

Updated 12/01/08

FEDERAL PROJECT

BIDDING INSTRUCTIONS

FOR ALL PROJECTS:

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

For a Paper Bid:

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

For an Electronic Bid:

- a) a completed Bid using Expedite® software and submitted via the Bid Express™ webbased service, b) a Bid Guaranty (as described below) or a faxed copy of a Bid Bond (with original to be delivered within 72 hours), and c) any other certifications or Bid requirements listed in the Bid Documents as due by Bid opening.
3. Include prices for all required items in the Schedule of Items. (“Zero is not considered a Bid price.”)
4. Include a Bid Guaranty. Acceptable forms are:
 - a) a properly completed and signed Bid Bond on the Department’s prescribed form (or on a form that does not contain any significant variations from the Department’s form as determined by the Department) for 5% of the Bid Amount or
 - b) an Official Bank Check, Cashier’s Check, Certified Check, U.S. Postal Money Order or Negotiable Certificate of Deposit in the amount stated in the Notice to Contractors.
5. If a paper Bid is to be sent, Federal Express overnight delivery is suggested as the package is delivered directly to the DOT Headquarters Building located at 16 Child Street in Augusta.
6. Other means, such as U.S. Postal Service’s Express Mail has proven not to be reliable.

IN ADDITION, FOR FEDERAL AID PROJECTS:

7. Complete the DBE Proposed Utilization form in the proper amounts, and submit with your bid on bid opening day. If you are submitting your bid electronically, you must FAX your DBE Utilization Form to (207) 624-3431.

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

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

NOTICE

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

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

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

The downloading of bid packages from the MDOT website is not the same as providing an electronic bid to the Department. Electronic bids must be submitted via <http://www.BIDX.com>. For information on electronic bidding contact Larry Childs at Larry.Childs@maine.gov.

NOTICE

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

Bid Enclosed - Do Not Open

PIN:

Town:

Date of Bid Opening:

Name of Contractor with mailing address and telephone number:

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

Double Envelope: Bid Enclosed

PIN:

Town:

Date of Bid Opening:

Name of Contractor:

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

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

Bid Enclosed: Do Not Open

PIN:

Town:

Name of Contractor:

October 16, 2001

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

KNOW ALL MEN BY THESE PRESENTS THAT _____

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

as Principal, and _____ as Surety, a

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

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

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

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

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

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

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

_____ and if the Department shall accept said bid

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

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

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

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

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

force, and effect.

Signed and sealed this _____ day of _____ 20_____

WITNESS:

WITNESS

PRINCIPAL:

By _____

By: _____

By: _____

SURETY:

By _____

By: _____

Name of Local Agency: _____

NOTICE

Bidders:

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

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

The Contractor Shall:

1. Submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan with your bid on the Bid day.
2. Extend equal opportunity to MDOT certified DBE firms (as listed in MDOT's DBE Directory of Certified Businesses) in the selection and utilization of Subcontractors and Suppliers.

SPECIFIC INSTRUCTIONS FOR COMPLETING THE FORM:

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

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

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

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

NOTICE

Disadvantaged Business Enterprise Proposed Utilization

The Apparent Low Bidder must submit the Disadvantaged Business Enterprise Proposed Utilization form with their bid.

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

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

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

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

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

NOTICE

Maine Department of Transportation Disadvantaged Business Enterprise Program

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

For FFY 2009 (October 1, 2008 through September 30, 2009), MaineDOT has established a DBE participation goal of 5.8% to be achieved through race/gender neutral means.

Interested parties may view MaineDOT's DBE goal setting methodology for the next 45 days during normal business hours (8-4, M-F) at the Maine Department of Transportation, Civil Rights Office, 16 State House Station, Augusta ME 04333-0016. Appointments may be scheduled by telephone at (207) 624-3519. The goal setting methodology is also available for viewing on the MaineDOT website: <http://www.maine.gov/mdot/disadvantaged-business-enterprises/dbe-home.php>.

Public comment will be accepted for 45 days following the last date of publication. The public comment period will be complete on September 26th, 2008. The goal will be submitted for approval to the FHWA on September 1st, 2008. Updated goal will be submitted to FHWA, if necessary, based on public comment.

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

Several interested stakeholders will be notified directly by e-mail of the goal publication, including Maine Small Business Administration, Associated General Contractors, and ACEC, and Maine DBEs.

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

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

Contractor: _____ Telephone: _____ Ext. _____

Prepared by: _____ Fax: _____

BID PRICE: \$ _____ BID DATE: ____/____/____

FEDERAL PROJECT PIN # _____ PROJECT LOCATION: _____

TOTAL DBE _____ % PARTICIPATION FOR THIS SUBMISSION

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

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

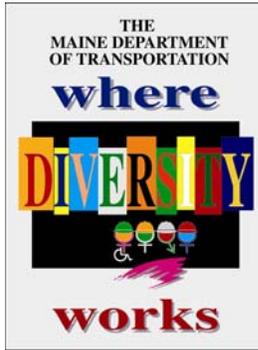
Equal Opportunity Use:

Form received: ____/____/____ Verified by: _____

____ Accepted ____ Rejected _____

cc: Contracts Other _____

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



MaineDOT's CIVIL RIGHTS OFFICE

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

MAINE DEPARTMENT OF TRANSPORTATION

CERTIFIED DISADVANTAGED AND WOMEN BUSINESS ENTERPRISE

DECEMBER 2005

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

www.maine.gov/mdot/disadvantaged-business-enterprises/dbe-home.php

Vendor Registration

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

<http://www.maine.gov/purchases/vendorinfo/vss.htm>

NOTICE

All bids for Federal Projects opened after December 1, 2008 **MUST** be accompanied by the DBE Proposed Utilization form. If you are submitting an electronic bid, the DBE Utilization Form may be faxed to 207-624-3431.

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

Sealed Bids addressed to the Maine Department of Transportation, Augusta, Maine 04333 and endorsed on the wrapper "Bids for **Concrete Rubblization, Hot Mix Asphalt Overlay, Pavement Milling, Drainage, Highway Lighting and Safety Improvements** in the towns of **Brunswick, Topsham, Bowdoin, Bowdoinham, Richmond, and West Gardiner, and the city of Gardiner**" will be received from contractors at the Reception Desk, Maine DOT Building, Child Street, Augusta, Maine, until 11:00 o'clock A.M. (prevailing time) on February 25, 2009, and at that time and place publicly opened and read. Bids will be accepted from all bidders. The lowest responsive bidder must have completed, or successfully complete, a **Highway Construction and Paving Project**, or project specific prequalification to be considered for the award of this contract. **We now accept electronic bids for those bid packages posted on the bidx.com website. Electronic bids do not have to be accompanied by paper bids. Please note: the Department will accept a facsimile of the bid bond; however, the original bid bond must then be received at the MDOT Contract Section within 72 hours of the bid opening.** Until further notice, dual bids (one paper, one electronic) will be accepted, with the paper copy taking precedence.

Description: Maine Federal Aid Project Nos. **IM-1511(450)E** , PIN 15114.50, **IM-1598(400)E** , PIN 15984.00

Location: The section of highway under construction in Kennebec, Sagadahoc, and Cumberland Counties Project No. IM-1511(400)E is located on Interstate 295 northbound, beginning 0.08 mi. south of the Durham Road Overpass and extending northerly 23.920 mi. to 0.03 mi. north of the Exit 51 on ramp. Project IM-1598(400)E is a highway lighting project in Sagadahoc County, located in the town of Richmond at exits 43 on and off ramps on Interstate 295 northbound & southbound.

