding Mortar	Linear Foot	292				
518.4	Epoxy Injection Crack Repair	Linear Foot	88				
518.80	Partial Depth Concrete Deck Repairs	Square Foot	1780				
520.2211	Expansion Joint Modification	Each	2				
520.23	Asphaltic Plug Joint	Linear Foot	151				
520.234	Expansion Device - Silicone Coated and Pre-compressed Seal	Linear Foot	18				
520.2341	Bridge Joint Replacement - Silicone Coated and Pre-compressed Seal	Linear Foot	63				
523.1201	Reset Steel Bearings	Each	8				
523.52	Bearing Installation	Each	45				

**CARRIED FORWARD:**

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
523.521	Bearing Removal	Each	20				
523.5402	Laminated Elastomeric Bearings, Expansion	Each	10				
523.54021	PTFE Elastomeric Bearings, Expansion	Each	15				
524.40	Protective Shielding - Steel Girders	Square Yard	870				
524.7212	Jacking Existing Superstructure (Blackstrap Road)	Lump Sum	1				
524.7212	Jacking Existing Superstructure (Weymouth Road)	Lump Sum	1				
526.306	Temporary Concrete Barrier, Type I - Supplied by Authority	Lump Sum	1				
526.34	Permanent Concrete Transition Barrier	Each	4				
527.341	Work Zone Crash Cushions - TL-3	Unit	6				
603.159	12 inch Culvert Pipe Option III	Linear Foot	41				
603.179	18 inch Culvert Pipe Option III	Linear Foot	190				
606.1721	Bridge Transition - Type I	Each	4				

<b>CARRIED FORWARD:</b>
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Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
606.1728	W-Beam to 3-Bar Bridge Rail Transition	Each	4				
606.241	Guardrail Type 3d - 15 ft. Radius and Less	Linear Foot	50				
606.242	Guardrail Type 3d - over 15 feet Radius	Linear Foot	225				
606.244	Guardrail Type 3d - Single Rail, 7 foot Posts	Linear Foot	2312.5				
606.265	Terminal End - Single Rail - Galvanized Steel	Each	3				
606.278	Terminal End - Anchored End	Each	1				
606.353	Reflectorized Flexible Guardrail Marker	Each	18				
606.78	Low Volume Guardrail End - Type 3	Each	2				
606.79	Guardrail 350 Flared Terminal	Each	6				
606.81	Tangent Guardrail Terminal – Energy Absorbing	Each	1				
607.17	Chain Link Fence - 6 Foot	Linear Foot	1010				
607.23	Chain Link Fence Gate	Each	5				

**CARRIED FORWARD:**

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
607.2325	Pipe Entry Gate	Each	4				
607.32	Bracing Assembly Type I - Metal Posts	Each	26				
607.33	Bracing Assembly Type II - Metal Posts	Each	11				
607.431	Snow Fence	Linear Foot	208				
609.11	Vertical Curb Type 1	Linear Foot	250				
610.08	Plain Riprap	Cubic Yard	230				
610.18	Stone Ditch Protection	Cubic Yard	86				
613.319	Erosion Control Blanket	Square Yard	6500				
615.07	Loam	Cubic Yard	1140				
618.1401	Seeding Method Number 2, Plan Quantity	Unit	96				
619.1201	Mulch - Plan Quantity	Unit	96				
619.1202	Temporary Mulch (Dutton Hill Road)	Lump Sum	1				

**CARRIED FORWARD:**

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
619.1202	Temporary Mulch (Weymouth Road)	Lump Sum	1				
620.58	Erosion Control Geotextile	Square Yard	430				
620.625	Cellular Confinement System	Square Yard	840				
627.712	White or Yellow Pavement Marking Line	Linear Foot	5760				
627.78	Temporary Pavement Marking Line, White or Yellow	Linear Foot	25				
629.05	Hand Labor, Straight Time	Hour	184				
631.12	All Purpose Excavator (Including Operator)	Hour	100				
631.171	Truck - Small (Including Operator)	Hour	120				
631.36	Foreman	Hour	120				
639.18	Field Office, Type A	Each	1				
643.72	Temporary Traffic Signal	Lump Sum	1				
645.272	Regulatory, Warning and Bridge Number Signs, Type I - Supplied by the Authority	Each	29				

**CARRIED FORWARD:**

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
652.30	Flashing Arrow	Each	9				
652.312	Type III Barricades	Each	4				
652.33	Drum	Each	820				
652.34	Cone	Each	200				
652.35	Construction Signs	Square Foot	4425				
652.361	Maintenance of Traffic Control Devices	Lump Sum	1				
652.38	Flaggers	Hour	160				
652.41	Portable - Changeable Message Sign	Each	12				
652.45	Truck Mounted Attenuator	Cal. Day	60				
				200	00	12000	00
652.451	Automated Trailer Mounted Speed Limit Sign	Unit	8				
652.46	Temporary Portable Rumble Strip	Cal. Day	550				
				75	00	41250	00
656.75	Temporary Soil Erosion and Water Pollution Control (Running Hill Road)	Lump Sum	1				

**CARRIED FORWARD:**

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
656.75	Temporary Soil Erosion and Water Pollution Control (Blackstrap Road)	Lump Sum	1				
656.50	Baled Hay, in place	Each	30				
656.632	30 inch Temporary Silt Fence	Linear Foot	4510				
659.10	Mobilization	Lump Sum	1				
<b>TOTAL:</b>							

Acknowledgment is hereby made of the following Addenda received since issuance of the Plans and Specifications: \_\_\_\_\_

Accompanying this Proposal is an original bid bond, cashiers or certified check on \_\_\_\_\_ Bank, for \_\_\_\_\_, payable to the Maine Turnpike Authority. In case this Proposal shall be accepted by the Maine Turnpike Authority and the undersigned should fail to execute a Contract with, and furnish the security required by the Maine Turnpike Authority as set forth in the Specifications, within the time fixed therein, an amount of money equal to Five (5%) Percent of the Total Amount of the Proposal for the Contract awarded to the undersigned, but not less than \$500.00, obtained out of the original bid bond, cashier's or certified check, shall become the property of the Maine Turnpike Authority; otherwise the check will be returned to the undersigned.

The performance of said Work under this Contract will be completed during the time specified in Subsection 107.1.

It is agreed that time is of the essence of this Contract and that I (we) will, in the event of my (our) failure to complete the Work within the time limit named above, pay to Maine Turnpike Authority liquidated damages in the amount or amounts stated in the Specifications.

The undersigned is an Individual/Partnership/Corporation under the laws of the State of \_\_\_\_\_, having principal office at \_\_\_\_\_, thereunto duly authorized.

\_\_\_\_\_ (SEAL)

\_\_\_\_\_ (SEAL)

*Affix Corporate Seal  
or Power of Attorney  
Where Applicable*

\_\_\_\_\_ (SEAL)

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

Its: \_\_\_\_\_



MAINE TURNPIKE AUTHORITY  
MAINE TURNPIKE  
YORK TO AUGUSTA  
CONTRACT AGREEMENT

This Agreement made and entered into between the Maine Turnpike Authority, and sometimes termed the "Authority", and \_\_\_\_\_

\_\_\_\_\_ herein termed the "Contractor":

WITNESSETH: That the Authority and the Contractor, in consideration of the premises and of the mutual covenants, considerations and agreements herein contained, agree as follows:

FIRST: The parties hereto mutually agree that the documents attached hereto and herein incorporated and made a part hereof collectively evidencing and constituting the entire Contract to the same extent as if herein written in full, are the Notice to Contractors, the Accepted Proposal, the Specifications, the Plans, this Agreement, the Contract Bond and all Addenda to the Contract Documents duly issued and herewith enumerated:

SECOND: The Contractor for and in consideration of certain payments to be made as hereafter specified, hereby covenants and agrees to perform and execute all of the provisions of this Contract and of all documents and parts attached hereto and made a part thereof, and at his own cost and expense to furnish and perform everything necessary and required to construct and complete, ready for its intended purpose, in accordance with the Contract and such instructions as the Engineer may give, acceptable to the Authority, in the times provided, all of the Work covered and included under Contract No. \_\_\_\_\_ covering \_\_\_\_\_ as herein described.

THIRD: In consideration of the performance by the Contractor of his covenants and agreements as herein set forth, the Authority hereby covenants and agrees to pay the Contractor according to the Schedule of Prices set forth in the Proposal with additions and deductions as elsewhere herein provided in the times and in the manner stated in the Specifications. This Agreement shall insure to the benefit of, and shall be binding upon the parties hereto, and upon their respective successors and assigns; but neither party hereto shall assign or transfer his interest herein in whole or in part without the consent of the other, except as herein provided.

IN WITNESS WHEREOF the parties to this Agreement have executed the same in quintuplicate.

AUTHORITY -

MAINE TURNPIKE AUTHORITY

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

Title: CHAIRMAN

Date of Signature: \_\_\_\_\_

ATTEST:

\_\_\_\_\_  
Secretary

CONTRACTOR -

\_\_\_\_\_  
CONTRACTOR

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

Title: \_\_\_\_\_

Date of Signature: \_\_\_\_\_

WITNESS:

\_\_\_\_\_

CONTRACT BOND

KNOW ALL MEN BY THESE PRESENTS that \_\_\_\_\_  
of \_\_\_\_\_ in the County of \_\_\_\_\_ and 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 Maine Turnpike Authority in the sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_.\_\_\_\_),  
to be paid to said Maine Turnpike Authority, or its successors, for which payment, well and truly  
to be made, we bind ourselves, our heirs, executors, successors and assigns jointly and severally  
by these presents.

The condition of this obligation is such that the Principal, designated as Contractor in the  
foregoing Contract No. \_\_\_\_\_ shall faithfully perform the Contract on his part and  
satisfy all claims and demands incurred for the same and shall pay all bills for labor, material,  
equipment and all other items contracted for, or used by him, in connection with the Work  
contemplated by said Contract, and shall fully reimburse 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.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, A.D., 201\_\_\_\_

Witnesses:

CONTRACTOR

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (SEAL)

SURETY

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (SEAL)

(Surety must attach copy of Power of Attorney showing authority of Office or Agent to execute bonds)

FINAL LIEN AND CLAIM WAIVER AND AFFIDAVIT

Upon receipt of the sum of \_\_\_\_\_, which sum represents the total amount paid, including the current payment for work done and materials supplied for Project No. \_\_\_\_\_, in \_\_\_\_\_, Maine, under the undersigned's Contract with the Maine Turnpike Authority.

The undersigned, on oath, states that the Final Payment of \_\_\_\_\_ is the final payment for all work, labor, materials, services and miscellaneous (all of which are hereinafter referred to as "Work Items") supplied to the said Project through \_\_\_\_\_ and that no additional sum is claimed by the undersigned respecting said Project.

The undersigned, on oath, states that all persons and firms who supplied Work Items to the undersigned in connection with said Project have been fully paid by the undersigned for such Work Items or that such payment will be fully effected immediately upon receipt of this payment.

In consideration of the payment herewith made, the undersigned does fully and finally release and hold harmless the Maine Turnpike Authority, and its Surety, if any, from any and all claims, liens or right to claim or lien, arising out of this Project under any applicable bond, law or statute.

It is understood that this Affidavit is submitted to assure the Owner and others that all liens and claims relating to the Work Items furnished by the undersigned are paid.

\_\_\_\_\_  
(Contractor)

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

Title: \_\_\_\_\_

State of MAINE  
County of \_\_\_\_\_

I, \_\_\_\_\_, hereby certify on behalf of \_\_\_\_\_  
*(Company Officer)* *(Company Name)*  
its \_\_\_\_\_, being first duly sworn and stated that the foregoing representations are  
*(Title)*  
are true and correct upon his own knowledge and that the foregoing is his free act and deed in said capacity  
and the free act and deed of the above-named

\_\_\_\_\_  
*(Company Name)*

The above-named, \_\_\_\_\_, personally appeared before me this \_\_\_\_ day of \_\_\_\_\_ and swears that this is his free act and deed.

(SEAL)

\_\_\_\_\_  
Notary Public  
My Commission Expires: \_\_\_\_\_

MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

PART I – SUPPLEMENTAL SPECIFICATIONS

*(Rev. November 10, 2016)*

The Supplemental Specifications are available on the Maine Turnpike Authority Website at <http://www.maineturnpike.com/Projects-Planning/Construction-Contracts.aspx>

MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

PART II – SPECIAL PROVISIONS

PART II - SPECIAL PROVISIONS

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MAINE TURNPIKE AUTHORITYSPECIFICATIONSPART II - SPECIAL PROVISIONS

All work shall be governed by the Maine Department of Transportation Standard Specifications, Revision of November 2014, except for that work which applies to sections of the Maine Department of Transportation Standard Specifications which are amended by the Maine Turnpike Supplemental Specifications and the following modifications, additions and deletions.

General Description of Work

The work consists of bridge repairs to the Running Hill Road Underpass bridge in the City of South Portland, Maine, bridge repairs to the Blackstrap Road Underpass bridge in the Town of Cumberland, Maine, bridge repairs to the Weymouth Road Underpass bridge in the Town of Gray, Maine, and replacing the Dutton Hill Road Underpass bridge superstructure over the Maine Turnpike in the Town of Gray, Maine. The work includes bridge pavement and membrane replacement, approach work and paving, deck expansion joint modification, bridge drain grate modification, bearing repairs, and miscellaneous superstructure and substructure repairs for Running Hill Road Underpass and Blackstrap Road Underpass Bridge. The work includes raising the existing superstructure, bridge pavement and membrane replacement, approach work and paving, deck expansion joint modification, bridge drain grate modification, bearing replacement, and miscellaneous superstructure and substructure repairs for Weymouth Road Underpass Bridge. The work also includes concrete deck and steel girder replacement, concrete substructure modifications and repairs, approach work and paving, guardrail and bridge rails, and access road construction for Dutton Hill Road Underpass Bridge as well as maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications

Plans

The drawings included in these Contract Documents, and referred to as the Plans, show the general character of the work to be done under this Contract. They bear the general title “Maine Turnpike – Contract 2018.09 – Bridge Repairs – Running Hill Road Underpass (Mile 45.4) – Bridge Repairs – Blackstrap Road Underpass (Mile 58.3) – Access Roads – Forest Lake Road – Superstructure Replacement – Dutton Hill Road Underpass (Mile 59.9) – Bridge Repairs – Weymouth Road Underpass (Mile 66.2)”. The right is reserved by the Resident to make such minor corrections or alterations in the Plans as he deems necessary without change in the unit prices on the Schedule of Prices of the Proposal.

101.2 DefinitionHolidays

The following is added after Memorial Day in the Supplemental Specifications:

Independence Day 2018  
(Fourth of July)

12:01 p.m. preceding Tuesday to  
11:59 a.m. the following Thursday.

Christmas

New Years

103.4 Notice of Award

The following sentence is added:

The Maine Turnpike Authority Board is scheduled to consider the Contract Award on December 21, 2017.

104.3.8 Wage Rates and Labor Laws

Section 104.3.8 Wage Rates and Labor Laws has been amended as follows:

The fair minimum hourly rates determined by the State of Maine Department of Labor for this Contract are as follows:

**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 to laborers and workers employed on the below titled project.**

**Title of Project** -----MTA 2018.09 Various Underpass Bridge Repairs and Superstructure Replacement

**Location of Project** --S. Portland, Cumberland and Gray, Cumberland County

**2017 Fair Minimum Wage Rates  
Heavy & Bridge Cumberland County  
-REVISED-**

<b>Occupation Title</b>	<b>Minimum Wage</b>	<b>Minimum Benefit</b>	<b>Total</b>	<b>Occupation Title</b>	<b>Minimum Wage</b>	<b>Minimum Benefit</b>	<b>Total</b>
Backhoe Loader Operator	\$18.25	\$2.36	\$20.61	Laborer - Skilled	\$18.00	\$3.51	\$21.51
Bricklayer	\$23.09	\$2.65	\$25.74	Line Erector - Power/Cable Splicer	\$34.50	\$6.95	\$41.45
Bulldozer Operator	\$20.55	\$3.83	\$24.38	Loader Operator - Front-End	\$20.25	\$3.68	\$23.93
Carpenter	\$24.31	\$3.61	\$27.92	Mechanic- Maintenance	\$18.00	\$3.87	\$21.87
Carpenter - Rough	\$19.00	\$5.50	\$24.50	Mechanic- Refrigeration	\$22.83	\$4.22	\$27.05
Cement Mason/Finisher	\$16.78	\$1.15	\$17.93	Millwright	\$28.85	\$22.07	\$50.92
Crane Operator =>15 Tons)	\$26.50	\$6.35	\$32.85	Painter	\$20.00	\$2.41	\$22.41
Crusher Plant Operator	\$18.00	\$2.91	\$20.91	Paver Operator	\$19.25	\$1.45	\$20.70
Diver	\$21.00	\$6.83	\$27.83	Pile Driver Operator	\$30.00	\$6.96	\$36.96
Earth Auger Operator	\$22.97	\$5.41	\$28.38	Pipe/Steam/Sprinkler Fitter	\$25.00	\$3.93	\$28.93
Electrician - Licensed	\$26.50	\$8.91	\$35.41	Pipelayer	\$20.00	\$2.85	\$22.85
Electrician Helper/Cable Puller (Licensed)	\$20.00	\$3.18	\$23.18	Rigger	\$20.50	\$4.74	\$25.24
Excavator Operator	\$22.00	\$3.24	\$25.24	Roller Operator - Earth	\$18.01	\$0.39	\$18.40
Fence Setter	\$14.75	\$0.00	\$14.75	Roller Operator - Pavement	\$18.75	\$4.65	\$23.40
Grader/Scraper Operator	\$17.50	\$2.11	\$19.61	Truck Driver - Light	\$16.00	\$1.00	\$17.00
Ironworker - Reinforcing	\$25.75	\$5.37	\$31.12	Truck Driver - Heavy	\$18.00	\$2.50	\$20.50
Ironworker - Structural	\$22.50	\$6.53	\$29.03	Truck Driver - Tractor Trailer	\$20.00	\$5.46	\$25.46
Laborers (Incl.Helpers & Tenders)	\$17.25	\$3.62	\$20.87				

**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.**

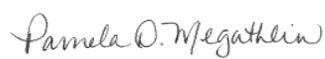
**Posting of Schedule - Posting of this schedule is required in accordance with 26 MRSA §1301 et. seq., by any contractor holding a State contract for construction valued at \$50,000 or more and any subcontractors to such a contractor.**

**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.**

**Determination No:** HB-075-2017

**A true copy**

**Filing Date:** November 1, 2017

**Attest:** 

**Expiration Date:** 12-31-2017

**Pamela D. Megathlin  
Director  
Bureau of Labor Standards**

**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 to laborers and workers employed on the below titled project.**

**Title of Project** -----MTA 2018.09 Various Underpass Bridge Repairs and Superstructure Replacement

**Location of Project** --S. Portland, Cumberland and Gray, Cumberland County

**2017 Fair Minimum Wage Rates  
 Highway & Earthwork Cumberland County  
 -REVISED-**

<u>Occupation Title</u>	<u>Minimum</u>	<u>Minimum</u>	<u>Total</u>	<u>Occupation Title</u>	<u>Minimum</u>	<u>Minimum</u>	<u>Total</u>
	<u>Wage</u>	<u>Benefit</u>			<u>Wage</u>	<u>Benefit</u>	
Asphalt Raker	\$18.00	\$0.64	\$18.64	Loader Operator - Front-End	\$19.00	\$3.74	\$22.74
Backhoe Loader Operator	\$19.50	\$4.07	\$23.57	Mechanic- Maintenance	\$20.00	\$2.75	\$22.75
Bulldozer Operator	\$22.00	\$3.71	\$25.71	Painter	\$16.00	\$0.00	\$16.00
Carpenter - Rough	\$18.30	\$2.74	\$21.04	Paver Operator	\$19.25	\$3.30	\$22.55
Cement Mason/Finisher	\$16.78	\$1.15	\$17.93	Pipelayer	\$20.00	\$3.91	\$23.91
Crusher Plant Operator	\$21.80	\$5.62	\$27.42	Pump Installer	\$18.00	\$3.76	\$21.76
Electrician - Licensed	\$24.42	\$3.88	\$28.30	Roller Operator - Earth	\$15.81	\$0.15	\$15.96
Excavator Operator	\$21.00	\$3.26	\$24.26	Roller Operator - Pavement	\$18.05	\$3.27	\$21.32
Flagger	\$13.00	\$0.00	\$13.00	Screed/Wheelman	\$18.25	\$2.50	\$20.75
Grader/Scraper Operator	\$16.50	\$1.24	\$17.74	Stone Mason	\$18.00	\$0.00	\$18.00
Ironworker - Reinforcing	\$25.75	\$5.14	\$30.89	Truck Driver - Light	\$16.00	\$1.00	\$17.00
Ironworker - Structural	\$22.00	\$5.70	\$27.70	Truck Driver - Medium	\$17.45	\$1.44	\$18.89
Laborers (Incl.Helpers & Tenders)	\$14.25	\$0.64	\$14.89	Truck Driver - Heavy	\$16.00	\$1.13	\$17.13
Laborer - Skilled	\$16.25	\$1.59	\$17.84	Truck Driver - Tractor Trailer	\$20.75	\$2.43	\$23.18
Line Erector - Power/Cable Splicer	\$25.38	\$6.01	\$31.39	Truck Driver - Mixer (Cement)	\$16.00	\$3.49	\$19.49

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.

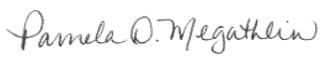
Posting of Schedule - Posting of this schedule is required in accordance with 26 MRSA §1301 et. seq., by any contractor holding a State contract for construction valued at \$50,000 or more and any subcontractors to such a contractor.

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.

Determination No: HI-165-2017

A true copy

Filing Date: November 1, 2017

Attest: 

Expiration Date: 12-31-2017

Pamela D. Megathlin  
 Director  
 Bureau of Labor Standards

BLS(Highway & Earthwork Cumberland)

#### 104.4.6 Utility Coordination

This Subsection is amended by the addition of the following:

These Special Provisions outline the arrangements which have been established by the Authority for coordination of the work to be accomplished by the utilities. The scope and schedule of utility relocation work is noted herein. The Contractor shall plan and conduct his work accordingly.

#### General

Utility working days are Monday through Friday, conditions permitting. Times are estimated on the basis of a single crew for each utility. Any times and dates mentioned are estimates only and are dependent upon favorable weather, working conditions, and freedom from emergencies. The Contractor shall have no claim against the Authority if they are exceeded.

The Contractor shall plan and conduct his operations in accordance with the following utility schedule. The Contractor must comply with all OSHA regulations pertaining to work adjacent to utility wires. The Contractor shall plan and conduct his work accordingly.

The following utilities are located within the Project limits. The Contractor shall ascertain the location of the existing utilities and any other necessary information by direct inquiry at the office of the following utility owners:

#### **AERIAL UTILITIES**

##### COMMUNICATION:

FairPoint Communications  
5 Davis Farm Road  
Portland, ME 04103

ATTN: Morris Leathers (207) 342-4280, Cell (207)-446-5371

##### CABLE TELEVISION:

Spectrum Cable  
118 Johnson Road  
Portland, ME 04102

ATTN: Mark Pelletier (207) 253-2324

##### ELECTRIC:

Central Maine Power Company  
83 Edison Drive  
Augusta, ME 04336

ATTN: John Rugan (207)453-5605, Cell (207)242-8669

### CENTRAL MAINE POWER (CMP)

An existing utility pole will conflict with the construction of the Forest Lake Road Access Road. Additionally, the aerial utilities at the Forest Lake Road Access Road may need to be raised to provide the required underclearance for the access road. The Turnpike is currently coordinating with CMP to relocate this pole and determine if the existing aerial utilities need to be raised. This work will be completed at no cost to the Contractor. CMP does not anticipate any working days or relocations, new sets, or transfers beyond what is described above.

The contractor shall notify CMP ten (10) working days prior to clearing and excavation. The coordination effort is to relay contractor's construction schedule and determine possible covering of aerial conductors.

### FAIRPOINT COMMUNICATIONS

Fairpoint does not anticipate any working days or relocations, new sets, or transfers.

The contractor shall notify Fairpoint ten (10) working days prior to clearing and excavation. The coordination effort is to relay contractor's construction schedule and determine possible covering of aerial conductors.

### SPECTRUM CABLE

Spectrum does not anticipate any working days or relocations, new sets, or transfers.

The contractor shall notify Spectrum Cable ten (10) working days prior to clearing and excavation. The coordination effort is to relay contractor's construction schedule and determine possible covering of aerial conductors.

### 104.4.7 Cooperation With Other Contractors

This Subsection is amended by the addition of the following:

Adjacent contracts currently scheduled for the 2018 construction season include:

MTA Contract 2018.02 – Rand Road Interchange Pavement Rehabilitation, MM 47.3

MTA Contract 2018.03 – Exit 44 SB On-ramp Widening, MM 44.0

MTA Contract 2018.13 – Guide Sign Modifications – Phase III, MM 32 to 44

MTA Contract 2017.08 – Guide Sign Modifications – Phase II, MM 23.3 to 73

The following Subsection is added:

#### 105.2.4.2 Lead Paint

The Contractor shall note that the existing bridges structure may contains lead based paint. The Contractor shall institute every precaution when working with materials coated with lead based paints.

#### Lead Paint Removal

The Contractor is required to remove and dispose of lead based paint and paint residue before cutting, grinding, drilling and sandblasting existing materials in preparation of completing the work except as provided under the Drilling of Lead Based Paint subsection in this Special Provision. All lead based paint and paint residue shall be removed, handled, stored and disposed of in conformance with all local, State and Federal laws and regulations governing lead based paint. The Contractor may use his own properly trained employees to abate the lead based paint in accordance with applicable regulations and requirements; or he may hire a licensed lead abatement subcontractor to abate the lead based paint in accordance with applicable regulations and requirements.

The Contractor, or licensed lead abatement subcontractor, shall submit a Project specific Health and Safety (OSHA) Plan and a Hazardous Waste Management Plan (EPA/DEP) a minimum of two (2) weeks prior to undertaking the removal of lead based paint.

#### Drilling of Lead Based Paint

The Contractor may drill lead based painted steel, without lead based paint removal, provided the Contractor collects and recycles the drill cuttings at a licensed metal recycling facility. If the Contractor chooses not to collect and recycle the drill cuttings at a licensed metal recycling facility he will be required to abate the area where drilling is to occur in full accordance with the lead based paint removal, storage and disposal requirement of this Special Provision.

The Authority will require a signed statement from the Contractor stating the drill cuttings were collected and recycled at a licensed metal recycling facility and the name the recycling facility.

#### Health and Safety Plan

The Health and Safety Plan submittal shall describe how the Contractor/licensed lead abatement subcontractor intends to remove the lead based paints; and shall outline how the Contractor/licensed lead abatement subcontractor will adhere to all Federal, State and local ordinances which govern worker (including authorized representatives of the Authority) exposure to lead based paints, and ensure the safety of the workers performing lead removal. Copies of current worker training certificates (OSHA), medical screenings, and respirator fit up shall be included in the submittal.

## Hazardous Waste Management Plan

The Hazardous Waste Management Plan submittal shall describe how the Contractor/licensed lead abatement subcontractor intends to manage the hazardous waste that will be generated, temporarily accumulated, stored, transported off-site and disposed; adhere to ordinances associated with the management of hazardous wastes; and ensure protection of the environment.

The Hazardous Waste Management Plan shall:

- Be signed by the Contractor;
- State whether Contractor or licensed lead abatement subcontractor will be undertaking the work; and,
- State whether abated lead materials will be accumulated and stored on-site (required if Contractor is not licensed by DEP/EPA to transport and temporarily store lead based hazardous waste), or be removed in HEPA vacuums daily to the removal Contractor's licensed waste storage facility (permitted only if Contractor is licensed by DEP/EPA to transport and temporarily store lead based hazardous waste).

If abated lead materials are to be accumulated and stored on-site, the Hazardous Waste Management Plan shall include (at a minimum) the following:

- Container size and labeling standards:
  - Containers must be 55 gallons or less
  - Containers must have the labeled "HAZARDOUS WASTE"
- Accumulation requirements:
  - Labels will include accumulation start date and container full date
  - On-site storage will not exceed 180 days from full date
  - Total on-site storage shall not exceed 55 gallons or 220 pounds
- Inspections (including frequency and checklist):
  - Inspections shall be performed each day the Contractor works
  - Inspection checklist shall be similar to MaineDEP format (Refer to Appendix A1 of MaineDEP Handbook for Hazardous Waste Generators – January 2008)
- Transport and DOT "pre-transport requirements":
  - Specify the licensed hazardous waste transporter to be used
  - Obtain Generator's EPA ID No. (typically a provisional ID # is obtained through the licensed hazardous waste transporter)
  - USDOT – approved containers must be used for shipment
  - Schedule MTA for signing Hazard Waste Manifest
- Recordkeeping requirements:
  - Describe where at the jobsite the required records (e.g., inspection logs, training records, Lead Determination report/hazardous waste characterization, etc.) will be maintained
  - Describe how and when copies of the required documents specified above will be transferred to the MTA Environmental Services Coordinator's office

The Contractor/licensed lead abatement subcontractor, shall provide documentation to the MTA that the employees who will be removing, handling, managing and/or directly supervising the hazardous waste operations have received required Resource Conservation and Recovery Act (RCRA) hazardous waste management training, and all training is current.

The lead based hazardous waste must remain on-site, unless the removal is being performed by a licensed lead abatement subcontractor that collects the paint residue in HEPA vacuums and is licensed by DEP/EPA to transport and temporarily store lead based hazardous waste at the removal Contractor's licensed waste storage facility. Both on-site and licensed off-site lead based hazardous waste storage facilities require secure storage and daily inspection of the stored waste.

If the removal Contractor is not licensed by DEP/EPA to transport and temporarily store lead based hazardous waste off-site, then an EPA licensed Hazardous Waste transporter(s) shall be used to remove hazardous waste from the site. All removal and disposal documentation will be required when the hazardous waste leaves the site. As the Generator, only the Authority's Environmental Services Coordinator or his trained designee shall sign waste manifests when material is removed from the Project site.

The removal, storage, handling, transporting, and disposal of lead based paint and lead based paint residue will not be measured separately for payment, but shall be incidental to the various Contract work items.

The following Subsection is added:

#### 105.8.2 Permit Requirements

The Dutton Hill Road Project is being constructed under the Maine Department of Environmental Protection (DEP) Natural Resources Protection Act Permit by Rule regulations Section 11 – State Transportation Facilities, amended June 8, 2012. A copy of the Section 11 – State Transportation Facilities Permit by Rule regulations are attached in **Appendix A**.

The Dutton Hill Road Project is being constructed under Section 404 of the Clean Water Act, through the US Army Corps of Engineers Maine Programmatic General Permit, Category 2. The Project is subject to the General Conditions of Category 2 of the Maine Programmatic General Permit dated October 13, 2015 through October 13, 2020, and may also be subject to additional conditions specified in the Maine General Permit authorization to be issued by the U.S. Army Corps of Engineers. A copy of the General Permit standards and conditions is attached in **Appendix B**, and any other specific standards and conditions issued with the authorization notice by the US Army Corps of Engineers will be provided when available. MTA anticipates the in-water work window for the Piscataqua River will run from July 15 through September 30, and all in-water work will need to be completed during this period.

Final Section 404 Clean Water Act permit authorization is anticipated by January 1, 2018 or sooner.

The Project is subject to the requirements of the Maine Pollutant Discharge Elimination System (MPDES) General Permit for Stormwater Discharge from Construction Activity, as promulgated by the US Environmental Protection Agency (US EPA) and Administrated by the

Maine Department of Environmental Protection (DEP). Two separate Notice of Intents (NOI), accompanied by preliminary Limit of Disturbance (LOD) plans were submitted by the Authority to the DEP for the Dutton Hill Road and Weymouth Road project sites for coverage under the Maine Construction General Permit (MCGP). Compliance with the erosion and sedimentation control requirements outlined in this Contract is required by the Contractor.

The Contractor shall prepare a LOD plan illustrating the Contractor's proposed limit of earthwork disturbance. The LOD plan shall show all construction access locations, field office locations, material and temporary waste storage locations, as well as include the Contract limits of earthwork disturbance. All applicable erosion and sedimentation control devices needed shall be detailed on the Contractor's LOD plan and are not limited to those devices shown on the Contract LOD plan. **This Plan shall be submitted for review and approval, to the Resident within 14 days of Contract award.** Payment for creating, revising, and completing this plan shall be incidental to Item 659.10, Mobilization.

The LOD for this Contract, which were submitted as part of the NOI, has been estimated to be 2.82 acres for the Dutton Hill Road project site and 1.70 acres for the Weymouth Road project site.

At any time during the Contract, if the Limit of Disturbance needs to be adjusted to accommodate construction activities, the Contractor shall resubmit the LOD plan (including any additional erosion and sedimentation control measures needed) to the Resident for review and approval prior to any additional disturbance taking place:

- If the cumulative area of disturbance exceeds the estimated LOD noted above, and the total revised LOD remains less than one acre, the Resident shall have a minimum of five (5) working days to approve the revised LOD plan.
- If the cumulative area of disturbance exceeds the estimated LOD noted above, and the total revised LOD is over one acre, the Resident shall first approve of the plan and then resubmit the NOI for MaineDEP approval. The approval may take a minimum of 21 working days.

Compliance with the erosion and sedimentation control requirements outlined in this Contract is required by the Contractor.

The Contractor shall comply with the conditions outlined in the US Army Corps Maine General Permit, Maine Department of Environmental Protection NRPA Permit by Rule, and the Maine Pollutant Discharge Elimination System Construction General Permit for stormwater discharge associated with construction activity. The Contractor shall indemnify and hold harmless the Maine Turnpike Authority or its agents, representatives and employees against any and all claims, liabilities or fines arising from or based on the violation of the above noted permits.

#### 107.1 Contract Time and Contract Completion Date

This Subsection is amended by the addition of the following:

The construction of the Blackstrap Road Underpass and Running Hill Road Underpass shall be substantially completed on or before June 15, 2018. Supplemental Liquidated Damages on a

calendar day basis in accordance with Subsection 107.8 shall be assessed for each calendar day that substantial completion is not achieved.

The construction of the Dutton Hill Road Underpass including the Northbound Access Road between Dutton Hill Road and the Turnpike and the Forest Lake Road Access Road shall be substantially completed by November 16, 2018. Supplemental Liquidated Damages on a calendar day basis in accordance with Subsection 107.8 shall be assessed for each calendar day that substantial completion is not achieved.

The construction of the Weymouth Road Underpass shall be substantially completed by August 24, 2018. Supplemental Liquidated Damages on a calendar day basis in accordance with Subsection 107.8 shall be assessed for each calendar day that substantial completion is not achieved.

All work at the Running Hill Road Underpass and the Blackstrap Road Underpass shall be completed on or before November 16, 2018.

All work the Dutton Hill Road Underpass, Forest Lake Road Access Ramp and Weymouth Road Underpass shall be completed on or before June 15, 2019.

#### 107.1.1 Substantial Completion

This Subsection is amended by the addition of the following:

At the Running Hill Road Underpass, substantially complete shall be defined by the Authority as the following:

- All bridge repair work required by the Contract that impacts traffic on Running Hill Road.
- Running Hill Road fully opened to four lanes of traffic including shoulders, sidewalk, surface pavement and pavement markings.

At the Blackstrap Road Underpass, substantially complete shall be defined by the Authority as the following:

- All bridge repair work required by the Contract that impacts traffic on Blackstrap Road.
- Blackstrap Road fully opened to two-way traffic including shoulders, surface pavement and pavement markings.

At the Dutton Hill Road Underpass, substantially complete shall be defined by the Authority as the following:

- All bridge deck work, including curbing, steel bridge rail, snow fence, concrete sealing, surface pavement and guardrail installation including attachments complete and available for traffic.
- Dutton Hill Road fully opened to two-way traffic including shoulders, guardrail, surface pavement, pavement markings and signage.
- Dutton Hill Road and Forest Lake Road access roads complete including surface pavement, pavement markings, gates and signage.

- All disturbed slopes loamed, seeded and mulched, temporary erosion control mix and/or blanket installed where necessary.

At the Weymouth Road Underpass, substantially complete shall be defined by the Authority as the following:

- All bridge deck work, including concrete sealing, surface pavement, concrete transition barrier and guardrail installation including attachments complete and available for traffic.
- Weymouth Road fully opened to two-way traffic including shoulders, guardrail, surface pavement, pavement markings and signage.
- Shoulder widening at access roads complete including surface pavement, pavement markings, gates and signage.
- All disturbed slopes loamed, seeded and mulched, temporary erosion control mix and/or blanket installed where necessary.

Supplemental Liquidated damages on a calendar day basis in accordance with Subsection 107.8 shall be assessed for each calendar day that substantial completion is not achieved at each location.

#### 107.4.6 Prosecution of Work

The following restrictions shall be applied to the work at all locations:

- All tree clearing shall be completed prior to June 1, 2018.

The following restrictions shall be applied to the work at the Dutton Hill Road Underpass:

- Dutton Hill Road shall not be closed until on or after June 15, 2018 or the end of the 2017-2018 school year, whichever is later.
- Dutton Hill Road shall not be closed until the Blackstrap Road Underpass has been reopened to two lanes of traffic.
- Culvert sliplining shall be completed between July 15, 2018 and September 30, 2018.

The following restrictions shall be applied to the work at the Weymouth Road Underpass:

- Weymouth Road shall not be closed until on or after June 15, 2018 or the end of the 2017-2018 school year, whichever is later.
- The Contractor shall be allowed to close the Weymouth Road Underpass Bridge for a maximum of fifty-six (56) calendar days. Supplemental Liquidated damages on a calendar day basis in accordance with Subsection 107.8 shall be assessed for each calendar day that the closure extends beyond fifty-six (56) calendar days.

The following restrictions shall be applied to the work at the Running Hill Road Underpass:

- The Contractor shall be allowed a maximum of fourteen (14) calendar days for each of the two phases of construction. Supplemental Liquidated damages on a calendar day basis in accordance with Subsection 107.8 shall be assessed for each calendar day that each phase of construction extends beyond fourteen (14) calendar days.

The Contractor shall submit to the Authority a construction schedule which shall document that the Contractor has the necessary labor and equipment to work immediately and continuously at each project site once the bridge is closed. The intent of this specification is to minimize the amount of time for bridge closure, while providing the Contractor sufficient time to complete the work in a diligent manner and reopen the bridge as prescribed by the project's Substantial Completion dates.

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Existing Superstructure)  
(Removing of Existing Bituminous Pavement)

202.01 Description

The following paragraphs are added:

At the Running Hill Road Underpass, Blackstrap Road Underpass and Weymouth Road Underpass bridges, the work shall include all labor, equipment, and materials required to remove and dispose of the existing bituminous pavement and waterproofing membrane from the existing bridge deck.

At the Dutton Hill Road Underpass, the work shall include all labor, equipment, and materials required to remove and dispose of the existing bridge superstructure.

202.03 Removing Existing Superstructure, Structural Concrete, Railings, Curbs, Sidewalks and Bridges

This section is amended by the addition of the following:

Prior to starting any demolition work at the Dutton Hill Road Underpass, the Contractor shall submit a demolition plan to the Resident for approval. The demolition plan shall be stamped by a Professional Engineer licensed in the State of Maine. The demolition plan shall consider the effect of construction equipment, methods of operation, and sequence of work on the capacity and stability of the bridge. The capacity of the structure shall be calculated to demonstrate the proposed work activities will not result in unacceptable overstress in the structure.

No demolition will be permitted until the approved method of shielding is completely installed. Traffic will not be permitted to use the travelway directly under the demolition work; a lane closure will be required.

All materials removed as part of this work shall become the property of the Contractor unless otherwise noted. The Contractor shall provide the Resident with an affidavit stating the final location of all disposed material and that the material was disposed of in accordance with the Maine Department of Environmental Protection Solid Waste Regulations.

202.031 Removing Existing Bituminous Pavement and Concrete Wearing Surface from Bridges and Scarifying the Top of Deck.

The first paragraph is amended by the addition of the following:

The use of milling equipment to remove existing bituminous pavement is not allowed.

202.08 Basis of Payment

This Subsection is amended by the addition of the following:

Removing Existing Superstructure will be paid for at the Contract lump sum price which shall be full compensation for removing and disposing of the superstructure as shown on the Plans or as approved by the Resident.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
202.10	Removing Existing Superstructure - Property of Contractor	Lump Sum
202.202	Removing Pavement Surface	Square Yard

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Existing Structural Concrete)

202.01 Description

The following paragraphs are added:

At the Dutton Hill Road Underpass, this work shall include removal and disposal of portions of the existing wingwalls and abutments as shown on the Plans.