Outline of Work: Concrete Rubblization, Hot Mix Asphalt Overlay, Pavement Milling, Drainage, highway lighting, Safety Improvements and other incidental work.

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

Plans, specifications and bid forms may be seen at the Maine DOT Building in Augusta,. They may be purchased from the Department between the hours of 8:00 a.m. to 4:30 p.m. by cash, credit card (Visa/Mastercard) or check payable to Treasurer, State of Maine sent to Maine Department of Transportation, Attn.: Mailroom, 16 State House Station, Augusta, Maine 04333-0016. They also may be purchased by telephone at (207) 624-3536 between the hours of 8:00 a.m. to 4:30 p.m. Full size plans \$55.00 (\$60.50 by mail). Half size plans \$27.50 (\$30.75 by mail), Bid Book \$10 (\$13 by mail), Single Sheets \$2, payment in advance, all non-refundable.

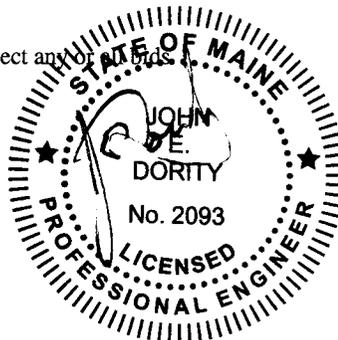
Each Bid must be made upon blank forms provided by the Department and must be accompanied by a bid bond at 5% of the bid amount or an official bank check, cashier's check, certified check, certificate of deposit, or United States postal money order in the amount of \$700,000 payable to Treasurer, State of Maine as a Bid guarantee. A Contract Performance Surety Bond and a Contract Payment Surety Bond, each in the amount of 100 percent of the Contract price, will be required of the successful Bidder.

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

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

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

Augusta, Maine
February 4, 2009



JOHN E. DORITY
CHIEF ENGINEER

SPECIAL PROVISION 102.7.3
ACKNOWLEDGMENT OF BID AMENDMENTS

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

Amendment Number	Date

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

CONTRACTOR

Date

Signature of authorized representative

(Name and Title Printed)

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015114.50

PROJECT(S): IM-1511(450)E
IM-1598(400)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS

SECTION 0001 PROJECT ITEMS

0010	201.11 CLEARING	6.000 AC				
0020	201.23 REMOVING SINGLE TREE TOP ONLY	4.000 EA				
0030	201.24 REMOVING STUMP	4.000 EA				
0040	202.11 REMOVING PORTLAND CEMENT CONCRETE PAVEMENT	230000.000 SY				
0050	202.126 REMOVE EXISTING CONCRETE SLAB TO FULL DEPTH	25000.000 SY				
0060	202.202 REMOVING PAVEMENT SURFACE	265000.000 SY				
0070	202.204 RUMBLE STRIPS	4.000 GP				
0080	202.205 RUMBLE STRIPS - SHOULDER	240000.000 LF				
0090	203.20 COMMON EXCAVATION	6500.000 CY				
0100	203.24 COMMON BORROW	11000.000 CY				

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015114.50

PROJECT(S): IM-1511(450)E
IM-1598(400)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0110	204.201 ADD SHOULDER AGGREGATE TO EXISTING SHOULDER	165000.000 SY				
0120	205.512 WIDENING OF EXISTING SHOULDER	5500.000 SY				
0130	206.07 STRUCTURAL ROCK EXCAVATION - DRAINAGE AND MINOR STRUCTURES	150.000 CY				
0140	211.21 INSLOPE REHABILITATION	240000.000 LF				
0150	304.08 AGGREGATE BASE COURSE - SCREENED	11000.000 CY				
0160	307.32 FULL DEPTH RECYCLED PAVEMENT (UNTREATED MAINLINE TRAVELWAY)	30000.000 SY				
0170	311.36 FULL DEPTH CONCRETE RUBBLIZATION	230000.000 SY				
0180	403.208 HOT MIX ASPHALT 12.5 MM HMA SURFACE	25000.000 T				
0190	403.2081 12.5 MM POLYMER MODIFIED HOT MIX ASPHALT	35000.000 T				
0200	403.211 HOT MIX ASPHALT (SHIMMING)	5000.000 T				

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015114.50

PROJECT(S): IM-1511(450)E
IM-1598(400)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0210	403.213 HOT MIX ASPHALT 12.5 MM HMA BASE	60000.000 T				
0220	403.2131 12.5 MM POLYMER MODIFIED HMA BASE	35000.000 T				
0230	403.2132 12.5 MM ASPHALT RICH BASE MIXTURE	40000.000 T				
0240	409.15 BITUMINOUS TACK COAT - APPLIED	40000.000 G				
0250	410.25 ASPHALT-RUBBER SURFACE TREATMENT WITH AGGREGATE COVER	46000.000 SY				
0260	411.10 UNTREATED AGGREGATE SURFACE COURSE (TRUCK MEASURE)	7500.000 CY				
0270	424.3331 ASPHALT LOW MODULUS CRACK SEALER, APPLIED	6000.000 LB				
0280	424.3333 LOW MODULUS JOINT SEALER, APPLIED	475000.000 LF				
0290	429.34 GRID/ FABRIC FABRIC COMPOSITE PAVEMENT INTERLAYER	5000.000 SF				
0300	502.29 STRUCTURAL CONCRETE WEARING SURFACE ON BRIDGES	LUMP	LUMP			
0310	502.31 STRUCTURAL CONCRETE APPROACH SLABS	LUMP	LUMP			

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015114.50

PROJECT(S): IM-1511(450)E
IM-1598(400)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0320	504.07 CONCRETE PIPE TIES	50.000 GP				
0330	508.14 HIGH PERFORMANCE WATERPROOFING MEMBRANE	LUMP	LUMP			
0340	515.21 PROTECTIVE COATING FOR CONCRETE SURFACES	LUMP	LUMP			
0350	518.39 REPAIRING GRANITE CURB BEDDING MORTAR	150.000 LF				
0360	518.50 REPAIR OF UPWARD FACING SURFACES - TO REINFORCING STEEL < 7.9 IN.	250.000 SF				
0370	518.51 REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL < 7.9 IN.	170.000 SF				
0380	518.60 REPAIR OF VERTICAL SURFACES < 7.9 IN.	50.000 SF				
0390	518.61 REPAIR OF VERTICAL SURFACES > 7.9 IN.	18.000 CY				
0400	520.241 BRIDGE JOINT MODIFICATION TYPE 1	4.000 EA				
0410	520.242 BRIDGE JOINT MODIFICATION TYPE 2	4.000 EA				

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015114.50

PROJECT(S): IM-1511(450)E
IM-1598(400)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0420	520.243 BRIDGE JOINT MODIFICATION TYPE 3	2.000 EA				
0430	520.245 BRIDGE JOINT MODIFICATION TYPE 5	2.000 EA				
0440	520.26 LONGITUDINAL BRIDGE JOINT MODIFICATION	25.000 LF				
0450	526.301 TEMPORARY CONCRETE BARRIER TYPE I	LUMP	LUMP			
0460	526.34 PERMANENT CONCRETE TRANSITION BARRIER	28.000 EA				
0470	527.34 WORK ZONE CRASH CUSHIONS	4.000 UN				
0480	603.16 15 INCH CULVERT PIPE OPTION I	120.000 LF				
0490	603.179 18 INCH CULVERT PIPE OPTION III	400.000 LF				
0500	603.205 30 INCH REINFORCED CONCRETE PIPE CLASS III	168.000 LF				
0510	603.215 36 INCH REINFORCED CONCRETE PIPE CLASS III	8.000 LF				

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015114.50

PROJECT(S): IM-1511(450)E
IM-1598(400)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0520	603.74 REMOVE AND RELAY CONCRETE PIPE 12 INCH CONCRETE PIPE	8.000 LF				
0530	603.7415 REMOVE & RELAY 15 INCH CONCRETE PIPE	24.000 LF				
0540	603.7418 REMOVE & RELAY 18 INCH CONCRETE PIPE	24.000 LF				
0550	603.7424 REMOVE & RELAY 24 INCH CONCRETE PIPE	192.000 LF				
0560	603.743 REMOVE & RELAY 30 INCH CONCRETE PIPE	64.000 LF				
0570	603.7436 REMOVE & RELAY 36 INCH CONCRETE PIPE	8.000 LF				
0580	603.7442 REMOVE & RELAY 42 INCH CONCRETE PIPE	16.000 LF				
0590	604.18 ADJUSTING MANHOLE OR CATCH BASIN TO GRADE	2.000 EA				
0600	604.182 CLEAN EXISTING CATCH BASIN AND MANHOLE	14.000 EA				
0610	605.09 6 INCH UNDERDRAIN TYPE B	4000.000 LF				
0620	605.10 6 INCH UNDERDRAIN OUTLET	400.000 LF				

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015114.50

PROJECT(S): IM-1511(450)E
IM-1598(400)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0630	606.1721 BRIDGE TRANSITION - TYPE 1	32.000 EA				
0640	606.24 GUARDRAIL TYPE 3D - SINGLE RAIL	56000.000 LF				
0650	606.241 GUARDRAIL TYPE 3D - 15 FOOT RADIUS AND LESS	400.000 LF				
0660	606.242 GUARDRAIL TYPE 3D - OVER 15 FOOT RADIUS	400.000 LF				
0670	606.265 TERMINAL END - SINGLE RAIL - GALVANIZED STEEL	70.000 EA				
0680	606.353 REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	180.000 EA				
0690	606.356 UNDERDRAIN DELINEATOR POST	85.000 EA				
0700	606.65 GUARDRAIL THRIE BEAM - SINGLE RAIL	800.000 LF				
0710	606.70 TRANSITION SECTION THRIE BEAM	4.000 EA				
0720	606.754 WIDEN SHOULDER FOR GUARDRAIL 350 FLARED TERMINAL	54.000 EA				
0730	606.79 GUARDRAIL 350 FLARED TERMINAL	52.000 EA				

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015114.50

PROJECT(S): IM-1511(450)E
IM-1598(400)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0740	606.792 GUARDRAIL 350 MEDIAN TERMINAL SYSTEM	4.000 EA				
0750	609.40 RESET CURB TYPE 5	300.000 LF				
0760	610.08 PLAIN RIPRAP	600.000 CY				
0770	610.24 GRANULAR FILTER	150.000 CY				
0780	613.319 EROSION CONTROL BLANKET	8000.000 SY				
0790	615.07 LOAM	1100.000 CY				
0800	618.1401 SEEDING METHOD NUMBER 2 - PLAN QUANTITY	2600.000 UN				
0810	619.1201 MULCH - PLAN QUANTITY	2600.000 UN				
0820	619.1401 EROSION CONTROL MIX	5600.000 CY				
0830	620.58 EROSION CONTROL GEOTEXTILE	400.000 SY				
0840	620.65 REINFORCEMENT GEOGRID	10000.000 SY				

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015114.50

PROJECT(S): IM-1511(450)E
IM-1598(400)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0850	626.11 PRECAST CONCRETE JUNCTION BOX	8.000 EA				
0860	626.23 PREWIRED CONDUIT SECONDARY WIRING	7550.000 LF				
0870	626.25 UNDER PAVEMENT DUCT - direct bore or jack	450.000 LF				
0880	626.32 24 INCH FOUNDATION	23.000 EA				
0890	627.18 12 " SOLID WHITE PAVEMENT MARKING	10500.000 LF				
0900	627.72 6 INCH WHITE PAVEMENT MARKING LINE	270000.000 LF				
0910	627.74 6 INCH YELLOW PAVEMENT MARKING LINE	150000.000 LF				
0920	627.75 WHITE OR YELLOW PAVEMENT AND CURB MARKING	2100.000 SF				
0930	627.77 REMOVING PAVEMENT MARKINGS	13000.000 SF				
0940	627.781 TEMPORARY 6 INCH PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW	500000.000 LF				
0950	629.05 HAND LABOR, STRAIGHT TIME	100.000 HR				

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015114.50

PROJECT(S): IM-1511(450)E
IM-1598(400)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0960	631.10 AIR COMPRESSOR (INCLUDING OPERATOR)	50.000 HR				
0970	631.11 AIR TOOL (INCLUDING OPERATOR)	50.000 HR				
0980	631.12 ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	100.000 HR				
0990	631.122 MINI ALL-PURPOSE EXCAVATOR (INCLUDING OPERATOR)	100.000 HR				
1000	631.132 SMALL BULLDOZER (INCLUDING OPERATOR)	100.000 HR				
1010	631.14 GRADER (INCLUDING OPERATOR)	60.000 HR				
1020	631.15 ROLLER, EARTH AND BASE COURSE (INCLUDING OPERATOR)	40.000 HR				
1030	631.172 TRUCK - LARGE (INCLUDING OPERATOR)	240.000 HR				
1040	631.18 CHAIN SAW RENTAL (INCLUDING OPERATOR)	50.000 HR				
1050	631.32 CULVERT CLEANER (INCLUDING OPERATOR)	50.000 HR				
1060	631.52 SIGN CREW	100.000 HR				

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015114.50

PROJECT(S): IM-1511(450)E
IM-1598(400)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1070	634.16 HIGHWAY LIGHTING	LUMP	LUMP			
1080	634.2041 LUMINAIRES	23.000 EA				
1090	634.206 LIGHT STANDARD FOR POST TOP LUMINAIRE	23.000 EA				
1100	639.18 FIELD OFFICE TYPE A	2.000 EA				
1110	645.306 FLEXIBLE REFLECTORIZED DELINEATOR	500.000 EA				
1120	652.30 FLASHING ARROW BOARD	5.000 EA				
1130	652.312 TYPE III BARRICADE	35.000 EA				
1140	652.33 DRUM	700.000 EA				
1150	652.34 CONE	450.000 EA				
1160	652.35 CONSTRUCTION SIGNS	2000.000 SF				
1170	652.36 MAINTENANCE OF TRAFFIC CONTROL DEVICES	180.000 CD				

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015114.50

PROJECT(S): IM-1511(450)E
IM-1598(400)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1180	652.38 FLAGGER	1000.000 HR				
1190	652.41 PORTABLE - CHANGEABLE MESSAGE SIGN	6.000 EA				
1200	652.43 PORTABLE - CHANGEABLE MESSAGE SIGN - TO BE RETAINED BY THE DEPARTMENT	6.000 EA				
1210	656.75 TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LUMP	LUMP			
1220	659.10 MOBILIZATION	LUMP	LUMP			
1230	660.21 ON-THE-JOB TRAINING (BID)	3000.000 HR				
	SECTION 0001 TOTAL					
	TOTAL BID					

CONTRACT AGREEMENT, OFFER & AWARD

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

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

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

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, **PIN No. 15114.50, for the Concrete Rubblization, Hot Mix Asphalt Overlay, Pavement Milling, Drainage, and Safety Improvements in the towns of Brunswick, Topsham, Bowdoin, Bowdoinham, Richmond, and West Gardiner, and the city of Gardiner, Counties of Kennebec, Sagadahoc, and Cumberland, Maine. PIN No. 15984.00, for the Highway Lighting in the town of Richmond, County of Sagadahoc, Maine.** The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

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

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

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before **October 17, 2009**. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002 and related Special Provisions.