At the Weymouth Road Underpass, this work shall include removal and disposal of portions of the existing wingwalls, concrete transition barrier and abutments as shown on the Plans.

After removal of the concrete, all newly exposed structural steel surfaces to be incorporated into the new construction shall be thoroughly cleaned with chipping hammers or other means as necessary so all surfaces are free of rust, scale, chunks of concrete, or other foreign materials.

The Contractor may not dispose of demolition concrete within the Project Limits. All materials shall become the property of the Contractor and shall be removed from the site at the completion of the project. The Contractor shall provide the Resident with an affidavit stating the final location of all disposed material and that the material was disposed of in accordance with the Maine Department of Environmental Protection Solid Waste Regulations.

202.07 Method of Measurement

The following paragraphs are added:

Any excavation required to remove existing structural concrete or superstructure concrete will not be measured separately for payment, but shall be incidental to Item 202.12, Removing Existing Structural Concrete.

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Existing Drain Troughs)

202.01 Description

The following paragraph is added:

The work shall consist of removing and disposing of the exposed portions of the existing drain troughs at the abutment at the Dutton Hill Road Underpass.

The filling and shaping of the void left by the removal of the existing drain troughs will be paid under Item 203.25 Granular Borrow.

The following Subsections are added:

202.025 General

All drain trough components removed shall be disposed of by the Contractor off of the turnpike right-of-way in accordance with the Maine Department of Environmental Protection Solid Waste Management Requirements.

202.08 Basis of Payment

The following sentences are added:

Removing Existing Drain Troughs shall be incidental to Contract Items and include all removal, disposal, filling, equipment and labor necessary to satisfactorily complete the work.

SPECIAL PROVISION

SECTION 203

EXCAVATION AND EMBANKMENT

203.01 Description

The following paragraph is added:

This work shall consist of cutting, removing and disposing of the full depth of existing bituminous concrete pavement at the approaches to the bridge structures within the limits of work as shown on the Plans or as approved by the Resident. The pavement shall be sawcut to the full depth of pavement at the limits of the excavation to provide a clean, vertical cut surface.

203.04 General

The following sentence is added to the end of the third paragraph.

There are no approved waste storage areas or waste areas within the Project limits unless shown on the Plans. Unsuitable materials shall be disposed of off-site in accordance with Subsection 203.06.

All excavations shall be accomplished in accordance with the applicable OSHA Standards. The Resident reserves the right to request the Contractor to prepare an excavation plan. This plan shall include, but not necessarily be limited to, the limit and depth of excavation, side slope, shoring, trench box and utility support.

203.10 Embankment Construction - General

The thirteenth and fourteenth paragraphs are deleted and replaced with the following:

Compaction of each layer of base or subbase material shall continue until a density of not less than 98% of the maximum density has been achieved for the full width and depth of the layer.

The existing slopes should be benched as shown on the drawings prior to placing additional fill. Embankment fill should be placed in lifts which extend laterally beyond the limits of the design side slopes such that the specified degree of compaction is achieved within the limits of the completed embankment. The slopes should then be trimmed back to design dimensions.

203.16 Winter Construction of Embankments

The word “core” is deleted from the first and second sentences in the first paragraph.

203.18 Method of Measurement

The following paragraphs are added:

There will be no additional payment for the required excavation plan, and costs shall be incidental to the Excavation items.

SPECIAL PROVISION

SECTION 206

STRUCTURAL EXCAVATION

206.02 Construction Methods

The following paragraphs are added:

There are no approved waste storage areas or waste areas within the Project limits. Unsuitable materials shall be disposed of off-site in accordance with Subsection 203.06.

SPECIAL PROVISIONSECTION 401HOT MIX ASPHALT PAVEMENT

Section 401 of the Maine Turnpike Authority 2016 Supplemental Specifications is modified as follows:

401.01 Description

The following paragraph is added:

A Quality Control Plan (QCP) is required.

401.02 Materials

Section 401.02 is deleted in its entirety and replaced with the following:

Aggregates for HMA Pavements Coarse Aggregate and fine aggregate for HMA pavements shall be graded such that when combined in the proper proportions, including filler if required, the resultant blend will meet the composition of mixture for the type of pavement specified. Materials shall meet the requirements specified in Section 700 – Materials:

Asphalt Cement	702.01
Aggregates for HMA Pavement	703.07
RAP for HMA Pavement	703.08
HMA Mixture Composition	703.09

Surface HMA Coarse aggregate: The material retained on the No. 4 sieve, shall consist of angular fragments obtained from crushed quarry stone and be free of dirt or other objectionable materials. Coarse aggregate shall have a Micro-Deval value of 16.0 percent or less as determined by AASHTO T 327. The crushed stone shall have a maximum of 1.5% material finer than the No. 200 mesh when tested in accordance with AASHTO T-11. Flat and elongated particles shall not exceed a maximum of 8% at a 5:1 ratio in accordance with ASTM D-4791. Coarse aggregate angularity shall be a minimum of 95/90 in accordance with AASHTO T-335.

Surface HMA Fine aggregate: The material passing the No. 4 sieve, shall be crushed manufactured sand free from dirt, clay balls, or other objectionable material. Natural sand may be incorporated into the mix at a rate no greater than 13 percent by weight of total aggregate. The unconfined void content of the fine aggregate blend shall be a 45 minimum value when tested in accordance with AASHTO T-304, method A. AASHTO T-176 sand equivalent value shall be 45 minimum.

Asphalt Low Modulus Joint Sealer: Asphalt Low Modulus Joint Sealer shall be a modified asphalt and rubber compound designed for sealing and improving the strength and performance of the base asphalt cement and shall conform to ASTM D6690 Type IV and the following specifications:

Cone Penetration	90-150
Flow @ 60°C [140°F]	3.0mm [1/8 in] max
Bond, non-immersed	Three 12.7mm [1/2 in] specimens pass 3 cycles @ 200% extension @ -29°C [-20°F]
Resilience, %	60 min
Asphalt Compatibility, ASTM D5329	pass*

\* There shall be no failure in adhesion, formation of any oily exudate at the interface between the sealant and asphaltic concrete or other deleterious effects on the asphaltic concrete or sealant when tested at 60°C [140°F].

The contractor shall provide the Resident or authorized representative with a copy of the material manufacturer's recommendations pertaining to heating, application, and reheating prior to the beginning of operations or the changing of materials.

#### Section 401.03 Composition of Mixtures

Section 401.03 is deleted in its entirety and replaced with the following:

The Contractor shall compose the Hot Mix Asphalt Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), and mineral filler if required. HMA shall be designed and tested according to AASHTO R35 and the volumetric criteria in Table 1. The Contractor shall size, uniformly grade, and combine the aggregate fractions in proportions that provide a mixture meeting the grading requirements of the Job Mix Formula (JMF). The Contractor may use a maximum of 15 percent reclaimed asphalt pavement (RAP) in any base, binder, surface, or shim course, unless otherwise noted. Current MaineDOT approved designs will be allowed on local roads.

The Contractor shall submit a job mix formula (JMF) developed for each specified mixture at least 30 days prior to placement.

The JMF shall establish a single percentage of aggregate passing each sieve size within the limits shown in Subsection 703.09. The mixture shall be designed and produced, including all production tolerances, to comply with the allowable control points for the particular type of mixture as outlined in Subsection 703.09. The JMF shall state the original source, gradation, and percentage to be used of each portion of the aggregate and mineral filler if required. It shall also state the proposed PGAB content, the name and location of the refiner, the supplier, the source of PGAB submitted for approval, the type of PGAB modification if applicable, and the location of the terminal if applicable.

In addition, the Contractor shall provide the following information with the proposed JMF:

- Properly completed JMF indicating all mix properties (Gmm, VMA, VFB, etc.).
- Stockpile Gradation Summary.
- Individual aggregate consensus properties
- Design Aggregate Structure Consensus Property Summary.
- Design Aggregate Structure Trial Blend Gradation Plots (0.45 power chart).
- Trial Blend Test Results for at least three different aggregate blends.
- Selected design aggregate blend.
- Test results for the selected design aggregate blend at a minimum of three binder contents.
- Test results for final selected blend compacted to  $N_{max}$ .
- Specific Gravity and temperature/viscosity charts for the PGAB to be used.
- Recommended mixing and compaction temperatures from the PGAB supplier.
- Material Safety Data Sheets (MSDS) For PGAB.
- Asphalt Content vs. Air Voids trial blend curve.
- Test report for Contractor's Verification sample.
- Summary of RAP test results (if used), including count, average and standard deviation of binder content and gradation.

At the time of JMF submittal, the Contractor shall identify and make available the stockpiles of all proposed aggregates at the plant site. There must be a minimum of 150 ton for stone stockpiles, 75 ton for sand stockpiles, and 50 ton of blend sand before the Authority will sample. The Authority shall obtain samples for laboratory testing. The Contractor shall also make available to the Authority the PGAB proposed for use in the mix in sufficient quantity to test the properties of the asphalt and to produce samples for testing of the mixture. Before the start of paving, the Contractor and the Authority shall split a production sample for evaluation. The Contractor shall test its split of the sample and determine if the results meet the requirements. If the results are found to be acceptable, the Contractor will forward their results to the Authority's Lab, which will test the Authority's split of the sample. The results of the two split samples will be compared and shared between the Authority and the Contractor. If the Authority finds the mixture acceptable, an approved JMF will be forwarded to the Contractor. The Authority will then notify the Contractor that paving may commence. The first day's production shall be monitored, and the approval may be withdrawn if the mixture exhibits undesirable characteristics such as checking, shoving or displacement. The Contractor shall be allowed to submit aim changes within

24 hours of receipt of the first Acceptance test result for an individual JMF. Adjustments will be allowed of up to 2% on the percent passing the 2.36 mm sieve through the 0.075 mm and 3% on the percent passing the 4.75 mm or larger sieves. Adjustments will be allowed on the %PGAB of up to 0.2 percent. Adjustments will be allowed on GMM of up to 0.010.

The Contractor shall submit a new JMF for approval each time a change in material source or materials properties is proposed. The same approval process shall be followed. The cold feed percentage of any aggregate except natural sand may be adjusted up to 10 percentage points from the amount listed on the JMF, however no aggregate listed on the JMF shall be eliminated. Natural sand may be adjusted up to 5 percent from the amount listed on the JMF but shall not exceed 13% by weight of total aggregates. The cold feed percentage for RAP may be reduced up to five percentage points from the amount listed on the JMF and shall not exceed the percentage of RAP approved in the JMF or for the specific application.

**TABLE 1**  
**VOLUMETRIC DESIGN CRITERIA**

Design ESAL's (Millions)	Required Density (Percent of G <sub>mm</sub> )			Voids in the Mineral Aggregate (VMA)(Minimum Percent)					Voids Filled with Binder (VFB) (Minimum %)	Fines/Eff. Binder Ratio
				Nominal Maximum Aggregate Size (mm)						
	N <sub>initial</sub>	N <sub>design</sub>	N <sub>max</sub>	25	19	12.5	9.5	4.75		
10 to <30	≤89.0	96.0	≤98.0	13.0	14.0	15.0	16.0	16.0	65-80*	0.6-1.2

\* For 9.5 mm nominal maximum aggregate size mixtures, the maximum VFB is 82.

\* For 4.75 mm nominal maximum aggregate size mixtures, the maximum VFB is 84.

\* For 4.75mm nominal maximum aggregate size mixtures, the Fines/Effective Binder Ratio is 0.6-1.4

As part of the JMF submittal, there are Hamburg Wheel Tracker requirements, the Contractor shall provide the Authority the test results in accordance with AASHTO T324. The results shall be generated by a third party independent testing laboratory as approved by the Authority. The test results shall meet the requirements of Table 1A

**TABLE 1A**  
**HAMBURG WHEEL TRACKER REQUIREMENTS**

Specified PG Binder Grade	Test Temperature (°C)	Maximum Rut Depth (mm)	Minimum Number of Passes	Minimum Allowable SIP*
64-28	45	12.5	20,000	15,000
64E-28	45	8.0	20,000	15,000

\* As calculated by the most recently published version of the Maine DOT HWT worksheet, which is available online at <http://www.maine.gov/mdot/contractors/publications/>

#### Section 401.091 Material Transfer Vehicle (MTV)

The fourth paragraph shall be deleted and replaced with:

The MTV shall be designed so that the mix receives additional mixing action.

Section 401.165 Longitudinal Joint Density

The first paragraph shall be deleted and replaced with:

When noted in Special Provision Section 403, the Authority will measure the pavement density of longitudinal joints between adjoining mainline travel lanes in both the unconfined and confined condition as determined by the days paving operation.

The eighth paragraph shall be deleted and replaced with:

The minimum density of the completed pavement shall be 91.5 percent of the theoretical maximum density obtained. Two consecutive failing tests shall result in production shut down. Prior to resuming paving operations, the contractor quality control unit shall satisfy the Authority that the paving operation will produce joint densities in compliance with the Specifications.

The eleventh paragraph and associated table shall be deleted and replaced with:

Payment reduction will be applied to each subplot that has a density lower than 91.5% as outlined below.

PERCENT COMPACTION	PERCENT PAY
91.5 or greater	100
90.0 to 91.4	95
89.9 or less	90

Section 401.17 Joints

The fourth paragraph shall be deleted and replaced with:

When required by Special Provision Section 403, Mainline Longitudinal joints shall be constructed as notched-wedge joint and constructed in a manner that will best ensure joint integrity.

Section 401.191 Inspection/Testing

In paragraph nine delete and replace Item #8 with:

- 8. Secure High Speed Internet Access

SPECIAL PROVISIONSECTION 403HOT MIX ASPHALT PAVEMENT

Course	HMA Grading	Item Number	Total Thickness	No. of Layers	Complimentary Notes
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Running Hill Road Underpass, Blackstrap Road Underpass, Dutton Hill Road Underpass, and Weymouth Road Underpass

Wearing	9.5mm	403.210	1.5"	1	B,F,J,L,N
Base	9.5mm	403.210	1.5"	1	B,F,J,L,N

Dutton Hill Road Underpass Approach

Surface	9.5 mm	403.210	1.5"	1	B,F,J,L,N
Base	12.5mm	403.213	2.5"	1	B,F,J,L,N

Dutton Hill Road Underpass Access Roads (including Forest Lake Road)

Surface	9.5 mm	403.210	1.5"	1	B,F,J,L,N
Base	12.5 mm	403.213	2.5"	1	B,F,J,L,N

Weymouth Road Underpass Approach

Surface	9.5 mm	403.210	1.5"	1	B,F,J,L,N
Base	12.5 mm	403.213	2.5"	1	B,F,J,L,N

Turnpike Shoulder Widening

Surface	12.5 mm	403.208	2.0"	1	B,F,J,L,N
Base	12.5 mm	403.213	2.0"	2	B,F,J,L,N

COMPLEMENTARY NOTES

- A. The required PGAB for this mixture shall be **64E-28**.
- B. The required PGAB for this mixture shall be **64-28**.
- C. A maximum of 15 percent RAP may be used.
- D. RAP may not be used.
- E. The Maine DOT will conduct the job mix verification. The aggregate qualities shall meet the design traffic level of 3 to <10 million ESALS for mix placed under this contract. The design verification, Quality Control, and Acceptance tests for this mix will be performed at **XX gyrations**. (N design) Minimum and Maximum PGAB content shall not apply.
- F. The MTA will conduct the job mix verification. The aggregate qualities shall meet the design traffic level of 10 to <30 million ESALS for mix placed under this contract. The

design verification, Quality Control, and Acceptance tests for this mix will be performed at **75 gyrations**. (N design)

- G. A material transfer vehicle (MTV) shall be used for the placement of Hot Mix Asphalt wearing surface on all roadways including acceleration and deceleration lanes and all ramps.
- H. Joints shall be constructed as the “notched wedge” type in accordance with Subsection 401.17.
- I. Joint density will be measured in accordance with Subsection 401.165.
- J. Tack coat shall be applied between all layers of pavement at a rate of 0.04 G/SY.
- K. PGAB shall conform to the provisions of 403.02 – Polymer Modified PGAB for HMA
- L. The contractor shall furnish a quality control technician equipped with an approved densometer to ensure density requirements are met.
- M. Hydrated Lime shall be incorporated into the mixture.
- N. No vehicular loads shall be permitted on newly completed pavement until adequate stability has been attained and the material has cooled sufficiently to prevent distortion or loss of fines. The newly paved area may be opened to traffic after the internal temperature of the pavement has cooled to 120° F. The Resident will test the internal temperature of the pavement and shall be the sole judge as to the opening to traffic. The period of time before opening to traffic may be extended at the discretion of the Resident. The lane closure may not be removed until the internal temperature has cooled to 120° F.

SPECIAL PROVISION

SECTION 409

BITUMINOUS TACK COAT

409.02 Bituminous Material

This Subsection is deleted and replaced with the following:

Bituminous material shall conform to the Specifications for Emulsified Asphalt RS-1h, of the AASHTO Designation M-140.

409.05 Equipment

Add “or as determined by the Resident”, after the words “gal/yd<sup>2</sup>” in the fourth line of the second paragraph of this Subsection.

409.06 Preparation of Surface

The following paragraph is added:

All existing pavement and shoulder areas on which bituminous concrete mixtures are to be placed shall receive a tack coat. The surface area where the tack coat is to be applied shall be dry and cleaned of all dirt, sand, and loose material. Cleaning shall be accomplished by use of revolving brooms or mechanical sweepers. Undesirable material not removed by the above means shall be cleaned by hand sweeping or scraping, or a combination of both. Small areas otherwise inaccessible may be swept with hand brooms. The tack coat shall be applied only when the existing surface is dry.

409.08 Method of Measurement

The following paragraphs are added:

Measurement will be based on delivery slips made out in duplicate by the Contractor and signed by the Resident, or his representative, at the point of delivery. One of these slips shall be retained by the Resident and one by the Contractor. Delivery slips shall be furnished by the Contractor and shall provide space for identifying the vehicle and driver, for stating the volume of material carried, the source of the material, the date, and the Resident or his representative's signature.

Material included in the delivery slips and not used or rejected shall be deducted from the amount being measured for payment. Each day's delivery slips shall be reconciled by the Contractor and the Resident within 24-hours.

Cleaning of the surface area where tack coat is to be applied shall be incidental to Item 409.15, Bituminous Tack Coat - Applied.

409.09 Basis of Payment

The following pay items are added:

<u>Pay Item</u>		<u>Pay Unit</u>
409.15	Bituminous Tack Coat – Applied	Gallon

SPECIAL PROVISION

SECTION 419

SAWING AND SEALING JOINTS IN BITUMINOUS PAVEMENT

(Sawing Bituminous Pavement)

419.01 Description

This work consists of sawing bituminous concrete pavement as shown on the Plans, as specified herein or as approved by the Resident.

419.02 General

The bituminous concrete pavement to be sawed shall be accurately marked before cutting. The marking shall be in accordance with the locations as shown on the Plans or as approved by the Resident. Cutting shall be with an approved power driven saw with an abrasive blade.

Unless otherwise noted or directed, the sawcut shall be vertical, a minimum of 3/8 inch wide, and extend to the depth as shown on the Plans.

Residue or debris from the sawing operation shall be removed immediately and legally disposed of by the Contractor.

419.03 Method of Measurement

Sawing Bituminous Pavement will be measured by the linear foot of pavement actually cut and accepted. No additional payment will be made for variations in the pavement thickness.

419.04 Basis of Payment

Sawing Bituminous Pavement will be paid for at the Contract unit price per linear foot which shall be full compensation for all materials, tools, equipment labor, and all incidentals necessary for the completion of the work to the satisfaction of the Resident. The disposal of sawcut residue shall be incidental to this item.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
419.30      Sawing Bituminous Pavement	Linear Foot

SPECIAL PROVISION

SECTION 502

STRUCTURAL CONCRETE

(Bridge Drain Grate Modification)  
(Bridge Drain Grate Modification (Running Hill Road))

502.01 Description

The following sentences are added:

The work also consists of modifying existing bridge drain grates at the Blackstrap Road Underpass and Weymouth Road Underpass, and fabricating, galvanizing, and installing bridge drain grate extensions where noted and as detailed on the Plans.

The work also consists of modifying existing bridge drain grates at the Running Hill Road Underpass, removing existing and fabricating, galvanizing, and installing new bridge drain grate replacement bars where noted and as detailed on the Plans.

502.03 Materials

The following sentences are added:

Bridge drain materials shall meet the requirements specified in, and shall be galvanized in accordance with, Division 700, Subsection 711.04, Bridge Drains.

502.17 Bridge Drains and Incidental Drainage

The following sentences are added:

Prior to beginning the work, the Contractor shall field measure existing drains to confirm the dimensions of the drain grate extensions and new bridge drain grate bars.

The existing bridge drain grate, new bridge drain grate bars, and the bridge drain grate extension shall be prepared for a field weld. The new bridge drain grate bars and bridge drain grate extension shall be fitted and welded to the existing bridge drain body.

All bridge drains grates shall be accurately placed at the locations shown on the Plans or as approved by the Resident. The Contractor shall provide an adequate means for securely holding them in the required positions during welding.

The Contractor shall touch-up any damaged galvanizing with two coats of zinc-rich chromate paint after wire brushing and solvent cleaning the damaged area.

502.53 Method of Measurement

Bridge Drain Grate Modification will be measured per each by the actual number of bridge drains repaired per the Plans, complete in place and accepted.

Bridge Drain Grate Modification (Running Hill Road) will be measured per each by the actual number of bridge drains repaired per the Plans, complete in place and accepted.

504.54 Basis of Payment

Bridge Drain Grate Modification will be paid for at the Contract unit price per each, which price shall be full compensation for measuring and preparing the existing bridge drain grate; fabrication, galvanizing and installation of the bridge drain grate extension and galvanizing touchup, including all materials, labor, tools, equipment and incidentals necessary for furnishing and installing the Bridge Drain Grate Modification in accordance with the Plans and Specifications.

Bridge Drain Grate Modification (Running Hill Road) will be paid for at the Contract unit price per each, which price shall be full compensation for measuring and preparing the existing bridge drain grate; fabrication, galvanizing and installation of the bridge drain bars and galvanizing touchup, including all materials, labor, tools, equipment and incidentals necessary for furnishing and installing the Bridge Drain Grate Modification (Running Hill Road) in accordance with the Plans and Specifications.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
502.701      Bridge Drain Grate Modification	Each
502.7011     Bridge Drain Grate Modification (Running Hill Road)	Each

SPECIAL PROVISIONSECTION 502STRUCTURAL CONCRETE

## (Precast Deck Panels)

This specification amends Maine Turnpike Authority Supplemental Specification 502.

502.01 Description

This work shall consist of casting, furnishing, and erecting partial-depth prestressed structural concrete deck panels (hereafter called "precast deck panels") and all related materials as an optional stay-in-place forming system in accordance with the contract plans and specifications.

Precast Deck Panels shall comply with Section 535 – Precast, Prestressed Concrete Superstructure.

Precast deck panels shall be 3.5 inches thick throughout. The panels shall be rectangular in shape having a nominal width between 4'-0" and 8'-0". Panels shall have 0.5" chamfers along all edges. The panels shall be manufactured in conformity with the following tolerances:

Thickness of panel	-1/8", 1/4"
Width of panel	-0", +1/4"
Length of panel	±1/4"
Horizontal alignment (dev. from line)	1/4"
Squareness (difference along diagonals)	1/2"
Vertical position of strand group (meas.)	+0", -1/8"
Vertical position of individual strands	±1/8"
Horizontal strand position	±1/4"
Strand projection	±1/2"
Bowing	±1/8"
Sweep	±1/8"
Warping (meas. from nearest corner)	1/16"
Threaded jack inserts (long. and transv.)	±1/4"

502.02 Materials

Deformed welded wire fabric for precast deck panels shall conform to the requirements of AASHTO M221 (ASTM A497).

All mild reinforcing steel for precast deck panels, included deformed welded wire fabric, shall be epoxy coated in accordance with Standard Specification 503.

Grout dams shall be continuous foam strips of one color fabricated from rigid high-density extruded polystyrene (XPS) conforming to ASTM C578 Type VII. Non-corrosive threaded

inserts, leveling screws and compressible polyethylene foam (1.7 pcf) strips may be used in lieu of rigid grout dams if approved by the Resident. Compressible polyethylene foam shall be white such as "CelluPlank" manufactured by Sealed Air Corporation, or an approved equal.

Adhesive for bonding grout dams to girder flanges shall be "CX-200 Construction Adhesive" manufactured by ChemRex or an approved equal.

#### 502.042 Installation of Precast/Prestressed Deck Panel

The following paragraphs are added:

At a minimum, stud welded shear connectors shall extend to the top of the precast deck panel, and preferably should extend two inches above the top of the precast deck panel.

Prestressing steel for precast deck panels shall be uncoated, low relaxation, seven wire strand conforming to the requirements of AASHTO M203 (ASTM A416). The strand shall be 3/8 inch diameter Grade 270. The initial strand tension shall be 17.2 kips per strand.

If leveling screws are used, temporary bracing shall be installed between the ends of the panels to prevent any transverse movements and hence loss of bearing. The leveling screws shall be completely removed after the grouting operation and the holes filled with a fluid type grout prior to the placement of the cast-in-place topping.

The Contractor shall furnish certified copies of a representative load-elongation curve test report for each size and grade of strand for each lot of 10 tons or fraction thereof. The Contractor shall also furnish a certified mill test report for each heat and coil of wire used in the production of the strand.

#### 502.05 Composition and Proportioning

The following paragraph is added:

Portland Cement concrete for partial depth precast deck panels shall be Class P ( $f'_c=6,000$  psi,  $f'_{ci}=4,000$  psi). The mix design shall be approved by the Resident.

Grout shall conform to the requirements of the amended Master Limits Table. Chemical air-entrainment is not required. Shrinkage-reducing properties shall be developed in the mix through the use of an approved admixture such as "Eclipse" manufactured by W.R. Grace or an approved equal. Expansive type additives are not acceptable.

The Master Limits Table is amended as follows:

MASTER LIMITS TABLE

Class of Concrete	Minimum Compressive Strength at 28 Days	Minimum Cementit. Content	Water Cement Ratio	Slump	Air Content	Maximum Coarse Aggregate Size (703.02)	Notes
	PSI	LB./CY		INCHES	%	INCHES	
Grout	4,000	658	0.38±0.02	7 ± 1	3 ± 1	1/2	1, 2, 3, 4

502.17 Nonconforming Work

The following sentences are added:

Any of the following conditions shall be cause for rejection of precast deck panels:

- a) Any cracks transverse or diagonal to the strand pattern and crossing more than one strand with crack widths greater than 0.15 mm.
- b) Any crack parallel to a strand and longer than 1/3 of the panel length strand with crack widths greater than 0.15 mm.
- c) Cracks shorter than 1/3 of the panel length and occurring at more than 25 percent of the total number of strands in the panel.
- d) Voids or honeycombed areas with exposed strand.

Panels with cracks or with damage less severe than the conditions stated above shall be repaired by the Contractor, at his own expense, using procedures approved by the Resident.

502.18 Method of Measurement

The following paragraphs are added:

No separate measurement will be made for Precast Concrete Deck Panels. All work and related materials including, but not necessarily limited to, furnishing and installing deck panels, lifting devices, grout dams, adhesive, leveling screws, inserts, grout, panel reinforcing steel or welded wire fabric, and cast-in-place concrete topping will be incidental to, and included in, Item 502.263, Structural Concrete Roadway and End Posts on Steel Bridges.

If precast concrete deck panels are utilized in the construction, no deducts will be applied to Structural Concrete Roadway and End Posts, Reinforcing Steel, and Protective Shielding for the material not used due to the use of the precast panels.

No separate measurement will be made for longer stud welded shear connectors required with the Precast Concrete Deck Panels. All costs associated with this work shall be incidental to the associated contract items.

SPECIAL PROVISIONSECTION 502STRUCTURAL CONCRETE

## (Annular Space Grouting)

Description This work shall consist of providing and placing non-shrink grout as described below. The annular space (void between the host and culvert liner pipes) shall be completely grouted to support the liner and provide long-term stability. The Contractor shall provide testing of the materials and methods for compliance with the following requirements. Prior to any work the Contractor shall furnish an acceptable plan for performing and testing the grouting.

Preparation After slip liner installation but prior to grouting, bulk heading of the ends and venting shall be constructed.

After bulk heading of the ends and venting, test the integrity of the installed liner pipe and constructed bulkheads for any leaks.

Planned Vents The Contractor shall submit shop drawings or indicate in the installation plan the proposed number and location of vents relative to pipe diameter and stiffness for the grouting operations.

Materials The grout material shall consist of Portland cement (Portland cement and fly ash) and/or additives as described in the following Subsections of Division 700 -

## Materials:

Portland Cement	701.01
Water	701.02
Air-Entraining Admixtures	701.03
Fine Aggregate	701.01
Fly Ash	701.10 Type F or C
Chemical Admixtures	701.04
Accelerating Admixtures	AASHTO M-194 Type "C"

(a) Compressive Strength The grout shall have a minimum penetration resistance of 700 kPa [100 psi] in 24 hours when tested in accordance with ASTM C403 and a minimum compressive strength of 3500 kPa [500 psi] in 28 days when tested in accordance with ASTM C495 or C109.

(b) Performance Requirements The Contractor shall submit the proposed grout mix, methods, plans and criteria of the grouting operations. The grouting system shall have sufficient gauges, monitoring devices and tests to determine the effectiveness of the grouting operation and to ensure compliance with the liner pipe specifications and design parameters.

(c) Mix Designs One or more mixes shall be developed to completely fill the annular space based on the following requirements:

- (1) Size of annular void
- (2) Void (size) of the surrounding soil
- (3) Absence or presence of groundwater
- (4) Sufficient strength and durability to prevent movement of the liner pipe, and
- (5) Provide adequate retardation.

Qualifications The Contractor shall demonstrate to the Resident its worker's capabilities of filling the annular space and performing their work in conformance with the Plans and the Specifications.

Grouting Equipment The materials shall be mixed in equipment of sufficient size and capacity to provide the desired amount of grout material for each stage in a single operation. The equipment shall be capable of mixing the grout at densities required for the approved procedure and shall also be capable of changing density as dictated by field conditions any time during the grouting operation.

Injection Procedure and Pressure The gauged pumping pressure shall not exceed the liner pipe Manufacturer's approved recommendations. Pumping equipment shall be of a size sufficient to inject grout at velocity and pressure relative to the size of the annular space. Gauges to monitor grout pressure shall be attached immediately adjacent to each injection port. The gauge shall conform to an accuracy of not more than one-half percent error over the full range of the gauge. The range of the gauge shall be not more than 100 percent greater than the design grout pressure. Pressure gauges shall be instrument oil filled and attached to a saddle type diaphragm seal (gauge saver) to prevent slogging with grout. All gauges shall be certified and calibrated in accordance with ANSI B40 Grade 2A.

Test Section The Contractor shall be required to perform a test on each type of grout and grout system proposed to be used.

Submittals and Required Calculations The Contractor shall submit the following to the Resident for his review and approval at least 30 working days prior to the start of the grouting operation:

- (1) The proposed grouting mix
- (2) The proposed densities and viscosities
- (3) Initial set time of the grout
- (4) The proposed grouting method
- (5) The maximum of injection pressures
- (6) The 24-hour and 28 day compressive strengths
- (7) Proposed grout stage volumes
- (8) Bulkhead designs
- (9) Buoyant force calculations
- (10) Flow control
- (11) Provisions for service connections
- (12) Pressure gauge certification
- (13) Vent location plans
- (14) Certification that grouting plan conforms with all provisions, cautions and restrictions or the liner manufacturer

These shall be submitted as a complete package for a single or sample section only. The Contractor shall notify the Resident of any changes to be made in grouting.

Method of Measurement Grout satisfactorily placed and accepted will not be measured. The cost shall be incidental to the Culvert Sliplining pay item.

SPECIAL PROVISION

SECTION 502

STRUCTURAL CONCRETE

(Sealing Deck Construction Joints)

502.01 Description

The following sentence is added:

The work also consists of sealing any transverse construction joints in the existing concrete bridge deck prior to the placement of High Performance Waterproofing Membrane at the Blackstrap Road Underpass.

502.03 Materials

The following sentence is added:

Sealing of the transverse construction joints in the bridge deck shall be done with Sikasil 728NS, manufactured by the Sika Corporation, or an approved equal.

502.11 Expansion and Contraction Joints

The following sentences are added:

The sealant shall be placed in accordance with the manufacturer’s recommendations.

502.53 Method of Measurement

Sealing Deck Construction Joints will be measured by the linear foot of joints sealed, as measured along the centerlines of the joints complete in place.

504.54 Basis of Payment

Sealing Deck Construction Joints will be paid for at the contract unit price per linear foot, which shall be payment in full for furnishing all materials, labor and equipment, including preparation of the surfaces of the joint in accordance with the manufacturer’s recommendations, and all incidentals necessary to seal the existing deck construction joints.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
502.91      Sealing Deck Construction Joints	LF

SPECIAL PROVISION

SECTION 504

STRUCTURAL STEEL

504.03 Drawings

This Subsection is amended by the addition of the following:

When structural steel erection is to take place over travel ways, the Contractor shall submit a structural steel erection plan stamped by a Professional Engineer licensed in the State of Maine. The erection plan shall include the number and location of crane(s), the weight of the pick, crane capacities, bracing locations and all other pertinent information needed to demonstrate the structural steel can be safely erected and assembled.

504.51 Installation

This Subsection is amended by the addition of the following:

Where an outer face of the bolted parts has a slope of more than one to 20 with respect to a plane normal to the bolt axis, a smooth beveled washer will be used to compensate for the lack of parallelism.

504.641 Method of Measurement

There will be no additional payment for the required erection plan. The cost shall be incidental to the Structural Steel Erection pay item.

SPECIAL PROVISIONSECTION 506SHOP APPLIED PROTECTIVE COATING - STEEL(Zinc Rich Coating System – Shop Applied)506.05 Inspection

This section is amended by the addition of the following:

The QAI shall be given ample notice in order to inspect the product prior to coating, recoating or removal of paint from the area. “Ample notice” shall be defined at the Pre-Job meeting depending on shop or site conditions.

Substrates that are primed or surfaces that are recoated without notification of the QAI will be rejected and no further coating shall be done on the piece. Coating applied without notification of the QAI will be investigated by destructive and non-destructive testing as approved by the Resident and by a review of the JCR. The Resident may reject, conditionally accept, or accept the coating based on documentation and test results. Rejected coating shall be removed and re-applied. Conditionally accepted coatings shall be made acceptable as approved by the Resident. The cost of additional testing and repairs shall be borne by the Contractor.

At the completion of the shop coating the completion date (month and year), NTPEP System No. (provided on the NEPCOAT Qualified Products List), the type of coating system used (Inorganic Zinc = IOZ, Organic Zinc = OZ), and top coat federal color number shall be stenciled on the inside of the fascia beams, at the locations designated by the Resident, in four inch letters and numbers (for example: 6/05, SSC(09)-01, IOZ, Fed Color #30045). The paint used for this marking shall be white or black (whichever provides greater contrast) polyurethane or such other paint as may be approved by the Resident.

506.11 Materials

This first paragraph is deleted and replaced with the following:

Coatings systems shall be from the Northeast Protective Coating Committee (NEPCOAT) Qualified Products List (QPL), list A. The list may be found through NEPCOAT’s web page: <http://www.nepcoat.org>.

506.17 Handling and Storage

This section is amended by the addition of the following:

The coating shall be adequately cured before handling, but under no circumstances shall the product be handled before the coating has achieved the manufacturer’s published minimum cure time.

Material shall not be loaded for shipment until the shop coating has adequately cured and been inspected and accepted. The components will be stamped "APPROVED" only after the loading has been completed and approved, and no material shall be shipped without the prior approval of the Resident.

SPECIAL PROVISION

SECTION 506

SHOP APPLIED PROTECTIVE COATING - STEEL

(Zinc Rich Coating System – Field Applied)

506.01 Description

This section is amended by the addition of the following:

This work shall also consist of the cleaning and painting of all existing steel bearings at the Running Hill Road Underpass bridge. The finish coat color shall match color of the existing paint system.

506.03 Submittals

This section is amended by the addition of the following:

The Contractor shall submit for review by the Authority a materials list and other such details as described within the Plans and the respective subsections of this Specification.

506.05 Inspection

This section is amended by the addition of the following:

The Resident will have the authority to reject material or workmanship that does not meet the Contract requirements.

506.06 Non-Conforming Work

This section is amended by the addition of the following:

Rejected material and workmanship shall be corrected or replaced by the Contractor in accordance with Subsection 106.8.2 of the Standard Specifications.

ZINC-RICH COATING SYSTEMS

506.10 Description

This section is amended by the addition of the following:

Work shall consist of application of a two coat, zinc-rich coating system in accordance with this Specification. Where the selected coating system is a three coat system, the intermediate coat shall be omitted and only the primer and top coat shall be applied.

506.11 Materials

This section is amended by the addition of the following:

Coatings systems shall be selected from the Northeast Protective Coating Committee (NEPCOAT) Qualified Products List (QPL) A or B list. The list may be found through the NEPCOAT Web page (<http://www.nepcoat.org>).

The Contractor shall provide the batch description, lot number, date of manufacture, shelf life and the manufacturer's published storage requirements for each coating to the Resident. In addition, the Contractor shall provide the manufacturer's published instructions for application of each coat of the coating system including equipment, surface preparation, anchor profile, mixing, thinning, application, cure time for the entire range of allowable environmental conditions, DFT and recoat time.

#### 506.13 Surface Preparation

This section is amended by the addition of the following:

Removal of lead based paint shall be in accordance with Subsection 105.2, Health and Safety. The Contractor shall submit a lead based paint removal plan to the Resident for approval prior to the start of the work.

Prior to cleaning, all corners and edges of members and plates, whether rolled cut or sheared, exposed in the assembled product shall be rounded to approximately 1/8 inch radius. A series of tangents to the approximate radius will be considered as rounded

Surfaces to be field-painted shall be power tool cleaned to meet the requirements of SSPC-SP3. All surfaces shall be solvent wiped in accordance with SSPC-SP1 following power tool cleaning. Faying surfaces shall be blast cleaned to bare metal to meet the requirements of SSPC-SP6.

After cleaning is complete the surface shall be visually inspected for fins, tears, delaminations and other discontinuities. Fins, tears and other discontinuities shall be removed with a grinder or other suitable power tool and the area shall be blended at a slope of approximately 1:20.

The allowable time between cleaning and primer application shall not exceed the manufacturer's published recommendations or eight hours, whichever is less. If the substrate develops flash rust (rust bloom) before the primer is applied or before the primer application is completed, the piece shall be re-blasted to bare substrate and re-coated.

#### 506.14 Inspection

This section is amended by the addition of the following:

All protective coatings shall be applied using a method approved by the Resident. Protective coating shall not be applied when the steel temperature, or the ambient temperature in the immediate vicinity of the piece(s) in question; See manufacturers guidelines for temperature limitations. Thinning and mixing of coatings shall be in conformance with the manufacturer's

published instructions. Thinner shall be measured using a graduated cup or other container that clearly indicates the amount of thinner being added. Mixing shall be done using the method, equipment and for the amount of time recommended by the coating manufacturer.

Primer and topcoat shall be applied in accordance with the manufacturer's published recommendations. Environmental conditions in the immediate vicinity of the surfaces to be coated shall be within the range of the manufacturer's published requirements both during the coating operation and during the curing period. Primer shall not be force cured.

Recoat time shall be in accordance with the manufacturer's published requirements for the environmental conditions at the time of application and cure. If the coating is contaminated with dust, debris, over spray or other deleterious material, the surface shall be cleaned in accordance with SSPC-SP 1 immediately prior to recoating. Other methods of cleaning may be used if approved by the Resident.

The Resident shall be given ample notice in order to inspect the product prior to coating, recoating or removal of paint from the area. "Ample notice" shall be defined at the Pre-Job meeting depending on shop or site conditions.

Substrates that are primed or surfaces that are recoated without notification of the Resident will be rejected and no further coating shall be done on the piece. Rejected coating shall be removed and re-applied. The cost of repairs shall be borne by the Contractor.

#### 506.16 Touch-up and Repairs

This first paragraph is deleted and replaced with the following:

Damaged or unacceptable coatings shall be repaired. Damaged areas shall be prepared in accordance with the manufacturer's published instructions or as directed by the Resident. Damaged or unacceptable coatings shall be repaired using the same coating removed and prepared for repair. Environmental conditions, cure times and DFTs shall be in accordance with manufacturer's published directions for the coating being applied. Repairs to topcoat shall result in a uniform gloss and color match. The Resident shall have final authority concerning acceptable appearance.

#### 506.60 Method of Measurement

The following sentences are added:

Zinc Rich Coating System – Field Applied will be measured by the lump sum, complete and accepted. The coating limits shall be as shown or described in the Contract Documents. Surface preparation of the existing steel bearings will not be measured separately for payment, but shall be incidental to the Zinc Rich Coating System – Field Applied pay item

#### 506.61 Basis of Payment

The following sentence is added:

Payment for Zinc Rich Coating System – Field Applied will be full compensation for furnishing all labor, materials, equipment and incidentals necessary to prepare and paint the existing steel bearings.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
506.9103	Zinc Rich Coating System (Field Applied)	Lump Sum

SPECIAL PROVISION

SECTION 507

RAILINGS

(Aluminum Bridge Rail – 3 Bar Post Remove and Reset)  
(Aluminum Bridge Railing – Splice Retrofit)

507.01 Description

The following paragraphs are added:

This work shall include the splice retrofit of the aluminum bridge railing at Weymouth Road Underpass Bridge as shown on the plans.

This work shall also include replacing a missing bridge rail anchor bolt at Running Hill Road Underpass Bridge as shown on the plans. The anchor bolt shall be replaced by drilling and anchoring in a new anchor bolt as well as removing and resetting the existing rail to perform the work

507.02 Materials

The following paragraph is added:

Bridge rail anchor bolt shall be the same diameter as the existing bridge rail anchor bolts with exposed hex nuts (American Standard Heavy) and washer and shall conform to the designation stainless ASTM A276 Type 430. The anchoring product shall be from the MaineDOT pre-approved products list of Epoxy and Resin Based Adhesive Bonding Systems- Epoxy Anchoring Materials.

507.08 Method of Measurement

The following sentences are added:

Aluminum Bridge Railing – Splice retrofit will be measured as each, fabricated, delivered, erected, and accepted.

Aluminum Bridge Rail – 3 Bar Post Remove and Reset will be measured as each, installed and accepted.

507.07 Basis of Payment

The following paragraph is added:

Aluminum Bridge Railing – Splice retrofit will be paid for at the unit price for each, complete in place. Payment for galvanizing and/or protective coating, when required, shall be included in the unit price as well as materials, equipment and labor required.

Aluminum Bridge Rail – 3 Bar Post Remove and Reset will be paid for at the unit price of each, complete in place including all materials equipment and labor for the removal and resetting of the bridge rail.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
507.0928	Aluminum Bridge Rail – 3 Bar Post Remove and Reset	Each
507.095	Aluminum Bridge Railing – Splice Retrofit	Each

SPECIAL PROVISION

SECTION 508

WATERPROOFING MEMBRANE

(Membrane Waterproofing)

508.01 Description

The following paragraph is added:

The work shall also include furnishing and applying an approved membrane waterproofing system to the backs of the backwalls and abutments as shown on the plans.

508.02 Materials

The following paragraph is added:

Membrane Waterproofing for the backs of the curtain walls and abutments shall consist of an adhesive primer, preformed waterproofing membrane sheet and mastic designed to work as one system. The following systems have been pre-approved for use on this project for the backs of the curtain walls and abutments:

- 1) Jiffy-Seal 140/60 Cold Weather membrane, VOC 100 Primer, 160H Mastic – Manufactured by Protecto Wrap Co.
- 2) 104-AHT membrane, 740 Primer, 104CM Mastic – Manufactured by Royston Laboratories, Inc.
- 3) Lo Temp Membrane, Bituthene Primer B2, Bituthene Mastic – Manufactured by W.R. Grace

The following paragraphs are added:

508.055 Installation – Membrane Waterproofing

For the backs of the curtain walls and abutments the concrete surfaces shall have a uniform, fine-textured finish that is free of protrusions prior to application of the Membrane Waterproofing system. All honeycombed areas and surface cavities in new and existing concrete shall be cleaned and filled with approved patching materials. All surfaces to be membraned shall be clean and free of laitance, oil and foreign materials.

Immediately prior to application of the primer, the surface shall be cleaned by brooms and compressed air. The concrete surface shall be inspected and approved by the Resident prior to priming.

The adhesive primer shall be thoroughly mixed before use and applied by roller only and allowed to cure in accordance with the manufacturer's recommendations.

Membrane shall be installed in a shingled pattern so that water is permitted to drain without accumulating against seams. The membrane shall be pressed or rolled into place to assure bond with the primed surface and elimination of air bubbles. Lap joints at the beginning and end of rolls shall be staggered with those of adjacent rolls and shall be sealed in accordance with the manufacturer's recommendation.

Torn or damaged membrane shall be repaired in accordance with manufacturer's recommendations.

#### 508.08 Method of Measurement

The following paragraph is added:

Membrane Waterproofing for the backs of curtain walls and abutments will be measured for payment as one lump sum.

#### 508.09 Basis of Payment

The following paragraphs are added:

Membrane Waterproofing will be paid for at the Contract lump sum price, which shall be payment in full for furnishing all materials, labor and equipment, including cleaning of concrete surfaces and providing a moisture meter, and all incidentals necessary to provide a waterproof barrier on the specified concrete surface that is properly adhered to the concrete substrate. Adhesive primer, preformed waterproofing membrane sheets and mastic provided as part of the membrane waterproofing manufacturer's system shall be included in the lump sum price for Membrane Waterproofing. Cleaning and filling of all honeycombed areas and surface cavities in new and existing concrete surfaces to which membrane is to be applied with approved patching materials shall be included in the lump sum price for Membrane Waterproofing. Damage to new or existing concrete surfaces, resulting from the Contractor's placement or curing operations, or any damage caused by the Contractor's operations shall be repaired at no cost to the Authority.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
508.15      Membrane Waterproofing	Lump Sum

SPECIAL PROVISIONSECTION 509STRUCTURAL PLATE PIPES, PIPE ARCHES, ARCHES, AND METAL BOX CULVERTS

(Culvert Sliplining)

509.01 Description

The following paragraph is added:

This work shall consist of sliplining the existing culvert at the Dutton Hill Road Underpass Bridge in accordance with the plans and specifications.

509.02 Materials

The following paragraph is added:

Materials shall meet the requirements of the following Special Provisions:

Annular Space Grout  
Plastic Pipe

Special Provision 502 (Annular Space Grout)  
Special Provision 602 (Plastic Pipe)

509.04 General

The following paragraphs are added:

Handle and assemble all elements of the structure in accordance with the manufacturer's instructions, except as modified herein, on the plans or as directed by the Resident. The Contractor shall submit fabrication details including assembly drawings, pipe insertion methods, internal joint coupling, bracing details, and dewatering methods, to the Resident for review. The Resident will be allowed a minimum of 14 working days to review the Contractor's submittal.

509.08 Method of Measurement

Culvert Sliplining will be measured by the linear foot along the length of the culvert pipe as shown on the Plan. Dewatering, culvert liner pipe and annular space grout will not be measured separately for payment, but shall be incidental to the Culvert Sliplining pay item.

520.06 Basis of Payment

Payment for culvert sliplining will be full compensation for furnishing all labor, materials, equipment necessary to manufacture and install the liner pipe complete and in place, including: but not limited to dewatering, cleaning, inspecting, strutting, bracing, skids, concrete, joint bands, seals, installing grout nipples, plugs, fittings, hardware, and damaged pipe repair. Grout used to fill the annular space and backfill voids will be considered incidental to Item 509.201. Plastic pipe used to line the existing culvert will be considered incidental to Item 509.201.

Payment will be made under:

Pay Item

Pay Unit

509.201      Culvert Sliplining

Linear Foot

SPECIAL PROVISIONSECTION 515PROTECTIVE COATING FOR CONCRETE SURFACES

(Pigmented Concrete Protective Coating)

Section 515, Protective Coating for Concrete Surfaces, is deleted in its entirety and replaced with the following:

515.01 Description

The work shall include the surface preparation and application of a pigmented concrete protective coating system, consisting of a clear penetrating sealer followed by a pigmented top coat, to protect new and existing concrete and masonry structures. The coating system shall be applied to piers, endposts, wingwalls, abutments, curbs and fascia in accordance with the Plans, Specifications and the manufacturer's published recommendations.

Where pigmented protective coatings are already present on concrete surfaces specified to receive new protective coatings, the work shall also include removing areas of existing protective coating that are blistered, flaking, peeling or otherwise loosely adhered to the concrete substrate prior to application of the new coating. The removal of loosely adhered pigmented protective coatings shall be completed by high-pressure washing. Where the removal of existing pigmented coatings is required the anticipated removal limits, and the anticipated quantity of removal, will be shown on the plans. The actual removal limits may vary and will be established and marked in the field by the Resident.

515.02 Materials

The pigmented penetrating sealer system shall be a two coat system consisting of Certi-Vex Guard Clear (primer/sealer) and Certi-Vex HBC Smooth (top coat), as manufactured by Vexcon Chemicals, Inc., or an approved equal, consisting of the following two parts:

- The primer shall be a vinyl toluene acrylic silane polymer blend or an approved equal. This primer shall provide the main protection against the ingress of water borne chlorides and sulfates.
- The top coat shall be solvent borne modified acrylic resins with selected pigments and fillers.

The products shall comply with regulations limiting the Volatile Organic Compound (VOC) content of architectural and industrial maintenance coatings.

The Contractor shall submit the Vexcon Chemical's product data sheets, material safety data sheets and recommended instructions for application of the Certi-Vex Guard Clear and Certi-Vex HBC Smooth.

The pigmented penetrating sealer color shall be Concrete Gray.

Materials shall be delivered to the site in original packages or containers bearing the manufacturer's labels and identification.

#### 515.021 Substitute Materials

The Contractor shall submit a written request for approval of proposed substitute material naming the proposed manufacturer and product. This request shall be accompanied by:

1. Test data from an independent testing laboratory stating that the proposed substitute meets or exceeds the specified requirements as listed and has been tested in accordance with the specified test standards.
2. Documentation that the proposed material has a proven record of performance when used in the intended application as confirmed by actual field tests and successful installations in place on at least five similar projects.
3. Certification that if two or more types of products are intended to be used as part of a system they will be supplied by the same manufacturer to ensure compatibility of materials, and to maintain single source manufacturer responsibility.

The Resident reserves the right to require additional testing to evaluate any proposed substitute product at no additional cost to the Authority. The Resident's decision as to the acceptability or non-acceptability of the proposed product shall be final.

#### 515.03 Surface Preparation

All caulking, patching, and joint sealant shall be installed prior to application of the sealer. The surface shall be prepared in strict accordance with the instructions of the approved manufacturer. Surface shall be fully cured, dry, and free from contamination such as asphalt coatings, oil, grease, loose particles, decaying matter, moss, algae growth, and curing compounds. For maximum penetration of the primer, the Contractor shall lightly sandblast the surface.

Existing form tie hole plugs which are loose or deteriorated shall be completely removed. The holes shall be reamed to sound concrete. All open form tie holes, new and existing shall be filled with an approved non-shrinking mortar, and after setting, rubbed level to the adjacent surface. Filled holes shall be cured for at least two (2) days prior to the application of the concrete protective coating.

Grass and vegetation adjacent to surfaces to be coated shall be removed or trimmed closely to permit proper preparation and application of the coating.

Where coatings are specified to be applied to concrete surfaces that have been previously covered with pigmented coating, the Contractor shall remove any protective coating that, in the judgement of the Resident, is blistered, flaking, peeling or otherwise loosely adhered to the concrete substrate. Loosely adhered coating shall be generally defined as any coating that can be removed by vigorously scraping the concrete surface using a 3" steel putty knife and firm pressure. The goal of the removal work is to remove areas of flaking, missing or otherwise compromised

coating systems; protective coatings that are tightly adhered to the concrete substrate need not be removed.

The removal of existing protective coatings shall be completed using high pressure washing. The specific pressure, flow rate, nozzle and standoff distance for the high-pressure washing operation shall be selected by the Contractor to remove loosely adhered coatings as specified. After high-pressure washing the Resident shall verify all loosely adhered coatings have been removed from the specified areas by scraping the surfaces with a putty knife. The Contractor will be required to complete additional pressure washing to remove any remaining loosely adhered coatings identified by the Resident

Following removal of existing coating systems all exposed surfaces of the substructure unit to be coated shall be cleaned and rinsed by pressure washing. The Contractor may use, when required, appropriate cleaning materials recommended by the sealer manufacturer in conjunction with high pressure water for cleaning the concrete or masonry. After pressure washing the concrete surfaces shall be allowed to air dry for a minimum of 48 hours prior to applying the new protective coating.

The Contractor will be responsible for controlling and filtering runoff resulting from the pressure washing operations in accordance with Supplemental Specification 656, and all local, state and federal requirements.

#### 515.04 Application

The materials shall be mixed and applied in strict accordance with the instructions of the approved manufacturer. Spray or roll the primer at the recommended application rate. If the surface is very absorbent, the primer should be applied until surface is saturated per the manufacturer's written instructions. All areas not to receive coating shall be marked with straight, even lines as the limit lines.

The Contractor shall, in the presence of the Resident, apply the materials on a sample area which is representative of a jobsite application. When color and application methods are approved, the sample area shall serve as a standard of acceptance for all further work.

The primer shall not be applied in direct sunlight when the air or surface temperature is greater than 90°F, or when air or surface temperature is below 35°F. The top coat shall not be applied when air or surface temperature is below 45°F or as approved by the Resident.

For surfaces that have previously received pigmented coating the primer shall only be applied to areas where the existing coating was marked for removal and then removed by sandblasting. The primer application shall extend beyond the removal limits of the existing coating system by six inches on all sides.

The primer shall be allowed to dry for a minimum of two-hours before applying pigmented top coat. Under poor drying conditions this time shall be extended. The primer shall not be coated with top coat until the surface is dry. The top coat should be applied by brush, roller or suitable airless spray.

Top coat material shall be applied per the manufacturer’s recommended application rate and in strict accordance with the manufacturer’s written instructions. The top coat shall provide consistent color without light spots or shadows. The Resident reserves the right to have the Contractor recoat the top coat if the dried top coat(s) lack consistent color or show light spots or shadows.

For surfaces that have previously received pigmented coating the top coat shall be applied to the complete limits of pigmented coating application as described on the Contract Plans, not just the area of old coating removal.

Regardless of the application method used (sprayer, roller or brush) the Contractor shall be responsible for achieving 100% coverage of the concrete including the interior surfaces of concrete voids, recesses, or other depressions on the concrete surface.

Protect plants, grass, sealant, asphalt, traffic, etc. during application from spray.

515.05 Method of Measurement

Pigmented Concrete Protective Coating will be measured for payment by the square yard, satisfactorily applied and accepted.

The removal of existing pigmented protective coatings will not be measured for payment separately, but shall be incidental to the Pigmented Protective Coating for Concrete Surfaces pay item.

515.06 Basis of Payment

Pigmented Concrete Protective Coating will be paid at the Contract unit price per square yard which price shall be full compensation for all labor, materials, equipment and incidentals required for furnishing and applying the pigmented concrete protective coating as shown on the Plans, in accordance with these Specifications or as approved by the Resident.

Surface preparation, including high-pressure washing to remove existing pigmented coatings, vegetation removal, and protection of surfaces not designated for treatment will not be paid for separately, but shall be incidental to the Pigmented Concrete Protective Coating item.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
515.201      Pigmented Protective Coating for Concrete Surfaces	Square Yard

SPECIAL PROVISIONSECTION 515PROTECTIVE COATING FOR CONCRETE SURFACES

(Clear Concrete Protective Coating)

Section 515, Protective Coating for Concrete Surfaces, is deleted in its entirety and replaced with the following:

515.01 Description

The work shall include the surface preparation and application of a clear protective coating on concrete surfaces to protect new cast-in-place concrete, precast concrete and masonry structures. The coating system shall be applied to piers, endposts, curbs and fascia in accordance with the Plans, Specifications and the manufacturer's published recommendations.

515.02 Materials

The penetrating sealer shall be StandOff® SLX100 Water & Oil Repellent, as manufactured by ProSoCo, Inc., or an approved equal. The sealer shall have the following properties:

Active Substance:	modified alkyl alkoxy silane
Active Content:	> 90%
Form:	clear liquid
VOC:	< 3.5 pounds per gallon

The product shall comply with regulations limiting the Volatile Organic Compound (VOC) content of architectural and industrial maintenance coatings.

The Contractor shall submit the ProSoCo's product data sheets, material safety data sheets and recommended instructions for application of the StandOff® SLX100.

Materials shall be delivered to the site in original packages or containers bearing the manufacturer's labels and identification.

515.021 Substitute Materials

The Contractor shall submit a written request for approval of proposed substitute material naming the proposed manufacturer and product. This request shall be accompanied by:

1. Test data from an independent testing laboratory stating that the proposed substitute meets or exceeds the specified requirements as listed and has been tested in accordance with the specified test standards.

2. Documentation that the proposed material has a proven record of performance when used in the intended application as confirmed by actual field tests and successful installations in place on at least five similar projects.
3. Certification that if two or more types of products are intended to be used as part of a system, they will be supplied by the same manufacturer to ensure compatibility of materials, and to maintain single source manufacturer responsibility.

The Resident reserves the right to require additional testing to evaluate any proposed substitute product at no additional cost to the Authority. The Resident's decision as to the acceptability or non-acceptability of the proposed product shall be final.

#### 515.03 Surface Preparation

All caulking, patching, and joint sealant shall be installed prior to application of the sealer. On new surfaces to be treated, all voids shall be dressed by dry rubbing to remove form marks and blemishes to present a neat appearance. Concrete and masonry surfaces shall be cleaned free of dust, surface dirt, oil, efflorescence and contaminants to ensure penetration of the sealer. The surface may be slightly damp at the time of treatment.

The Contractor may use, when required, appropriate cleaning materials recommended by the sealer manufacturer in conjunction with high pressure water for cleaning the concrete or masonry.

#### 515.04 Application

The Contractor shall apply the clear concrete protective coating in strict accordance with the manufacturer's published recommendations.

The application shall not be conducted when surface and air temperatures are below 40°F or above 90°F. The work shall not be conducted when there is a chance of the surface temperature falling below 40°F in the 24-hours following application; nor should it be applied on hot, windy days.

The treatment shall not be applied during rain to wet surfaces or when there is a chance of rain within 24-hours after application. After treatment, surfaces should be protected from rain for not less than 48-hours. It shall not be applied when winds are sufficient to carry airborne chemicals to unprotected surfaces.

Prior to applying the sealer, the Contractor shall protect all surrounding non-masonry/non-concrete surfaces, landscape and lawn areas, and surfaces not designated for treatment, from contact with the penetrating sealer, and prevent overspray of the penetrating sealer caused by wind drift.

The Contractor shall ensure that all safety equipment, facilities and precautions recommended by the product manufacturer are furnished and/or strictly adhered to.

The sealer material shall be applied in the manner and with the equipment recommended by the product manufacturer. Coverage will vary depending on condition, texture and porosity of the surfaces. Pre-testing is required.

Sealer shall be applied as packaged without dilution or alteration. The sealer shall be applied with low pressure (20 psi) airless spray equipment or with a heavily saturated brush or roller unless otherwise permitted by the Resident. Sufficient material shall be applied to thoroughly saturate the surface making sure to brush out excess material that does not penetrate.

When the sealer is applied to horizontal surfaces, it shall be applied in a single saturating application with sufficient material and applied so the surface remains wet for one to two minutes before penetration into the concrete. Surface residues, pools and puddles shall be broomed-out thoroughly until they completely penetrate into the surface.

When the sealer is applied to vertical and sloped surfaces, it shall be applied in a "wet-on-wet" application for best results on most porous materials. In the case of extremely dense concrete, it may be necessary to restrict the amount of material applied to one saturating application in order to prevent surface darkening. Apply from the bottom up with sufficient material to thoroughly coat the surface and create a slight rundown below the spray pattern. Allow the first application to penetrate the concrete surface, and within a few minutes after the first coat appears dry, reapply in the same saturating manner.

When the sealer is applied to vertical and sloped surfaces, it shall be applied in two applications, 10 minutes apart, with a low pressure (20 psi) airless sprayer.

515.05 Method of Measurement

Clear Protective Coating for Concrete Surfaces will be measured for payment by the square yard, satisfactorily applied and accepted.

515.06 Basis of Payment

Clear Protective Coating for Concrete Surfaces will be paid at the Contract unit price per square yard which price shall be full compensation for all labor, materials, equipment and incidentals required for furnishing and applying the clear concrete protective coating as shown on the Plans, in accordance with these Specifications or as approved by the Resident.

Surface preparation, vegetation removal, and protection of surfaces not designated for treatment will not be measured separately for payment, but shall be incidental to the Clear Concrete Protective Coating item.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
515.202      Clear Protective Coating for Concrete Surfaces	Square Yard

SPECIAL PROVISIONSECTION 518STRUCTURAL CONCRETE REPAIR

(Epoxy Injection Crack Repair)

518.01 Description

The following paragraphs are added:

The work includes epoxy injection crack repair as described below.

- Epoxy Injection Crack Repair includes repair of concrete cracks with widths equal to or greater than 1/8 inches as shown on the Plans or identified by the Resident.

518.02 Repair Materials.

The following paragraphs are added:

Epoxy Injection Crack Repairs shall be completed using a high strength, low viscosity moisture tolerant epoxy resin as recommended by the manufacturer and approved by the Resident. The proposed repair materials shall be submitted to the Resident for approval.

The structural properties of all crack repair materials shall meet or exceed the following requirements:

Tensile Strength (@ 7 days)	5,000 psi	ASTM D638
Bond Strength (@ 14 days)	1,000 psi	ASTM C882
Compressive Strength (@ 3 days, 73 °F)	5,000 psi	ASTM D695
Compressive Modulus (@ 7 days)	250 ksi	ASTM D695
Flexural Strength (@14 days)	8,000 psi	ASTM D790

Wide cracks (1/2" +/- and greater) may be repaired with a non-shrink cementitious grout as recommended by the manufacturer. The following product shall be used:

- CONSPEC UW300 as manufactured by Dayton Superior, 7777 Washington Village Drive, Suite 130, Dayton OH, 45459

518.07 Placing Repair Materials

The following Subsection is added:

518.071 Placing Epoxy Injection Materials

- a) Mix epoxy components per manufacturer's instructions. Review pot life characteristics of combined materials and prepare quantities accordingly;

- b) Open all injection ports along the crack and ensure that all injection ports are securely fastened to the concrete substrate;
- c) Attach injection device to the lowest port on vertical cracks, or the first port in the series on horizontal cracks;
- d) Slowly and under constant pressure, inject the epoxy material into the first port until the epoxy flows out of the next port in the series. While maintaining constant pressure and flow at the first port, close the adjacent port and continue injection process until epoxy flows from the subsequent port in the series, or until no additional epoxy can be injected into the first port.
- e) Repeat the above procedure until all ports have been injected.

518.10 Method of Measurement

The quantity of Epoxy Injection Crack Repair will be measured by the linear foot.

518.11 Basis of Payment

The following paragraphs are added:

Epoxy Injection Crack Repair will be paid at the Contract unit bid price per linear foot for each repair; which price shall include, but not necessarily be limited to, removal and disposal of materials, cleaning existing concrete, placing, curing and finishing epoxy and all materials, labor, equipment, tools and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
518.4          Epoxy Injection Crack Repair	Linear Foot

SPECIAL PROVISION

SECTION 518

STRUCTURAL CONCRETE REPAIR

(Repairing Granite Curb Joint and Bedding Mortar)

518.01 Description:

The following paragraphs are added:

This work shall consist of the removal and replacement of existing deteriorated granite curb joint and granite curb bedding mortar as shown on the plans or as directed by the Resident.

518.02 Repair Materials:

The following paragraph is added:

Mortar shall be an approved epoxy resin mortar or an approved polymer modified cementitious repair mortar.

The following Subsection is added:

518.071 Construction Requirements:

For structures where the existing wearing surface is not removed, the Resident will designate areas where the existing granite curb joint mortar is to be repaired.

For structures where the existing wearing surface is removed the Resident will, after the existing wearing surface is removed, designate areas where the existing granite curb joint mortar and the existing granite curb bedding mortar is to be repaired.

In areas designated for granite curb joint mortar repair, the existing granite curb joint mortar shall be removed between curb sections to a minimum depth of 1 inch from the face of curb. Any loose mortar shall also be removed. The repair area shall be repointed with new mortar and tooled concave at the face of curb. The mortar shall be proportioned, mixed, and applied in accordance with the Manufacturer's recommendations.

In areas designated for granite curb bedding mortar repair, the existing granite bedding mortar shall be removed under the curb to a minimum depth of 1 inch from the face of curb. Any loose mortar shall also be removed. The mortar shall be replaced with new mortar and finished with a 45 degree bevel at the face of curb. The mortar shall be proportioned, mixed, and applied in accordance with the manufacturer's recommendations.

518.10 Method of Measurement:

The following paragraph is added:

Repairing Granite Curb Joint and Bedding Mortar will be measured for payment by the linear foot along the face of curb, horizontally and vertically, complete and accepted.

518.11 Basis of Payment:

The following paragraphs are added:

Repairing Granite Curb Joint and Bedding Mortar will be paid for at the contract unit price per linear foot, which will include all materials, labor, equipment, and incidentals necessary to complete the work including removal of existing mortar.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
518.391	Repairing Granite Curb Joint and Bedding Mortar	Linear Foot

SPECIAL PROVISIONSECTION 520EXPANSION DEVICES – NON-MODULAR

(Asphaltic Plug Joint)

520.01 Description

This work consists of furnishing and installing asphaltic plug joint systems at the Dutton Hill Road Underpass, Weymouth Road Underpass, and Running Hill Road Underpass at the location(s) shown on the Plans, in accordance with these Specifications or as directed by the Resident. This work shall include furnishing, installation and removal of any bond breaking materials used to prevent asphalt pavement layers from adhering to any waterproofing membrane and any temporary header(s) installed with the intent to form the asphaltic plug joint channel, and any preparation required for the installation of the asphaltic plug joint.

This work shall also include having the approved manufacturer provide a qualified technical representative(s) to supervise the installation of the joint systems. The representative(s) shall instruct, train and supervise the Contractor's personnel in the proper methods of installation. All costs associated with this service shall be included in the unit price of the work.

Bridging plates for asphaltic plug joint systems shall only be used when shown on the Contract Plans.

520.02 Submittals

Prior to construction, the Contractor shall submit the following to the Resident for review and approval:

- (a) Complete and detailed Shop Drawings of asphaltic plug joint system. Shop Drawing shall include information covering materials, their properties, installation procedures, storage and handling requirements, and Materials Safety Data Sheets.
- (b) The resume of the manufacturer's technical representative, which shall include the representative's experience installing the asphaltic plug joint system along with the names and telephone numbers of contact persons for recent projects where technical assistance was provided.
- (c) Certified test reports of the asphaltic binder, closed cell foam backer rod and the plastic compound.
- (d) Certificates of Compliance for bridging plates, centering nails, and aggregate.

520.03 Materials

The asphaltic plug joints shall consist of a system including bridge joint binder material, aggregate, backer rod, closed cell foam, elastomeric concrete header material and polysulfide joint

sealant conforming to the details and dimensions shown on the Plans, in accordance with these Specifications and as directed by the Resident. Bridging plates shall only be used when shown on the Contract Plans.

The following systems are acceptable for use as asphaltic plug joints:

<u>Thorma-Joint</u>	<u>Polyjoint</u>	<u>Koch BJS</u>
Linear Dynamics, Inc. 400 Lannidex Plaza Parsippany, NJ 07054	A.H. Harris 321 Ellis Street New Britain, CT 06050	Koch Materials Company P.O. Box 510 Stroud, OK 74079

Materials which are incorporated in or used in conjunction with approved asphaltic plug joint systems are as follows:

(a) Asphaltic Binder:

Binder shall meet or exceed requirements of AASHTO M301 (ASTM D3405) and consist of hot applied, thermoplastic polymeric modified asphalt with the following properties when tested in accordance with the following ASTM methods:

PROPERTY	REQUIREMENT	TEST METHOD
Softening Point, °F	180 min.	ASTM D36
Tensile Adhesion @ 77°F, %	800 min.	ASTM D3583
Ductility @ 77°F, inch	16 min.	ASTM D113
Penetration, 0.1 mm 77°F, 150 g, 5 s 0°F, 200 g, 60 s	90 max. 10 max.	ASTM D3407
Flow 5 hrs @ 140°F, mm	3.0 max.	ASTM D3407
Bond @ -20°F	pass 3 cycles	ASTM D3407
Resilience @ 77°F, %	60 min.	ASTM D3407
Asphalt Compatibility @ 140°F	pass	ASTM D3407
Recommended Pouring Temperature, °F	380 to 390	
Safe Heating Temperature, °F	410	

(b) Backer Rod:

Backer rod shall be a cylindrical closed cell expanded polyethylene foam rod, with a diameter of 150 percent of joint opening width, capable of withstanding the temperature of the hot binder materials and meeting the manufacturer's requirements, or the following properties, whichever is more stringent:

PROPERTY	REQUIREMENT	TEST METHOD
Density, lb/ft <sup>3</sup>	2.0 min.	ASTM D1622
Tensile Strength, psi	25 min.	ASTM D1623
Water Absorption, % of wt.	1.0 max.	ASTM C509

## (c) Bridging Plate:

Bridging Plate shall be either Plate Steel or Aluminum Flashing as specified on the plans.

Plate Steel Bridging Plates shall be fabricated from ASTM A36 steel, shall be a minimum of 1/4 inch thick and shall be galvanized. Holes for centering nails shall be located approximately one foot on center along the centerline of plates.

Aluminum Flashing Bridging Plates shall be rust-free roll aluminum. The aluminum flashing shall be a minimum of 6" wide and have a minimum thickness of 0.02 inches.

## (d) Centering Nail:

Nail shall be 16d or larger and hot dip galvanized in accordance with ASTM A153.

## (e) Aggregates:

Aggregate shall be crushed, double-washed and dried, igneous rock and meeting the manufacturer's gradation. This aggregate shall also be used for top dressing on the finished joints.

## (f) Plastic Compound:

Plastic compound used for repairing overcuts in bituminous concrete overlays shall be a two-component liquid with a synthetic resin base. It shall have a minimum viscosity of 3,500 cps at 77°F and a maximum viscosity of 65,000 cps at 25°F. The plastic compound shall be cured by the addition of a specific hardener. Sufficient hardener shall be used to cure the plastic compound in approximately 30 minutes at 77°F. It shall have sufficient strength and resiliency to withstand stresses set up by vibration, expansion and contraction due to temperature changes. It shall also be resistant to most chemicals and solvents, including most salts, acids, and hydrocarbons.

## (g) Aluminum Flashing:

Aluminum flashing shall be rust-free roll aluminum. The aluminum flashing shall be a minimum of 6" wide and 0.0084" thick.

## (h) Closed Cell Foam:

Closed Cell Foam shall be one of the following materials:

<u>Manufacturer:</u> Dow Building Solutions GreenGuard Owens Corning	<u>Product:</u> SYTROFOAM Extruded Polystyrene Insulation Board Foamular 250
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#### 520.04 Installations

Asphaltic plug joint system shall be installed in accordance with manufacturer's latest instructions and specifications. Manufacturer's representatives shall be present during the entire installation to ensure satisfactory results are obtained.

Asphaltic plug joint system shall allow total joint movement for up to two inches. The installation shall be centered over the expansion joint gap as indicated on the Plans. It shall not be installed when ambient or substrate temperatures are below 40°F, when rain is imminent, or in other environmental conditions disapproved by the Resident. The area shall be free of any dirt, dust, moisture, petroleum or solvents that might contaminate the joint materials or reduce the bond of the joint system to the substrate or vertical faces. The use of compressed air and heat may be required to dry the area before installing the joint system.

Backer rods shall be installed in expansion joint openings at a minimum of one inch depth as indicated on the Plans.

Aluminum flashing shall be placed centered above the backer rod and shall be placed the full length of the expansion joint.

Binder shall be heated to a safe temperature as recommended by manufacturer. Heating kettles shall be equipped with continuous agitation system, temperature controller, calibrated thermometer and double steel jacket with an oil layer in between, to prevent scorching of the binder. During application, the temperature of binder shall be maintained at a minimum of 350°F. It shall be poured into expansion joint openings until it runs over edges.

If called for on the plans the bridging plates, whether fabricated from steel plate or aluminum flashing, shall be placed from curb to curb on the roadway portion of expansion joints. Plates shall be centered over joint openings. Centering nails shall be placed in pre-drilled holes and hammered in to secure plates.

Once the bridging plates are installed, liquid asphalt binder shall be poured and leveled over the bridging plates and adjacent membrane surfaces in a manner that ensures full coverage. Areas with excessive application, such as pooling of liquid, should be removed or dispersed along the joint area.

Aggregate shall be heated in a rotating drum mixer to a minimum of 350°F or as recommended by the Engineer. The thermoplastic polymeric modified asphalt Binder shall be added to the mixer to pre-coat aggregates.

Coated aggregate shall be placed into blockouts in layers as recommended by the manufacturer. Blockouts shall be overfilled with coated aggregate as required to compensate for compaction. Equipment for compaction shall be as recommended by the manufacturer. Additional

thermoplastic polymeric modified asphalt binder shall be screeded over the compacted joint to fill any surface voids.

Top dressing aggregate shall be applied per the manufacturer’s recommendation.

Plastic compound shall be used for repairing overcuts in bituminous concrete. Cleaning, mixing and application shall be in conformance to the manufacturer’s instructions.

Vehicular traffic may pass over finished joints two-hours after compaction or as recommended by the manufacturer.

520.05 Method of Measurement

Asphaltic Plug Joint system will be measured by the linear foot along the top surface of installed joints to the limits as shown on the Plan. Preparation of surfaces for the proposed joint system including cutting, grinding and cleaning, will not be measured separately for payment, but shall be incidental to the Asphaltic Plug Joint pay item.

520.06 Basis of Payment

Asphaltic Plug Joint will be paid for at the Contract unit price per linear foot which price shall be full compensation for all labor, materials, equipment and incidentals required for furnishing and installing the Asphaltic Plug Joint as shown on the Plans, in accordance with these Specifications or as approved by the Resident.

The backer rod and elastomeric sealant installed up the vertical face, and across the horizontal surfaces, of bridge curbs and sidewalks will not be measured separately for payment, but shall be incidental to the Asphaltic Plug Joint pay item.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
520.23      Asphaltic Plug Joint	Linear Foot

SPECIAL PROVISIONSECTION 520EXPANSION DEVICES – NON-MODULAR

(Expansion Joint Modification)

520.01 Description

The following paragraph is added:

This work shall also include modifying the existing deck expansion joints at the abutments at the Blackstrap Road Underpass Bridge as shown on the Plans and in accordance with these Specifications or as approved by the Resident. The Expansion Joint Modification work at each joint consists of removal and disposal of the existing elastomeric gland seal from the existing joint, removal of pavement from the top of abutment backwall and bridge deck to the limits shown in the plans, furnishing and installing new steel plates and steel edge members on the existing expansion joint angles and curb plates, furnishing and installing new elastomeric concrete joint headers, and furnishing and installing new elastomeric gland seals, as shown on the Plans.

520.02 Materials

The following paragraphs are added:

Materials for each new elastomeric gland seal shall meet the material requirements of Expansion Device - Compression Seal specified in this Subsection. The seal shall be a Watson Bowman Acme Wabo StripSeal model number SE-400 and the steel edge members that provide recesses for locking the gland seal in position shall be standard profile configuration “E” in the deck joint and “A” in the curb joints.

The elastomeric concrete placed between the joint plates and deck surface/top of backwall shall be a product be listed on the MaineDOT qualified products list of elastomeric concrete. The elastomeric concrete manufacturer’s onsite representative will not be required for this installation.

520.03 Fabrication

The following paragraph is added:

For each Expansion Joint Modification the Contractor shall field measure the existing joint and joint components in the deck and curbs prior to development of shop drawings. The shop drawings shall indicate that they are based on field measurements

520.06 Installations

The following are added after the first paragraph:

On phased construction projects, gland seals shall be installed in one piece after the joint plates and steel edge members are installed for all construction phases. The Contractor shall schedule the installation of the work when the ambient temperature allows the bridge steel to contract sufficiently so the gland seal may be installed without damage.

After the joint plates are installed the Contractor shall place elastomeric concrete between the joint plates and deck surface/top of backwall as shown in the Plans. The elastomeric concrete shall be cured in accordance with the manufacturer's recommendations.

Once the new gland seals are permanently installed, the Contractor shall thoroughly clean the abutment seats, bearings, and girder ends by pressure washing to remove any debris, salt, or other foreign contaminants.

All field welding shall be done by a AWS D1.5 certified welder.

#### 520.07 Method of Measurement

The following paragraphs are added:

Expansion Joint Modifications will be measured as Each.

Preparation of existing surfaces for the proposed joint modifications including any cutting, grinding and cleaning of existing expansion joint and curb plates, will not be measured separately for payment, but shall be incidental to the Expansion Joint Modification item.

Furnishing, placing and curing elastomeric concrete between the joint plates and deck surface/top of backwall as shown in the Plans will not be measured separately for payment, but shall be incidental to the Expansion Joint Modification item.

Pressure washing the abutment seats after seal installation will not be measured separately for payment, but shall be incidental to the Expansion Joint Modification item.

#### 520.08 Basis of Payment

The following paragraphs are added:

Expansion Joint Modification will be paid for at the Contract unit price which shall be full compensation for: removal and disposal of the existing elastomeric gland seal from the existing joint; removal of pavement and concrete from the top of abutment backwall and bridge deck to the limits shown in the plans; furnishing and installing new steel plates and steel edge members on the existing expansion joint angles and curb plates; furnishing, installing and curing new elastomeric concrete joint headers; and furnishing and installing new elastomeric gland seals; including all materials, labor, tools, equipment and incidentals necessary to complete the work in accordance with the Plans and Specifications.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
520.2211	Expansion Joint Modification	Each

SPECIAL PROVISIONSECTION 520EXPANSION DEVICES – NON-MODULAR

(Silicone Coated and Pre-compressed Seal)

520.01 Description

The work shall consist of furnishing and installing waterproof expansion joints at the Running Hill Road Underpass and Dutton Hill Road Underpass at the locations shown and in accordance with the details shown on the plans and the requirements of this specification. Preformed sealant shall be silicone pre-coated, preformed, pre-compressed, self-expanding, sealant system.

520.02 Materials

The pre-compressed sealant shall be SEISMIC COLORSEAL as manufactured by EMSEAL or approved equivalent. The expansion joint system shall be comprised of three components:

1. Preformed sealant shall be silicone pre-coated, preformed, pre-compressed, self-expanding, sealant system
2. Expanding foam to be cellular foam impregnated with a water-based, non-drying, 100% acrylic dispersion.
3. Seal shall combine factory-applied, low-modulus silicone and a backing of acrylic-impregnated expanding foam into a unified hybrid sealant system.

Silicone external color facing shall be gray and shall be factory-applied to the foam while it is partially pre-compressed to a width greater than maximum joint extension and cured before final compression. When compressed to final supplied dimension, a bellow(s) to handle movement must be created in the silicone coating.

Material shall be capable of movements of +50%, -50% (100% total) of nominal material size.

All products must be certified by independent laboratory test report to be free in composition of any waxes or wax compounds using FTIR and DSC testing.

All products shall be certified in writing to be: a) capable of withstanding 150°F (65°C) for 3 hours while compressed down to the minimum of movement capability dimension of the basis of design product (-50% of nominal material size) without evidence of any bleeding of impregnation medium from the material; and b) that the same material after the heat stability test and after first being cooled to room temperature will subsequently self-expand to the maximum of movement capability dimension of the basis-of-design product (+50% of nominal material size) within 24 hours at room temperature 68°F (20°C).

Alternate manufacturers must demonstrate that their products meet or exceed the design criteria and must submit certified performance test reports performed by nationally recognized independent laboratories. Submittal of alternates must be made two weeks prior to bid opening to allow proper evaluation time.