C. Price.

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

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

D. Contract.

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

E. Certifications.

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

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

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of: **PIN No. 15114.50, for the Concrete Rubblization, Hot Mix Asphalt Overlay, Pavement Milling, Drainage, and Safety Improvements in the towns of Brunswick, Topsham, Bowdoin, Bowdoinham, Richmond, and West Gardiner, and the city of Gardiner, Counties of Kennebec, Sagadahoc, and Cumberland, Maine. PIN No. 15984.00, for the Highway Lighting in the town of Richmond, County of Sagadahoc, State of Maine**, on which bids will be received until the time specified in the “Notice to Contractors” do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached “Schedule of Items”.

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

As Offeror also agrees:

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

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

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

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and

submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan with their bid.

Fifth: That this offer shall remain open for 60 calendar days after the date of opening of bids.

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

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

CONTRACTOR

Date

(Signature of Legally Authorized Representative
of the Contractor)

Witness

(Name and Title Printed)

G. Award.

Your offer is hereby accepted.
documents referenced herein.

This award consummates the Contract, and the

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: David A. Cole, Commissioner

Witness

CONTRACT AGREEMENT, OFFER & AWARD

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

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

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

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, **PIN No. 15114.50, for the Concrete Rubblization, Hot Mix Asphalt Overlay, Pavement Milling, Drainage, and Safety Improvements in the towns of Brunswick, Topsham, Bowdoin, Bowdoinham, Richmond, and West Gardiner, and the city of Gardiner, Counties of Kennebec, Sagadahoc, and Cumberland, Maine. PIN No. 15984.00, for the Highway Lighting in the town of Richmond, County of Sagadahoc, Maine.** The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

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

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

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before **October 17, 2009**. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002 and related Special Provisions.

C. Price.

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

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

D. Contract.

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

E. Certifications.

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

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

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of: **PIN No. 15114.50, for the Concrete Rubblization, Hot Mix Asphalt Overlay, Pavement Milling, Drainage, and Safety Improvements in the towns of Brunswick, Topsham, Bowdoin, Bowdoinham, Richmond, and West Gardiner, and the city of Gardiner, Counties of Kennebec, Sagadahoc, and Cumberland, Maine. PIN No. 15984.00, for the Highway Lighting in the town of Richmond, County of Sagadahoc, State of Maine**, on which bids will be received until the time specified in the “Notice to Contractors” do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached “Schedule of Items”.

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

As Offeror also agrees:

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

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

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

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and

submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan with their bid.

Fifth: That this offer shall remain open for 60 calendar days after the date of opening of bids.

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

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

CONTRACTOR

Date

(Signature of Legally Authorized Representative
of the Contractor)

Witness

(Name and Title Printed)

G. Award.

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

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

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: David A. Cole, Commissioner

Witness

CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at 1705 U.S. Route 202, Winthrop, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and (Name of the firm bidding the job) a corporation or other legal entity organized under the laws of the State of Maine, with its principal place of business located at (address of the firm bidding the job)

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

A. The Work.

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

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

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

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before November 15, 2003. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002.

C. Price.

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

D. Contract.

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

E. Certifications.

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

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

F. Offer.

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

PIN 1234.00 West Eastport, Hot Mix Asphalt Overlay

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

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

As Offeror also agrees:

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

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

Third: To begin the Work on the date specified in the Engineer's "Notice to Commence Work" as stated in Section 107.2 of the Standard Specifications Revision of 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

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

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

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

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

CONTRACTOR
(Sign Here)

(Signature of Legally Authorized Representative of the Contractor)
(Print Name Here)

(Name and Title Printed)

Date _____

(Witness Sign Here)

Witness

G. Award.

Your offer is hereby accepted.

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

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: David A. Cole, Commissioner

(Witness)

BOND # _____

CONTRACT PERFORMANCE BOND
(Surety Company Form)

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

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

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

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

WITNESSES:

SIGNATURES:

CONTRACTOR:

Signature.....

.....

Print Name Legibly

Print Name Legibly

SURETY:

Signature

.....

Print Name Legibly

Print Name Legibly

SURETY ADDRESS:

NAME OF LOCAL AGENCY:

ADDRESS

.....

.....

.....

.....

TELEPHONE.....

.....

BOND # _____

CONTRACT PAYMENT BOND
(Surety Company Form)

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

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

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

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

WITNESS:

SIGNATURES:

CONTRACTOR:

Signature.....

.....

Print Name Legibly

Print Name Legibly

SURETY:

Signature.....

.....

Print Name Legibly

Print Name Legibly

SURETY ADDRESS:

NAME OF LOCAL AGENCY:

.....

ADDRESS

.....

.....

TELEPHONE

.....

SPECIAL PROVISION PARTNERING

The successful bidder will have the opportunity to enter into a cooperative partnership agreement with the State Department of Transportation for the contract. The objective of this agreement is the effective completion of the work on time and to the standard of quality that will be a source of pride to both the State and the Contractor. The partnering agreement will not affect the terms of the contract. It is intended only to establish an environment of cooperation between the parties. If the partnering agreement is accepted.

1. Contractor shall select and provide a third-party facilitator to conduct the team building workshop for the Contractor and Department personnel. Facilitator selection shall require Department concurrence. The cost for the facilitator and his associated expenses will be shared equally by the Department on the next monthly estimate, following receipt of invoice(s) from the Contractor, on an extra work basis.
2. Contractor and Department will exchange lists of the key personnel to be participants in the workshop. The list will contain the name and job title of each person, a contact phone number, and the address for job related correspondence.
3. The Contractor shall select the location and make all arrangements for space as required by facilitator, and for any meals required. This cost to be shared equally.
4. A working arrangement for the partnership will be agreed upon in writing at the workshop. The arrangement will set out the mutually recognized goals and expectation of the parties.
5. The Contractor and the Department agree to make an effort to maintain identified key personnel assigned to the work for its duration. A timely notice by each shall be given if changes by either must be made.
6. Project issues shall be processed in the manner agreed upon by the parties during the orientation.
7. Follow-up workshops may be held periodically throughout the duration of the contract as agreed by the Contractor and the Department.
8. The Partnering Agreement is not intended to be a legal document. Failure by either party to follow the process identified will not be grounds for any claim under the contract.
9. ARE YOU INTERESTED IN THIS OPPORTUNITY? YES _____ NO _____

General Decision Number: ME080003 07/25/2008 ME3

Superseded General Decision Number: ME20070003

State: Maine

Construction Type: Highway

Counties: Androscoggin and Cumberland Counties in Maine.

Highway Construction Projects Excluding Major Bridging (for example: bascule, suspension and spandrel arch bridges; those bridging waters presently navigating or to be navigable; and those involving marine construction in any degree); tunnels, building structures in rest area projects and railroad construction.

Modification Number	Publication Date
0	02/08/2008
1	07/25/2008

* SUME2000-011 10/24/2000

	Rates	Fringes
CARPENTER.....	\$ 11.30	1.95
ELECTRICIAN.....	\$ 17.90	2.30
Laborers:		
Flaggers.....	\$ 6.55	
Landscape.....	\$ 7.99	.72
Unskilled.....	\$ 8.69	1.08
Power equipment operators:		
Backhoes.....	\$ 12.39	2.00
Bulldozers.....	\$ 11.13	1.94
Excavators.....	\$ 11.24	1.31
Loaders.....	\$ 11.19	1.82
Rollers.....	\$ 10.16	1.56
Truck drivers:		
Dump.....	\$ 9.02	1.39
Two axle.....	\$ 9.08	1.28

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

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

In the listing above, the "SU" designation means that rates

listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

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

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

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

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

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

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

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

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

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

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

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

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END OF GENERAL DECISION

General Decision Number: ME080009 07/25/2008 ME9

Superseded General Decision Number: ME20070009

State: Maine

Construction Type: Highway

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

HIGHWAY CONSTRUCTION PROJECTS excluding major bridging (for example: bascule, suspension and spandrel arch bridges; those bridging waters presently navigating or to be navigatable; and those involving marine construction in any degree); tunnels, building structures in rest area projects and railroad construction.

Modification Number	Publication Date
0	02/08/2008
1	06/06/2008
2	07/25/2008

ENGI0004-015 04/01/2008

	Rates	Fringes
Power equipment operators:		
Pavers.....	\$ 18.22	8.50
Rollers.....	\$ 18.22	8.50

* SUME2000-008 10/24/2000

	Rates	Fringes
CARPENTER.....	\$ 11.60	1.51
Ironworkers:		
Structural.....	\$ 12.03	1.58
Laborers:		
Drillers.....	\$ 10.00	2.50
Flaggers.....	\$ 6.55	
Guardrail Installers.....	\$ 7.92	
Landscape.....	\$ 7.87	.16
Line Stripper.....	\$ 8.69	.23
Pipelayers.....	\$ 9.21	2.31
Rakers.....	\$ 9.00	1.51
Sign Erectors.....	\$ 10.00	
Unskilled.....	\$ 8.66	1.38
Wheelman.....	\$ 8.50	.43
Power equipment operators:		
Backhoes.....	\$ 11.87	2.05
Bulldozers.....	\$ 12.33	2.88
Cranes.....	\$ 14.06	1.75
Excavators.....	\$ 12.38	2.48

Graders.....	\$ 13.06	3.73
Loaders.....	\$ 11.41	2.87
Mechanics.....	\$ 13.18	2.57

Truck drivers:

Dump.....	\$ 9.35	3.10
Tri axle.....	\$ 8.70	1.18
Two axle.....	\$ 8.56	2.19

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

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

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

WAGE DETERMINATION APPEALS PROCESS

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

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

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

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

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

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request

review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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

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

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

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

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

=====

END OF GENERAL DECISION

PIN 15114.50

SPECIAL PROVISION 105
CONSTRUCTION AREA

A Construction Area located in the **Towns of Brunswick, Topsham, Bowdoin, Bowdoinham, Richmond and City of Gardiner** has been established by the Maine Department of Transportation (MDOT) in accordance with provisions of 29-A § 2382 Maine Revised Statutes Annotated (MRSA).

- (a) The section of highway under construction in Kennebec, Sagadahoc and Cumberland Counties, Project No. IM-1511(450)E is located on Interstate I-295 Northbound, beginning 0.02 mi north of the Durham Road Overpass and extending northerly 23.9 miles to 0.06 mi. south of the Maine Turnpike Toll Plaza in Gardiner.

Per 29-A § 2382 (7) MRSA, the MDOT may “*issue permits for stated periods of time for loads and equipment employed on public way construction projects, United States Government projects or construction of private ways, when within construction areas established by the Department of Transportation. The permit:*

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

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

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

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

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

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

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

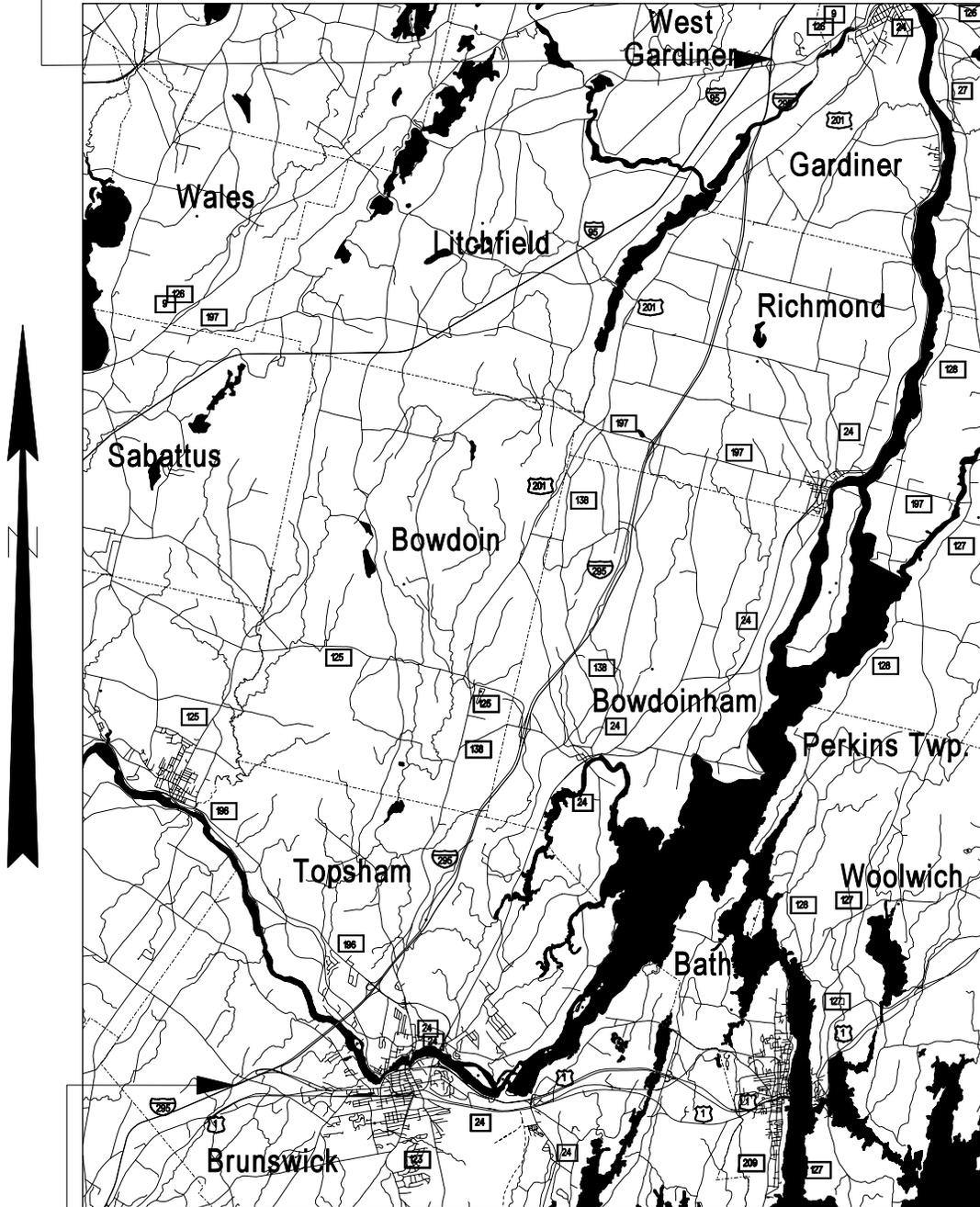
The Municipal Officers for the **Towns of Brunswick, Topsham, Bowdoin, Bowdoinham, Richmond and City of Gardiner** agreed that an Overlimit Permit will be issued to the Contractor for the purpose of using loads and equipment on municipal ways in excess of the limits as specified in 29-A MRSA, on the municipal ways as described in the “Construction Area”.