The following systems have been pre-approved for use on this project:

SEISMIC COLORSEAL as manufactured by EMSEAL JOINT SYSTEMS LTD.  
25 Bridle Lane  
Westborough, MA 01581  
Phone: 800-526-8365  
www.emseal.com

### 520.03 Fabrication

Submittals – Prior to construction, the Contractor shall prepare and submit:

- A. Typical joint seal system drawing(s) indicating pertinent dimensions, general construction, and expansion joint opening dimensions. Directional changes and terminations into horizontal plane surfaces shall be shown in the drawings.
- B. Joint seal system product information, including complete installation instructions.
- C. Samples of the materials comprising the joint seal system.

The joint seal system shall be supplied pre-compressed to less than the joint size, packaged in shrink-wrapped lengths with a mounting adhesive on one face.

### 520.04 Delivery

Products shall be delivered to the site in Manufacturer's original, intact, labeled containers. Products shall be handled and protected as necessary to prevent damage or deterioration during shipment, handling and storage. Products shall be stored in accordance with Manufacturer's instructions.

### 520.05 Installation

The Contractor shall arrange with the pre-compressed sealant's manufacturer to have the services of a competent field representative at the work site prior to any installation to instruct the work crews in the proper installation procedures. The field representative shall remain at the job site after work commences and continue to instruct until the representative and the Contractor, Inspector and Engineer are all in agreement that the crew has mastered the technique of installing the system successfully.

The manufacturer's field representative must be fully qualified to perform the work and shall be subject to the approval of the Engineer.

Immediately prior to the installation of the seal element, the concrete contact surface shall be prepared per the manufacturer’s requirements and to the satisfaction of the manufacturer’s field representative.

Any protruding roughness of the surfaces shall be removed to ensure joint sides are smooth. The Contractor shall ensure that there is sufficient depth to receive the full depth of the size of the seal being installed. The joint gap shall be inspected for cleanliness by the Resident. Should any contaminates remain, the joint must be re-cleaned.

The joint seal shall be protected by the Contractor to prevent any damage by any site equipment or other matters throughout the on-going construction process.

520.06 Method of Measurement

Expansion Device – Silicone Coated and Pre-compressed Seal will be premeasured by the linear foot, as measured along the joint centerline complete in place.

520.07 Basis of Payment

Expansion Device – Silicone Coated and Pre-compressed Seal will be paid for at the contract unit price per linear foot, which shall be payment in full for furnishing all materials, labor and equipment, including the manufacturer’s field representative and preparation of the concrete surfaces of the joint in accordance with the manufacturer’s recommendations, and all incidentals necessary to provide a complete watertight joint seal.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
520.234      Expansion Device – Silicone Coated and Pre-compressed Seal	LF

SPECIAL PROVISIONSECTION 520EXPANSION DEVICES – NON-MODULAR

(Bridge Joint Replacement - Silicone Coated and Pre-compressed Foam)

520.01 Description

The work shall include furnishing and installing an expansion joint seal system consisting of a preformed, pre-compressed, self-expanding, sealant system with silicone pre-coated surface at the Running Hill Road Underpass as shown in the Plans.

The work shall include preparing the surfaces of the seal location in accordance with the manufacturer's recommendations. The joint seal system shall consist of a preformed compression (pre-compressed) seal and epoxy adhesive combined in into a system that will seal the joint in which it is installed.

520.02 Materials

The pre-compressed sealant shall be BEJS as manufactured by EMSEAL with a nominal size of 2 inches or approved equivalent. The pre-compressed installation size shall be as required for the existing joint opening. The Contractor shall field measure the existing joint opening to determine the appropriate pre-compressed installation size. The expansion joint system shall be comprised of two components:

- 1) Cellular polyurethane foam impregnated with hydrophobic 100% acrylic (free in composition of any waxes or asphalts), water based emulsion, and factory coated with highway-grade, fuel resistant silicone.
- 2) Field-applied epoxy adhesive primer.

Impregnation agent shall have proven non-migratory characteristics. Silicone coating shall be highway-grade, low-modulus, fuel resistant silicone applied to the impregnated foam sealant at a width greater than maximum allowable joint extension and which when cured and compressed will form a bellows. Depth of seal shall be as recommended by manufacturer. The foam seal shall be installed into manufacturer's standard field-applied epoxy adhesive. The sealant system shall be installed recessed from the steel surface such that when the field applied injection band of silicone is installed between the steel and the foam-and-silicone-bellows, the system will be ½ inches in from the exterior steel surface. Material shall be capable of movements of +50%, -50% (100% total) of nominal material size. Transitions shall be warranted to be watertight at inside and outside comers through the full movement capabilities of the product.

All products must be certified by independent laboratory test report to be free in composition of any waxes or wax compounds using FTIR and DSC testing.

All products shall be certified in writing to be: a) capable of withstanding 150°F (65°C) for 3 hours while compressed down to the minimum of movement capability dimension of the basis

of design product (-50% of nominal material size) without evidence of any bleeding of impregnation medium from the material; and b) that the same material after the heat stability test and after first being cooled to room temperature will subsequently self-expand to the maximum of movement capability dimension of the basis-of-design product (+50% of nominal material size) within 24 hours at room temperature 68°F (20°C).

Alternate manufacturers must demonstrate that their products meet or exceed the design criteria and must submit certified performance test reports performed by nationally recognized independent laboratories. Submittal of alternates must be made three weeks prior to bid opening to allow proper evaluation time.

The following systems have been pre-approved for use on this project:

BEJS as manufactured by EMSEAL JOINT SYSTEMS LTD.  
25 Bridle Lane  
Westborough, MA 01581  
Phone: 800-526-8365  
[www.emseal.com](http://www.emseal.com)

#### 520.03 Fabrication

Submittals – Prior to construction, the Contractor shall prepare and submit:

- A. Typical joint seal system drawing(s) indicating pertinent dimensions, general construction, and expansion joint opening dimensions. Directional changes and terminations into horizontal plane surfaces shall be shown in the drawings.
- B. Joint seal system product information, including complete installation instructions.
- C. Samples of the materials comprising the joint seal system.

#### 520.04 Delivery

Products shall be delivered to the site in Manufacturer's original, intact, labeled containers. Products shall be handled and protected as necessary to prevent damage or deterioration during shipment, handling and storage. Products shall be stored in accordance with Manufacturer's instructions.

#### 520.05 Installation

Immediately prior to the installation of the seal element, the steel plate surface shall be prepared per the manufacturer's requirements and to the satisfaction of the Resident.

Any protruding roughness of the surfaces shall be removed to ensure joint sides are smooth. The Contractor shall ensure that there is sufficient depth to receive the full depth of the size of the seal being installed. The joint gap shall be inspected for cleanliness by the Resident. Should any contaminates remain, the joint must be re-cleaned.

The joint seal shall be protected by the Contractor to prevent any damage by any site equipment or other matters throughout the on-going construction process.

The pre-compressed seal and epoxy adhesive shall be installed in accordance with the Plans.

520.06 Method of Measurement

Expansion Device – Silicone Coated and Pre-compressed Foam will be premeasured by the linear foot, as measured along the joint centerline complete in place.

520.07 Basis of Payment

Expansion Device – Silicone Coated and Pre-compressed Foam will be paid for at the contract unit price per linear foot, which shall be payment in full for furnishing all materials, labor and equipment, including preparation of the surfaces of the joint in accordance with the manufacturer’s recommendations, and all incidentals necessary to provide a complete joint seal.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
520.2341     Bridge Joint Replacement – Silicone Coated and Pre-compressed Seal	LF

SPECIAL PROVISION

SECTION 523

BEARINGS

(Reset Steel Bearing)

523.01 Description

The following paragraphs are added:

This work shall also consist of resetting the existing steel bearings at the Blackstrap Road Underpass Bridge as shown on the Plans and in accordance with these Specifications.

523.50 Method of Measurement

The following sentences are added:

Reset Steel Bearing will be measured for payment by the actual number of existing bearings reset in accordance with the Plans and Specifications.

Jacking and temporary support of bridge girders required for bearing removal will be measured for payment separately under the respective Temporary Structural Support pay item.

523.51 Basis of Payment

The following paragraphs are added:

Reset Steel Bearing will be paid for at the contract unit price each, which will be full compensation for all materials, equipment, labor and incidentals required to reset the existing bearings to remain.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
523.1201      Reset Steel Bearings	Each

SPECIAL PROVISIONSECTION 523BEARINGS

(PTFE Elastomeric Bearings, Expansion)

523.01 Description

The following paragraph is added:

This work shall also consist of the installation of new elastomeric bearings with PTFE sliding surfaces at the locations shown on the Plans.

523.02 Materials

The following paragraphs are added:

All exposed steel surfaces shall be galvanized in accordance with ASTM A123 and A153 as applicable.

Stainless steel plates shall be 20 gauge (GA) conforming to ASTM A240 Type 304. Sliding surfaces shall have a surface finish of 10 micro inches R.M.S. (Root-Mean-Square) on the side in contact with PTFE. The reverse side shall be prepared for bonding to the auxiliary plate or load plate. The stainless steel shall be a minimum of 1/4 inch smaller than the auxiliary load plate in all directions, and shall be bonded to the auxiliary load plate with an epoxy adhesive meeting the requirements of this Specification, or as approved by the Resident.

Epoxy adhesive shall meet the requirements of the following Table:

Physical Property	ASTM Test Method	Requirement
Flexural Modulus	D790	$2 \times 10^4$
Safe Operating Temperature		-60° to 145° C
Linear Expansion Coefficient, in/in	D696	$4.8 \times 10^{-5}$
Bond Strength, psi (Tensile Shear)	D1002	1,000

Polytetraflouroethylene (PTFE): PTFE sliding surfaces shall be 100 percent virgin unfilled PTFE polymer and bonded to a rigid confining substrate. The substrate shall limit the elongation of the confined PTFE to not more than 0.009 inch under a load of 2,000 psi for 15 minutes at 78°F for a 2 inch by 3 inch test sample. The virgin unfilled PTFE shall have a minimum thickness of 1/16 inch.

PTFE properties shall conform to the requirements of the following Table:

Physical Property	ASTM Test Method	Requirement
Hardness at 78°F	D2240	50 -65 Durometer D
Tensile Strength, psi	D1457	2800 (min. avg.)
Elongation %	D1457	200 (min. avg.)
Deformation Under Load % 78°F – 2,000psi (1/2”x1/2”x1/32”)	D621	4 (max.)
Specific Gravity	D792	2.14 to 2.21

Coefficient of friction between contacting PTFE and polished stainless steel surfaces shall not exceed 0.06 at an 800 psi compressive loading.

PTFE shall be bonded to the upper load plate or elastomeric pad with rigid confining medium substrate conforming to the requirements of this Specification.

#### 523.09 Installation of Bearings

The following paragraphs are added:

Where required, removal of existing lead based paint shall be in accordance with Subsection 105.2, Health and Safety. The Contractor shall submit a lead based paint removal plan to the Resident for approval prior to the start of the work.

All surfaces of the new and existing steel girders, where paint is removed for welding and bearing installation, shall be repaired to the requirements of Special Provision 506.26 Repairs, upon completion of the work.

Welding of structural steel adjacent to elastomeric bearing pads shall be controlled such that no portion of the bearing pad or Teflon surface will be subjected to temperatures in excess of 300°F. Temperature Indicating Crayons are to be used on the steel components immediately adjacent to the elastomeric bearing and Teflon surfaces during field welding operations to assure that these temperature restrictions are not exceeded.

#### 523.51 Basis of Payment

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
523.54021 PTFE Elastomeric Bearings, Expansion	Each

SPECIAL PROVISION

SECTION 523

BEARINGS

(Bearing Removal)

523.01 Description

The following paragraphs are added:

This work shall also consist of removing existing bearing assemblies at the Weymouth Road Underpass Bridge. All removed bearing assemblies shall become property of the Contractor.

523.50 Method of Measurement

The following sentences are added:

Bearing Removal will be measured for payment by the actual number of bearings removed.

Jacking and temporary support of bridge girders required for bearing removal will be measured for payment separately under the respective Temporary Structural Support pay item.

523.51 Basis of Payment

The following paragraph is added:

Bearing Removal will be paid for at the contract unit price each, which price shall be full compensation for all materials, equipment, labor and incidentals required for bearing removal.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
523.521      Bearing Removal	Each

SPECIAL PROVISIONSECTION 524TEMPORARY STRUCTURAL SUPPORTS

(Jacking Existing Superstructure)

524.01 Description

The following paragraphs are added:

At Blackstrap Road, this work shall consist of the jacking and temporary structural support of the existing superstructure at pier and abutment locations to allow for the rehabilitation and resetting of existing bearings.

At Weymouth Road, this work shall consist of the jacking and temporary structural support of the existing superstructure at pier and abutment locations to allow for the removal of existing bearings and for the installation of proposed bearings and bearing bolster assemblies. All girders at all supports must be jacked and temporarily supported simultaneously while the bridge is closed to traffic.

This work shall also consist of designing, fabricating, erecting, operating, maintaining, and dismantling the temporary structural supports and jacking systems required to perform the work.

524.02 Materials

The following paragraphs are added:

Materials used as temporary structural supports shall be structural grade sawn timber, structural steel, or a combination of both, at the Contractor's option. All temporary structural support materials, whether new or used, shall be sound and of adequate strength and cross section for the intended loads. All structural steel shall have a minimum yield strength of 36,000 psi.

Blocking and/or pads required to accommodate differences in elevation and/or to distribute loads to the soil may additionally incorporate plain and reinforced concrete as approved by the Resident.

524.03 Design

The following paragraphs are added:

The jacking system and temporary structural supports shall be designed to support all applicable loads including, but not limited to, all vertical loading including live load and impact, transverse and longitudinal horizontal loads, differential settlement induced loads, and shall account for any temporary unbalanced loading due to jacking forces and other loading during load transfer. The temporary structural supports shall be designed with sufficient redundancy that failure of one member will not cause the collapse of the entire system or the supported structure. Temporary

structural supports which are adjacent to traveled ways or which support structures carrying traffic, shall additionally be designed to resist any vibration or impact forces due to traffic and shall incorporate sufficient protection against impact by errant vehicles. Temporary structural supports which are founded on, or are in close proximity to, existing structures to be rehabilitated shall be designed to resist any vibration induced by other work to be completed on the project.

The jacking system and temporary structural support shall be designed and sealed by a Professional Engineer licensed in the State of Maine. Design computations, plans, details, working drawings, and other documentation necessary to complete the work and certify conformance with these provisions shall be approved by the Resident prior to beginning this work.

The Contractor shall provide bracing or other means of restraint to prevent longitudinal and transverse movement of the superstructure and twisting of the stringers or deck during the jacking operations, and while the superstructure is temporarily supported. These lateral restraints shall include steel sliding plates, or alternative low friction rigid material, to facilitate vertical movement of the superstructure during jacking operations.

All design, detail and load requirements shall conform to the most current edition of the AASHTO LRFD Bridge Design Specifications with applicable Interim Specifications, the Contract Plans, the Standard Specifications, and as specified herein. The design computations shall verify the proposed jacking scheme does not introduce unacceptable stresses in the existing bridge components including steel girders, diaphragms, connections, bridge decks, and pier caps. All design computations submitted for approval shall be reviewed, checked, and initialed accordingly. Any support systems requiring attachment to existing concrete shall be approved by the Resident. Systems requiring extensive drilling and anchoring into existing concrete will not be accepted.

As part of the jacking system design computations, the Contractor shall determine all applicable live load and dead load reactions based on the proposed jacking scheme. Note that at the Weymouth Road Underpass, the bridge will be closed to live load traffic at the time of jacking. At the Blackstrap Road Underpass, the bridge is not anticipated to be closed to live load traffic and the proposed jacking scheme shall be capable of supporting live load traffic as noted in this section.

The Contractor shall provide a jacking system and a temporary support system with a capacity of at least 150% of the calculated loads.

The jacking force applied at each jack location shall not exceed of 125% of the loads identified to avoid overstressing, or otherwise damaging, the pier caps or superstructure. If loads in excess of these limits are required the jacking operations shall cease and the Resident shall be notified. Jacking operations shall not resume until guidance is provided by the Resident. Jacks on the piers and abutments shall be located on the existing centerlines of bearing.

Removal of lead based paint shall be in accordance with Subsection 105.2.4.2, Lead Paint. The Contractor shall submit a lead based paint removal plan to the Resident for approval prior to the start of the work.

All surfaces of the existing steel girders, where paint is removed for jacking operations shall be repaired with two coats of cold-galvanizing, upon completion of the work.

#### 524.04 Erection and Removal

The following paragraphs are added:

At the Weymouth Road Underpass, the existing superstructure shall be raised by jacking at each pier and abutment. A minimum of four jacking points shall be used at each pier and abutment location. The jacking shall be synchronized so that all portions of the girders are raised by approximately equal amounts simultaneously. A maximum of 1/8 inch differential movement between adjacent girders will be allowed during the jacking operation. A maximum of 2 inches of differential movement will be permitted between a substructure jacking height and the overall plane of the other substructure jacking heights during jacking operations.

The Contractor may support the jacking systems and temporary structural support systems off of the top of abutment seats, top of pier caps, footings, or Contractor-furnished blocking systems. The proposed anchorage system shall not be supported primarily from the face of abutment or face of pier. Bracing shall be provided to maintain the superstructure in a stable condition during the jacking operations.

Drawings showing the method the Contractor chooses to raise, temporarily support, and brace the superstructures shall be stamped by a Professional Engineer registered in the State of Maine, and shall be submitted to the Resident for approval.

#### 524.05 Method of Measurement

This subsection is replaced in its entirety with the following:

Jacking Existing Superstructure will be measured by the lump sum at each bridge and will include the design, fabrication, erection, operation, maintenance, and removal of all required temporary jacking and structural support systems to the extent specified herein. It shall also include the removal or modification, and reinstallation of existing bridge elements to prevent damage during the jacking operation and the repair of damaged or removed protective coatings as specified herein. Temporary works used by the Contractor for their convenience will not be measured for payment. The work associated with removal and reinstallation of existing highway appurtenances (e.g. guardrails, sign supports, etc.) to facilitate the erection of temporary structural supports will not be measured for payment, but will be considered incidental to the Jacking Existing Superstructure Pay Item.

#### 524.06 Basis of Payment

This subsection is removed and replaced with the following:

Jacking Existing Superstructure will be paid for at the contract lump sum price at each bridge which price shall be full compensation for all materials, equipment, labor and incidentals necessary for the design, erection, maintenance and dismantling of the jacking and temporary support systems; and the satisfactory jacking and lowering of the superstructure required on the project in accordance with these specifications.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
524.7212	Jacking Existing Superstructure	Lump Sum

SPECIAL PROVISIONSECTION 524TEMPORARY STRUCTURAL SUPPORTS

(Protective Shielding - Steel Girders)

524.01 Description

The following paragraph is added:

This work shall also consist of furnishing all labor, equipment and materials required to provide protection for the public during demolition and construction. This protection shall include, but not necessarily be limited to, protective shielding of existing structures during demolition work, concrete removal, and installation of temporary deck support over roadway lanes and shoulders on all existing and new bridge structures.

The following Subsections are added:

524.031 Protective Shielding Design

Prior to the start of work, the Contractor shall submit working drawings for review and comment indicating the sizes and dimensions of protective shielding. If the shielding is to be attached to prestressed concrete components the submittal shall be coordinated with the respective precast concrete shop drawings. The proposed methods of protective shielding, including connections and fasteners, shall be in accordance with the following criteria:

The protective shielding shall be designed for safely supporting all construction and dead loads, but not less than 100 pounds per square foot with a load duration of seven (7) days. Protective shielding shall be stiff enough to limit deflection to 1/2 inch under maximum loads and to be tightly sealed at all joints. The protective shielding shall be placed on the tops of the bottom flanges of the steel girders, or between the web or bottom flanges of the concrete I-girders, with edges and laps made tight to protect the turnpike motorists from dust, debris and falling objects.

Special hangers may be required to support shielding on prestressed structural concrete I-girders or prestressed structural concrete slabs. The Contractor will not be permitted to install inserts, shoot fasteners, or drill holes in the concrete I-girders or concrete slabs to support the shielding. The Contractor may propose 3/4 inch or one inch diameter sleeves be installed in the webs of the girders during fabrication for temporary fasteners to pass through. The proposed and approved sleeves shall be coordinated with the girder manufacturer; and shall be filled, and stuck flush, with an epoxy grout after the protective shielding is removed.

524.041 Protective Shielding Erection and Removal

No portion of the protective shielding installed over a roadway shall project below a plane connecting the bottoms of the bottom flanges of the steel stringers or concrete I-girders. During demolition operations, the protective shielding shall be covered with sheet plastic made tight at

edges and laps to prevent water used in the sawcutting operation from falling onto the facilities under the bridge.

The protective shielding on existing and new structures shall extend horizontally three feet beyond the fascia lines and vertically to a point one foot minimum above the top of parapet or railing. The shielding shall also extend 10 feet beyond the edge of pavement of the roadway below, unless otherwise noted on the Plans or as approved by the Resident.

Shielding shall be approved and installed prior to the start of any demolition work and shall remain in position during all demolition work. Shielding shall also be approved and installed prior to the start of any deck forming and shall remain in position during all deck work. The shielding shall be relocated or removed only as approved by the Resident.

Construction sequences may require protective shielding material to be removed, stored and then reinstalled by the Contractor. Any shielding which is damaged during this removal and reinstallation shall be replaced by the Contractor at no additional cost.

524.28 Method of Measurement

The following paragraph is added:

Protective Shielding will be measured by the square yard for shielding designed, installed, removed and disposed or stacked. For purposes of computing the area, only the horizontal plan dimensions will be used.

524.29 Basis of Payment

The following paragraphs are added:

Protective Shielding will be paid for at the Contract bid price per square yard and shall include all design, materials, transportation and stacking, labor (to install, remove and stack as needed), tools and equipment necessary to perform the work as described above or as approved by the Resident. The measurement shall include one sequence of placement, removal, and on-site storage (if applicable for intended reuse) of Protective Shielding. Where bridge and girder construction dictates that Protective Shielding is to be installed in the same location at a later date, then the quantity of Protective Shielding shall be increased accordingly to reflect the total work, and shall be tabulated on the drawings. Therefore, the calculated quantity of Protective Shielding will be the summation of each sequence noted above (placement, removal, and on-site storage). The Contractor shall note that additional timber material may be required to accommodate differing girder spacing or differing overhang dimensions.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
524.40          Protective Shielding - Steel Girders	Square Yard

SPECIAL PROVISIONSECTION 526CONCRETE BARRIER

(Temporary Concrete Barrier Type I - Supplied by Authority)

526.01 Description

The following paragraphs are added:

This work shall consist of loading, transporting, setting, resetting, removing, transporting and stacking Temporary Concrete Barrier Type I – Supplied by Authority. The barrier shall have attachments allowing individual sections to be connected into a continuous barrier.

The work also includes supplying connecting pins and furnishing and mounting retro-reflective delineators, per Subsection 526.02 and 526.03.

Concrete barriers supplied by Authority shall be available at the following location(s):

<u>Maintenance Area</u>	<u>Linear Feet of Barrier</u>
Crosby Maintenance Area Mile 46 Southbound	1,130

Upon substantial completion of work, the Contractor shall remove and transport the barrier back to its maintenance area of origin. All barrier shall be returned, sorted and stacked according to type in locations directed by the project Resident or maintenance area foreman.

526.02 Materials

The following paragraphs are added:

- e. Delineators shall be bi-directional with a minimum effective reflective area of eight square inches as approved by the Resident. The reflectors shall be methyl methacrylate and the housing of acrylonitrile butadiene styrene. Color shall be in accordance with the MUTCD.

526.021 Acceptance

The Resident shall have the authority to accept or reject all Temporary Concrete Barrier Type I – Supplied by Authority used on the Project that does not meet the requirements of this specification

526.03 Construction Requirements

The following paragraphs are added:

The Contractor shall notify the Resident prior to the scheduled pick-up and delivery of concrete barrier. No barrier shall be removed from or stacked at the Turnpike Maintenance Area without approval of the Resident.

The Contractor shall move and place barrier-utilizing methods that will not damage the barrier. Barrier that is damaged by the Contractor by failing to use proper methods shall be replaced by the Contractor at no additional cost to the Maine Turnpike Authority.

Concrete barrier supplied by the Authority consists of several different styles. Not all barriers may be compatible. The Contractor shall utilize caution when setting barrier to use identical barrier types as adjacent barrier. Non-compatible barrier that cannot be attached together shall be overlapped by a minimum of 10 feet with the blunt end on the non-traffic side of the barrier. This work will not be measured separately for payment, but shall be incidental to the concrete barrier.

Concrete barrier placed at roadway low points shall be shimmed on 1" by 2" by 2' long wood planks to allow drainage to pass under the barrier. In addition, the Resident may direct the Contractor to shim the concrete barrier at other locations to provide for proper roadway drainage. All labor, material, and equipment necessary to shim the barrier will not be measured separately for payment, but shall be incidental to the Concrete Barrier.

The removal of concrete barrier from adjacent to the travel lane may be conducted without a lane closure if it is accomplished in accordance with the following requirements:

1. Barrier is removed from the trailing end and the workmen and equipment involved in the operation are always behind the barrier. No workmen or equipment shall enter the travel lane.
2. Barrier shall be dragged away from the travel lane to at least a 30-degree angle by the use of a cable.
3. Barrier shall be lifted no more than six inches while within 10 feet of the travel lane.

Retro-Reflective Delineators shall be mounted as follows:

4. One on top of each barrier.
5. One on the traffic side of every barrier used in a taper.
6. One on the traffic side of every other barrier at regularly spaced intervals and locations.
7. Delineators shall be installed on both sides of the barrier if barrier is used to separate opposing traffic.
8. Delineators shall be physically adhered so as to withstand the force of throw from a snow plow.
9. If more than 25% of delineators in any 50 foot section of barrier fall off for any reason, the Contractor will be responsible for reinstalling all the delineators in that run at that their own cost.
10. Contractor is required to submit the installation method for review and approval to the Resident.

#### 526.04 Method of Measurement

The following paragraphs are added:

Temporary Concrete Barrier Type I – Supplied by Authority shall be measured for payment by the lump sum.

The loading, transporting, setting, resetting, removing, transporting, sorting and stacking of the barrier, the furnishing, installation and maintenance of the barrier delineators, and furnishing and installing connector pins will not be measured separately for payment, but shall be incidental to the cost of the Barrier. Temporary storage of Concrete Barrier between construction phases, if required, will not be measured separately for payment, but shall be incidental to the cost of the Barrier. All equipment required to load, unload, transport and stack Concrete Barrier shall be supplied by the Contractor.

Any Barrier lost or damaged by the Contractor shall be replaced by the Contractor at no additional cost to the Authority.

526.05 Basis of Payment

The fifth paragraph is deleted and not replaced.

The following paragraphs are added:

Temporary Concrete Barrier Type I – Supplied by Authority will be paid for at the Contract lump sum price, complete in place. Such payment shall be full compensation for loading, transporting, setting, resetting, temporary storage, removing, transporting and stacking at the area designated, furnishing all materials, and all other incidentals necessary to complete the work. Temporary Concrete Barrier Type I – Supplied by Authority and all connecting pins shall remain the property of the Authority, and shall be returned to the Turnpike Maintenance Area as designated in Subsection 526.01.

Payment of Concrete Barrier shall be based on a percentage of the work accomplished during that pay period.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
526.306      Temporary Concrete Barrier, Type I – Supplied by Authority	Lump Sum

SPECIAL PROVISION

SECTION 527

ENERGY ABSORBING UNIT

(Work Zone Crash Cushion)

527.01 Description

The first paragraph is deleted in its entirety and replaced with the following:

The Contractor shall furnish and install work zone crash cushions where shown on the Plans, as specified herein, in Special Provision 652, or as approved by the Resident. Work zone crash cushions are required at each exposed end of temporary concrete barrier or guardrail.

The exposed end of the concrete barrier within 30 feet of the mainline travel lane shall be protected at all times. Barrier shall not be reset until after the work zone crash cushion(s) has been set to protect the exposed end of the barrier.

527.02 Materials

The following paragraph is added:

Only work zone crash cushions meeting the NCHRP Report 350 TL-3 crash test requirements may be used on the turnpike and local roadways with posted speeds of 45 MPH or greater. Work zone crash cushions meeting the NCHRP Report 350 TL-2 crash test requirements may be used on local roadways with posted speeds of 40 MPH or less. The Contractor shall provide the Resident with documentation of the proposed work zone crash cushion's NCHRP Report 350 Crash Test Results prior to installation at the jobsite.

527.03 Construction Requirements

The following is added to the end of the first paragraph:

The design speeds for work zone crash cushions shall be 45 mph for local road and 70 mph for turnpike roadways unless otherwise noted on the Plans.

527.04 Method of Measurement

Work Zone Crash Cushions used to protect exposed ends of guardrail for steel girder erection will not be measured separately for payment, but shall be included under the Maintenance of Traffic for Steel Girder Erection item.

527.05 Basis of Payment

Payment will be made under:

Pay Item

Pay Unit

527.341      Work Zone Crash Cushions – TL-3

Unit

SPECIAL PROVISIONSECTION 602PIPE LINING

(Plastic Pipe)

Description: This work shall consist of inserting a new pipe into an existing culvert and constructing seals at the ends of the new pipe and filling the voids between the new and existing culvert pipe with grout in accordance with the plans and specifications. The Contractor shall utilize the following new pipe to be inserted into the existing pipe:

- 1) A smooth-lined Snap-Tite plastic pipe or any other HDPE culvert that meets this Special Provision under Materials and Pipe Design. The culvert shall be the largest size pipe that can be installed inside of the existing pipe and allow for a minimum 1" grout to be placed around the entire circumference of the pipe.
- 2) Total length shall be as detailed in the plans. The Contractor shall verify the length of the existing pipe prior to submitting fabrication drawings.

General Construction Requirements: Handle and assemble all elements of the structure in accordance with the manufacturer's instructions, except as modified herein, on the plans or as directed by the Resident.

The Contractor will dewater, inspect, and clean the existing culvert. The Contractor shall provide strutting and bracing to insure the stability of the existing culvert during this operation.

The Contractor may push or pull or use a combination of both to get the new pipe sections into place. When pushing is used, the jacking force must be uniformly distributed around the perimeter of the liner pipe to avoid the possibility of damaging the pipe due to a concentrated jacking load. The Contractor shall utilize skids in the existing culvert, to facilitate placement of the pipe sections. The displacement between adjacent pipe ends shall not exceed 1/2 in.

The pipe sections shall be braced against the existing culvert so that the new pipe shall remain in place during grouting operations. The Contractor is responsible for assuring that the pipe does not "Float" during the grouting operation. A minimum 1 in. of grout shall be between the new and existing culverts. Bracing material shall not significantly impede grout flow into the annular space between the culverts.

Seals: Place plywood or material of equivalent strength, in the annular space at each end of the culvert, to retain grout. Seals may be left in place providing they do not interfere with bank protection and/or fish passage.

Materials:

Pipe and Fittings - Reference Specifications:

ASTM F-714; Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR). Based on outside diameter

CSA B 137.1: Polyethylene Pipe, Tubing and Fittings for Cold Water Pressure Services.  
ASTM D-3350: Standard Specification for Polyethylene Plastics Pipe and Fittings Materials.

ASTM D-3035: Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR). Based on Controlled Outside diameter

ISO 9002: Model for Quality Assurance in Production and Installation.

AWWA C906: Standard for Polyethylene (PE) Pressure Pipe and Fittings 4 inch through 63 inch for Water Distribution.

- 1) The pipe shall be manufactured from polyethylene resin compound with a minimum cell classification of PE 345464C in accordance with ASTM D3350. This material shall have a long term hydrostatic strength of 1600 psi when tested and analyzed by ASTM D2837, and shall be a Plastic Pipe Institute (PPI) listed compound.
- 2) The raw material shall contain a minimum of 2%, well dispersed, carbon black. Additives, which can be conclusively proven not to be detrimental to the pipe may also be used, provided the pipe produces meets the requirements of this standard.
- 3) The pipe shall contain no recycled compound except that generated in the manufacturer's own plant from resin of the same specification and from the same raw material supplier.
- 4) Compliance with the requirements of this paragraph shall be certified in writing by the pipe supplier.
- 5) Manufacturer's Quality System shall be certified by an appropriate independent body to meet the requirements of the ISO 9002 Quality Management Program.

#### Pipe Design

The pipe shall be designed as a stand-alone direct burial pipe. The pipe shall be able to support the earth and live load by itself with no additional capacity from the existing pipe or the annular space grout.

- 1) The pipe shall be designed in accordance with the relationships of the ISO-modified formula (see ASTM F714).
- 2) The design pressure rating P shall be derived using the ISO modified formula and shall be its normal working pressuring in pounds per square inch at temperatures up to 73 F.
- 3) The Hydrostatic Design Stress shall be 800 psi for PE 3408 materials.
- 4) The pipe dimensions shall be as specified in manufacturer's literature.

#### Marking:

The following shall be continuously indent printed on the pipe or spaced at intervals not exceeding 5 feet:

- 1) Name and/or trademark of the pipe manufacturer.
- 2) Nominal pipe size
- 3) Dimension Ratio
- 4) The letters PE followed by the polyethylene grade per ASTM D3350, followed by the Hydrostatic
- 5) Design basis in 100's of psi e.g. PE 3408.
- 6) Manufacturing Standard Reference e.g. ASTM F 714
- 7) A production code from which the date and place of manufacture can be determined.

Joining Methods:

The polyethylene pipe should be joined by extrusion welding or other means in accordance with the manufacturer's recommendations.

The pipe manufacturer shall provide an outline of recommended field quality control procedures to be performed on the polyethylene system components.

Construction Requirements: The sections of pipe shall be assembled and joined together prior to insertion into the existing culvert. Assembly shall be accomplished above ground, either at the job-site or at a remote location. The pipe shall be welded on both the interior surface and exterior surface if joined by extrusion welding.

The polyethylene liner pipe may be inserted into the existing pipe with a power winch and steel cable connected to the end of the pipe in an appropriate manner. The pipe manufacturer's recommendations should be followed regarding the most appropriate method of attaching the cable to the liner pipe. If required, a special pulling head may be attached to the end of the liner pipe to facilitate easy connection of the pulling cable.

Method of Measurement Plastic Pipe satisfactorily placed and accepted will not be measured. The cost shall be incidental to the Culvert Sliplining pay item.

SPECIAL PROVISION

SECTION 606

GUARDRAIL

(W-Beam to 3-Bar Bridge Rail Transition)

606.01 Description

The section is amended by the addition of the following:

This work shall consist of furnishing and erecting W-beam to 3-bar bridge rail transitions at the required locations in accordance with the Specifications and in reasonably close conformity with the lines and grades shown on the Plans.

W-beam to 3-bar bridge rail transitions shall consist of galvanized thrie beam transition sections, nested thrie beam, wood or composite offset blocks, driven steel posts, connection hardware, terminal connectors, and other incidentals required to complete the work.

606.08 Method of Measurement

The section is amended by the addition of the following:

W-beam to 3-bar bridge rail transitions will be measured by each unit satisfactorily fabricated, delivered and erected.

Curbing will not be considered for payment as part of the W-beam to 3-bar bridge rail transitions, but will be measured for payment separately under Specification 609.

606.09 Basis of Payment

The section is amended by the addition of the following:

The accepted quantity of W-beam to 3-bar bridge rail transitions will be paid for at the Contract unit price for each unit complete in place and shall be full compensation for furnishing all labor, equipment and materials necessary to complete the work. Payment shall be full compensation for furnishing and installing thrie beam transition sections, nested thrie beam, wood or composite offset blocks, driven posts, terminal connectors, connection plates, all hardware, nuts, bolts, washers, and all other items necessary to make for a complete installation as shown on the Plans or as approved by the Resident.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
606.1728      W-Beam to 3-Bar Bridge Rail Transition	Each

SPECIAL PROVISION

SECTION 606

GUARDRAIL

(Guardrail Type 3d- Single Rail, 7 foot posts)

606.01 Description

The section is amended by the addition of the following:

This work shall consist of furnishing and erecting Guardrail Type 3d – Single Rail, 7 Foot Posts at the required locations in accordance with the Specifications and in reasonably close conformity with the lines and grades shown on the Plans.

606.02 Materials

The section is amended by the addition of the following:

Steel posts shall be 7 feet long.

606.08 Method of Measurement

The section is amended by the addition of the following:

Guardrail Type 3d – Single Rail, 7 Foot Posts will be paid for at the contract unit price per linear foot of rail satisfactorily installed and accepted.

606.09 Basis of Payment

The section is amended by the addition of the following:

The accepted quantity of Guardrail Type 3d – Single Rail, 7 Foot Posts will be paid for at the contract unit price per linear foot of rail and shall be full compensation for furnishing all labor, equipment and materials necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
606.244	Guardrail Type 3d– Single Rail, 7 Foot Posts	Linear Foot

SPECIAL PROVISION

SECTION 606

GUARDRAIL

(Terminal End - Anchored End)

606.01 Description

The following sentence is added:

This work shall consist of furnishing and installing Terminal End – Anchored End end treatments in accordance with these Specifications, the AASHTO-AGC-ARBTA Joint Committee Task Force 13 Report: A Guide to Standardized Highway Barrier Hardware, dated May 1995; and in reasonably close conformity with the lines and grades as shown on the Plans or as approved by the Resident.

606.02 Materials

The following sentences are added:

The guardrail elements shall be per the Components' List found on Sheet No. 2 of 2 of Drawing SEW02a – Trailing End Terminal – Foundation Tube Option in the Task Force 13 Report noted above and/or as noted in the Contract Documents.

The following Subsection is added:

606.042 Terminal End - Anchored End

Installation of the Terminal End – Anchored End shall be in strict accordance with the AASHTO-AGC-ARBTA Joint Committee Task Force 13 Report and the Details on Sheet No. 1 of 2 of Drawing SEW02a – Trailing End Terminal – Foundation Tube Option.

Height of installation of Terminal End – Anchored End units shall be 27.5-inches to the top of rail, transitioning to the standard height of 30-inches over a 25-foot length of Type 3d rail located immediately after the last post of the Anchored End unit.

The reveal on the soil tube for the Anchored End units shall not exceed 3.5-inches. If site grading is to be required to achieve the required rail height and soil tube reveal height, then such work will be incidental to the installation of the Anchored End units

606.08 Method of Measurement

The second paragraph is amended by the addition of: “, Terminal End - Anchored End,” after the words “breakaway cable terminal”.

606.09 Basis of Payment

The second paragraph is amended by the addition of: “, Terminal End - Anchored End,” after the words “breakaway cable terminal”.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
606.278	Terminal End - Anchored End	Each

SPECIAL PROVISION

SECTION 606

GUARDRAIL

(Tangent Guardrail Terminal – Energy Absorbing)

606.01 Description

The following sentence is added:

This work shall consist of furnishing and installing an energy absorbing tangent guardrail terminals for W-beam guardrail in accordance with these specifications at locations shown on the Plans or as directed by the Resident.

606.02 Materials

The section is amended by the addition of the following:

The terminal shall be in compliance with NCHRP 350 Test Level 3 and meet Federal Highway Administration eligibility requirements for reimbursement under the Federal-aid highway program. The system selected shall be one that is currently listed on MaineDOT's Qualified Products List of Terminals for W-Beam Guardrail Systems – Tangent Terminals (Energy Absorbing).

A set of installation drawings shall be submitted to the Resident for the system installed. The system shall be installed according to the manufacturer's installation drawings and recommendations.

606.08 Method of Measurement

The section is amended by the addition of the following:

Terminals shall be measured by each unit, complete, in place, and accepted.

606.09 Basis of Payment

The section is amended by the addition of the following:

The accepted quantity of terminals shall be paid for at the contract unit price, such payment being full compensation for all labor, materials, equipment, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item

Unit

606.81 Tangent Guardrail Terminal – Energy Absorbing

Each

SPECIAL PROVISION

SECTION 606

GUARDRAIL

(Guardrail - Remove and Dispose)

606.01 Description

The following paragraph is added:

This work shall consist of removing, disposing of existing guardrail elements, component parts and hardware, as directed by the Resident. All materials shall become the property of the Contractor and shall be removed from the site at the completion of the Project. The Contractor shall provide the Resident with an affidavit stating the final location of all disposed material and that the material was disposed of in accordance with the Maine Department of Environmental Protection Solid Waste Regulations.

606.09 Basis of Payment

The following paragraphs are added:

Guardrail – Remove and Dispose shall be incidental to Contract Items and include all removal, disposal, equipment and labor necessary to satisfactorily complete the work.

SPECIAL PROVISION

SECTION 607

FENCES

(Pipe Entry Gate)

607.1 Description

The following paragraphs is added:

This work shall also consist of installing a pipe entry gate in reasonably close conformity with the lines and grades as shown on the Plans or as approved by the Resident.

The installation shall include the assembly and erection of all parts and materials complete at the locations as shown on the Plans or as approved by the Resident.

607.2 Materials

The following sentences are added:

The pipe entry gate width is designated on the Plans.

Pipe entry gate and associated hardware shall be of galvanized steel as specified in AASHTO M181 and shall be galvanized in accordance with the applicable requirements of ASTM A153.

607.6 Method of Measurement

Pipe Entry Gate will be measured by each unit of the kind specified and installed.

607.7 Basis of Payment

Pipe Entry Gate will be paid for at the Contract price each, complete in place, which payment shall be compensation for furnishing and installing all necessary hardware, excavation and concrete.

Gate connection to proposed fence will not be measured separately for payment, but shall be incidental to the gate work.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
607.2325	Pipe Entry Gate	Each

SPECIAL PROVISION

SECTION 607

FENCES

(Snow Fence)

607.01 Description

The following paragraph is added:

The work shall include the installation of snow fence on the bridge to the limits shown on the plans.

607.02 Materials

The following paragraph is added:

Snow fence material shall consist of hot-dipped galvanized chain link fence at a height shown on the Plans. Posts shall be galvanized metal and spaced as shown on the Plans. The chain link fence and the posts shall be connected to the vertical bridge rail posts via U-bolts as shown on the Plans. All accessories such as tie wires, U-bolts, bars, and tension members shall be galvanized.

607.06 Method of Measurement

The following paragraph is added:

Snow Fence will be measured by the linear foot accepted in place.

607.07 Basis of Payment

The accepted quantities of Snow Fence shall be paid for at the contract unit price per foot of Snow Fence. Payment shall be full compensation for furnishing and installing all materials as shown on the plans including labor tools and incidentals required to complete the installation.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
607.431	Snow Fence	Linear Foot

SPECIAL PROVISION

SECTION 613

EROSION CONTROL BLANKET

613.01 Description

This work shall also include seeding, mulching and watering the median swale and/or longitudinal flow line to the limits and width as shown on the Plans or as directed by the Resident.

613.02 Materials

The following sentences are added:

Seeding shall meet the requirements of Section 618, Seeding, Method Number 2.

Mulch shall meet the requirements of Section 619.

The following Subsection is added:

613.041 Maintenance and Acceptance

See Section 618.10 for maintenance and acceptance of seeding.

613.042 Mulch

All mulch shall be placed after the area has been seeded and prior to the installation of the Erosion Control Blanket.

613.09 Basis of Payment

The following "and mulch" is added after the words "initial seeding" in the second sentence.

SPECIAL PROVISION

SECTION 619

MULCH

(Mulch – Plan Quantity)  
(Temporary Mulch)

619.01 Description

The first paragraph is modified by the addition of the following:

“as a temporary or permanent erosion control measure” after the word “mulch”.

Add the following sentence at the end of the first paragraph:

Refer to Section 656 Temporary Soil and Water Pollution Control, for more information on Temporary Mulch.

619.03 General

The first paragraph is deleted and replaced with the following:

Cellulose fiber mulch shall not be used within 200 feet of a wetland or stream. The limits shall be 200 feet up station and down station of the wetland or streams as well as the slopes adjacent to the stream. The application of hay or straw mulch with an approved binder shall be used at these locations to prevent erosion.

The use of cellulose fiber mulch will only be allowed at other areas with the approval of the Resident. The Contractor may be required to demonstrate that the material may be applied in a manner that will prevent erosion and will aid in the establishment of permanent vegetation. The Resident reserves the right to require the use of hay or straw mulch at all locations if he determines that the cellulose mulch is ineffective. Cellulose fiber mulch is not acceptable for winter stabilization.

610.06 Method of Measurement

The following sentence is added:

Temporary Mulch will be paid for by the lump sum.

656.10 Basis of Payment

Temporary Mulch will be paid for at the Contract price per lump sum which shall be full compensation for furnishing and spreading the Temporary Mulch as many times as necessary as determined by the Contractor’s operations and staging. The price shall also include the additional mulch netting and snow removal necessary during the winter months.

Payment will be made under:

Pay Item

Pay Unit

619.1201 Mulch – Plan Quantity  
619.1202 Temporary Mulch

Unit  
Lump Sum

SPECIAL PROVISION

SECTION 620

GEOTEXTILES

(Cellular Confinement System)

620.01 Description

The following sentence is added:

This work shall also include designing, furnishing and installing a proprietary cellular confinement system on slopes steeper than 2H:1V at the locations shown on the plan or designated by the Resident.

The cellular confinement system shall consist of a four (4) inch deep (minimum) geocell material which may be expanded to form a three dimensional cellular confinement system which resembles the appearance of a large honeycomb. This geocell material shall be anchored to the slope, filled with loam and seed and covered with temporary erosion control blanket to form a stable slope protection system.

The work shall also include having the manufacturer provide a qualified field representative on site at the start of construction to ensure the cellular confinement system is installed in accordance with the Contract Documents.

620.02 Materials

The following paragraph is added:

Slope stabilization geotextile shall be GEOWEB - GW30V Cellular Confinement System as manufactured by Presto Geosystems, PO Box 2399, Appleton, Wisconsin 54912 2399. Toll Free (800) 548 3424. Phone (920) 738 1328. Fax (920) 738 1222. E Mail [info@prestogeo.com](mailto:info@prestogeo.com). Website [www.prestogeo.com](http://www.prestogeo.com) or approved equal.

Stake anchors shall be #4 reinforcing steel (minimum), 24" long (minimum) with molded, high-strength polyethylene end caps installed on the exposed rebar ends.

Keys shall be constructed of polyethylene and provide a high strength connection to connect the cellular confinement system together at each interleaf and end to end connection.

Infill material shall be loam meeting the requirements of Section 615 with a Soil Conservation Service texture of loam, sandy loam or silty loam. Topsoil shall be neither excessively acidic nor alkaline; and shall be free of any foreign material. Clays and silts are not acceptable infill material.

The Contractor shall submit shop drawings and installation instructions for review by the Resident.

### 620.03 Placement

The following paragraphs are added:

Prepare subgrade and install cellular confinement system in accordance with Manufacturer's recommendations.

Excavate or fill foundation soils so top of installed cellular confinement system is flush with or slightly lower than adjacent terrain or final grade as indicated on the drawings or as directed by the Engineer.

Install the cellular confinement system in accordance with the approved shop drawings and the manufacturer's published recommendations. The stake anchors and keys shall be installed in a grid pattern provided by the manufacturer and approved by the Resident.

Place specified infill in expanded cells with suitable material handling equipment. Limit the drop height to a maximum of 3 feet (1 m) to avoid damage or displacement of the cell walls. Fill the cellular confinement system sections from the crest of the slope to toe or in accordance with Engineer's direction. Evenly spread infill and tamp into place.

Fill the anchorage trench with the specified material and compact as required by the Contract Documents.

Seed, and install erosion control fabric, secured per the Manufacturer's instructions, immediately after placement of the loam fill materials.

### 620.05 Protection of Fabric

The following paragraphs are added:

The manufacturer's recommendation for cellular containment system installation, staking, and placement of loam shall be strictly followed so the cellular containment system is not damaged. The operation of construction vehicles over the installed cellular containment system will not be permitted.

### 620.07 Method of Measurement

The quantity of cellular containment system will be measured by the number of square yards of surface area satisfactorily covered and accepted.

Common excavation and fill materials to obtain subgrade for the cellular containment system will be measured for payment under their respective pay items. Proper preparation of the subgrade to accept the cellular containment system will not be measured separately but shall be incidental to Item 620.625 Cellular Confinement System.

Loam, seed, and temporary erosion control blanket will be measured for payment under their individual pay items. No additional compensation will be allowed for any additional labor, material or equipment required to place these materials in the cellular containment system in accordance with the manufacturer's recommendation.

620.08 Basis of Payment

Pay Item

Pay Unit

620.625 Cellular Confinement System

Square Yard

SPECIAL PROVISION

SECTION 627

PAVEMENT MARKINGS

(White or Yellow Pavement Marking Line)

627.01 Description

The following sentences are added:

This work shall consist of furnishing and placing the final pavement markings at locations as shown on the Plans or as directed by the Resident.

The following sentence is added:

This work shall consist of furnishing and placing pavement marking paint and temporary pavement marking paint at locations as shown on the Plans or as directed by the Resident.

627.02 Materials

The following is added before the last paragraph:

The paint for pavement markings shall be 100% acrylic waterbase paint.

627.04 General

The following is added to the third paragraph:

Dotted white lines (DWL) shall consist of alternate 3 foot painted line segments and 9 foot gaps.

Permanent pavement marking paint shall be applied at the end of each work week prior to opening the work area to traffic or as approved by the Resident.

Temporary pavement marking paint and temporary pavement markers shall be applied daily prior to opening the work area to traffic during non-work hours or as approved by the Resident.

627.08 Removing Lines and Markings

The last sentence is deleted and is not replaced.

627.09 Method of Measurement

The second and third sentences in the second paragraph are deleted and replaced with the following:

The measurement of broken white lines, both permanent and temporary and dotted white lines, will include the gaps when painted. Temporary painted pavement marking lines will be measured for payment by the linear foot.

627.10 Basis of Payment

This Subsection is deleted and replaced with the following:

The accepted quantity of white or yellow pavement marking lines will be paid at the Contract price per linear foot. This price shall include all labor and materials to furnish, and install the paint line.

The accepted quantity of broken and dotted white pavement marking lines will be paid at the Contract price per linear foot. This price shall include all labor and materials to furnish and install the paint line.

The accepted quantity of temporary white or yellow pavement marking lines will be paid at the Contract price per linear foot. This price shall include all labor and materials to furnish, install and maintain the paint marking.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
627.712      White or Yellow Pavement Marking Line	Linear Foot

SPECIAL PROVISION

SECTION 645

HIGHWAY SIGNING

(Regulatory, Warning and Bridge Number Signs, Type I - Supplied by Authority)

645.01 Description

The following paragraph is added:

This work shall consist of erecting Regulatory, Warning and Bridge Number Signs furnished by the Authority and supplying and erecting any necessary sign posts as shown on the Plans or as directed by the Resident.

624.022 Sign Layout Drawings

This subsection is deleted and replaced with the following:

645.022 Authority Supplied Signs

The Maine Turnpike Authority will supply the proposed sheet aluminum signs for this project. The Contractor shall be responsible for coordinating with the MTA Sign Shop, located along the Turnpike northbound at Milepoint 58, to pick-up the signs and transport them to the job site.

645.08 Method of Measurement

This subsection is deleted and replaced with the following:

Regulatory, Warning and Bridge Number Signs, Type I shall be measured by the unit complete in place and accepted.

645.09 Basis of Payment

This subsection is deleted and replaced with the following:

The accepted Regulatory, Warning and Bridge Number Signs, Type I – Supplied by Authority will be paid for at the Contract unit price each. Such price shall be full compensation for erecting the sign panels and supplying and erecting the necessary sign posts, pick-up and transportation of the signs from the MTA Sign Shop to the job site, and all other labor, tools, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
645.272	Regulatory, Warning and Bridge Number Signs, Type I - Supplied by Authority	Each

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(Flaggers)

652.2.4 Other Devices

Paragraph five is deleted and replaced with the following:

STOP/SLOW paddles shall be the primary and preferred hand-signaling device. Flags shall be limited to emergencies. The paddle shall have an octagonal shape and be at least 18 inches wide with letters at least 6 inches high and should be fabricated from light semi-rigid material. All STOP/SLOW Paddles.

652.4 Flaggers

The last sentence in the first paragraph is deleted and replaced with the following:

Only flashing SLOW/STOP paddles shall be used and the flagger station shall be illuminated to assure visibility in accordance with 652.6.2.

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(Temporary Portable Rumble Strips)

652.01 Description:

This work consists of furnishing and placing temporary portable rumble strips RoadQuake 2F TPRS or an approved equal.

652.02 Materials:

Furnish a temporary portable rumble strip system, which includes a method to transport and move these to on-site locations where they will be used. The Contractor shall submit for approval, literature and all necessary certifications to the Maine Turnpike prior to procurement of the product.

652.03 General:

Placement:

Provide rumble strips where the plans show or as directed by the Resident as follows:

Prior to placing rumble strips, clean the roadway of sand and other materials, that may cause slippage.

Place one end of the rumble strips 6 inches from the roadway centerline. Extend the strips perpendicular to the direction of travel. Ensure strips lay flat on the roadway surface.

Only one series of rumble strips, placed before the first work zone, is required per direction of travel for multiple work zones spaced 1 mile or less apart. Work zones spaced greater than 1 mile apart require a separate series of rumble strips. Each lane shall use one group of temporary rumble strips.

Bracketed "Rumble Strip Ahead" signs shall be utilized and will be paid for under the respective construction sign pay items.

Maintenance:

Maintain rumble strips as follows:

If rumble strips slide, become out of alignment, or are no longer in the wheel path of approaching vehicles during the work period, thoroughly clean both sides of the rumble strips and reset on a clean roadway.

Repair or replace damaged rumble strips immediately.

652.04 Method of Measurement:

The accepted quantity will measure temporary portable rumble strips as a one group, per lane, per day. A group shall be considered 3 full lane width of rumble strips.

652.05 Basis of Payment:

The accepted quantity of temporary portable rumble strips will be paid for at the contract unit price per group which shall include the transport device. Payment is full compensation for providing, relocating, maintaining or replacing, and removing temporary portable rumble strips.

<u>Pay Item</u>	<u>Pay Unit</u>
652.46      Temporary Portable Rumble Strip	Cal. Day

SPECIAL PROVISIONSECTION 652MAINTENANCE OF TRAFFIC(Automated Speed Limit Sign)652.1 Description

This special provision provides for furnishing, operating, and maintaining an Automated Trailer Mounted Radar Speed Limit Sign for project use. The Contractor shall furnish, operate, and maintain the Automated Trailer Mounted Radar Speed Limit Signs during the project operations.

652.1.1 Instruction and maintenance manuals shall be provided.

652.2 MaterialsAutomated Trailer Mounted Speed Limit Sign

Trailer mounted speed limit signs shall be self-contained units including sign assembly, flashing lights, directional radar to measure speed limits, a regulatory speed limit sign, a construction sign stating “Work Zone Speed Limit When Flashing” and power supply specifically constructed to operate as a trailer-mounted sign. The preferred color of the unit shall be “construction orange”.

Signs

Base material for the regulatory speed limit signs shall be weather proof, rigid substrate specifically manufactured for highway signing and meet the retro-reflective sheeting application requirements of the sheeting manufacturer.

Sign text shall consist of the letters, digits and symbols either applied by stick-on or silk screen, to conform to the dimensions and designs indicated in the Contract, MUTCD and/or FHWA Standard Highway Signs. The materials and methods shall be in accordance with standard commercial processes.

The regulatory sign should have changeable speed limit numbers.

“Work Zone” construction signs shall be mounted on the trailer unit above and below the regulatory speed limit sign. (see Appendix). The “When Flashing” construction sign shall be added to the trailer.

Signs and secondary signs shall follow the MUTCD for minimum mounting heights.

### Power supply

The power supply shall be either full battery power with solar panel charging (capable of maintaining a charged battery level) and 135 ampere, 12 volt deep cycle batteries, or diesel powered generator with a fuel capacity sufficient for 10 hours of continuous operation.

### Flashing Lights

Each unit shall be equipped with two mono-directional flashing lights, placed in accordance with the MUTCD, with amber lenses and reflectors, which are visible through a range of 120 degrees when viewed facing the sign. The lights, either strobe, halogen, or incandescent lamps, shall be visible for a minimum distance of one mile under daylight conditions and shall have a minimum flash rate of 40 flashes per minute. An "On" indicator light shall be mounted on the back of the signs, which is visible for at least 500 feet to provide confirmation that the flashing lights are operating.

### Radar

The directional radar shall monitor approaching traffic only. The radar shall be capable of measuring speeds from 5 to 70 MPH at a distance of up to 1500 feet and shall have a high speed cut off thresh hold.

## CONSTRUCTION REQUIREMENTS

### 652.3.2 Responsibility of the Contractor

The Contractor shall furnish the Automated Trailer Mounted Speed Limit Sign as described in this Special Provision for this project.

All existing speed limit signs, which conflict with the construction zone trailer mounted speed limit signs shall be covered completely during the operation of the flashing lights. These signs shall be immediately uncovered when the use of the flashing lights is discontinued.

Automated Trailer Mounted Speed Limit Signs shall be used only during the Contractor's actual work hours, unless specifically authorized by the Engineer.

The Resident will record the actual time and location for the signs on a daily basis when the Automated Trailer Mounted Speed Limit Signs are in use.

Automated Trailer Mounted Speed Limit Signs shall be located as shown on the plans.

Automated Trailer Mounted Speed Limit Signs shall be delineated with retro-reflective temporary traffic control devices while in use and shall also be delineated by affixing a retro-reflective material directly on the trailer.

Upon delivery of the Automated Trailer Mounted Speed Limit Sign and before acceptance by the Authority, the Contractor shall have a representative of the manufacturer review the condition and notify the Resident in writing, of all deficiencies noted.

The Contractor shall arrange to have all necessary repairs performed at no cost to the Authority.

To avoid impairing driver vision, the Contractor shall dim the lighted speed limit readings by 50 percent during nighttime use, and restore full power lighting during daytime operation.

652.7 Method of Measurement

Each Automated Trailer Mounted Speed Limit Sign will be measured as a unit.

A unit will include the unit as described in this Special Provision, the Trailer, Radar Speed Limit Sign, flashing beacon amber lights, regulatory speed limit sign, "Work Zone Speed Limit When Flashing" construction sign, fuel, necessary maintenance, and all checking of Radar Speed Limit Signs by manufacturer. Also included are all project moves including the transporting and delivery of each unit.

652.8 Basis of Payment

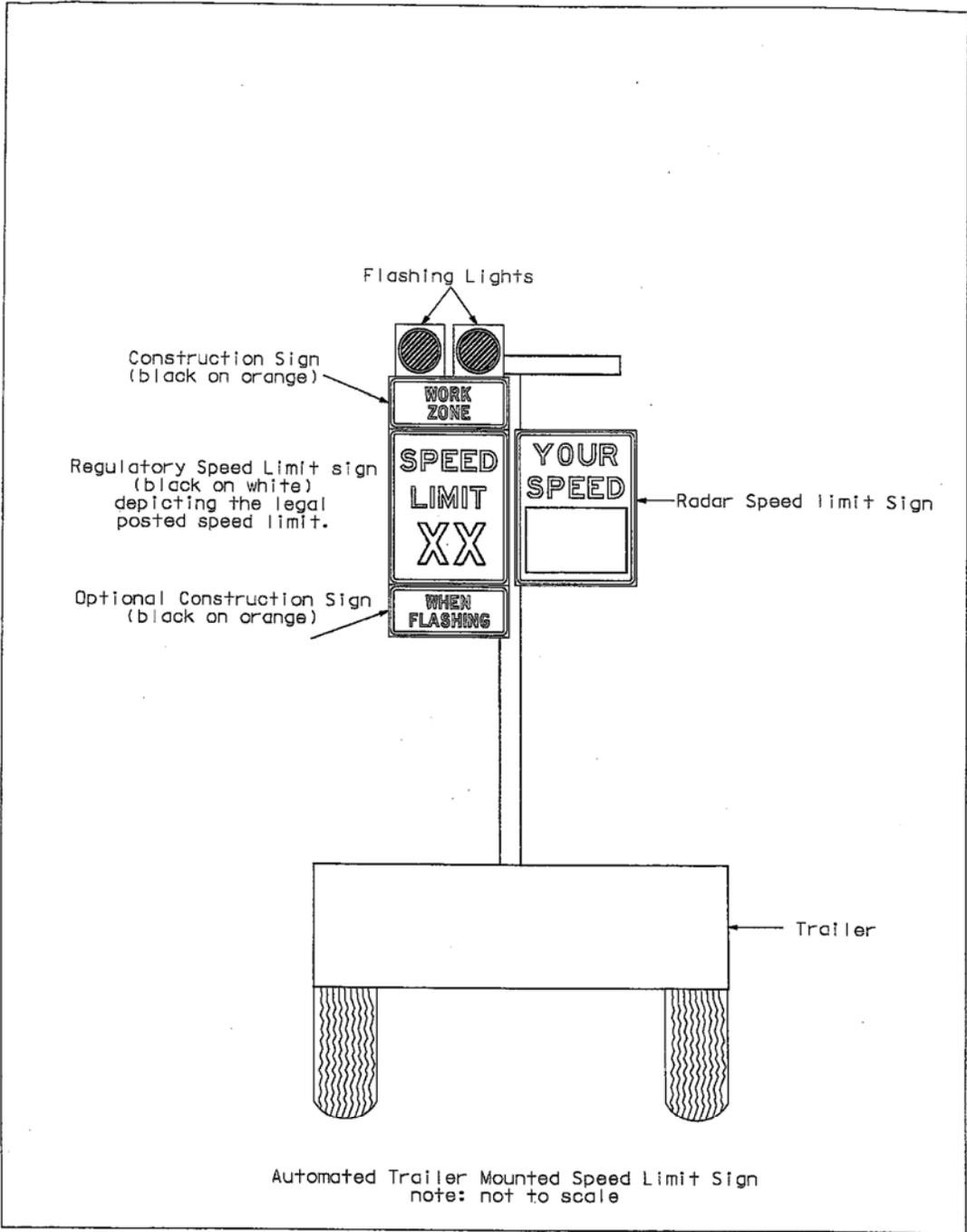
The accepted quantity of Automated Trailer Mounted Speed Limit Sign will be paid for at the contract price per unit for the number of units used and accepted.

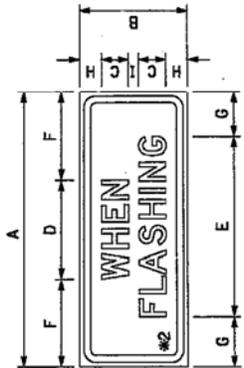
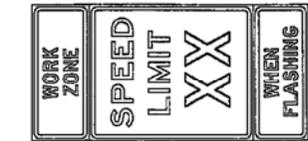
Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
652.451      Automated Trailer Mounted Speed Limit Sign	Unit

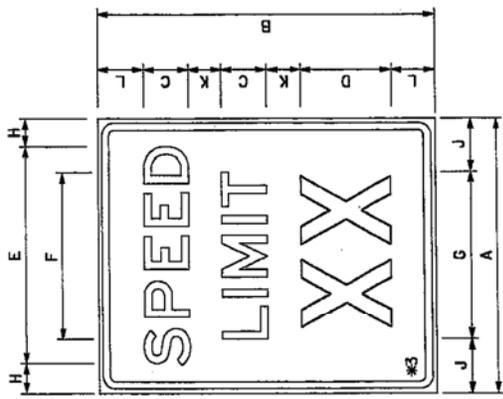
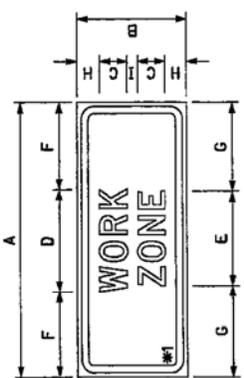
## Appendix B

### Automated Trailer Mounted Speed Limit Sign





#1 - 1.25" BORDER, 0.75" INDENT.  
 BLACK ON ORANGE; BB GRADE PLYWOOD SIGN  
 #2 - 1.25" BORDER, 0.75" INDENT.  
 BLACK ON WHITE; BB GRADE PLYWOOD SIGN  
 #3 - 1.25" BORDER, 0.75" INDENT.  
 BLACK ON WHITE; BB GRADE PLYWOOD SIGN



DIMENSIONS (inches)/LETTER FONTS

	A	B	C	D	E	F	G	H	I	J	K	L
#1	48	20	5D	18 <sup>1</sup> / <sub>8</sub>	16 <sup>5</sup> / <sub>8</sub>	14 <sup>7</sup> / <sub>8</sub>	15 <sup>5</sup> / <sub>8</sub>	4	2	N/A	N/A	N/A
#2	48	20	5D	17 <sup>1</sup> / <sub>4</sub>	31 <sup>3</sup> / <sub>8</sub>	15 <sup>1</sup> / <sub>2</sub>	8 <sup>1</sup> / <sub>4</sub>	4	2	N/A	N/A	N/A
#3	48	60	8E	16E	38 <sup>1</sup> / <sub>4</sub>	29 <sup>1</sup> / <sub>4</sub>	29 <sup>1</sup> / <sub>2</sub>	4 <sup>7</sup> / <sub>8</sub>	9 <sup>3</sup> / <sub>8</sub>	9 <sup>1</sup> / <sub>4</sub>	8	6

**CONSTRUCTION SIGN/REGULATORY SIGNS**

TRAILER MOUNTED CONSTRUCTION ZONE  
 SPEED LIMIT SIGN

SPECIAL PROVISIONSECTION 652MAINTENANCE OF TRAFFIC

(Specific Project Maintenance of Traffic Requirements)

This Specification describes the specific project maintenance of traffic requirements for this Project.

The following minimum traffic requirements shall be maintained:

Running Hill Road Underpass Bridge Traffic Control Requirements

Running Hill Road bridge shall be maintained open at all times in accordance with the details shown on the Plans and as described in Special Provision 652, Table B. Maintenance of traffic control plans have been developed for the work on top of the bridge in two phases. The traffic control plan for the topside of the bridge includes a double lane closure and a lane shift onto the opposing direction's lanes. The bridge shall maintain a minimum lane width of 11 feet 6 inches in each direction at all times.

For work that will be done below the bridge, additional traffic control plans have been developed to maintain traffic along the Turnpike, including shoulder closures and single lane closures.

Blackstrap Road Underpass Bridge Traffic Control Requirements

The Blackstrap Road bridge shall be maintained open to at least one lane of through traffic in accordance with the details shown on the Plans and as described in Special Provision 652, Table B. The project includes provisions for a temporary traffic signal to maintain one lane traffic flow to complete the work. The active traffic lane shall maintain a minimum lane width of 14 feet for alternating one-way traffic.

For work that will be done below the bridge, additional traffic control plans have been developed to maintain traffic along the Turnpike, including single lane closures.

Dutton Hill Road Underpass Bridge Traffic Control Requirements

The Dutton Hill Road bridge over the Turnpike will be closed in accordance with the Section 107.4.6 and as described in Special Provision 652, Table A. A temporary detour shall be established and maintained at all times during the bridge closure in accordance with the Dutton Hill Road Underpass Bridge Detour Plan. The detour route begins at the Dutton Hill Road bridge over the Turnpike near Portland Road/Gray Road, then following Portland Road/Gray Road south to the intersection at Blackstrap Road. The detour follows Blackstrap Road west to Forest Lake Road to the intersection at Dutton Hill Road.

Forest Lake Road Access Road

Forest Lake Road shall be maintained open to two-way traffic at all times through the construction of the access road. When construction occurs within 6 feet of the edge of pavement the northbound lane shall be closed and two-way traffic maintained with an MUTCD compliant flagging operation.

#### Weymouth Road Underpass Bridge Traffic Control Requirements

The Weymouth Road bridge over the Turnpike will be closed in accordance with the Section 107.4.6 and as described in Special Provision 652, Table A. A temporary detour shall be established and maintained at all times during the bridge closure in accordance with the Weymouth Road Underpass Bridge Detour Plan. The detour route begins at the Weymouth Road bridge over the Turnpike then follow Weymouth Road east to the intersection with Lewiston Road. The detour turns north on Lewiston Road to Mayall Road and continues to the intersection at Sabbathday Road. Continuing south on Sabbathday Road the detour connects with Shaker Road and continues south until the intersection with Weymouth Road.

#### Maine Turnpike Traffic Control Requirements

The maintenance of traffic control plans include shoulder closures, single lane closures and acceleration lane closures for the work that will occur on or adjacent to the Turnpike.

Activities along the Turnpike mainline are only allowed during the times noted in Table A. Travel lanes may not be impeded by traffic control devices until the time frames specified for each activity.

**TABLE A: TURNPIKE MAINLINE - APPROVED SHOULDER CLOSURES AND LANE CLOSURES**

RUNNING HILL ROAD UNDERPASS (MM 45.40)

<b>Mainline, Northbound and Southbound                      March 12, 2018 to June 28, 2018                      September 4, 2018 to November 16, 2018</b>			
		<b>Turnpike                      Shoulder                      Closures</b>	<b>Turnpike                      Single Lane                      Closures</b>
<b>Days of Week:</b>	<b>Sunday p.m. through Friday                      a.m. (nightwork only)</b>		
Time of Day:	7:00 p.m. to 6:00 a.m. next day	Allowed	
Time of Day:	9:00 p.m. to 5:00 a.m. next day	Allowed	Allowed

<b>Mainline, Northbound and Southbound                      June 29, 2018 to September 3, 2018</b>			
		<b>Turnpike                      Shoulder                      Closures</b>	<b>Turnpike                      Single Lane                      Closures</b>
<b>Days of Week:</b>	<b>Sunday p.m. through Friday                      a.m. (nightwork only)</b>		
Time of Day:	9:00 p.m. to 5:00 a.m. next day	Allowed	Allowed

BLACKSTRAP ROAD UNDERPASS (MM 58.30)

<b>Mainline Northbound</b>			
<b>March 12, 2018 to November 16, 2018</b>			
		<b>Turnpike Shoulder Closures</b>	<b>Turnpike Single Lane Closures</b>
<b>Days of Week:</b>	<b>Sunday p.m. through Thursday p.m.</b>		
Time of Day:	7:00 p.m. to 2:00 p.m. next day	Allowed	Allowed
<b>Day of Week:</b>	<b>Thursday p.m. through Friday a.m.</b>		
Time of Day:	7:30 p.m. Thursday to 12:01 p.m. Friday	Allowed	Allowed

<b>Mainline Southbound</b>		
<b>March 12, 2018 to November 16, 2018</b>		
		<b>Turnpike Single Lane Closures</b>
<b>Days of Week:</b>	<b>Sunday p.m. through Friday a.m. (nightwork only)</b>	
Time of Day:	7:00 p.m. to 5:30 a.m. next day	Allowed

\*Southbound shoulder closures are not feasible

## DUTTON HILL ROAD UNDERPASS (MM 59.90)

<b>Mainline Northbound</b> <b>March 12, 2018 to November 16, 2018</b>				
		<b>Turnpike Shoulder Closures</b>	<b>Turnpike Lane Closures</b>	<b>Removing / Erecting Structural Steel</b>
<b>Days of Week:</b>	<b>Sunday p.m. through Thursday p.m.</b>			
Time of Day:	7:00 p.m. to 2:00 p.m. next day	Allowed	Allowed	
Time of Day:	10:00 p.m. to 5:00 a.m. next day	Allowed	Allowed	Allowed
<b>Day of Week:</b>	<b>Thursday p.m. through Friday</b>			
Time of Day:	7:30 p.m. Thursday to 12:01 p.m. Friday	Allowed	Allowed	
Time of Day:	10:00 p.m. Thursday to 5:00 a.m. Friday	Allowed	Allowed	Allowed

<b>Mainline Southbound</b> <b>March 12, 2018 to June 28, 2018</b> <b>September 4, 2018 to November 16, 2018</b>				
		<b>Turnpike Shoulder Closures</b>	<b>Turnpike Single Lane Closures</b>	<b>Removing / Erecting Structural Steel</b>
<b>Days of Week:</b>	<b>Monday a.m. through Friday a.m.</b>			
Time of Day:	9:00 a.m. to 5:30 a.m. next day	Allowed	Allowed	
<b>Day of Week:</b>	<b>Friday</b>			
Time of Day:	9:00 a.m. to 3:00 p.m.	Allowed	Allowed	
<b>Days of Week:</b>	<b>Sunday p.m. through Friday a.m.</b>			
Time of Day:	7:00 p.m. to 5:30 a.m. next day	Allowed	Allowed	
Time of Day:	10:00 p.m. to 5:00 a.m. next day	Allowed	Allowed	Allowed

<b>Mainline Southbound June 29, 2018 to September 3, 2018</b>				
		<b>Turnpike Shoulder Closures</b>	<b>Turnpike Lane Closures</b>	<b>Removing / Erecting Structural Steel</b>
<b>Days of Week:</b>	<b>Monday a.m. through Friday a.m.</b>			
Time of Day:	10:00 a.m. to 5:30 a.m. next day	Allowed		
Time of Day:	7:00 p.m. to 5:30 a.m. next day	Allowed	Allowed	
Time of Day:	10:00 p.m. to 5:00 a.m next day	Allowed	Allowed	Allowed

WEYMOUTH ROAD UNDERPASS (MM 66.20)

<b>Mainline Northbound and Southbound March 12, 2018 to May 18, 2018 October 21, 2018 to November 16, 2018</b>			
		<b>Turnpike Shoulder Closures</b>	<b>Turnpike Lane Closures</b>
<b>Days of Week:</b>	<b>Sunday p.m. through Friday p.m.</b>		
Time of Day:	7:00 p.m. to 7:00 p.m. next day	Allowed	Allowed

<b>Mainline Northbound and Southbound May 21, 2018 to October 19, 2018</b>			
		<b>Turnpike Shoulder Closures</b>	<b>Turnpike Lane Closures</b>
<b>Days of Week:</b>	<b>Sunday p.m. through Thursday p.m.</b>		
Time of Day:	7:00 p.m. to 7:00 p.m. next day	Allowed	Allowed
<b>Days of Week:</b>	<b>Thursday p.m. through Friday p.m.</b>		
Time of Day:	7:00 p.m. to 3:00 p.m. next day	Allowed	Allowed

**TABLE B: OTHER ROADWAYS - APPROVED LANE AND ROAD CLOSURES**

<b>Running Hill Road</b> <b>March 12, 2018 to June 15, 2018</b>			
		<b>Reduce Traffic to One Lane Each Direction</b>	<b>Reduce Traffic to Single Lane / Flagging Operations</b>
<b>Time of Day:</b>	24 Hours (per TCP)	Allowed	
<b>Days of Week:</b>	<b>Sunday p.m. through Friday a.m.</b>		
<b>Time of Day:</b>	9:00 p.m. to 5:30 a.m. next day		Allowed

<b>Blackstrap Road</b> <b>March 12, 2018 to June 15, 2018</b>		
		<b>Reduce Traffic to Single (alternating) Lane</b>
<b>Time of Day:</b>	24 Hours (per TCP)	Allowed

NOTE 1: Turnpike Lane Closures shall be removed if construction is not ongoing. Unattended lane closures are not allowed.

Construction vehicles are prohibited from merging with mainline traffic after noon on Fridays between June 22<sup>nd</sup> and September 7<sup>th</sup> unless the merge occurs at an interchange.

NOTE 2: There shall be no lane closures permitted along the Turnpike over the following dates:

- April school vacation week 2018 (April 16<sup>th</sup> – April 20<sup>th</sup>)
- May 25-28, 2018
- June 29-July 8, 2018
- August 31-September 3, 2018
- October 5-8, 2018
- November 21-26, 2018

652.7 Method of Measurement

The following paragraph is added:

Traffic control devices required to complete the work will be measured for payment under their respective pay items. Installation, maintenance, and removal of traffic setups and the Contractor's dedicated traffic employee will not be measured separately for payment, but shall be incidental to Item 652.361, Maintenance of Traffic Control Devices.

# APPENDIX A

Section 11 – State Transportation Facilities Permit by Rule

**Chapter 305: PERMIT BY RULE**

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- 1. Introduction.** A "permit by rule" or "PBR", when approved by the Department of Environmental Protection (DEP), is an approval for an activity that requires a permit under the Natural Resources Protection Act (NRPA). Only those activities described in this chapter may proceed under the PBR process. A PBR activity will not significantly affect the environment if carried out in accordance with this chapter, and generally has less of an impact on the environment than an activity requiring an individual permit. A PBR satisfies the Natural Resources Protection Act (NRPA) permit requirement and Water Quality Certification requirement.

If a proposed activity is not described in this chapter, or will not be conducted in accordance with the standards of this chapter, the applicant must obtain an individual permit prior to beginning the activity.

- A. Location of activity.** The location of an activity may affect whether an activity qualifies for PBR, and whether review by the Department of Inland Fisheries and Wildlife is required.

- (1) Type of resource. For some types of activities, the availability of a PBR is affected by the type of natural resource in or adjacent to which the activity is proposed. For example, an applicant proposing an activity consisting of "Movement of rocks or vegetation" may receive a PBR only if the activity will take place in a great pond, river, stream or brook. Limitations concerning the location of activities are addressed in the "Applicability" provision in each section of this chapter.
- (2) Essential habitat. Essential habitats include areas critical to the survival of threatened and endangered species such as the bald eagle, least tern, roseate tern, and piping plover. If the activity is located in essential habitat, such as near an eagle nesting site, a PBR is only available if the applicant obtains written approval from the Department of Inland Fisheries and Wildlife (IF&W). This approval from IF&W must be submitted to the DEP with the PBR notification form, and the applicant must follow any conditions stated in the IF&W approval.

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NOTE: Maps showing areas of essential habitat are available from the Department of Inland Fisheries and Wildlife regional headquarters, municipal offices, the Land Use Regulation Commission (for unorganized territories) and DEP regional offices. If the activity is located in essential habitat, IF&W must be contacted to request and obtain a "certification of review and approval".

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- B. Notification.** The applicant must file notice of the activity with the DEP prior to beginning work on the activity. The notification must be on a form provided by the DEP and must include any submissions required in this chapter. The applicant must keep a copy to serve as the permit.

The notification form must be sent to the DEP by certified mail (return receipt requested), or hand delivered to the DEP and date stamped by the department. By signing the notification form, the applicant is representing that the activity will meet the applicability requirements and standards of the rule. In addition, by signing the notification form the applicant represents that the applicant has sufficient title, right, or interest in the property where the proposed activity is to take place.

**C. Effective period**

- (1) Beginning of period. The PBR becomes effective 14 calendar days after the DEP receives the notification form, unless the DEP approves or denies the PBR prior to that date. If the DEP does not speak with or write to the applicant within this 14 day period regarding the PBR notification, the applicant may proceed to carry out the activity.

There are three exceptions regarding the effective date of an approved PBR:

- (a) Activities listed in Section 10 (Stream crossings) occurring in association with forest management are exempt from the 14 day waiting period.
- (b) Activities listed in Section 10 (Stream crossings) performed or supervised by individuals currently certified in erosion control practices by the DEP are exempt from the 14 day waiting period. To be certified in erosion control practices, an individual must successfully complete all course requirements of the Voluntary Contractor Certification Program administered by the DEP's Nonpoint Source Training and Resource Center.
- (c) Activities that are part of a larger project requiring a permit under the Site Location of Development or the Storm Water Management Acts may not proceed until any required permit under those laws is obtained.

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NOTE: Activities that are part of a larger project may require other permits from the DEP also. These other laws may prohibit the start of construction of any part of the project unless a permit under that law is obtained. In these cases, while not a violation of this rule, starting work on a PBR approved activity would be a violation of those other applicable laws.

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- (2) End of period. The PBR is generally effective for 2 years from the date of approval, except that a PBR for "Replacement of structures" under Section 4 is effective for 3 years.

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NOTE: Activities that qualify under this chapter may need to meet other local, state and federal requirements. Examples -- (1) If an activity extends below the low water line of a lake, coastal wetland or international boundary water, the applicant should contact the Bureau of Parks and Lands (287-3061) concerning possible lease or easement requirements, or (2) If an activity will involve work below the mean high water line in navigable waters of the United States, the applicant should contact the Army Corps of Engineers (623-8367).

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**D. Discretionary authority.** Notwithstanding compliance with the PBR applicability requirements and standards set forth in this chapter, the DEP may require an individual permit application to be filed in any case where credible evidence indicates that the activity:

- (1) May violate the standards of this rule or the NRPA (38 M.R.S.A. Section 480-D);
- (2) Could lead to significant environmental impacts, including cumulative impacts; or
- (3) Could adversely impact a resource of special concern.

If an individual permit is required pursuant to this subsection, the DEP shall notify the applicant in writing within the 14 calendar day waiting period described in sub-section (C) above. When

the DEP notifies an applicant that an individual permit is required, no work may be conducted unless and until the individual permit is obtained.