As noted above, a bond may be required by the municipality, the exact amount of said bond to be determined prior to use of any municipal way. The MDOT will assist in determining the bond amount if requested by the municipality.

The maximum speed limits for trucks on any town way will be 25 mph (40 km per hour) unless a higher legal limit is specifically agreed upon in writing by the Municipal Officers concerned.

IM-1511(450)E

END PROJECT STA. 478+00.00



BEGIN PROJECT STA. 519+94.00

LOCATION MAP



Scale in Miles

SPECIAL PROVISION
SECTION 103
AWARD AND CONTRACTING
(Notice of Award)

103.4 Notice of Award This Contract is potentially eligible for American Recovery and Reinvestment Plan monies. The Award of this contract may depend on the successful passage of this or a similar federal economic stimulus package. If the package does not pass, is of insufficient size, or makes this Contract ineligible for funding, then the Department may reject all bids for this Contract and not award the Contract without liability.

The Department has 60 Days following Bid Opening to Deliver a written Notice of Intent to Award and request a payment bond, performance bond, insurance bond, special certifications, and other information from the Apparent Low Bidder. If the Apparent Low Bidder is not prequalified at the time of Bid Opening, the Department shall have 15 days from the successful completion of the Prequalification process or 60 days following Bid Opening; whichever is longer. Once these pre-execution conditions are met, the Department will execute the Contract and notify the Contractor of the award with a written Notice of Award. If a Notice of Award is not sent within 30 days of receipt of the proper bonds and insurance, the Apparent Successful Bidder may withdraw its Bid without forfeiture of its Bid Guaranty or Bidding eligibility. The Notice of Intent to Award will set forth and/or reference the conditions that the Bidder must fulfill before Contract Execution. If the Department and the Apparent Successful Bidder agree, an extension beyond the 60 days of the Bid and Bid prices may occur and the Bid remains viable. For a related provision, see Section 103.5.

SPECIAL PROVISIONS
SECTION 104
UTILITIES

MEETING

A Preconstruction Utility Conference, as defined in Subsection 104.4.6 of the Standard Specifications is required.

GENERAL

Utilities have been notified and will be furnished a project specification book. If utility relocations, though unexpected, become necessary, they will be scheduled in compliance with Section 104.4.6 of the Standard Specifications and will be done by the utilities in conjunction with the work by the Contractor.

Utility/Railroad	Aerial	Underground	Railroad
Time Warner Cable	X		
Central Maine Power Company	X		
Verizon	X		
MaineCom Services	X		
Cobbosseecontee Telephone Company	X		
MDOT		X	
Maine Natural Gas		X	
Maritimes Northeast Pipeline		X	
Maine Turnpike Authority		X	
Brunswick & Topsham Water District		X	
Pan Am Railroad			X

Temporary utility adjustments are **not** anticipated. If temporary relocation becomes necessary, sufficient time will need to be allowed prior to the construction for all required temporary relocation. If the **Contractor** feels temporary relocation is necessary they must notify the **Department** of their concerns prior to construction.

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 Department if they are exceeded.

In all cases, the utilities shall be notified, by the **Contractor**, well in advance (three weeks) before work in any area is to commence.

***Special note to Contractor and the Utilities:** The Contractor shall plan and schedule his work in such a manner that the utilities that are located on this project will not be harmed, damaged or impacted in any way. The Contractor and Utility will coordinate and communicate their work plans in an effort not to interfere with each other's progress or the completion of the project.*

Aerial

Several utilities have aerial wires crossings over I-295. These locations are at every bridge location that side roads either cross over or under I-295 and at all exits. No relocation or involvement of any kind is anticipated by the aerial utilities as part of this project but the contractor should be aware of these lines when using machines that are over legal heights.

CMP has a major high volt power line that crosses the project at mile marker 34.0. The contractor is once again advised to use caution when working in that area with over height machines.

Underground

Unless otherwise specified, any underground utility facilities indicated in these project documents represent approximate locations gathered from available information. The Department cannot certify the level of accuracy of this data. The contractor is required to notify the underground utility involved for more accurate layout of their facility.

Maine Department of Transportation

The Maine Department of Transportation has underground facilities in the form of highway lighting in and around Exits 28, 31, 37, 43, 49 and 51. Although no conflicts are anticipated, if the scope of the work changes to include subsurface work in the area of the lighting, the contractor shall contact Ron Cote at 624-3602 for location and marking of the facilities. There is also remote traffic warning speed signs on the shoulder of the project. Should any subsurface work be necessary in the vicinity of these sites, the contractor shall contact Debbie Morgan at 624-3606 for location and marking of the facilities. The contractor shall provide at least a five (5) working day notice before commencing any work in these areas.

Maine Natural Gas

Maine Natural Gas (MNG) has a six-inch diameter coated steel gas main that crosses the project in the area of the Cathance River. Not knowing which machines the contractor will choose to accomplish the rubblization, MNG:

1. Through a utility coordination meeting, prior to the start of construction, MNG is made aware of the schedule for the work in the vicinity of their pipe. The purpose will be so they can leak survey the area before and after the rubblizing occurs.
2. MNG will be notified well in advance (three weeks) if the equipment selected is other than the Antigo MHB (maximum lift: 60", maximum hammer weight: 2,000 pounds) or the Resonant Machines RHB. MNG feels other equipment warrants more analysis and would want to know the hammer size, weight, drop height, and frequency.

If it is determined that the rubblization process is having potential damage in any way, to MNG's pipe, the contractor shall remove the slab by excavation method. The project Resident will determine the distance either side of MNG pipe for excavation removal, if that should be the case, with the help of the representative from MNG. That representative will be Gary Kenny and he can be reached at 207-729-0420, ext. 103.

Maritimes & Northeast Pipeline

M&N Pipeline operates a 30" high pressure gas main that crosses the project at mile marker 42.8 approximately. (Line is well marked with yellow markers) Although the pipe has sufficient cover, Maritimes & Northeast does not want to subject their line to the stress levels induced by the equipment used by the contractor. Regardless of what machines used, Maritimes & Northeast will require concrete removal by excavation for at least 10 feet either side of their pipe line. M&N Pipeline representatives must be on site for any excavation activities over the pipeline including slab removal. M&N Pipeline will require the same notification that Maine Natural Gas is requiring. The Resident and M&N Pipeline will give the contractor guidance if more than 20 feet is required. The contact for Maritimes Northeast is Don Thompson at 737-8249.