**E. Violations.** A violation of law occurs when a person, or his or her agent, performs or causes to be performed any activity subject to the NRPA without first obtaining a permit from the DEP, or acts contrary to the provisions of a permit. The person, his or her agent, or both, may be held responsible for the violation. Commonly, the "person" is the landowner, and the "agent" is the contractor carrying out the activity. A violation occurs when:

- (1) An activity occurs that is not allowed under PBR, whether or not a PBR notification form has been filed with and/or approved by the DEP;
- (2) An activity occurs that is allowed under PBR, but a PBR for the activity has not become effective prior to the beginning of the activity; or
- (3) An activity occurs that is allowed under PBR and a PBR for the activity is in effect, but the standards specified in this chapter are not met.

See the "applicability" provision under each activity for rules concerning what activities are allowed under PBR. A PBR is only valid for the person listed on the notification form, or for his or her agent.

Each day that a violation occurs or continues is considered a separate offense. Violations are subject to criminal penalties and civil penalties of not less than \$100 nor more than \$10,000 for each day of that violation (38 M.R.S.A. Section 349).

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NOTE: A local Code Enforcement Officer (CEO) may take enforcement action for a violation of the Natural Resources Protection Act if he or she is authorized to represent a municipality in District Court, and he or she has been certified as familiar with court procedures, 30-A M.R.S.A. Section 4452(7).

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**11. State transportation facilities****A. Applicability**

- (1) This section applies to the maintenance, repair, reconstruction, rehabilitation, replacement or minor construction of a State Transportation Facility carried out by, or under the authority of, the Maine Department of Transportation (MaineDOT) or the Maine Turnpike Authority, including any testing or preconstruction engineering, and associated technical support services.

- (2) This section does not apply to an activity within a coastal sand dune system.

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NOTE: The construction of a transportation facility other than roads and associated facilities may be subject to the Storm Water Management Law, 38 M.R.S.A. Section 420-D.

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## **B. Standards**

- (1) Photographs of the area to be altered by the activity must be taken before work on the site begins. The photographs must be kept on file and be made available at the request of the DEP.
- (2) The activity must be reviewed by the Department of Inland Fisheries and Wildlife and the Department of Marine Resources, as applicable. The applicant must coordinate with the reviewing agencies and incorporate any recommendations from those agencies into the performance of the activity.
- (3) All construction activities undertaken must be detailed in a site-specific Soil Erosion and Water Pollution Control Plan and conducted in accordance with MaineDOT's Best Management Practices for Erosion and Sediment Control, dated January 2000, and Standard Specifications, dated December 2002.
- (4) Alignment changes may not exceed a distance of 200 feet between the old and new center lines in any natural resource.
- (5) The activity may not alter more than 300 feet of shoreline (both shores added together) within a mile stretch of any river, stream or brook, including any bridge width or length of culvert.
- (6) The activity may not alter more than 150 feet of shoreline (both shores added together) within a mile stretch of any outstanding river segment identified in 38 M.R.S.A. 480-P, including any bridge width or length of culvert.
- (7) The activity must minimize wetland intrusion. The activity is exempt from the provisions of Chapter 310, the Wetland and Waterbodies Protection Rules, if the activity alters less than 15,000 square feet of natural resources per mile of roadway (centerline measurement) provided that the following impacts are not exceeded within the 15,000 square foot area:
  - (a) 1,000 square feet of coastal wetland consisting of salt tolerant vegetation or shellfish habitat; or
  - (b) 5,000 square feet of coastal wetland not containing salt tolerant vegetation or shellfish habitat; or
  - (c) 1,000 square feet of a great pond.

All other activities must be performed in compliance with all sections of Chapter 310, the Wetland Protection Rules, except 310.2(C), 5(A), 9(A), 9(B) and 9(C).
- (8) The activity may not permanently block any fish passage in any watercourse containing fish. The applicant must coordinate with the reviewing agencies listed in paragraph 2 above to

improve fish passage and incorporate any recommendations from those agencies into the performance of the activity.

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NOTE: For guidance on meeting the design objectives for fish passage, including peak flow, maximum velocity, mining depth and gradient, see the MaineDOT Waterbody and Wildlife Crossing Policy and Design Guide (July 2008), developed in conjunction with state and federal resource and regulatory agencies.

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- (9) Rocks may not be removed from below the normal high water line of any coastal wetland, freshwater wetland, great pond, river, stream or brook except to the minimum extent necessary for completion of work within the limits of construction.
- (10) If work is performed in a river, stream or brook that is less than three feet deep at the time and location of the activity, the applicant must isolate the work area from the resource and divert stream flows around the work area, maintaining downstream flows while work is in progress.
- (11) Wheeled or tracked equipment may not operate in the water. Equipment operating on the shore may reach into the water with a bucket or similar extension. Equipment may cross streams on rock, gravel or ledge bottom. If avoiding the operation of wheeled or tracked equipment in the water is not possible, the applicant must explain the need to operate in the water. Approval from the DEP to operate in the water must be in writing, and any recommendations from the DEP must be incorporated into the performance of the activity.
- (12) All wheeled or tracked equipment that must travel or work in a vegetated wetland area must travel and work on mats or platforms.
- (13) Any debris or excavated material must be stockpiled either outside the wetland or on mats or platforms. Erosion and sediment control best management practices must be used, where necessary, to prevent sedimentation. Any debris generated during the activity must be prevented from washing downstream and must be removed from the wetland or water body. Disposal of debris must be in conformance with the Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. Section 1301 *et seq.*
- (14) Work below the normal high water line of a great pond, river, stream or brook must be done at low water except for emergency work or work agreed to by the resource agencies listed in paragraph 2 above.
- (15) Perimeter controls must be installed before the work starts. Disturbance of natural resources beyond the construction limits shown on the plans is not allowed under this rule.

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

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- (16) The use of untreated lumber is preferred. Lumber pressure treated with chromated copper arsenate (CCA) may be used only if necessary and only if use is allowed under federal law and not prohibited from sale under 38 M.R.S.A. 1682, and provided it is cured on dry land in a manner that exposes all surfaces to the air for a period of at least 21 days prior to construction. Wood treated with creosote or pentachlorophenol may not be used where it will contact water.

- (17) A temporary road for equipment access must be constructed of crushed stone, blasted ledge, or similar materials that will not cause sedimentation or restrict fish passage. Such roads must be completely removed at the completion of the activity. In addition, any such temporary roads which are in rivers, streams or brooks, must allow for a passage of stormwater flows associated with a 10-year storm.
- (18) Non-native species may not be planted in restored areas.
- (19) Disposal of debris must be in conformance with Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. Sections 1301 *et seq.*
- (20) Disturbance of vegetation must be avoided, if possible. Where vegetation is disturbed outside of the area covered by any road or structure construction, it must be reestablished immediately upon completion of the activity and must be maintained.
- (21) A vegetated area at least 25 feet wide must be established and maintained between any new stormwater outfall structure and the high water line of any open water body. A velocity reducing structure must be constructed at the outlet of the stormwater outfall that will create sheet flow of stormwater, and prevent erosion of soil within the vegetated buffer. If the 25 foot vegetated buffer is not practicable, the applicant must explain the reason for a lesser setback in writing. Approval from the DEP must be in writing and any recommendations must be incorporated into the activity.

**C. Definitions.** The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

- (1) **Diversion.** The rerouting of a river, stream or brook around a construction site and then back to the downstream channel.
- (2) **Fill.** a. (verb) To put into or upon, supply to, or allow to enter a water body or wetland any earth, rock, gravel, sand, silt, clay, peat, or debris; b. (noun) Material, other than structures, placed in or immediately adjacent to a wetland or water body.
- (3) **Floodplain wetlands.** Freshwater wetlands that are inundated with flood water during a 100-year flood event based on flood insurance maps produced by the Federal Emergency Agency or other site specific information.
- (4) **Riprap.** Heavy, irregularly shaped rocks that are fit into place, without mortar, on a slope as defined in the MaineDOT Standard Specifications, dated December 2002.

## APPENDIX B

General Permit Standards and Conditions

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

The New England District of the U.S. Army Corps of Engineers (Corps) hereby issues a General Permit (GP) for activities subject to Corps jurisdiction in waters of the U.S. within the boundaries of the State of Maine. This GP is issued in accordance with Corps regulations at 33 CFR 320 - 332 [see 33 CFR 325.2(e)(2)]. This GP authorizes activity-specific categories of work that are similar in nature and cause no more than minimal individual and cumulative adverse environmental impacts. Refer to Page 2 for the list of activities and Appendix A for activity specific conditions of eligibility in inland and tidal waters.

**I. GENERAL CRITERIA**

1. 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 – 20), and Appendix A - Definition of Categories.
2. Under this GP, projects may qualify for the following:
  - Category 1: Category 1 Self -Verification Notification Form is required (SVNF – see Appendix B).
  - Category 2: Application to and written approval from the Corps is required (Pre-Construction Notification (PCN)). No work may proceed until written approval from the Corps is 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 activities eligible 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.

3. Prospective permittees need to read:
  - a. Section II to determine if the activity requires Corps authorization.
  - b. Sections III and IV to determine if the activity may be eligible for authorization under this GP, specifically whether it is eligible for Self-Verification (SV) or whether Pre-Construction Notification (PCN) is required.
4. Permittees must ensure compliance with all applicable General Conditions in Section IV. The Corps will consider unauthorized any activity requiring Corps authorization if that activity is under construction or completed and does not comply with all of the terms and conditions.
5. Project proponents are encouraged to contact the Corps with questions at any time. Pre-application meetings (see 33 CFR 325.1(b)), whether arranged by the Corps or requested by permit applicants, are encouraged to facilitate the review of projects. Pre-application meetings and/or site visits can help streamline the permit process by alerting the applicant to potentially time-consuming concerns that are likely to arise during the evaluation of their project (e.g., avoidance, minimization and compensatory mitigation requirements, historic properties, endangered species, essential fish habitat, and dredging contaminated sediments).

## II. CORPS JURISDICTION/ACTIVITIES COVERED

1. Permits are required from the Corps of Engineers for the following work:
  - a. The construction of any structure in, over or under any navigable water of the United States (U.S.)<sup>1</sup>, the excavating or dredging from or depositing of material in such waters, or the accomplishment of any other work affecting the course, location, condition, or capacity of such waters. The Corps regulates these activities under Section 10 of the Rivers and Harbors Act of 1899. See 33 CFR 322;
  - b. The discharge of dredged or fill material and certain discharges associated with excavation into waters of the U.S. (e.g. sidcasting). The Corps regulates these activities under Section 404 of the Clean Water Act (CWA). See 33 CFR 323; and
  - c. The transportation of dredged material for the purpose of disposal in the ocean. The Corps regulates these activities under Section 103 of the Marine Protection, Research and Sanctuaries Act. See 33 CFR 324.
2. Related laws:

33 CFR 320.3 includes a list of related laws, including: Section 401 of the CWA, Section 402 of the CWA, Section 307(c) of the Coastal Zone Management (CZM) Act of 1972, The National Historic Preservation Act of 1966, the Endangered Species Act, the Fish and Wildlife Act of 1956, the Marine Mammal Protection Act of 1972, Magnuson-Stevens Act, and Section 7(a) of the Wild and Scenic Rivers Act.
3. An activity listed below may be authorized by this GP only if that activity and the permittee satisfy all of the GP's terms and conditions. Any activity not specifically listed below may still be eligible for the GP; applicants are advised to contact the Corps for a specific eligibility determination. Category 1 and Category 2 eligibility criteria for each activity in both Inland and Tidal waters can be found in Appendix A.

1. Repair, Replacement, Expansion, and Maintenance of Authorized Structures and Fills
2. Moorings
3. Structures, Floats and Lifts
4. Aids to Navigation, and Temporary Recreational Structures
5. Dredging, Disposal of Dredged Material, Beach Nourishment, and Rock Removal and Relocation
6. Discharges of Dredged or Fill Material Incidental to the Construction of Bridges
7. Bank and Shoreline Stabilization
8. Residential, Commercial, Industrial, and Institutional Developments, and Recreational Facilities
9. Utility Line Activities
10. Linear Transportation Projects
11. Mining Activities
12. Boat Ramps and Marine Railways
13. Land and Water-Based Renewable Energy Generation Facilities and Hydropower Projects
14. Reshaping Existing Drainage Ditches and Mosquito Management
15. Oil Spill and Hazardous Material Cleanup
16. Cleanup of Hazardous and Toxic Waste
17. Scientific Measurement Devices
18. Survey Activities
19. Agricultural Activities
20. Fish and Wildlife Harvesting, Enhancement, and Attraction Devices
21. Habitat Restoration, Establishment and Enhancement Activities
22. Previously Authorized Activities
23. Stream & Wetland Crossings
24. Aquaculture

Note: Multiple activities may be authorized in the same GP, e.g. a recreational pier (#3) with an associated mooring (#2) or a windpower facility (#13) with an associated transmission line (#9).

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<sup>1</sup> Defined in Appendix F, Definitions and at 33 CFR 328.  
Section II

### III. PROCEDURES

1. State Approvals. Applicants are responsible for applying for and obtaining any of the required state or local approvals. 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 (PBR) and general permit authorizations; Site Location of Development Act permit; Maine Waterway Development and Conservation Act permit; and Maine Hazardous Waste, Septage, and Solid Waste Management Act license.
- Maine Department of Conservation, Agriculture & Forestry: Land Use Planning Commission (LUPC) permit.
- Maine Department of Marine Resources: Aquaculture Leases.
- Maine Department of Conservation, Bureau of Parks and Lands, Submerged Lands: Submerged Lands Lease.

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

2. How to Obtain/Apply for Authorization.

a. **Category 1 (Self-Verification):** Self-Verification Notification Form (SVNF) required. The SVNF is required for all SV eligible work in Maine unless otherwise stated in Appendix A. Activities that are eligible for SV are authorized under this GP and may commence without written verification from the Corps provided the prospective permittee has:

i. Confirmed that the activity will meet the terms and conditions of Category 1. Consultation with the Corps and/or other relevant federal and state agencies may be necessary to ensure compliance with the applicable general conditions (GCs) and related federal laws such as the National Historic Preservation Act (see GC 6), the Endangered Species Act (GC 8) and the Wild and Scenic Rivers Act (GC 9). Prospective permittees are encouraged to contact the Corps with SV eligibility questions. Activities not meeting the SV criteria must submit a PCN to the Corps.

ii. Submitted the SVNF (see GC 27 and Appendix B) to the Corps. **NOTE: A copy of a state permit application form may be an acceptable surrogate for the SVNF. Whichever form chosen needs to include a location map, plans, and an Official Species List for federally listed threatened or endangered species (Reference Appendix D).**

b. **Category 2 (Pre-Construction Notification (PCN)):** Application to and written verification from the Corps is required before work can proceed. For activities that do not qualify for SV or where otherwise required by the terms of the GP, the permittee must submit a PCN and obtain a written permit before starting work in Corps jurisdiction.

i. The Corps will coordinate review of all activities requiring PCN with federal and state agencies and federally recognized tribes, as appropriate. To be eligible and subsequently authorized, an activity must result in no more than minimal individual and cumulative effects on the aquatic environment as determined by the Corps in accordance with the criteria listed within this GP. This may require project modifications involving avoidance, minimization, or compensatory mitigation for unavoidable impacts to ensure that the net adverse effects of a project are no more than minimal.

ii. The Corps will attempt to issue a written eligibility determination within the state's review period. Regardless, work eligible for Category 2 may not proceed before Corps written approval is received.

c. All applicants for Category 2 projects must:

- i. Apply directly to the Corps using the state application form or the Corps application form (ENG Form 4345<sup>2</sup>), and apply directly to the state (DEP, LUPC, BPL or DMR) as applicable using the appropriate state form, if the work is regulated by the Corps and the state; or
  - ii. Apply directly to the Corps using the Corps application form (ENG Form 4345<sup>2</sup>) if the work is regulated by the Corps but not the state (DEP, LUPC, BPL or DMR).
  - iii. Provide application information (see “Information Typically Required” in Appendix C) to help ensure the application is complete and to speed project review.
  - iv. Obtain an Official Species List of federally threatened or endangered species in the project area (GC 8).
  - v. Submit a copy of their application materials to the Maine Historic Preservation Commission (MHPC) *and all five Indian tribes* listed at Appendix E, at the same time, or before, they apply to 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 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).
- d. Work that is not regulated by the State of Maine, but is subject to Corps jurisdiction, may still be eligible for authorization under this GP.

**e. Emergency Situations:** 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.” Emergency work is subject to the same terms and conditions of this GP as non-emergency work, and similarly, must qualify for authorization under the GP; otherwise an IP is required. The Corps will work with all applicable agencies to expedite verification according to established procedures in emergency situations.

3. Individual Permits. Projects that are not authorized by this GP require an Individual Permit (IP) (33 CFR 325.5) and proponents must submit an application directly to the Corps. This GP does not affect the Corps IP review process or activities exempt from Corps regulation. For general information and application form, see the Corps website or contact the Corps (see Appendix E). The Corps encourages applicants to apply concurrently for a Corps IP and applicable state permits.

The Corps retains discretionary authority on a case-by-case basis to elevate a GP eligible project to an IP based on concerns for the aquatic environment or for any other factor of the public interest [33 CFR 320.4(a)]. Whenever the Corps notifies an applicant that an IP is required, no work in Corps jurisdiction may be conducted until the Corps issues the required authorization in writing indicating that work may proceed.

4. Enforcement/Non-Compliance. Work performed without the required Corps of Engineers permits is subject to administrative, civil, and criminal penalties. The Corps will evaluate unauthorized activities for enforcement action under 33 CFR 326.

The Corps will consider unauthorized any activity requiring Corps authorization if that activity is under construction or completed and does not comply with all of the terms and conditions of a GP or an IP. The Corps may elect to suspend enforcement proceedings if the permittee modifies his project to comply with a GP.

After considering whether a violation was knowing or intentional, and other indications of the need for a penalty, the Corps can elect to terminate an enforcement proceeding with an after-the- fact authorization under a GP, if all terms and conditions of the GP have been satisfied, either before or after the activity has been accomplished.

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<sup>2</sup> Located at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) under “Forms & Publications.”  
Section III

#### **IV. GENERAL CONDITIONS**

To qualify for GP authorization, the prospective permittee must comply with the following general conditions, as applicable.

1. Other Permits
2. Federal Jurisdictional Boundaries
3. Minimal Direct, Secondary, and Cumulative Impacts
4. Mitigation (Avoidance, Minimization, and Compensatory Mitigation)
5. Single and Complete Projects
6. Historic Properties
7. Corps Projects and Property
8. Federal Threatened and Endangered Species
9. Wild and Scenic Rivers
10. Navigation
11. Federal Liability
12. Utility Line Installation and Removal
13. Heavy Equipment in Wetlands or Mudflats
14. Temporary Fill
15. Restoration of Special Aquatic Sites (including wetland areas).
16. Soil Erosion, Sediment and Turbidity Controls
17. Time of Year Windows/Restrictions.
18. Aquatic Life Movements & Management of Water Flows
19. Water Quality and Coastal Zone Management
20. Floodplains and Floodways
21. Storage of Seasonal Structures
22. Spawning, Breeding, and Migratory Areas
23. Vernal Pools
24. Invasive and Other Unacceptable Species
25. Programmatic Agreements
26. Permit On-Site
27. Self-Verification Notification Form (SVNF)
28. Inspections
29. Maintenance
30. Property Rights
31. Transfer of GP Verifications
32. Modification, Suspension, and Revocation
33. Special Conditions
34. False or Incomplete Information
35. Abandonment
36. Enforcement Cases
37. Duration of Authorization
38. Previously Authorized Activities
39. Discretionary Authority
40. St. John/St. Croix Rivers.
41. National Lands
42. Essential Fish Habitat (EFH)
43. Work Site Restoration
44. Bank Stabilization
45. Stream Work & Crossings and Wetland Crossings

**1. Other Permits.** Permittees must obtain other federal, state, or local authorizations required by law. Applicants are responsible for applying for and obtaining all required state or local approvals. 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 <http://www.maine.gov/dacf/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 square feet (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 (PCN), and for those filling ≥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 supplement (see Appendix C). 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 LUPC jurisdiction regardless of whether they’re shown on LUPC 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. See [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> Jurisdictional Limits and Wetlands for more information on delineating jurisdictional areas.

**3. Minimal Direct, Secondary, and Cumulative Effects<sup>3</sup>**

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 4) 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 and Appendix F.

c. Site clearing, grading and construction activities in the upland habitat surrounding vernal pools (“Vernal Pool Management Areas”) are secondary impacts. See GC 23 for avoidance and minimization requirements and recommendations.

d. Bank stabilization activities in tidal waters are provided at Appendix A, Page 30. Direct impacts in tidal waters from contiguous bank stabilization projects in excess of 200 linear feet (Applicant or Applicant + Abutters combined) must undergo Category 2 review.

**4. Mitigation (Avoidance, Minimization, and Compensatory Mitigation)**

a. 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.

b. Applicants proposing work in jurisdictional waters should consider riparian/forested buffers for stormwater management and low impact development (LID) best management practices (BMPs) to reduce

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<sup>3</sup> Direct, secondary and cumulative effects are defined at Appendix F, Definitions and Acronyms.

impervious cover and manage stormwater to minimize secondary impacts to aquatic resources to the maximum extent practicable.<sup>4</sup>

c. Compensatory mitigation<sup>5</sup> for effects to waters of the U.S., including direct, secondary and temporal<sup>6</sup>, may be required for permanent impacts that exceed the SV area limits, and may be required for temporary impacts that exceed the SV area limits, to offset unavoidable impacts which remain after all appropriate and practicable avoidance and minimization has been achieved and to ensure that the adverse effects to the aquatic environment are no more than minimal. Proactive restoration projects or temporary impact work with no lasting secondary effects may generally be excluded from this requirement. Refer to Appendix G.

## **5. Single and Complete Projects<sup>7</sup>**

a. This GP shall not be used to piecemeal work and shall be applied to single and complete projects. 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 utility<sup>7</sup>.

c. Unless the Corps determines the activity has independent utility:

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 project.

d. For linear projects, such as power lines or pipelines with multiple crossings, the single and complete project 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. Historic Properties**

a. No undertaking shall cause effects (defined at 33 CFR 325 Appendix C and 36 CFR 800) on properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places<sup>8</sup>, including previously unknown historic properties within the permit area, unless the Corps or another Federal action agency has satisfied the consultation requirements of Section 106 of the National Historic Preservation Act (NHPA). The State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO) and the National Register of Historic Places can assist with locating information on: i) previously identified historic properties; and ii) areas with potential for the presence of historic resources, which may require identification and evaluation by qualified historic preservation and/or archaeological consultants in consultation with the Corps and the SHPO and/or THPO(s).

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<sup>4</sup> See: [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> State General Permit >> Permit Resources >> Mitigation for this additional information: a) "Wetland BMP Manual - Techniques for Avoidance & Minimization," b) riparian/forested buffer BMPs, and c) LID BMPs. LID BMPs include, but are not limited to: replacing curbs and gutters with swales; using an open space design for subdivisions; using permeable, pervious or porous pavements; constructing bio-retention systems; and/or, adding a green roof or rain garden.

<sup>5</sup> Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR 332. See also the New England District Compensatory Mitigation Guidance at [www.nae.usace.army.mil/regulatory](http://www.nae.usace.army.mil/regulatory) >> Mitigation.

<sup>6</sup> Temporal loss: The time lag between the loss of aquatic resource functions caused by the permitted impacts and the replacement of aquatic resource functions at the compensatory mitigation site(s) (33 CFR 332.2).

<sup>7</sup> Single and Complete Project and Independent Utility are defined in Appendix F - Definitions.

<sup>8</sup> The majority of historic properties are not listed on the National Register of Historic Places and may require identification and evaluation by qualified historic preservation and/or archaeological consultants in consultation with the Corps and the SHPO and/or THPO(s).

b. For activities eligible for SV, proponents must ensure and document that the activity will not cause effects as stated in 6(a). Proponents must submit a PCN if the authorized activity may cause effects as stated in 6(a) as soon as possible to ensure that the Corps is aware of any potential effects of the permitted activity on any historic property to ensure all Section 106 requirements are met.

c. All PCNs shall: i) show notification to the SHPO and applicable THPO(s)<sup>9</sup> for their identification of historic properties, ii) state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties, and iii) include any available documentation from the SHPO or THPO(s) indicating that there are or are not historic properties affected. Starting consultation early in project planning can save proponents time and money.

d. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

## 7. Corps Projects and Property

a. In addition to any authorization under this GP, proponents must contact the Corps Real Estate Division at (978) 318-8585 for work occurring on or potentially affecting Corps properties and/or Corps-controlled easements to initiate reviews and determine what real estate instruments are necessary to perform work. Permittees may not commence work on Corps properties and/or Corps-controlled easements until they have received any required Corps real estate documents evidencing site-specific permission to work.

b. Any proposed temporary or permanent alteration, or modification or use, including occupation, of a federal project (including but not limited to a levee, dike, floodwall, channel, anchorage, breakwater, seawall, 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 operations and maintenance, is not eligible for SV and requires review and approval by the Corps pursuant to 33 USC 408. Where Section 408 is applicable, a decision on a Department of the Army general permit application will not be rendered prior to the decision on a Section 408 request.

c. Any structure or work within any Corps Federal Navigation Project (FNP) or its buffer zone<sup>10</sup>, shall be subject to removal at the owner's expense prior to any future Corps dredging or the performance of periodic hydrographic surveys. See GC 10 for more requirements related to FNPs.

## 8. Federal Threatened and Endangered Species

a. No activity is authorized which: i) is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species; ii) "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed; or iii) violates the ESA.

b. **All applicants must request an Official Species List from the US Fish & Wildlife Service and must include the list in the Corps permit application. To request an Official Species List, refer to the instructions in Appendix D.**

c. **For federally listed species in tidal waters, applicants should contact the National Marine Fisheries Service at: <http://www.greateratlantic.fisheries.noaa.gov/protected/section7/>**

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<sup>9</sup> Appendix E, 3(a)&(b). Historic Resources, provides contact information and each tribe's "area of concern."

<sup>10</sup> See Appendix H for a list of FNPs. The buffer zone is equal to three times the authorized depth of the FNP.  
Section IV

d. A PCN is required if a threatened or endangered species, a species proposed for listing as threatened or endangered, or designated or proposed critical habitat (all hereinafter referred to as “listed species or habitat”), as identified under the ESA, is present in the action area<sup>11</sup>.

e. Federal agencies should follow their own procedures for complying with the requirements of the ESA but should coordinate that consultation with the Corps as well.

**9. Wild and Scenic Rivers.**<sup>12</sup> 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 2015 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); and 11.25 miles of the York River, in the State of Maine, from its headwaters at York Pond to the mouth of the river at York Harbor, plus its tributaries (currently under study).

## **10. Navigation**

a. Any structure or work that extends closer to the horizontal limits of any Corps Federal Navigation Project (see Appendix H) 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 28 (Moorings) and Page 29 (Structures, Floats & Lifts).

b. 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.

c. 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.

d. A PCN is required for all work in, over or under an FNP or its buffer zone unless otherwise indicated in Appendix A. (Reference Appendix A, Endnote 13, Page 36)

**11. 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.

## **12. Utility Line Installation and Removal**

a. Subsurface utility lines shall remain subsurface. If it is necessary to discharge dredged or filled material not previously authorized in order to keep such utility lines buried or restore them to their original subsurface condition, a PCN and written verification from the Corps may be required (e.g., in the case of side

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<sup>11</sup> The “Endangered Species Consultation Handbook – Procedures for Conducting Consultation and Conference Activities Under Section 7 of the ESA,” defines action area as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. [50 CFR 402.02].”

<sup>12</sup> Additional information can be found at: <http://www.rivers.gov>.

casting into wetlands from utility trenches). Certain repair, replacement or maintenance activities may be eligible for Category 1 – refer to Appendix A.

b. Subsurface utility lines must be installed at a sufficient depth to avoid damage from anchors, dredging, etc., and to prevent exposure from erosion and stream adjustment. In accordance with Corps New England District Regulation NEDER 1110-1-9 ([www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> [Useful Links and Documents](#)), as an absolute minimum, the bottom cover associated with the initial installation of utility lines under navigable waters and navigation channels shall be 48 inches in soil or 24 inches in rock excavation in competent rock unless specified in a written determination. These minimum bottom cover requirements for pipelines and cables shall be measured from the maximum depth of dredging to the top of the utility. The maximum depth of dredging, in waterways having existing FNPs, is generally considered to be the authorized project depth plus any allowance for advanced maintenance and the allowable overdepth for dredging tolerances. In waterways that do not have existing FNPs, this depth should be taken as two feet below the existing bottom or maximum depth of proposed dredging, as applicable.

c. Aerial utility lines that cross navigable waters must meet minimum clearances. See 33CFR322.5(i).

d. For horizontal directional drilling work, returns of drilling fluids to the surface (i.e., frac-outs) are not authorized and require restoration to the maximum extent practicable in accordance with the terms and conditions of this GP. The permittee and its contractor shall have onsite and shall implement the procedures detailed in a frac-out contingency plan for monitoring drilling operations and for the immediate containment, control and recovery/removal of drilling fluids released into the environment should a discharge of material occur during drilling operations.

e. Within the context of any new installations, any abandoned or inactive utility lines should be removed and faulty lines (e.g., leaking hazardous substances, petroleum products, etc.) should be removed or repaired to the extent practicable. A PCN and written verification from the Corps is required if they are to remain in place, e.g., to protect sensitive areas or ensure safety.

f. No work shall drain a water of the U.S. by providing a conduit for water on or below the surface. Trench plugs installed along pipelines may be effective.

**13. Heavy Equipment in Wetlands or Mudflats.** 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. Construction mats should be managed in accordance with the Construction Mat BMPs at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> State General Permits >> Permit Resources.

**14. 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 and disturbed soils shall be stabilized to prevent its eroding into waters of the U.S. where it is not authorized. Work shall include phased or staged development to ensure only areas under active development are exposed and to allow for stabilization practices as soon as practicable, typically within three calendar days after disturbance. Accelerated stabilization (the providing of temporary or permanent cover by the end of the work day to prevent erosion) shall be employed as necessary. Temporary fill must be placed in a manner that will prevent it from being eroded by expected high flows.

b. Unconfined temporary fill authorized for discharge into waters of the U.S. (e.g., temporary stream crossings) shall consist of material that minimizes impacts to water quality (e.g. washed stone, stone, etc.).

c. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Place materials in a location and manner that does not adversely impact surface or subsurface water flow into or out of the wetland. Temporary fill authorized for discharge into wetlands shall be placed on geotextile fabric or other appropriate material laid on the pre-construction wetland grade where practicable to minimize impacts and to facilitate restoration to the original grade. Construction mats are excluded from this requirement.

d. Temporary fill, construction mats and corduroy roads shall be entirely removed as soon as they are no longer needed to construct the authorized work. Temporary fill shall be placed in its original location or disposed of at an upland site and suitably contained to prevent its subsequent erosion into waters of the U.S. To qualify for Category 1, temporary fill placed during the: i.) growing season must be removed before the beginning of the next growing season; and ii.) non-growing season may remain throughout the following growing season, but must be removed before the beginning of the next growing season.

e. Temporary fill, construction mats and corduroy roads are considered temporary only if they are removed as soon as they are no longer needed to construct the authorized work.

f. Construction debris and/or deteriorated materials shall not be located in waters of the U.S.

#### **15. Restoration of Special Aquatic Sites (Including Wetland Areas)**

a. Temporary fills must be removed in their entirety and the affected areas restored to their pre-construction condition, function and elevation. Restoration shall typically commence no later than the completion of construction.

b. For excavated areas, “restored to pre-construction condition, function and elevation” means careful removal of existing soil and vegetation, separate topsoil and subsoil stockpiling, soil protection, and replacement back to the original location such that the original soil layering and vegetation schemes are approximately the same, unless otherwise authorized. Plan for natural settling that will occur (the initial post-restoration elevation of the backfilled areas should be above the desired final grade as topsoil may settle by 33% to 50%), minimize compaction, and ensure that topsoil is void of gravel and subsoil. A minimum of 4 inches of topsoil should be at the surface after the soil has settled. Wetland areas temporarily disturbed shall be stabilized (e.g., seeded or planted). Seed mixes and vegetation shall include only plant species native to New England and shall not include any species listed as “Invasive and Other Unacceptable Plant Species” in the “New England District Compensatory Mitigation Guidance” (see GC 24 and refer to Appendix G). This list may be updated periodically.

c. Limit compaction to the minimum needed to promote a successful seedbed; avoid a ‘fluffy’ seedbed, which is susceptible to erosion until the plants get established, and a compacted topsoil layer, which is counter-productive and will lead to greater erosion susceptibility down the road. Test soils for compaction. A soil probe, auger, or shovel should be able to retrieve samples of post-restoration profile. Equipment refusal shall be considered a failure of restoration, in which case the soil should be restored through deep-ripping and/or de-compaction, or other appropriate methods, and wetland hydrology must be maintained. See the BMPs at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> State General Permits >> Permit Resources >> Restoration.

d. In areas of authorized temporary disturbance, cut woody vegetation (trees, shrubs, etc.) shall be cut at or above 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.

e. Trenches shall be constructed or backfilled so that the trench does not drain waters of the U.S. (e.g., materials or methods that create a French drain effect).

#### **16. Soil Erosion, Sediment and Turbidity Controls**

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 .

**17. Time of Year Work Windows/Restrictions.** For activities where work is authorized in streams and tidal waters that causes turbidity or sediment re-suspension or other construction related disturbances, work must be conducted during the following TOY work windows (not during the TOY restrictions) unless otherwise authorized by the Corps under Category 2 review:

	<u>TOY Restriction</u> (no work)	<u>TOY Work Window</u> (work allowed)
Non-tidal waters	Oct. 01 through Jul. 14	Jul. 15 through Sep. 30
Tidal waters	Apr. 10 through Nov. 07	Nov. 08 through Apr. 09

Alternate windows authorized under Category 2 may include species specific windows recommended by the Maine Dept. of Marine Resources and/or Maine Dept. of Inland Fisheries & Wildlife.

**18. Aquatic Life Movements & Management of Water Flows**

- a. No activity may 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, unless the activity’s primary purpose is to impound water. Unless otherwise stated, activities impounding water in a stream require a PCN to ensure impacts to aquatic life species are avoided and minimized. All permanent and temporary crossings of waterbodies (e.g., streams, wetlands) shall be:
  - i. Suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species; and
  - ii. Properly aligned and constructed to prevent bank erosion or streambed scour both adjacent to and inside the culvert. Permanent and temporary crossings of wetlands shall be suitably culverted, spanned or bridged in such a manner as to preserve hydraulic and ecological connectivity between the wetlands on either side of the road.
- b. To avoid adverse impacts on aquatic organisms, the low flow channel/thalweg shall remain unobstructed during periods of low flow, except when it is necessary to perform the authorized work.
- c. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the preconstruction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

**19. Water Quality and Coastal Zone Management**

- a. Applicants must satisfy any conditions imposed by the state and EPA, where applicable, in their CWA § 401 Water Quality Certifications (WQC) for this GP, or in any Individual § 401 WQC. See Appendix E for state-specific contact information and to determine if any action is required to obtain a 401 WQC. The Corps may require additional water quality management measures to ensure that the authorized activity does not cause or contribute to a violation of water quality standards. All projects authorized by this GP shall be designed, constructed and operated to minimize or eliminate the discharge of pollutants.
- b. Applicants must satisfy any additional conditions imposed by the state in their Coastal Zone Management (CZM) Act consistency concurrences for this GP, or in any Individual CZM consistency concurrences. The Corps may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

**20. Floodplains and Floodways**

- a. Appropriate measures must be taken to minimize flooding to the maximum extent practicable.
- b. Activities within 100-Year Floodplains must comply with applicable Federal Emergency Management Agency (FEMA)-approved state and/or local floodplain management permitting requirements. Proponents may need to coordinate with FEMA and apply for a formal change to the flood insurance study products or forward a set of project plans and relevant technical documentation in a digital format to the Risk

Analysis Branch Chief, Mitigation Division, FEMA, Region 1, 99 High Street, Boston, Massachusetts 02110. Applicants should provide a copy of any documentation to the Corps along with the PCN.

c. Proponents may have to obtain a Flood Hazard Development Permit issued by the town. Inquiries may be directed to the municipality or to the Maine Floodplain Management Coordinator at (207) 287-8063. See <http://www.maine.gov/dacf/flood/>

**21. Storage of Seasonal Structures.** Seasonal or recreational structures such as pier sections, floats, aquaculture structures, etc. 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 landward of mean high water (MHW) or ordinary high water (OHW) and not in wetlands, tidal wetlands, their substrate or on mudflats. These seasonal structures may be stored on the fixed, pile-supported portion of the structure that is waterward of MHW or OHW. Seasonal storage of structures in navigable waters, e.g., in a protected cove on a mooring, requires Corps approval and local harbormaster approval.

## **22. Spawning, Breeding, and Migratory Areas**

a. Jurisdictional activities and impacts such as excavations, discharges of dredged or fill material, and/or suspended sediment producing activities in jurisdictional waters that provide value as 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.

b. Jurisdictional activities in waters of the United States that provide value as breeding areas for migratory birds must be avoided to the maximum extent practicable. The permittee is responsible for obtaining any “take” permits required under the USFWS’s regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the USFWS to determine if such “take” permits are required for a particular activity (See Appendix E).

## **23. Vernal Pools**

a. Only vernal pools that meet the current definition of waters of the U.S. are regulated by the Corps.

b. Direct and indirect adverse effects to all vernal pools (VPs), including their envelopes and critical terrestrial habitats (VP Management Areas<sup>13</sup>), shall be avoided and minimized to the maximum extent practicable. Site clearing, grading, and construction activities associated with a regulated activity in the VP Management Area may cause these adverse effects to the VP.

c. The State of Maine has specific protections for vernal pools.<sup>14</sup>

d. When any regulated activities occur within 750 feet of a vernal pool, the following management practices must be followed for all work within any VP Management Area (750’ of a VP’s edge) *in order to qualify for Category I*:

- i. No disturbance within the VP Depression or VP Envelope (area within 100 feet of the VP Depression’s edge)<sup>15</sup>;
- ii. 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 debris;
- iii. Maintain or restore forest corridors connecting wetlands and significant vernal pools;
- iv. Minimize forest floor disturbance; and
- v. Maintain native understory vegetation and downed woody debris.

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<sup>13</sup> 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.

<sup>14</sup> Appendix G, 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.

<sup>15</sup> 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.

vi. Cape Cod style-curbings or no curbings options shall be used on new roads to facilitate amphibian passage. (Reference Appendix G)

e. A PCN is required for any regulated activity within 750' of a vernal pool when all work within the VP Management Area does not comply with the Category 1 requirements in (d) above. Information on directional buffers in accordance with the VP Directional Buffer Guidance document may be provided in order to demonstrate minimal impact and avoid compensation requirements (Reference Appendix G). Conservation of the un-impacted area within the VP Management Area will often be required.

f. GC 2 requires applicants to delineate or approximately identify on the project plans all waters of the U.S., which contain vernal pools.

g. GC 23(b-d) do not apply to projects that are within a municipality and meet the provisions of a Corps-approved VP Special Area Management Plan (VP SAMP) and are otherwise eligible for self-verification.

#### **24. Invasive and Other Unacceptable Species<sup>16</sup>**

a. The introduction or spread of invasive or other unacceptable plant or animal species on the project site or areas adjacent to the project site caused by the site work shall be avoided to the maximum extent practicable. For example, construction mats and equipment shall be thoroughly cleaned and free of vegetation and soil before and after use. The introduction or spread of invasive plant or animal species on the project site caused by the site work shall be controlled.

b. No cultivars, invasive or other unacceptable plant species may be used for any mitigation, bioengineering, vegetative bank stabilization or any other work authorized by this GP. However, non-native species and cultivars may be used when it is appropriate and specified in a written verification, such as using *Secale cereale* (Annual Rye) to quickly stabilize a site. All PCNs should explain the reason for using non-native species or cultivars.

**25. Programmatic Consultations or Agreements.** The Corps requirements to comply with Section 106 of the NHPA, Section 7 of the Endangered Species Act or Essential Fish Habitat conservation under the Magnuson-Stevens Act may be satisfied by a Programmatic Agreement with the Corps, New England District or another federal action agency. Any Corps, New England District Programmatic Agreements will be available on our website.

**26. Permit On Site.** The permittee shall ensure that a copy of this GP and any accompanying authorization letter with attached plans are at the site of the work authorized by this GP whenever work is being performed and that all construction personnel performing work which may affect waters of the U.S. are aware of its terms and conditions. The entire permit authorization shall be made a part of any and all contracts and subcontracts 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 entire 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 subcontract. Although the permittee may assign various aspects of the work to different contractors or subcontractors, all contractors and subcontractors shall be obligated by contract to comply with all environmental protection provisions contained within the entire GP authorization, and no contract or subcontract shall require or allow unauthorized work in areas of Corps jurisdiction.

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<sup>16</sup> For the purposes of this GP, plant species that are considered invasive and unacceptable are provided in Appendix G "Invasive and other Unacceptable Plant Species" of our document "Compensatory Mitigation Guidance" at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> Mitigation. Chapter 4(e) Planting is also particularly relevant. The June 2009 "Corps of Engineers Invasive Species Policy" provides policy, goals and objectives and is located at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> Invasive Species. Additional information can be found at: [www.eddmaps.org/ipane](http://www.eddmaps.org/ipane).

**27. Self-Verification Notification Form (SVNF).** Permittees must complete and submit the SVNF provided at Appendix B to the Corps for work authorized by this GP unless otherwise noted in Appendix A. **NOTE: A copy of a state permit application form may be an acceptable surrogate for the SVNF provided either form used also include plans and an Official Species List of federally listed threatened or endangered species.**

**28. Inspections.** The permittee shall allow the Corps to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of this GP and any written verification. The Corps may also require post-construction engineering drawings for completed work, post-dredging survey drawings for any dredging work, or other post-construction reports. To facilitate these inspections, the permittee shall complete and return to the Corps the following forms:

- For Category 1/Self-Verification: The SVNF (see Appendix B).
- For Category 2/PCN: The a) Work-Start Notification Form and b) Compliance Certification Form, when either is provided with the authorization letter.

**29. Maintenance**

a. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable general conditions and activity-specific conditions to a written verification.

b. The requirement in (a) above does not include maintenance of dredging projects. Each maintenance dredging event exceeding the self-verification limits requires a new PCN unless an unexpired, written PCN or other Corps authorization specifies that the permittee may “dredge and maintain” an area for a particular time period. Self-verification or PCN maintenance dredging includes only those areas and depths previously authorized and actually dredged. Maintenance dredging with ocean or open water disposal will always require a PCN and at least Category 2 review.

c. Some maintenance activities may not be subject to regulation under Section 404 in accordance with 33 CFR 323.4(a)(2). Refer to Appendix A, Endnote 7.

**30. Property Rights.** This GP 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.

**31. 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 authorizations, as well as the new owner(s) of the property. If the permittee sells the property associated with a GP verification, the permittee may transfer the GP verification to the new owner by submitting a letter to the Corps (see Appendix E for address) to validate the transfer. A copy of the GP verification must be attached to the letter, and *the letter must contain the new owner’s contact information and 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.”

\_\_\_\_\_  
(Transferee)

\_\_\_\_\_  
(Date)

**32. Modification, Suspension, and Revocation.** Any work authorized under this GP by self-verification or PCN 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 U.S.

**33. 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 terms and 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.

**34. 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 Corps may determine that the GP authorization is not valid; modify, suspend or revoke the authorization; and the U.S. Government may institute legal proceedings.

**35. 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.

**36. Enforcement cases.** This GP does not apply to any existing or proposed activity in Corps jurisdiction associated with an ongoing Corps or EPA enforcement action, until such time as the enforcement action is resolved or the Corps or EPA, as appropriate, determines that the activity may proceed independently without compromising the enforcement action.

**37. Duration of Authorization.** This GP expires on October 12, 2020. 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 12, 2021 to complete the activity under the terms and conditions of the current GP.

**38. 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 GP in effect between October 12, 2010 and October 12, 2015 remains authorized subject to the terms and general conditions of this GP along with any special conditions in the authorizing written letter. Exception – if previously authorized work is not commenced and a new federally listed threatened or endangered species could be affected, the Corps must consult with the Service(s) prior to re-authorizing the work under this GP. Requests for re-authorization must include an updated Official Species list. To request an Official Species List, refer to the instructions in Appendix D.

**39. 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.

**40. 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 a PCN 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.

**41. National Lands.** 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 are not eligible for Category 1 and require a PCN.

**42. Essential Fish Habitat (EFH).** 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 G 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	Sheepscot 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 28 for Category 1 thresholds and requirements)
- Structures, floats & lifts (see Appendix A, Page 29 for Category 1 thresholds and requirements)
- Other activities specified in a programmatic agreement with NMFS.

#### **43. 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 GC 24 and refer to Appendix G). 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.

#### **44. 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.

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 total length along the bank(s); 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 sub-angular 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. Bank stabilization activities in tidal waters are provided at Appendix A, Page 30 & 31. Direct impacts in tidal waters from contiguous bank stabilization projects in excess of 200 linear feet (Applicant or Applicant + Abutters combined) must undergo Category 2 review.

#### **45. Stream Work and Crossings & Wetland Crossings**

##### **Notes:**

a. For *Stream Work and Crossings* below, conditions (a) and (b) apply to Inland Waters and Wetlands (see Appendix A, Page 1 for definition) and Navigable Waters (see Appendix A, Page 27 for definition). Conditions (c)-(l) below 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, Atlantic sturgeon, or shortnose sturgeon [see GC 8(b)] and some stream work such as crossings on EFH waters (see GC 42) is not eligible for Category 1.

c. “High-Quality Stream Segments” are shown at [www.maine.gov/dep/gis/datamaps](http://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 for more state contact information.

##### **Conditions for Stream Work and Crossings:**

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 G, 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 45(a) and GC 45(b) above.

ii. Shall be designed and constructed in accordance with the Corps General Stream Crossing

Standards provided on Page 19 and the stream simulation document listed at Appendix G, 8(a).

d. Replacement Stream Crossings. For replacement stream crossings to qualify for Category 1:

i. Must ensure compliance with GC 45(a) and GC 45(b) above.

ii. Shall be designed and constructed in accordance with the Corps General Stream Crossing

Standards provided on Page 19 and the stream simulation document listed at Appendix G, 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 and at least Category 2 review.

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 G, 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 spans<sup>17</sup> (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. Installed and removed during the low flow period specified in GC 45(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 methods<sup>18</sup>.

g. Slip Lining. Work using slip lining (retrofitting an existing culvert by inserting a smaller diameter pipe), invert lining, or resulting in decreased diameter, does 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 14(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 45(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 45(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 45(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 GC 45(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 – September 30 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.

**Corps General Stream Crossing Standards (required for Category 1; recommended for Category 2):**

- a. Culverts must be embedded:

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<sup>17</sup> 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.

<sup>18</sup> Design and construction shall be in accordance with the stream simulation document listed at Appendix G, 8(a).

- $\geq 2$  feet for box culverts and other culverts with smooth internal walls,
- $\geq 1$  foot for corrugated pipe arches
- $\geq 1$  foot and at least 25 percent for corrugated round pipe culverts

b. **For new crossings**, spans<sup>17</sup> are required to avoid or cause minimal disruption to the streambed and to meet the requirements of General Condition 45(a) and 45(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 45(h)ii requires Category 2 review and, unless demonstrated otherwise, stream simulation<sup>18</sup> to establish substrate and banks in the span structure and work area as specified in (d) and (e) below.

c. **For replacement crossings**, spans<sup>17</sup> are required to meet the requirements of General Condition 45(a) and 45(b). Footings and abutments shall be landward of 1.2 times bankfull width. Unless demonstrated otherwise, stream simulation<sup>18</sup> 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) 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 banks<sup>18</sup>. Note: Installation of substrate material within smaller culverts may not be safe or practicable. In these cases, it may be necessary to allow for natural deposition and bed development unless alternative methods are identified.

e. Crossings must be designed and constructed<sup>18</sup> 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.

**Conditions for 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 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.



Robert J. Desista  
Deputy Chief, Regulatory Division  
For DISTRICT ENGINEER

DATE 10/13/15

## APPENDIX A: DEFINITION OF CATEGORIES

<b>A. INLAND WATERS AND WETLANDS</b>	<p><b>Inland Waters and Wetlands:</b> Waters that are regulated under Section 404 of the Clean Water Act, including rivers, streams, lakes, ponds and wetlands, and <i>excluding Section 10 Navigable Waters of the U.S. (tidal and freshwater)</i>. 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 and designated activities, fill placed in the area between the mean high water (MHW) and the high tide line (HTL), and in the bordering and contiguous wetlands<sup>1</sup> to tidal waters are reviewed in the Navigable Waters section. (See B. Navigable Waters on page 27 below.)</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 5–20).</p>	
<b>ACTIVITY</b>	<b>CATEGORY 1 Self-Verification Eligible (SVNF Required)</b>	<b>CATEGORY 2 (PCN Required)</b>
<b>1. Repair, Replacement, Expansion, and Maintenance of Authorized Structures and Fills</b>	<p>Repair or maintenance of existing, currently serviceable, authorized fills with no expansion or change in use:</p> <ul style="list-style-type: none"> <li>• Conditions of the original authorization apply.</li> <li>• Minor deviations in fill design allowed.<sup>7</sup></li> <li>• 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.</li> <li>• No effect on federally listed endangered or threatened species or critical habitat.</li> </ul>	<p>Replacement of non-serviceable fills, or repair/maintenance of serviceable fill, with expansion &lt;3 acres, or with a change in use.</p>
<b>2. Moorings</b>	<p>NA – moorings in non-navigable inland waters are not subject to Corps jurisdiction. Note: Moorings placed in freshwater navigable waters are reviewed in the Navigable Waters section. (See B. Navigable Waters on Page 28 below.)</p>	<p>NA</p>
<b>3. Structures, Floats &amp; Lifts</b>	<p>For solid fill or crib supported structures on inland waters, &lt;15,000 square feet (SF) of waterway and/or wetland fill, associated secondary impacts<sup>2</sup>, and temporary fills.</p> <ul style="list-style-type: none"> <li>• No effect on federally listed endangered or threatened species or critical habitat.</li> <li>• Note: Temporary or permanent structures placed in freshwater navigable waters are reviewed in the Navigable Waters section. (See B. Navigable Waters on page 29 below.)</li> </ul>	<p>1. Work not eligible for Category 1 2. ≥15,000 SF to &lt;3 acres of inland waterway and/or wetland fill and associated secondary impacts (e.g., areas drained, flooded, fragmented, or excavated).</p>
<b>4. Aids to Navigation and Temporary Recreational Structures</b>	<p>NA - this activity in non-navigable inland waters is not subject to Corps jurisdiction. Note: Aids to Navigation and other structures placed in freshwater navigable waters are reviewed in the Navigable Waters section. (See B. Navigable Waters on page 30 below.)</p>	<p>NA</p>

<b>5. Dredging, Disposal of Dredged Material, Beach Nourishment, and Rock Removal and Relocation</b>	<p>1. For regulated discharges associated with excavation, and disposal &lt;15,000 SF inland waterway and/or wetland impacts.</p> <p>2. The activity does not occur in navigable waters of the U.S.</p> <p>3. Stream channelization, relocation or loss of streambed including impoundments or discharge of tailings into streams does not occur.</p> <p>4. No effect on federally listed endangered or threatened species or critical habitat.</p>	<p>1. Work not eligible for Category 1</p> <p>2. <math>\geq 15,000</math> SF to &lt;3 acres of inland waters.</p>
<b>6. Discharges of Dredged or Fill Material Incidental to the Construction of Bridges</b>	<p>NA - For discharges incidental to the construction of bridges in inland waters of the U.S. refer to Activity 23 (Stream and Wetland Crossings) and GC 45.</p> <p>Note: Discharges of Dredged or Fill Material Incidental to the Construction of Bridges in freshwater navigable waters are reviewed in the Navigable Waters section. (See B. Navigable Waters on page 30 below.)</p>	<p>NA</p>
<b>7. Bank and Shoreline Stabilization</b>	<p>Inland bank stabilization &lt;500 FT long and <math>\leq 1</math> CY of fill per linear foot below OHW, provided:</p> <ul style="list-style-type: none"> <li>• <math>\leq 1</math> cubic yard of fill per linear foot placed along the bank waterward of ordinary high water.</li> <li>• Work complies with the GCs (GC 44 in particular), including: <ul style="list-style-type: none"> <li>◦ No structures angled steeper than 1H:1V allowed. Only rough-faced stone or fiber roll revetments allowed.</li> <li>◦ No in-stream work involving fill or excavation in flowing waters (see GC 45(h)).</li> </ul> </li> <li>• In-water work limited to Jul 15 – Sep 30.</li> <li>• No work in vernal pools<sup>5</sup> or SAS<sup>3</sup>.</li> <li>• No effect on federally listed endangered or threatened species or critical habitat.</li> </ul>	<p>Work not eligible for Category 1</p>
<b>8. Residential, Commercial, Industrial, and Institutional Developments, and Recreational Facilities</b>	<p>1. &lt;15,000 SF of inland waterway and/or wetland fill and associated secondary impacts<sup>2</sup> (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 GC 14]</p> <p><u>Provided:</u></p> <ul style="list-style-type: none"> <li>• Historic fill + proposed impact area &lt;15,000 SF complies with GC 5, Single and Complete Projects.</li> <li>• No work in special aquatic sites (SAS)<sup>4</sup> other than wetlands.</li> <li>• No effect on federally listed endangered or threatened species or critical habitat.</li> </ul> <p>2. For work in Vernal Pool (VP) Management Areas (includes VPs)<sup>5</sup>:</p>	<p>1. Work not eligible for Category 1.</p> <p>2. <math>\geq 15,000</math> SF to &lt;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 (including mats), and regulated discharges associated with excavation.</p> <p>3. <i>Mechanical clearing without grubbing or other soil disturbance &gt;3 acres as a secondary impact may still be eligible for Category 2 at the discretion of the Corps.</i></p> <p>See GC 2 and Appendix C for wetland delineation</p>

	<ul style="list-style-type: none"> <li>• See GC 23 and Appendix C for VP delineation requirements.</li> <li>• See GC 23 to determine if work qualifies for Category 1 or 2.</li> <li>• See Appendix G for VP documents providing mitigation guidance.</li> </ul>	requirements.
<b>9. Utility Line Activities</b>	<ol style="list-style-type: none"> <li>1. &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts<sup>2</sup>, and temporary fills.</li> <li>2. The activity does not occur in, over, or under navigable waters of the U.S.</li> <li>3. Intake structures that are dry hydrants used exclusively for firefighting activities with no stream impoundments.</li> <li>4. There is no permanent change in pre-construction contours in waters of the U.S.</li> <li>5. Material resulting from trench excavation is temporarily side cast into waters of the U.S. for <math>\leq 3</math> months and is placed in such a manner that it is not dispersed by currents or other forces.</li> <li>6. The utility line is placed within and does not run a) parallel to, or b) along a streambed.</li> <li>7. Stream channelization, relocation or loss of streambed including impoundments does not occur.</li> <li>8. No effect on federally listed endangered or threatened species or critical habitat.</li> <li>9. There is no discharge in SAS other than non-tidal wetlands.</li> <li>10. Construction mats<sup>4</sup> 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 &lt;3 months, removed immediately upon work completion, and the wetlands must be restored (see GC 43).</li> <li>11. Stream crossings must comply with GC 17.</li> </ol>	<ol style="list-style-type: none"> <li>1. Work not eligible for Category 1</li> <li>2. <math>\geq 15,000</math> SF to &lt;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 (including mats), and regulated discharges associated with excavation.</li> <li>3. <i>Mechanical clearing without grubbing or other soil disturbance &gt;3 acres as a secondary impact may still be eligible for Category 2 at the discretion of the Corps.</i></li> </ol>
<b>10. Linear Transportation Projects (not including stream crossings)</b>  <b>For stream crossings, refer to Activity 23</b>	<ol style="list-style-type: none"> <li>1. &lt;15,000 SF of inland waterway and/or wetland fill associated secondary impacts (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 fill. (See GC 14.) Provided: <ul style="list-style-type: none"> <li>• Historic fill + proposed impact area &lt;15,000 SF and complies with GC 5 single and complete projects.</li> <li>• No work in special aquatic sites (SAS) other than wetlands.</li> </ul> </li> <li>2. Construction mats<sup>4</sup> 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 &lt;3 months, removed immediately upon work completion, and the wetlands must be restored (see GC 43).</li> <li>3. No effect on federally listed endangered or threatened species or critical habitat.</li> </ol>	<ol style="list-style-type: none"> <li>1. <math>\geq 15,000</math> SF to &lt;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 (including mats), and regulated discharges associated with excavation.</li> <li>2. <i>Mechanical clearing without grubbing or other soil disturbance &gt;3 acres as a secondary impact may still be eligible for Category 2 at the discretion of the Corps.</i></li> </ol>

<b>11. Mining Activities</b>	<ol style="list-style-type: none"> <li>1. &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts, and temporary impacts.</li> <li>2. The activity does not occur in navigable waters of the U.S.</li> <li>3. Stream channelization, relocation or loss of streambed including impoundments or discharge of tailings into streams does not occur.</li> <li>4. No effect on federally listed endangered or threatened species or critical habitat.</li> </ol>	<ol style="list-style-type: none"> <li>1. Work not eligible for Category 1.</li> <li>2. ≥15,000 SF to &lt;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 (including mats), and regulated discharges associated with excavation.</li> </ol>
<b>12. Boat Ramps</b>	<ol style="list-style-type: none"> <li>1. &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts, and temporary impacts.</li> <li>2. No effect on federally listed endangered or threatened species or critical habitat.</li> </ol>	<ol style="list-style-type: none"> <li>1. Work not eligible for Category 1</li> <li>2. &gt;15,000 SF and &lt; 3 acres of impact.</li> </ol>
<b>13. Land and Water-Based Renewable Energy Generation Facilities and Hydropower Projects</b>	<p><i>For land-based facilities:</i></p> <ol style="list-style-type: none"> <li>1. &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts, and temporary impacts.</li> <li>2. Stream channelization, relocation or loss of streambed including impoundments does not occur.</li> <li>3. No effect on federally listed endangered or threatened species or critical habitat.</li> </ol> <p><i>For water-based facilities and hydropower projects:</i> No new facilities are eligible.</p>	<p><i>For land-based activities:</i></p> <ol style="list-style-type: none"> <li>1. Work not eligible for Category 1.</li> <li>2. &gt;15,000 SF and &lt; 3 acres impact.</li> <li>3. <i>Mechanical clearing without grubbing or other soil disturbance &gt;3 acres as a secondary impact may still be eligible for Category 2 at the discretion of the Corps.</i></li> </ol> <p><i>For water-based facilities and hydropower projects:</i> &gt; 3 acres of impact will require an IP.</p>
<b>14. Reshaping Existing Drainage Ditches &amp; Mosquito Management</b>	Not Applicable	Not Applicable
<b>15. Oil Spill and Hazardous Material Cleanup</b>	<p>Jurisdictional 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 or 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. SAS<sup>3</sup> must typically be restored in place at the same elevation.</p> <p><i>Note: SVN<sup>F</sup> or a surrogate state reporting form may be submitted after the fact.</i></p>	Work not eligible for Category 1

<b>16. Cleanup of Hazardous and toxic waste</b>	<p>Specific jurisdictional activities to effect the containment, stabilization, or removal of hazardous or toxic waste materials, including court ordered remedial action plans or related settlements, which are performed, ordered or sponsored by a government agency with established legal or regulatory authority. SAS should be restored in place at the same elevation.</p> <ul style="list-style-type: none"> <li>• &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts, and temporary impacts.</li> <li>• No stream channelization, relocation or loss of streambed occurs.</li> <li>• The project does not involve establishing new disposal sites or expanding existing sites used for the disposal of hazardous or toxic waste.</li> <li>• No effect on federally listed endangered or threatened species or critical habitat.</li> </ul>	<p>Work not eligible for Category 1</p>
<b>17. Scientific Measurements Devices</b>	<ol style="list-style-type: none"> <li>1. 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 or concentrate movement of aquatic organisms.</li> <li>2. No effect on federally listed endangered or threatened species or critical habitat.</li> </ol>	<p>Work not eligible for Category 1</p>
<b>18. Survey Activities</b>	<ol style="list-style-type: none"> <li>1. Jurisdictional 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 43. 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).</li> <li>2. No effect on federally listed endangered or threatened species or critical habitat.</li> </ol>	<p>Work not eligible for Category 1</p>
<b>19. Agricultural Activities</b>	<ol style="list-style-type: none"> <li>1. For those activities subject to Corps jurisdiction<sup>16</sup>, &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts, and temporary impacts.</li> <li>2. No stream channelization, relocation, loss of streambed, or farm ponds in streams.</li> <li>3. No effect on federally listed endangered or threatened species or critical habitat.</li> </ol>	<ol style="list-style-type: none"> <li>1. ≥15,000 SF to &lt;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 (including mats), and regulated discharges associated with excavation.</li> <li>2. &gt; 3 acres of impact will require an IP.</li> </ol>

<b>20. Fish and Wildlife Harvesting, Enhancement and Attraction Devices and Activities</b>	NA - this activity in non-navigable inland waters, if not involving a discharge of dredged or fill material, is not subject to Corps jurisdiction. Note: Related structures placed in freshwater navigable waters (e.g. the upper Penobscot or Kennebec Rivers) are reviewed in the Navigable Waters section. (See B. Navigable Waters on Page 33 below.)	Not Applicable
<b>21. Habitat Restoration, Establishment and Enhancement Activities</b>	<ol style="list-style-type: none"> <li>1. &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts, and temporary impacts.</li> <li>2. The activity is supported in writing by a local, state, or non-Corps Federal environmental agency. Water impoundments require PCN.</li> <li>3. No conversion of i) a stream to wetland or vice versa, wetland to a pond or uplands, and ii) one wetland type to another.</li> <li>4. No dam removal.</li> <li>5. No effect on federally listed endangered or threatened species or critical habitat.</li> </ol>	<ol style="list-style-type: none"> <li>1. Work not eligible for Category 1</li> <li>2. 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 <math>\geq 15,000</math> SF, provided those activities result in net increase in overall aquatic resource functions and services.<sup>8</sup></li> </ol>
<b>22. Previously Authorized Activities</b>	Any work not commenced nor completed that was authorized in a written letter from the Corps under the GP in effect between October 12, 2010 and October 12, 2015. The terms and general conditions of this GP apply along with any special conditions in the written authorization.	
<b>23. Stream &amp; Wetland Crossings</b>	<ol style="list-style-type: none"> <li>1. River, stream and brook work and crossings: <ul style="list-style-type: none"> <li>• Must comply with GC 45 in particular, including: <ul style="list-style-type: none"> <li>o No slip lining [see GC 45 (g)].</li> <li>o No in-stream work involving fill or excavation in flowing waters [see GC 45(h)].</li> <li>o In-stream work limited to Jul 15 – Sep 30 [see GC 45 (l)].</li> </ul> </li> <li>• No work in riffles and pools<sup>3</sup>.</li> <li>• No stream relocations.</li> <li>• No dams or dikes<sup>6</sup>.</li> <li>• No effect on federally listed endangered or threatened species or critical habitat.</li> <li>• &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts, and temporary impacts.</li> </ul> </li> <li>2. Wetland crossings must comply with the particularly relevant GC 45.</li> </ol>	Work not eligible for Category 1
<b>24. Aquaculture (freshwater)</b>	<p>For land based installations, &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts, and temporary impacts.</p> <ul style="list-style-type: none"> <li>• In-stream/in-water work limited to Jul 15 – Sep 30.</li> <li>• No effect on federally listed endangered or threatened species or critical habitat.</li> </ul> <p>Note: Related structures placed in freshwater navigable waters are reviewed in the Navigable Waters section. (See B. Navigable Waters, below.)</p>	Work not eligible for Category 1

<b>B. NAVIGABLE WATERS</b>	<p><b>Navigable Waters of the United States:</b> 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 wetlands<sup>1</sup> 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. All Category 1 and 2 projects must comply with all of this GP's applicable terms (Pages 1 - 4) and General Conditions (Pages 5 - 20).</p>	
<b>ACTIVITY</b>	<b>CATEGORY 1</b> Self-Verification Eligible ( <i>SVNF Required</i> )	<b>CATEGORY 2</b> ( <i>PCN Required</i> )
<b>1. Repair, Replacement, Expansion, and Maintenance of Authorized (or grandfathered) Structures and Fills</b>	<p>1. Repair, replacement in-kind, or maintenance<sup>7</sup> of existing, currently serviceable<sup>7</sup>, authorized structures or fills:</p> <ul style="list-style-type: none"> <li>• All work is to be conducted in-the-dry, during low water.</li> <li>• Conditions of the original authorization apply.</li> <li>• No substantial expansion or change in use.</li> <li>• No new fill in SAS<sup>3</sup>.</li> <li>• Must be rebuilt in same footprint, however minor deviations in structure design allowed<sup>7</sup>.</li> <li>• 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.</li> </ul>	<ol style="list-style-type: none"> <li>1. Replacement of non-serviceable structures and fills or repair/maintenance of serviceable structures or fills, with fill, replacement or expansion &lt;1 acre, or with a change in use.</li> <li>2. &lt;1 acre temporary or permanent fill, excavation and/or secondary impacts. Fill area includes all temporary and permanent waterway fills, provided: <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul> </li> <li>3. Standard Pile Driving Conditions. Work involving piles shall adhere to one of the four methods below: <ul style="list-style-type: none"> <li>• Piles installed in-the-dry during low water or in-water between Nov. 8<sup>th</sup> - Apr. 9<sup>th</sup>, or</li> <li>• Must be drilled and pinned to ledge, or</li> <li>• Vibratory hammers used to install any size and quantity of wood, concrete or steel piles, or</li> <li>• Impact hammers limited to one hammer and &lt;50 piles installed/day with the following: wood piles of any size, concrete piles ≤18-inches diameter, steel piles &lt;12-inches diameter if the hammer is ≤3000 lbs and a wood cushion is used between the hammer and steel pile, and</li> <li>• For the methods above: <ul style="list-style-type: none"> <li>○ In-water noise levels shall not exceed &gt;187dB cSEL re 1μPa or 206dB peak re 1μPa at a distance &gt;10m from the pile being installed, and</li> <li>○ In-water noise levels &gt;150dB 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 150dB peak re 1μPa) must be provided between work days.</li> </ul> </li> <li>• Existing derelict, degraded or abandoned piles in the project area that are affected by project activities should be removed and properly disposed of in an upland location landward of MHW or OHW and not in wetlands, tidal wetlands, their substrate or mudflats.</li> </ul> </li> </ol>

<p><b>2. Moorings</b></p>	<p>1. Private, non-commercial, non-rental, single-boat moorings, provided:</p> <ul style="list-style-type: none"> <li>• Authorized by the local harbormaster/town.</li> <li>• Not associated with any boating facility.<sup>11</sup></li> <li>• Boat or mooring not located in a Federal Navigation Project or buffer zone<sup>12</sup> other than in a Federal Anchorage<sup>12</sup>. Moorings in a Federal Anchorage not associated with a boating facility<sup>11</sup> and are not for rent.</li> <li>• No interference with navigation.</li> <li>• No new moorings located in SAS<sup>3</sup>. Prior to installation of moorings, a site-specific eelgrass survey should be conducted to document that eelgrass is not present.</li> <li>• When existing, authorized moorings in SAS<sup>3</sup> are going to be replaced, they should be replaced with low impact mooring technology that prevents mooring chains from resting or dragging on the bottom substrate at all tides and helical anchors, or equivalent SAS protection systems where practicable.</li> </ul> <p>2. Minor relocation of previously authorized moorings, provided:</p> <ul style="list-style-type: none"> <li>• Authorized by the local harbormaster/town.</li> <li>• Not located in SAS<sup>3</sup></li> <li>• No interference with navigation.</li> <li>• Cannot be relocated into a Federal Navigation Project<sup>12</sup> other than a Federal Anchorage<sup>12</sup></li> </ul> <p><b>Note: Cat 1 eligible moorings do not require SVNF.</b></p>	<p>1. Moorings associated with an existing boating facility<sup>11</sup>. An eelgrass<sup>14</sup> 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 limits<sup>13</sup> of a Federal Channel<sup>12</sup>. (See Appendix H.) 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 limits<sup>11</sup>, or with moored vessels that extend, into the horizontal limits of a Federal Navigation Project<sup>12</sup>, except those in Federal Anchorages<sup>12</sup>.</p> <p><i>For 1-4 above, siting of new individual moorings in SAS<sup>3</sup>, including eelgrass<sup>14</sup>, should be avoided to the maximum extent practicable. If SAS<sup>3</sup> 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. For moorings that appear to impact SAS, the Corps may require an eelgrass survey.</i></p>
<p><b>3. Structures, Floats and Lifts</b></p>	<p>1. Reconfiguration of existing authorized structures shall occur in-the-dry during low water.</p> <p>2. Minor relocation of <u>previously authorized</u> floats or moored floats/lobster cars, provided:</p> <ul style="list-style-type: none"> <li>• Authorized by the local harbormaster/town.</li> <li>• Not located in SAS<sup>3</sup>.</li> <li>• No interference with navigation.</li> <li>• Cannot be relocated into a Federal Navigation Project<sup>12</sup> other than a Federal Anchorage<sup>12</sup>.</li> </ul>	<p>1. New structures or floats, including floatways/skidways, built to access waterway (seasonal and permanent). Includes both pile supported and crib supported structures.</p> <p>2. Expansions to existing boating facilities<sup>11</sup></p> <ul style="list-style-type: none"> <li>• Pile-supported structures &lt;400 SF, with attached floats totaling ≤200 SF.</li> <li>• Structures are ≤4' wide and have at least a 1:1 height:width ratio<sup>11</sup>.</li> <li>• Floats supported a minimum of 18" above the substrate during all tides.</li> <li>• Structures &amp; floats not located within 25' of any eelgrass<sup>8</sup>.</li> <li>• Moored vessels not positioned over SAS<sup>3</sup>.</li> </ul>

		<ul style="list-style-type: none"> <li>• <i>The Corps may require a letter of no objection from the abutter if structure is to be within 25 feet of the property line.</i></li> <li>• <i>No structure extends across &gt;25% of the waterway width at mean low water.</i></li> <li>• <i>Not located within the buffer zone of the horizontal limits<sup>13</sup> of a Corps Federal Navigation Project (FNP) (Appendix F). The buffer zone is equal to three times the authorized depth of that FNP.</i></li> </ul> <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 limits<sup>13</sup> of a Corps Federal Navigation Project<sup>12</sup> (see Appendix H).</p> <p>4. An Individual Permit is required for structures &amp; floats associated with a new or previously unauthorized boating facility<sup>11</sup>.</p> <p>5. Standard Pile Driving Conditions. Work involving piles shall adhere to one of the four methods below:</p> <ul style="list-style-type: none"> <li>• Piles installed in-the-dry during low water or in-water between Nov. 8<sup>th</sup> - Apr. 9<sup>th</sup>, or</li> <li>• Must be drilled and pinned to ledge, or</li> <li>• Vibratory hammers used to install any size and quantity of wood, concrete or steel piles, or</li> <li>• Impact hammers limited to one hammer and &lt;50 piles installed/day with the following: wood piles of any size, concrete piles ≤18-inches diameter, steel piles &lt;12-inches diameter if the hammer is ≤3000 lbs and a wood cushion is used between the hammer and steel pile, and</li> <li>• For the methods above: <ul style="list-style-type: none"> <li>○ In-water noise levels shall not exceed &gt;187dB cSEL re 1μPa or 206dB peak re 1μPa at a distance &gt;10m from the pile being installed, and</li> <li>○ In-water noise levels &gt;150dB 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 150dB peak re 1μPa) must be provided between work days.</li> </ul> </li> <li>• Existing derelict, degraded or abandoned piles in the project area that are affected by project activities should be removed and properly disposed of in an upland location landward of MHW or OHW and not in wetlands, tidal wetlands, their substrate or mudflats.</li> </ul>
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<p><b>4. Aids to Navigation and Temporary Recreational Structures</b></p>	<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><i>Note: Cat 1 eligible aids to navigation and regulatory markers do not require SVNF.</i></p>	<p>Work not eligible for Category 1</p>
<p><b>5. Dredging, Disposal of Dredged Material, Beach Nourishment, and Rock Removal and Relocation</b></p>	<p>1. Maintenance dredging<sup>10</sup> for navigational purposes &lt;1,000 CY with upland disposal. Includes return water from upland contained disposal area, provided:</p> <ul style="list-style-type: none"> <li>• Proper siltation controls are used.</li> <li>• Dredging &amp; disposal operation limited to Nov. 8 – Apr. 9.</li> <li>• No impact to SAS<sup>3</sup>.</li> <li>• No dredging in intertidal areas.</li> <li>• No dredging within 100’ of shellfish beds.</li> <li>• No dredging in areas designated as Critical Habitat for Atlantic salmon [see GC 8(b) &amp; (c)].</li> <li>• For dredging in tidal waters outside of Atlantic salmon critical habitat, applicants must contact NMFS (see GC 8) to ensure no impacts to listed species such as shortnose sturgeon, Atlantic surgeon, and listed sturgeon critical habitat.</li> <li>• Project proponents must contact the USFWS for work on coastal beaches to ensure no impacts to piping plovers, roseate terns, rufa red knot, or their habitat [see GC 8(c)].</li> <li>• No underwater blasting.</li> </ul> <p>2. Maintenance dredging 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>	<p>1. Maintenance dredging<sup>10</sup> ≥1,000 CY, new dredging &lt;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"> <li>• Upland.</li> <li>• Beach nourishment (above mean high water) of any area provided the dredging’s primary purpose is navigation or the sand is from an upland source.</li> <li>• Open water &amp; confined aquatic disposal, if Corps finds the material suitable.</li> </ul> <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 dredging<sup>10</sup> and/or disposal in or affecting a SAS<sup>3</sup> requires an Individual Permit.</p>

<b>6. Discharges of Dredged or Fill Material Incidental to the Construction of Bridges</b>	<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.</p> <p>2. Causeways and approach fills are not included in this category and require Category 2 or Individual Permit authorization.</p>	<p>&lt;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"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul>
<b>7. Bank and Shoreline Stabilization</b>	<p>1. Bank stabilization projects &lt;200 linear feet provided:</p> <ul style="list-style-type: none"> <li>• ≤1 cubic yard of fill per linear foot placed along the bank waterward of high tide line. No fill or equipment will occur in SAS<sup>3</sup>.</li> <li>• Work conducted in the intertidal zone must be conducted in-the-dry during low water.</li> <li>• No structures angled steeper than 1H:1V and only rough-faced stone or fiber roll revetments allowed.</li> <li>• No driving of piles or sheeting.</li> </ul> <p>2. Bank stabilization projects in excess of 200 linear feet (Applicant or Applicant + Abutters combined) must undergo Category 2 review.</p>	<p>1. Work not eligible for Category 1.</p> <p>2. &lt;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"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul>
<b>8. Residential, Commercial, Industrial, and Institutional Developments, and Recreational Facilities</b>	<p>Not Eligible</p>	<p>1. &lt;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"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul> <p>2. Conversions of previously authorized pile supported buildings over navigable waters to residences, offices, or other non-water dependent uses require at least a Category 2 review.</p> <p>3. Floating house boats or businesses on floats require Category 2 review.</p>
<b>9. Utility Line Activities</b>	<p>1. Repair or maintenance of existing, currently serviceable, authorized utilities with no expansion or change in use:</p> <ul style="list-style-type: none"> <li>• Conditions of the original authorization apply.</li> <li>• Trenching or filling is confined to the existing footprint.</li> <li>• In water work conducted between Nov 8 and Apr 9.</li> <li>• No new impact to SAS.</li> </ul> <p>2. Particularly relevant is GC12.</p> <p>3. <u>New work</u> in, over, or under navigable waters requires a PCN and Category 2 review.</p> <p>4. Except for aerial utility lines, 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</p>	<p>1. New or replacement installations or work not otherwise eligible for Category 1.</p> <p>2. &lt;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"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul> <p>3. Particularly relevant is GC12</p>

	Squaw Point) on Cape Jellison in Stockton Springs or in tidal	
<b>10. Linear Transportation Projects</b>  (Not Including Stream Crossings)	Not eligible	<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: <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul>
<b>11. Mining Activities</b>	Not Eligible	Not Eligible
<b>12. Boat Ramps and Marine Railways</b>	<ol style="list-style-type: none"> <li>1. No new impact to SAS</li> <li>2. Marine railway and boat ramp work not eligible for maintenance<sup>7</sup> (i.e. not currently serviceable<sup>7</sup>) may be replaced “in-kind” with minor deviations<sup>7</sup> provided: <ul style="list-style-type: none"> <li>• Work is in the intertidal zone.</li> <li>• No fill expansion below high tide line.</li> <li>• Work conducted in-the-dry during low water.</li> </ul> </li> <li>3. No new boat ramps or marine railways.</li> </ol>	<ol style="list-style-type: none"> <li>1. Work not eligible for Category 1</li> <li>2. &lt;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: <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul> </li> </ol>
<b>13. Land and Water-Based Renewable Energy Generation Facilities and Hydropower Projects</b>	Not Eligible	<ol style="list-style-type: none"> <li>1. &lt;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: <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul> </li> <li>2. No new impoundments.</li> </ol>
<b>14. Reshaping Existing Drainage Ditches and Mosquito Management</b>	<ol style="list-style-type: none"> <li>1. ≤500 linear feet of drainage ditch will be modified. The reshaping of the ditch cannot increase drainage capacity beyond the original as-built capacity nor can it expand the area drained by the ditch as originally constructed (i.e., the capacity of the ditch must be the same as originally constructed and it cannot drain additional wetlands or other waters of the U.S.).</li> <li>2. No new ditches or relocation of drainage ditches constructed in waters of the U.S.; the location of the centerline of the reshaped drainage ditch must be approximately the same as the location of the centerline of the original drainage ditch.</li> <li>3. No effect on federally listed endangered or threatened species or critical habitat</li> </ol>	<ol style="list-style-type: none"> <li>1. Work not eligible for Category 1</li> <li>2. &lt;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: <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul> </li> </ol>

<b>15. Oil Spill and Hazardous Material Cleanup</b>	<p>Jurisdictional 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. SAS<sup>3</sup> must typically be restored in place at the same elevation.</p> <p><i>Note: SVNF or a surrogate state reporting form may be submitted after the fact. No SVNF is required for Category 1 eligible containment booms.</i></p>	<p>Work not eligible for Category 1</p>
<b>16. Cleanup of Hazardous and Toxic Waste</b>	<p>Not eligible - except for booms placed for hazardous and toxic waste containment and absorption and prevention which are eligible for SV.</p> <p><i>Note: No SVNF is required for Category 1 eligible containment booms.</i></p>	<p>Specific jurisdictional 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 and other SAS must typically be restored in place at the same elevation to qualify.</p>
<b>17. Scientific Measurement Devices</b>	<p>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 or concentrate movement of aquatic organisms; no activity results in a hazard to navigation; and no activity requiring underwater blasting.</p>	<ol style="list-style-type: none"> <li>1. Work not eligible for Category 1</li> <li>2. &lt;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: <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul> </li> </ol>
<b>18. Survey Activities</b>	<p>Jurisdictional survey activities such as exploratory drilling, surveying and sampling activities, excluding any biological sampling devices. Does not include any activity requiring underwater blasting, seismic exploratory operations, or oil and gas exploration and fill for roads or construction pads. No activity may result in a hazard to navigation.</p>	<ol style="list-style-type: none"> <li>1. Work not eligible for Category 1</li> <li>2. &lt;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: <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul> </li> </ol>
<b>19. Agricultural Activities</b>	<p>Not Eligible</p>	<p>Not Eligible</p>

<b>20. Fish &amp; Wildlife Harvesting, Enhancement and Attraction Devices and Activities (Not Aquaculture)</b>	<p>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 may result in a hazard to navigation.</p> <p><i>Note: A SVNF is not required for these Category 1 eligible devices and activities.</i></p>	<p>1. Work not eligible for Category 1. 2. Impoundments or semi-impoundments of waters of the U.S. for the culture or holding of motile species such as lobster and new fish weirs with an impounded area <math>\leq</math> 1/2 acre.</p> <p>For Aquaculture operations, refer to Activity 24.</p>
<b>21. Habitat Restoration, Establishment and Enhancement Activities</b>	<p>1. Cultch placement in tidal waters is eligible for SV provided there are no salt marsh or vegetated shallow impacts. 2. SAS planting and transplanting <math>\leq</math> 100 SF in tidal waters; 3. No artificial or living reefs. 4. The activity is authorized in writing by a local, state, or non-Corps federal environmental agency. Water impoundments require PCN. 5. No conversion of i) a stream to wetland or vice versa, wetland to a pond or uplands, and ii) one wetland type to another. 6. No dam removal. 7. Shellfish habitat enhancement such as brushing the flats is eligible for Category 1, <i>but not the use of netting which requires Category 2 review.</i></p>	<p>1. Work not eligible for Category 1. 2. Aquatic habitat restoration, establishment and enhancement provided those activities are proactive and result in net increases in aquatic resource functions and services.<sup>8</sup></p>
<b>22. Previously Authorized Activities</b>	<p>Any work not commenced nor completed that was authorized in a written letter from the Corps under the GP in effect between October 12, 2010 and October 12, 2015. The terms and general conditions of this GP apply along with any special conditions in the written authorization.</p>	
<b>23. Stream &amp; Wetland Crossings</b>	<p>Not Eligible</p>	<p>All temporary or permanent crossings of tidal navigable waters or adjacent tidal wetlands not eligible as maintenance require a PCN. GC 45 applies</p>
<b>24. Aquaculture</b>	<p>Not Eligible</p>	<p>Shellfish &amp; finfish aquaculture (with the exception of Atlantic salmon and any other salmonid, or other federally listed endangered or threatened species), or other aquaculture facilities with no more than minimal individual and cumulative impacts to environmental resources or navigation. This is inclusive but not limited to cages, nets, bags, racks, long lines, fences, posts, poles, predator screening, etc. Aquaculture guidelines are provided at: <a href="http://www.maine.gov/dmr/aquaculture/index.htm">www.maine.gov/dmr/aquaculture/index.htm</a>.</p>

## Endnotes/Definitions

<sup>1</sup> **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 high water 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.”