Brunswick & Topsham Water District

The Brunswick & Topsham Water District has water lines that cross I-295. They have a 16-inch main passing under the I-295 near River Road, Brunswick and also a 20-inch main passing under I-295 near River Road Topsham. Based on the proposed scope of work these water lines will not conflict with construction. If the scope of work changes in these areas the Contractor must contact the Water District before executing the change. The contact for the Brunswick & Topsham Water District is Craig Douglas P.E. at 729-9956.

Maine Turnpike Authority

The Maine Turnpike Authority has facilities at the end of the project. These facilities include water, sewer, (Toll Booth) roadway lighting and shoulder advanced warning sign. All these facilities will not conflict with the proposed scope of the project. The Contractor must contact the MTA to have them mark these facilities prior to construction. If the scope changes from a simple mill and fill around the MTA's facilities the Contractor must immediately notify the MTA. The contact for the MTA is William Franklin at 871-7771.

Pan Am Railroad

I-295 crosses the Pan Am Railroad in Topsham. The scope of the project does not interfere with the rail tracks or rail service. No construction will be taking place under the bridge. If in the event that this changes and work needs to be performed under the bridge the Contractor will immediately contact Pan Am Railroad to discuss the change and review the needs of Pan Am. The contact for Pan Am Railroad is George Thayer and he can be reached at 978-663-6973.

DIG SAFE

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

MAINTAINING UTILITY LOCATION MARKINGS

The Contractor will be responsible for maintaining the buried utility location markings following the initial locating by the appropriate utility or their designated representative.

THE CONTRACTOR SHALL PLAN AND CONDUCT HIS WORK ACCORDINGLY.

The following utilities are known to have facilities in the area of this project:

Central Maine Power Company	Gary Crabtree	791-8025
Fairpoint	Marty Pease	797-1911
Maritimes Northeast Pipeline	Don Thompson	737-8249
Maine Natural Gas	Gary Kenny	729-0420
State of Maine	Ron Cote	624-3602
	Debbie Morgan (Traffic)	624-3606
Time Warner Cable	Don Johnson	253-2291
Maine Com Services	Mark Curtis	441-9532
Cobbosseecontee Telephone Company	Benjie Ladabour	634-7300
Brunswick & Topsham Water District	Craig Douglas P.E.	729-9956
Maine Turnpike Authority	William Franklin	871-7771
Pan Am Railways	George Thayer	978-663-6973

SPECIAL PROVISION
SECTION 104
Utilities

MEETING

A Pre-construction Utility Conference, as defined in Subsection 104.4.6 of the Standard Specifications is **not** required as no utility adjustments are anticipated.

GENERAL INFORMATION

These Special Provisions outline the arrangements that have been made on behalf of the Maine Department of Transportation (Me DOT) for coordination of utility work to be undertaken in conjunction with this project – **none anticipated**.

The following list is all know utility companies located within the Town of Sidney and is provided as information to the contractor. The list is informational only is not necessarily complete; it is the contractors responsibility to determine the presence of utility facilities within the project area:

Utility	Contact	Telephone	e-mail
Central Maine Power Company	Tim Robbins	242-9595	timothy.robbins@cmpco.com
Maritimes Northeast Pipeline	Lara Bailey	737-8249	ltbailey@spectraenergy.com
Northern New England Telephone Operations (formerly Verizon)	Steve Polyot	990-5280	stephen.j.polyot@verizon.com
Richmond Utilities District	Bruce Gardner	737-4721	richutil@prexar.com
Town of Richmond	Richard Lachance	737-2035	???????
Time Warner Cable (Augusta West Office)	David Bouchard	458-8101	dave.bouchard@twcable.com

Temporary aerial utility adjustments are **not** anticipated as part of this project.

Though **NONE** expected, the respective utility company will make all utility adjustments.

Utility company working days are Monday through Friday, conditions permitting. Estimated utility working days are based on a single crew each day for each utility.

AERIAL

Central Maine Power Company

The contractor will coordinate with Central Maine Power Company to verify the actual power source for the highway lighting system prior to the start of work.

The contact for issues regarding Central Maine Power Company and for power connection is Tim Robbins and he may be reached at (207) 242-9595 (cell).

UNDERGROUND

No underground utility facilities or surface utility adjustments are anticipated within the limits of the proposed project.

**Special Provisions – Utilities
Richmond
PIN 15984.00
August 18, 2008
Page 2**

SIGNING

Any utility company working within the construction limits of this project shall ensure that the traveling public is adequately protected at all times. All work areas shall be signed, lighted and flaggers employed as field conditions determine. All traffic controls shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices for Streets and Highways, as issued by the Federal Highway Administration.

BLASTING

In addition to any other notice that may be required, the Contractor shall notify an authorized representative of each utility company having facilities close to the work site no later than **24 hours** before the blast. The notice shall state the approximate time of the blast.

DIG SAFE

The Contractor shall be responsible for determining the presence of underground utility facilities prior to commencing any excavation work and shall notify utilities of proposed excavation in accordance with M.R.S.A. Title § 3360-A, Maine “Dig Safe” System.

THE CONTRACTOR SHALL PLAN AND CONDUCT THE WORK ACCORDINGLY.

/dpb

**SPECIAL PROVISION
PROTECTION OF RAILROAD TRAFFIC AND STRUCTURES**

1. GENERAL REQUIREMENTS

Part of the work required by the Contract will be performed within a railroad right of way and/or adjacent to the tracks, telephone, telegraph, signal and electric supply lines of a railroad or railroads. The Contractor agrees to perform all such work in compliance with all of the terms of this Special Provision and all safety rules, regulations, or standards applicable to the Railroad. The Contractor shall be fully responsible for all damages arising from his failure to comply with the requirements of this Special Provision. The Contractor shall be deemed to have included all costs in the unit prices of the Schedule of Prices and the Proposal.

2. AMOUNT OF RAILROAD WORK

The estimated amount of work to be done within 15.24 Meters (50 feet) of the track of the Pan Am Railways is 1% of the contract.

3. NUMBER OF TRAINS AND TRAIN SPEED

The Contractor is notified that a maximum speed of _____ kph (10 mph) will be considered as prevailing for the operation of trains of the Railroad at this project and that the approximate number of trains per day at this project is <1.

4. PRIORITY OF RAILROAD OPERATIONS

The train movements of the Railroad, and its lessees, and licensees shall have absolute priority over the performance of the Construction Project within the railroad right of way. The Contractor hereby agrees that the hours and times of work within the Railroad right of way must be coordinated through the Railroad and those hours and times are subject to change without prior notice to the Contractor, unless other prior arrangements have been made through the Railroad.

5. AUTHORITY OF RAILROAD TO STOP WORK

If the Contractor fails to comply with the safety terms of this Special Provision, or if the Chief Engineer of the Railroad determines that the Contractor is using unsafe practices that threaten the safety of rail traffic, rail workers, or the general public, the Railroad shall have the right to immediately order the Contractor to cease work and vacate the Railroad's property. The Railroad agrees to confirm any cessation of work in writing by delivering to the Department's Construction Manager a completed Stop Work Order form attached as Exhibit A within 24 hours of giving any such order.