### <sup>2</sup> **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.

<sup>3</sup> **Special Aquatic Sites:** Includes wetlands and saltmarsh, mudflats, riffles and pools, and vegetated shallows (predominantly comprised of eelgrass in Maine).

<sup>4</sup> **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.

<sup>5</sup> **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 G, page 3, Paragraph 10(b).

<sup>6</sup> **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.

<sup>7</sup> **Maintenance:** a) 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.

- 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.
- Currently serviceable means useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.
- No seaward expansion for bulkheads or any other fill activity is considered Category 1 maintenance.
- 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.

b) The state's maintenance provisions may differ from the Corps and may require reporting and written authorization from the state.

c) Contact the Corps to determine whether stream crossing replacements require a written application to the Corps for at least a Category 2 review.

d) Exempted Maintenance. 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."

<sup>8</sup> **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.

<sup>9</sup> **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*).

<sup>10</sup> **Maintenance Dredging:** This includes only those areas and depths previously authorized by the Corps and dredged. The Corps may require proof of authorization. Maintenance dredging typically refers to the routine removal of sediment to maintain the design depths of serviceable navigation channels, harbors, basins, marinas, boat launches, and port facilities. Maintenance dredging is conducted for navigational purposes and does not include any expansion of the previously dredged area or depth. The Corps may review a maintenance dredging activity as new dredging if sufficient time has elapsed to allow for the colonization of SAS, shellfish, etc.

<sup>11</sup> **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.

<sup>12</sup> **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.

<sup>13</sup> **Horizontal Limits:** The outer edge of a Federal Navigation Project (FNP). See Appendix F and contact the Corps for information on FNP's.

<sup>14</sup> **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/](http://www.nero.noaa.gov/hcd/) for eelgrass survey guidance. Note: Eelgrass surveys should be conducted between May and October unless otherwise directed.

<sup>15</sup> **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.

<sup>16</sup> **Agricultural Activities:** The Clean Water Act exempts certain discharges associated with normal farming, ranching, and forestry activities such as plowing, cultivating, minor drainage, and harvesting for the production of food, fiber, and forest products, or upland soil and water conservation practices (Section 404(f)(1)(A)). Applicants are strongly advised to contact the Corps for a determination of whether their activity is exempt or requires a permit.



**Appendix B: Self-Verification Notification Form**  
(for all tidal and non-tidal projects in Maine subject to Corps jurisdiction)

**US Army Corps  
of Engineers**®  
New England District

At least two weeks before work commences, complete **all** fields (write “none” if applicable) below or use the fillable form at [www.nae.usace.army.mil/missions/regulatory.aspx](http://www.nae.usace.army.mil/missions/regulatory.aspx). Send this form, a location map, any project plans, and an Official Species List (See GC 8) to the address noted below; fax to (207) 623-8206; or email to [jay.l.clement@usace.army.mil](mailto:jay.l.clement@usace.army.mil). The two-week lead time is not required for emergency situations (see page 4 for definition). Please call (207) 623-8367 with questions.

Maine Project Office  
U.S. Army Corps of Engineers  
New England District  
675 Western Avenue #3  
Manchester, Maine 04351

State Permit Number: \_\_\_\_\_  
Date of State Permit: \_\_\_\_\_  
State Project Manager: \_\_\_\_\_

Permittee: \_\_\_\_\_  
Address, City, State & Zip: \_\_\_\_\_  
Phone(s) and Email: \_\_\_\_\_

Contractor: \_\_\_\_\_  
Address, City, State & Zip: \_\_\_\_\_  
Phone(s) and Email: \_\_\_\_\_

Consultant/Engineer/Designer: \_\_\_\_\_  
Address, City, State & Zip: \_\_\_\_\_  
Phone(s) and Email: \_\_\_\_\_

Wetland/Vernal Pool Consultant: \_\_\_\_\_  
Address, City, State & Zip: \_\_\_\_\_  
Phone(s) and Email: \_\_\_\_\_

Project Location/Description: \_\_\_\_\_  
Address, City, State & Zip: \_\_\_\_\_  
Latitude/Longitude Coordinates: \_\_\_\_\_ Tax Map/Lot: \_\_\_\_\_  
Waterway Name: \_\_\_\_\_  
Work Description: \_\_\_\_\_

Provide any prior Corps permit numbers: \_\_\_\_\_  
Proposed Work Dates: Start: \_\_\_\_\_ Finish: \_\_\_\_\_

Area of wetland impact: \_\_\_\_\_ SF (leave blank if work involves structures & no fill in Navigable Waters)  
Area of waterway impact: \_\_\_\_\_ SF (leave blank if work involves structures & no fill in Navigable Waters)  
Area of compensatory mitigation provided: \_\_\_\_\_ SF

Work will be done under the following Appendix A categories (circle all that apply):  
I. Inland Waters and wetlands: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24  
II. Navigable Waters: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Your name/signature below, as permittee, indicates that you accept and agree to comply with the terms, eligibility criteria, and general conditions of Category 1 of the Maine General Permit.

Permittee Printed Name: \_\_\_\_\_  
Permittee Signature: \_\_\_\_\_ Date: \_\_\_\_\_



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New England District

## **Appendix C: Content of Pre-Construction Notification**

In addition to the following required information, the applicant must provide additional information as the Corps deems essential to make a public interest determination including, where applicable, a determination of compliance with the Section 404(b)(1) guidelines or ocean dumping criteria. Such additional information may include environmental data and information on alternate methods and sites as may be necessary for the preparation of the required environmental documentation. For a more comprehensive checklist, go to [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> Forms >> Application and Plan Guideline Checklist. Please check with the Corps for project-specific requirements.

### **Information required for all projects:**

- Corps application form ([ENG Form 4345](#)) or appropriate state application form (see Appendix E). Forms may need to be supplemented to include the information noted below.
- Proof of notification to the SHPO and the appropriate THPOs (see Appendix E).
- Official Species List for any federally listed endangered or threatened species (Instructions at Appendix D)
- Drawings, sketches, or plans (detailed engineering plans and specifications are not required) that are legible, reproducible (color is encouraged, but features must be distinguishable in black and white), no larger than 11"x17", with bar scale. Wetland area impact sheets should have the highest resolution possible to show work within Corps jurisdiction (do not just reduce project overview or cut large-scale plan into quadrant sheets). Provide locus map and a plan overview of the entire property with a key index to the individual impact sheets. A locus map be on a section of color USGS topographic map is encouraged. Digital submissions are encouraged.
- Include:
  - All direct, secondary, permanent and temporary effects the project would cause, including the anticipated amount of impacts to waters of the U.S. expected to result from the activity, in acres, linear feet, or other appropriate unit of measure.
  - Any historic permanent fill associated with each single and complete project.
  - Cross-section views of all wetland and waterway fill areas and wetland replication areas.
  - Delineation of all wetlands, other special aquatic sites (vegetated shallows, saltmarsh, mudflats, riffles and pools, coral reefs, and sanctuaries and refuges), and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Use Federal delineation methods and include Corps wetland delineation data sheets (see GC 2).
  - MLW and MHW elevations in tidal waters. Show the HTL elevations when fill is involved. Show OHW elevation in lakes and non-tidal streams.
  - Existing and proposed conditions.
  - For vegetated shallow and eelgrass survey guidance, see [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> Jurisdictional Limits and Wetlands >> Submerged Aquatic Vegetation Survey Guidance for the New England Region.
  - Show all known VPs on the project site. See GC 23 for vernal pool identification requirements.
- Volume, type, and source of fill material to be discharged into waters and wetlands, including the area(s) (in square feet or acres) of fill in wetlands, below OHW in inland waters and below the HTL in coastal waters.

- An Official Species List of federally “listed species or critical habitat” present in the action area (see GC 8).
- A restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions (see GC 43).

**Information that may be required:**

- Photographs of wetland/waterway to be impacted. Photos at low tide are preferred for work in tidal waters.
- For drawings, sketches, or plans:
  - The vertical datum for all coastal projects must be in U.S. survey feet and referenced to MLLW and current tidal epochs, with a reference chart showing conversion factor to NAVD88; do not use local datum. See [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> Forms and Publications >>Vertical Datum - FEMA (Jul 2007);
  - The horizontal state plane coordinates shall be in U.S. survey feet and based on the appropriate state plane coordinate system.
- For the construction of a filled area or pile or float-supported platform, the use of, and specific structures to be erected on, the fill or platform.
- For the discharge of dredged or fill material into waters of the U.S. or the transportation of dredged material for the purpose of disposing of it in ocean waters, the source of the material; the purpose of the discharge, a description of the type, composition and quantity of the material; the method of transportation and disposal of the material; and the location of the disposal site.
- For the discharge of dredged or fill material into waters of the U.S., include a statement describing how impacts to waters of the U.S. are to be avoided and minimized. Include either a statement describing how impacts to waters of the U.S. are to be compensated for or a statement explaining why compensatory mitigation should not be required for the proposed impacts.
- Purpose and need for the proposed activity;
- Limits and coordinates of any Federal Navigation Project in the vicinity of the project area.
- Limits and coordinates of any proposed mooring field, reconfiguration zone or aquaculture activity. Provide coordinates for all corners;
- Schedule of construction/activity;
- Names and addresses of adjoining property owners;
- Location and dimensions of adjacent structures;
- List of authorizations required by other Federal, interstate, state, or local agencies for the work, including all approvals received or denials already made.
- Identification and description of potential impacts to Essential Fish Habitat (defined at VI. Definitions and Acronyms).
- Identification of potential discharges of pollutants to waters, including potential impacts to impaired waters, in the project area (see GC 19).
- Invasive Species Control Plan (see GC 24). For sample control plans, see [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> Invasive Species.
- Wildlife Action Plan (WAP) maps. Contact Maine Inland Fisheries & Wildlife (Appendix E) or on line at [http://www.maine.gov/ifw/wildlife/conservation/action\\_plan.html](http://www.maine.gov/ifw/wildlife/conservation/action_plan.html)

**Information for dredging projects that may be required:**

- Sediment testing, including physical (e.g., grain-size analysis), chemical and biological testing. For projects proposing open water disposal, applicants are encouraged to contact the Corps as early as possible regarding sampling and testing protocols. Sampling and testing of sediments without such contact should not occur and if done, would be at the applicant’s risk.
- The area in square feet and volume of material to be dredged below mean high water.

- Existing and proposed water depths.
- Type of dredging equipment to be used.
- Nature of material (e.g., silty sand).
- Any existing sediment grain size and bulk sediment chemistry data for the proposed or any nearby projects.
- Information on the location and nature of municipal or industrial discharges and occurrence of any contaminant spills in or near the project area.
- Shellfish survey.
- Location of the disposal site (include locus sheet).
- Identification and description of any potential impacts to Essential Fish Habitat.
- Delineation of submerged aquatic vegetation (e.g., eelgrass beds).

**Information for aquaculture projects that may be required:**

- Maine Aquaculture guidelines and joint Corps/Maine DMR applications may be found at: [www.maine.gov/dmr/aquaculture/index.htm](http://www.maine.gov/dmr/aquaculture/index.htm).
- In addition to the information required above, applications must also include:
  - Whether canopy predator nets are being used.

## Appendix D: Instruction for USFWS IPaC Project Builder/Official Species List

NOTE: These instructions are subject to change by the USFWS. Users should check this GP's Corps webpage for the latest instructions or click [here](#).

In your internet browser go to <http://ecos.fws.gov/ipac/>

1. Click on get started.
2. Click on enter project location.
3. Search or zoom to your project location. (You can enter an address and then zoom in with your mouse).
4. Define your area. (Select the polygon tool and click around the boundary of your project.) or (Use the draw a line tool for linear projects)

Note: You can change/select the map from Streets to Satellite or Topo in the lower left corner of the map.

5. Click finished drawing then click confirm and select continue.
6. On the next page under Tasks (lower left), select Request an official species list. The pane will open. Select "request official species list" again.
7. A new page will open. Fill in the project information blanks with the project name, brief description, project type, lead agency, and contact information. Be sure to check the box to verify this is a legitimate project. Click on Submit Official Species List Request.
8. You will be sent an e-mail with instructions to complete the request by clicking on the link provided.
9. The site will open Official Species List Request Completed. Under the Maine Ecological Services Field Office address you will see "Official Species List Document". Click on that link and your document will open. Save and or print a copy and **include the entire report with your application.**

Note, you will receive a second e-mail with the same information. You can save the link in the event you need to return to the IPaC site for an updated list.

If a period of time has passed since your initial "Official Species List" identifier number was generated, you may choose to generate an "UPDATED SPECIES LIST". To do this, return to the IPaC homepage at <http://ecos.fws.gov/ipac> site. In the middle of the page, click the purple "Need an updated species list" link.

On the request an "Updated Official Species List" page, complete the information in the boxes provided. You will need the project specific official consultation code generated and stated on the original official list as well as the email address entered with the original submission.

Click "Request Updated Species List". Print, or save.

## Appendix E: Contacts and Tribal Areas of Interest

### 1. Federal

U.S. Army Corps of Engineers  
Maine Project Office  
675 Western Avenue #3  
Manchester, ME 04351  
(207) 623-8367 (phone); (207) 623-8206 (fax)

Federal Emergency Management Agency  
99 High St.  
Boston, MA 02110  
(877) 336-2734 (phone)  
*(Flood Plain Management)*

U.S. Environmental Protection Agency  
5 Post Office Square  
Suite 100 (OEP05-2)  
Boston, MA 02109-3912  
(617) 918-1589 (phone)

National Marine Fisheries Service  
55 Great Republic Drive  
Gloucester, MA 01930  
(978) 281-9102 (phone); (978) 281-9301 (fax)  
*(Federal endangered species & EFH)*

U.S. Fish and Wildlife Service  
Maine Field Office  
17 Godfrey Drive, Suite 2  
Orono, ME 04473  
(207) 866-3344 (phone); (207) 866-3351 (fax)  
*(Federal endangered species)*

National Park Service  
North Atlantic Region  
15 State Street  
Boston, MA 02109  
(617) 223-5203 (phone)  
*(Wild and Scenic Rivers)*

National Marine Fisheries Service  
Maine Field Office  
17 Godfrey Drive Suite 1  
Orono, ME 04473  
(207) 866-7379 (phone); (207) 866-7342 (fax)  
*(Federal endangered species)*

Commander (dpb)  
First Coast Guard District  
One South Street - Battery Bldg  
New York, NY 10004-1466  
(212) 668-7021 (phone); (212) 668-7967 (fax)  
*(bridge permits)*

### 2. State of Maine

#### a. Department of Environmental Protection *(State permits & Water Quality Certifications)*

Division of Land Resource Regulation  
Bureau of Land and Water Quality  
17 State House Station  
Augusta, Maine 04333  
(207) 287-7688 (phone)

Eastern Maine Regional Office  
106 Hogan Road  
Bangor, Maine 04401  
(207) 941-4570 (phone)

Southern Maine Regional Office  
312 Canco Road  
Portland, Maine 04103  
(201) 822-6300 (phone)

Northern Maine Regional Office  
1235 Central Drive - Skyway Park  
Presque Isle, Maine 04769  
(207) 764-0477 (phone)

b. Department of Agriculture, Conservation and Forestry

i. Maine Land Use Planning Commission (LUPC) (*State permits & Water Quality Certifications in the unorganized areas of the State*)

Augusta Office  
22 State House Station  
Augusta, Maine 04333-0022  
(207) 287-2631 (phone); (207) 287-7439 (fax)

Greenville Regional Office  
43 Lakeview Drive  
P.O. Box 1107  
Greenville, Maine 04441  
(207) 695-2466 (phone); (207) 695-2380 (fax)

Rangley Regional Office  
133 Fyfe Road  
PO Box 307  
West Farmington, ME 04992  
(207) 670-7493 (phone); (207) 287-7439 (fax)

Downeast Regional Office  
106 Hogan Rd, Suite 8  
Dorothea Dix Complex  
Bangor, Maine 04401  
(207) 941-4052 (phone); (207) 941-4222 (fax)

Ashland Regional Office  
45 Radar Road  
Ashland, ME 04732-3600  
(207) 435-7963 (phone); (207) 435-7184 (fax)

East Millinocket Regional Office  
191 Main Street  
East Millinocket, ME 04430  
(207) 746-2244 (phone); (207) 746-2243 (fax)

ii. Maine Coastal Program

Department of Agriculture, Conservation and Forestry  
Bureau of Resource Information and Land Use Planning  
17 Elkins Lane {physical address}  
State House Station 93  
Augusta, Maine 04333-0038  
(207) 287-2801 (phone); (207) 287-2353 (fax)  
(*CZM consistency determinations*)

iii. Division of Parks and Public Lands

22 State House Station  
Augusta, Maine 04333  
(207) 287-3061 (phone); (207) 287-6170 (fax)  
(*submerged lands leases*)

c. Department of Marine Resources

P.O. Box 8  
West Boothbay Harbor, Maine 04575  
(207) 633-9500 (phone); (207) 624-6024 (fax)  
(*aquaculture leases*)

**3. Historic Properties**

a. State Historic Preservation Officer (SHPO)

Mr. Kirk F. Mohny, Director

Maine Historic Preservation Commission (MHPC)  
65 State House Station  
Augusta, Maine 04333-0065  
(207) 287-2132 (phone); (207) 287-2335 (fax)  
Area of concern: The entire State of Maine

b. Tribal Historic Preservation Officers (THPOs)

Note: The area of concern for each tribe is the entire State of Maine

THPO & Environmental Planner  
*Houlton Band of Maliseet Indians*  
88 Bell Road  
Littleton, Maine 04730  
(207) 532-4273, x215 (phone)  
(207) 532-6883 (fax)  
envplanner@maliseets.com  
ogs1@maliseets.com

THPO  
*Aroostook Band of Micmacs*  
7 Northern Road  
Presque Isle, Maine 04769  
(207) 764-1972 (phone); (207) 764-7667 (fax)  
jpictou@mimca-nsn.gov

THPO  
*Passamaquoddy Tribe of Indians*  
Pleasant Point Reservation  
P.O. Box 343  
Perry, Maine 04667  
(207) 853-2600 (phone); (207) 853-6039 (fax)  
soctomah@gmail.com

THPO  
*Penobscot Nation*  
Cultural and Historic Preservation Dept.  
12 Wabanaki Way  
Indian Island, Maine 04468  
(207) 817-7471 (phone)  
chris.sockalexis@penobscotnation.org

THPO  
*Passamaquoddy Tribe of Indians*  
Indian Township Reservation  
P.O. Box 301  
Princeton, Maine 04668  
(207) 796-2301 (phone)  
(207) 796-5256 (fax); soctomah@gmail.com

**4. Organizational Websites (Note – Subject to Change):**

U.S. Army Corps of Engineers, N.E. District	<a href="http://www.nae.usace.army.mil/missions/regulatory.aspx">www.nae.usace.army.mil/missions/regulatory.aspx</a>
U.S. Army Corps of Engineers, Headquarters	See above link>>Useful Links>>Federal Agency Links
U.S. Environmental Protection Agency	<a href="http://www.epa.gov/owow/wetlands">www.epa.gov/owow/wetlands</a>
National Marine Fisheries Service	<a href="http://www.nmfs.noaa.gov">www.nmfs.noaa.gov</a>
U.S. Fish and Wildlife Service	<a href="http://www.fws.gov/mainefieldoffice">www.fws.gov/mainefieldoffice</a>
National Park Service	<a href="http://www.nps.gov/rivers/index.html">www.nps.gov/rivers/index.html</a>
Maine Department of Environmental Protection	<a href="http://www.maine.gov/dep">www.maine.gov/dep</a>
Maine Department of Agriculture, Conservation and Forestry	<a href="http://www.maine.gov/acf/index.shtml">www.maine.gov/acf/index.shtml</a>
Maine Land Use Planning Commission	<a href="http://www.maine.gov/doc/lupc/commission/offices.shtml">www.maine.gov/doc/lupc/commission/offices.shtml</a>
Maine Department of Marine Resources	<a href="http://www.maine.gov/dmr/index.htm">www.maine.gov/dmr/index.htm</a>
State of Maine - Aquaculture Guidelines	<a href="http://www.maine.gov/dmr/aquaculture/index.htm">www.maine.gov/dmr/aquaculture/index.htm</a>

## Appendix F: Definitions

### Definitions

**Attendant Features:** Occurring with or as a result of; accompanying.

**Biodegradable:** A material that decomposes into elements found in nature within a reasonably short period of time and will not leave a residue of plastic or a petroleum derivative in the environment after degradation. Examples of biodegradable materials include jute, sisal, cotton, straw, burlap, coconut husk fiber (coir) or excelsior. In contrast, degradable plastics break down into plastic fragments that remain in the environment after degradation.

**Boating facilities:** These provide, rent or sell mooring space, such as marinas, yacht clubs, boat yards, dockminiums, town facilities, land/home owners, etc. Not classified as boating facilities are piers shared between two abutting properties or town mooring fields that charge an equitable user fee based on the actual costs incurred.

**Brushing the Flats:** The placement of tree boughs, wooden lath structure, or small-mesh fencing on mudflats, or any bottom disturbance (e.g., discing, plowing, raking, etc.), to enhance recruitment of shellfish.

**Buffer Zone:** The buffer zone of an FNP is equal to three times the authorized depth of the FNP.

**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 are installed temporarily or permanently.

**Cumulative effects:** See “Direct, secondary, and cumulative effects.”

### **Direct, secondary, and cumulative effects:**

Direct Effects: The loss of aquatic ecosystem within the footprint of the discharge of dredged or fill material. Direct effects are caused by the action and occur at the same time and place.

Secondary Effects: 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) aquatic areas drained, flooded, fragmented, or mechanically cleared, b) fluctuating water levels in all impoundment and downstream associated with the operation of a dam, c) septic tank leaching and surface runoff from residential or commercial developments on fill, and d) leachate and runoff from a sanitary landfill located in waters of the U.S. See 40 CFR 230.11(h).

Cumulative Effects: The changes in an aquatic ecosystem that are attributable to the collective effect of a number of individual 1) discharges of dredged or fill material, or 2) structures. Although the impact of a particular discharge may constitute a minor change in itself, the cumulative effect of numerous such piecemeal changes can result in a major impairment of the water resources and interfere with the productivity and water quality of existing aquatic ecosystems. See 40 CFR 230(g).

### **Dredging:**

Maintenance Dredging: Includes areas and depths previously authorized by the Corps and dredged. The Corps may require proof of authorization. Maintenance dredging typically refers to the routine removal of accumulated sediment from channel beds to maintain the design depths of navigation channels, harbors, marinas, boat launches and port facilities. Routine maintenance dredging is conducted regularly for navigational purposes (typically at least once every ten years) and does not include any expansion of the previously dredged area or depth. The Corps may review a maintenance dredging activity as new dredging if sufficient time has elapsed to allow for the colonization of SAS,

shellfish, etc. The main characteristics of maintenance dredging projects are variable quantities of material; soft, uncompacted soil; contaminant content possible; thin layers of material; occurring in navigation channels and harbors; repetitive activity

**New Dredging:** Dredging of an area or to a depth that has never been authorized by the Corps or dredged.

**Dredged material & discharge of dredged material:** These are defined at 323.2(c) and (d). The term dredged material means material that is excavated or dredged from waters of the U.S.

**Essential Fish Habitat (EFH):** This is broadly defined to include those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.

**Fill material & discharge of fill material:** These are defined at 323.2(e) and (f). The term fill material is defined as material placed in waters of the U.S. where the material has the effect of either replacing any portion of a water of the U.S. with dry land or changing the bottom elevation of any portion of a water of the U.S.

**Federal anchorages, Federal channels and Federal turning basin:** Refer to Appendix H for those in Maine

**Federal navigation projects (FNPs):** These areas are maintained by the Corps; authorized, constructed and maintained on the premise that they will be accessible and available to all on equal terms; and are comprised of Federal Anchorages, Federal Channels and Federal Turning Basins. The buffer zone is equal to three times the authorized depth of a FNP. More information on the following FNPs is provided at [www.nae.usace.army.mil/missions/navigation.aspx](http://www.nae.usace.army.mil/missions/navigation.aspx) >> Navigation Projects.

**Flume:** An open artificial water channel, in the form of a gravity chute, that leads water from a diversion dam or weir completely aside a natural flow. A flume can be used to measure the rate of flow.

**Frac out:** During normal drilling operations, drilling fluid travels up the borehole into a pit. When the borehole becomes obstructed or the pressure becomes too great inside the borehole, the ground fractures and fluid escapes to the surface.

**Independent utility:** A test to determine what constitutes a single and complete non-linear project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

**Individual Permit:** A Department of the Army authorization that is issued following a case-by-case evaluation of a specific structure or work in accordance with the procedures of 33 CFR 322, or a specific project involving the proposed discharge(s) in accordance with the procedures of 33 CFR 323, and in accordance with the procedures of 33 CFR 325 and a determination that the proposed discharge is in the public interest pursuant to 33 CFR 320.

**Maintenance:** Regulations on maintenance are provided at 33 CFR 323.4. The following definitions are applicable:

**Minor deviations:** 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, which are necessary to make repair, rehabilitation, or replacement are permitted, provided the adverse environmental effects resulting from such repair, rehabilitation, or replacement are minimal.

**Currently serviceable:** Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

**Marina reconfiguration zone:** A Corps-authorized area in which permittees may rearrange pile-supported structures and floats without additional authorizations. A reconfiguration zone does not grant exclusive privileges to an area or an increase in structure or float area.

**Navigable waters of the U.S.:** See Waters of the U.S. below.

**Overall project:** See "single and complete linear project" below.

**Practicable:** Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

**Permanent impacts:** Permanent impacts means waters of the U.S. that are permanently affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent impacts include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. Temporary impacts include waters of the U.S. that are temporarily filled, flooded, excavated, drained or mechanically cleared because of the regulated activity.

**Pre-construction notification (PCN):** A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by this GP. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of these GPs. A PCN may be voluntarily submitted in cases where PCN is not required and the project proponent wants confirmation that the activity is authorized under this GP.

**Secondary effects:** See “Direct, secondary, and cumulative effects.”

**Single and complete linear project:** A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term “single and complete project” is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the U.S. (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for the purposes of this GP. 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.

The overall project, for purposes of this GP, includes all regulated activities that are reasonably related and necessary to accomplish the project purpose.

**Single and complete non-linear project:** For non-linear projects, the term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. For non-linear projects, the single and complete project must have independent utility (see definition).

**Special aquatic sites:** These include inland and saltmarsh wetlands, mud flats, vegetated shallows, sanctuaries and refuges, coral reefs, and riffle and pool complexes. These are defined at 40 CFR 230 Subpart E.

**Stream channelization:** The manipulation of a stream’s course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

**Temporary impacts:** See permanent impacts above.

**Utility line:** Any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term ‘utility line’ does not include activities that drain a water of the U.S., such as drainage tile or French drains, but it does apply to pipes conveying drainage from another area.

**Vegetated shallows:** Permanently inundated areas that under normal circumstances support communities of rooted aquatic vegetation, such as eelgrass and widgeon grass (*Rupia maritima*) in marine systems (doesn’t include salt marsh) as well as a number of freshwater species in rivers and lakes. Note: These areas are also commonly referred to as submerged aquatic vegetation (SAV).

**Vernal pools (VPs):** For the purposes of this GP, VPs are depressional wetland basins that typically go dry in most years and may contain inlets or outlets, typically of intermittent flow. Vernal pools range in both size and depth depending upon landscape position and parent material(s). Pools usually

support one or more of the following obligate indicator species: wood frog, spotted salamander, blue-spotted salamander, marbled salamander, Jefferson's salamander and fairy shrimp. However, they should preclude sustainable populations of predatory fish.

VP areas are:

- Depression (includes the VP depression up to the spring or fall high water mark, and includes any vegetation growing within the depression),
- Envelope (area within 100 feet of the VP depression's edge), and
- Critical terrestrial habitat (area within 100-750 feet of the VP depression's edge).

Note: See footnote to GC 23. The Corps may determine during the PCN review that a waterbody should not be designated as a VP based on available evidence.

**Water diversions:** Water diversions are activities such as bypass pumping (e.g., "dam and pump") 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.

**Weir:** A barrier across a river designed to alter the flow characteristics. In most cases, weirs take the form of a barrier, smaller than most conventional dams, across a river that causes water to pool behind the structure (not unlike a dam) and allows water to flow over the top. Weirs are commonly used to alter the flow regime of the river, prevent flooding, measure discharge and help render a river navigable.

**Waters of the U.S. & Waters of the United States (U.S.):** The term waters of the U.S. and all other terms relating to the geographic scope of jurisdiction are defined at 33 CFR 328. Also see Section 502(7) of the Federal CWA [33 USC 1352(7)]. Waters of the U.S. include jurisdictional wetlands. Not all waters and wetlands are jurisdictional. Contact the Corps with any questions regarding jurisdiction.

**Navigable waters:** Refer to 33 CFR 329. These waters include the following federally designated navigable waters in New England. This list represents only those waterbodies for which affirmative determinations have been made; absence from this list should not be taken as an indication that the waterbody is not navigable:

ME: All tidal waters; Kennebec River to Moosehead Lake; Penobscot River to the confluence of the East and West Branch at Medway, Maine; Lake Umbagog within the State of Maine.

## Appendix G: Additional References

### 1. GC 2: Federal Jurisdictional Boundaries.

(a) Corps Wetlands Delineation Manual, regional supplements, and Corps Wetland Delineation Data Sheets: [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) and then “Wetlands and Jurisdictional Limits.”

(b) The USFWS publishes the 1988 National List of Plant Species that Occur in Wetlands ([www.nwi.fws.gov](http://www.nwi.fws.gov)).

The Natural Resources Conservation Service (NRCS) publishes the current hydric soil definition, criteria and lists: <http://soils.usda.gov/use/hydric>. For the Field Indicators for Identifying Hydric Soils in N.E., see [www.neiwpc.org/hydricsoils.asp](http://www.neiwpc.org/hydricsoils.asp).

### 2. GC 5: Single and Complete Project.

*Single and complete project* means the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. For example, if construction of a residential development affects several different areas of a headwater or isolated water, or several different headwaters or isolated waters, the cumulative total of all filled areas should be the basis for deciding whether or not the project will be covered by Category 1 or 2.

The *Independent utility* test is used to determine what constitutes a single and complete project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

### 3. GC 8: Threatened and Endangered Species.

(a) The following NMFS site must be referenced to ensure that listed species or critical habitat are not present in the action area [GC 8(b)] or to provide information on federally-listed species or habitat [GC 8(e)]: [www.nero.noaa.gov/prot\\_res/esp/ListE&Tspec.pdf](http://www.nero.noaa.gov/prot_res/esp/ListE&Tspec.pdf). Contact the USFWS for information to check for the presence of listed species (see Appendix D for contact information & procedures).

(b) The Endangered Species Act Consultation Handbook – Procedures for Conducting Section 7 Consultations and Conferences, defines action area as “all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. [50 CFR 402.02].”

### 4. GC 42: Essential Fish Habitat.

As part of the GP screening process, the Corps may coordinate with NMFS in accordance with the 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act to protect and conserve the habitat of marine, estuarine and anadromous finfish, mollusks, and crustaceans. This habitat is termed “Essential Fish Habitat (EFH)”, and is broadly defined to include “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” There are EFH waters throughout inland and coastal waters in Maine. For additional information, see the EFH regulations 50 CFR 600 at [www.nero.noaa.gov/hcd](http://www.nero.noaa.gov/hcd) including the “Guide for EFH Descriptions” at [www.nero.noaa.gov/hcd/list.htm](http://www.nero.noaa.gov/hcd/list.htm). Additional information on the location of EFH can be obtained from NMFS (see Appendix D for contact information).

### 5. GC 4: Avoidance, Minimization and Compensatory Mitigation.

(a) See [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) and then “Mitigation” to view the April 10, 2008 “Final Compensatory Mitigation Rule” (33 CFR 332) and related documents. The Q&A document states: “In order to reduce risk and uncertainty and help ensure that the required compensation is provided, the rule establishes a preference hierarchy for mitigation options. The most preferred option

is mitigation bank credits, which are usually in place before the activity is permitted. In-lieu fee program credits are second in the preference hierarchy, because they may involve larger, more ecologically valuable compensatory mitigation projects as compared to permittee-responsible mitigation. Permittee-responsible mitigation is the third option, with three possible circumstances: (1) conducted under a watershed approach, (2) on-site and in kind, and (3) off-site/out-of-kind.

(b) Compensatory mitigation may take the form of wetland preservation, restoration, enhancement, creation, and/or in lieu fee (ILF) for inclusion into the Natural Resources Mitigation Fund for projects in DEP and LURC territories. Avoidance of wetland impacts will reduce the ILF dollar total for applicants. The ILF compensation program was established to provide applicants with a flexible compensation option over and above traditional permittee responsible compensation projects. See the Maine ILF Agreement at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory), “Mitigation” and then “Maine,” or [www.maine.gov/dep/blwq/docstand/nrpa/ILF\\_and\\_NRCP/index.htm](http://www.maine.gov/dep/blwq/docstand/nrpa/ILF_and_NRCP/index.htm).

## **6. GCs 24, 15, and 43: Invasive Species.**

(a) Information on what are considered “invasive species” is provided in our “Compensatory Mitigation Guidance” document at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) under “Mitigation.” The “Invasive Species” section has a reference to our “Invasive Species Control Plan (ISCP) Guidance” document, located at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) under “Invasive Species,” which provides information on preparing an ISCP.

(b) The June 2009 “Corps of Engineers Invasive Species Policy” is at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) under “Invasive Species” and provides policy, goals and objectives.

## **7. GC 44: Bank Stabilization.**

This generally eliminates bodies of water where the reflected wave energy may interfere with or impact on harbors, marinas, or other developed shore areas. A revetment is sloped and is typically employed to absorb the direct impact of waves more effectively than a vertical seawall. It typically has a less adverse effect on the beach in front of it, abutting properties and wildlife. See the Corps Coastal Engineering Manual [EM 1110-2-1100](#) at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) under “Useful Links and Documents” for design and construction guidance.

## **8. GC 45: Stream and Wetland Crossings.**

(a) Projects should be designed and constructed to ensure long-term success using the most recent manual located at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) under “Stream and River Continuity,” currently “Stream Simulation: An Ecological Approach to Providing Passage for Aquatic Organisms at Road-Stream Crossings, by the U.S. Forest Service.” Section 5.3.3 is of particular importance. Sections 7.5.2.3 Construction Methods and 8.2.11 Stream-Simulation Bed Material Placement both show important steps in the project construction.

(b) For more information on High-Quality Stream Segments and their components see:

i. High-Quality Stream Segments are shown at [www.maine.gov/dep/gis/datamaps](http://www.maine.gov/dep/gis/datamaps).

ii. Class A Waters or Class AA Waters:

[www.mainelegislature.org/legis/statutes/38/title38sec465.html](http://www.mainelegislature.org/legis/statutes/38/title38sec465.html), and

[www.mainelegislature.org/legis/statutes/38/title38sec467.html](http://www.mainelegislature.org/legis/statutes/38/title38sec467.html).

iii. Outstanding river segments [www.mainelegislature.org/legis/statutes/38/title38sec480-P.html](http://www.mainelegislature.org/legis/statutes/38/title38sec480-P.html).

(c) The Massachusetts Dam Removal and the Wetland Regulations offer guidance to evaluate the positive and negative impacts of culvert replacement, including the loss of upstream wetlands, which may be offset by the overall benefits of the river restoration. See

[www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) and then “Stream and River Continuity.”

(d) The ME DOT's document "Waterway and Wildlife Crossing Policy and Design Guide for Aquatic Organism, Wildlife Habitat, and Hydrologic Connectivity," 3rd Edition, July 2008, may be used as guidance to evaluate impacts to aquatic, wildlife and surface water resources when designing, constructing, repairing and maintaining stream crossings. Note: Adherence to this DOT document does not ensure compliance with this GP. Projects must comply with the requirements of this GP including GC 45 and the Corps General Stream Crossing Standards contained therein.

[www.maine.gov/mdot/environmental-office-homepage/fishpassage/3rd%20edition%20-%20merged%20final%20version%207-01-08a1.pdf](http://www.maine.gov/mdot/environmental-office-homepage/fishpassage/3rd%20edition%20-%20merged%20final%20version%207-01-08a1.pdf).

(e) GC 45(f): The Skidder Bridge Fact Sheet at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) under "Stream and River Continuity" may be a useful temporary span construction method.

**9. GC 45: Wetland Crossings.** The Maine DEP's crossing standards are at 06-096 DEP, Chapter 305: Permits by Rule, 9 & 10) Crossings (utility lines, pipes and cables).  
[www.maine.gov/dep/blwq/rules/NRPA/2009/305/305\\_effective\\_2009.pdf](http://www.maine.gov/dep/blwq/rules/NRPA/2009/305/305_effective_2009.pdf)

**10. GC 23: Protection of Vernal Pools.**

(a) The state's Significant Wildlife Habitat rules ([Chapter 335](#), Section 9(C) "Habitat management standards for significant vernal pool habitat") are located at

[www.maine.gov/dep/blwq/docstand/nrpapage.htm#rule](http://www.maine.gov/dep/blwq/docstand/nrpapage.htm#rule) under "Rules."

(b) The following documents provide conservation recommendations:

i. Best Development Practices: Conserving pool-breeding amphibians in residential and commercial development in the northeastern U.S., Calhoun and Klemens, 2002. Chapter III, Management Goals and Recommendations, Pages 15 – 26, is particularly relevant. (Available for purchase at [www.maineaudubon.org/resource/index.shtml](http://www.maineaudubon.org/resource/index.shtml) and on Corps website\*.)

ii. Science and Conservation of Vernal Pools in Northeastern North America, Calhoun and deMaynadier, 2008. Chapter 12, Conservation Recommendations section, Page 241, is particularly relevant. (Available for purchase via the internet. Chapter 12 is available on Corps website\*.)

\* [www.nae.usace.army.mil/reg](http://www.nae.usace.army.mil/reg) under "Vernal Pools."

(c) Cape Cod Curbing: For smaller roads and driveways, the most important design feature to consider is curbing. Granite curbs and some traditional curbing can act as a barrier to amphibian and hatchling turtle movements. Large numbers of salamanders have been intercepted in their migrations by curbs and catch basins. Use of Cape Cod curbs rather than traditional curbing may be one solution. Alternatively, where storm water management systems require more traditional curbing, it may be possible to design in escape ramps on either side of each catch basin. Cape Cod curbing is shown on Page 35 of the document cited in 10.b.i above. Bituminous material is not required; other materials such as granite are acceptable.

(d) The VP Directional Buffer Guidance document is located at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) under: 1) "State General Permits" and then "Maine," and 2) "Vernal Pools."

**11. GC 29: Maintenance.** River restoration projects that are designed to accommodate the natural dynamic tendencies of the fluvial system are maintained in accordance with the project's design objectives (Category 1) or the Corps authorization letter (Category 2). These projects are generally designed to support and implement channel assessment and management practices that recognize a stream's natural dynamic tendencies.

# Appendix H: Federal Navigation Projects in Maine