6. ENTRY UPON RAILROAD PROPERTY

The Railroad hereby agrees to permit the Contractor, together with their subcontractors, suppliers, consultants and engineers (the "Contractor"), to enter upon the Railroad property for the purpose of performing the Construction Project, PROVIDED THAT the Contractor complies with all of the terms of this Special Provision and all safety requirements and directions of the Chief Engineer of the Railroad, or his authorized representative (the "Railroad's Chief Engineer").

7. NOTICE REQUIRED BEFORE ENTRY

The Contractor shall give written notice to the Railroad's Chief Engineer at least 7 calendar day(s) in advance of the time it proposes to do work within the limits of the Railroad right-of-way or perform operations that may create a Hazard as specified by this Special Provision. The Contractor shall give such notice regardless of whether the work may also be within the limits of a public highway.

8. HAZARDS

The Contractor shall assess to its own satisfaction hazards which may be caused by its operations. At a minimum, the Contractor agrees that the following shall constitute Hazards.

An operating track shall be considered fouled and subject to hazard when any object is brought nearer than _____ meters (15 feet) to the gauge line of the near rail of the track.

A signal line or communication line shall be considered fouled and subject to hazard when any object is brought nearer than _____ meters (10 feet) to any wire or cable.

An electric supply line shall be considered fouled and subject to hazard when any object is brought nearer than _____ meters (10 feet) to any wire of the line.

Cranes, trucks, power shovels or any other equipment shall be considered as fouling and subjecting to hazard a track, signal line, communication or electric supply line when working in such position that failure of equipment, with or without load, could foul the track, signal line, communication or electric supply line.

Railroad operation will be considered subject to hazard when explosives are used in the vicinity of railroad premises, or during the driving or pulling of sheeting for any footing adjacent to a track, or when erecting structural steel adjacent to a track, or when performing work under, across or adjacent to a track, or when operations involve, swinging booms or chutes that could in any way come nearer than _____ meters (15 feet) to the gauge line of the near rail of the track, or when erection or removal of staging, false work or forms fouls a track or wire line.

None of the operations specified as a Hazard above shall be carried on during the approach or passing of a train or without permission from the Railroad's Chief Engineer and the presence of a railroad inspector/flagman, unless other prior arrangements have been made through the Railroad.

9. MINIMUM CLEARANCES

During the construction of staging, false work or forms, the Contractor shall at all times maintain a minimum vertical clearance of _____ meters (22.5 feet) above the top of high rail and a minimum side clearance of _____ meters (10 feet) from the gauge line of the near rail where track is tangent. Additional side clearance must be maintained where track is on a curve.

10. WORK PLAN SUBMITTAL AND APPROVAL

The Contractor shall submit in writing to the Railroad's Chief Engineer or duly authorized representative, and the Department's Railroad Property Manager or his appointed representative, at least 14 calendar day(s) in advance of the start of the project, an outline of his plan for work within the Railroad right of way including contemplated method(s) of construction. This plan must meet with the approval of the Railroad's Chief Engineer and the Department's Railroad Property Manager in every respect. If the Contractor contemplates the use of "on the track equipment", it should so state and obtain from the Railroad the conditions pertaining to such operations. All Railroad costs included in this operation will be borne by the Contractor. In a like manner, any of the Contractor's equipment or material on cars for this project shall be handled in conformance with existing traffic rules with all costs borne by the Contractor.

Prior to submitting his Proposal, the Contractor shall have ascertained from the Railroad and from the Department's Railroad Property Manager or his appointed representative, all information relating to its requirements and regulations and all costs in connection with compliance thereto.

11. EXCAVATIONS

Before excavation for footings adjacent to tracks and/or within the Railroad's right-of-way may commence, whether or not also within the limits of a public highway, plans and calculations for such excavations, prepared by a Professional Engineer authorized to practice in Maine, shall be submitted to the Railroad's Chief Engineer for review and approval. Unless other prior arrangements have been made, the Railroad's Chief Engineer shall have 2 week(s) to perform such review and approval and issue a written permission to proceed with the excavation. No excavation shall proceed without such permission.

At a minimum, excavations must utilize proper bracing, shoring, sheeting or other support as determined by the Railroad's Chief Engineer, to support the tracks with railroad traffic. Open excavation shall be suitably planked over when construction operations are not in progress, the location of any wires, conduits, pipes, cables or other railroad facilities below the surface of the ground. Damage to any such facilities caused by the failure of the Contractor to ascertain the location of such facilities or by failure to use due care to avoid injury to such facilities shall be at the expense of the Contractor.

12. EQUIPMENT

Equipment of the Contractor shall be in such condition so as to prevent failure that would cause delay in the operation of trains or damage to railroad facilities. Equipment shall not be placed or put in operation adjacent to a track without first obtaining permission of the Railroad. The Railroad agrees that such permission shall not be unreasonably withheld.

13. RAILROAD SERVICES - GENERALLY

When work is to be performed within the Railroad's right-of-way, the Railroad shall provide the services, equipment and materials provided in this Special Provision including, but not limited to, engineering, flagging, inspection, signal protection and/or relocation, and restoration or replacement of the Railroad's track structure of ballast. Further, if the Railroad's Chief Engineer determines that the Contractor's operations do not comply with all of the safety requirements of this Special Provision and all safety requirements and directions of said Chief Engineer, the Railroad will employ the necessary qualified employees to protect its trains and other facilities. The Contractor shall pay to the Railroad the cost for performing all Railroad Services unless said costs are to be paid by the Department as specified in this Special Provision.

14. INSPECTION / FLAGGING

The Railroad shall furnish and assign all inspectors / flaggers for general inspection purposes of general protection of railroad property and operations during construction as the Railroad's Chief Engineer determines are necessary to preserve safety.

(a) Responsibility for Cost. The Department will bear the cost of flagging or inspection (including travel time) or any combination thereof up to **0** man days of said flagging or inspection. If, in the opinion of the Railroad's Chief Engineer, further services of a flagger or inspector will be required due to the operations of the Contractor, the services will be furnished and the cost thereof (salary, expenses, insurance, taxes and vacation allowance, etc.) shall be paid to the Railroad by the Department, and will be recovered by the Department from the Contractor.

(b) Terms. The minimum hours per day for the Railroad employees engaged in inspection flagging services shall be eight (8) hours. Time at rates for straight time, overtime or for deadheading starts in accordance with established practices in effect in the territory in which the project is located. Information as to these practices should be obtained from the Railroad's Chief Engineer.

The Contractor shall notify the Railroad's Chief Engineer and the Chief Engineer of the Department in writing 7 calendar day(s) before beginning, resuming or suspending work within _____ meters (25 feet) of the track, so that an inspector may be provided or removed in accordance with the requirements of this Special Provision. An inspector may be removed upon 3 calendar day(s) notice. Failure to give notice of intent to suspend work shall be cause of charge to the Contractor the cost of inspection during the period when work is suspended.

(c) Estimated Cost. The following is an estimate of the cost per day of inspection/flagging necessary for this project. The rates shown include all overhead charges, travel time, deadheading and personal expenses.

Date of estimate N/A.

Estimated daily rate for four (4) consecutive hours Monday-Friday (straight time): N/A

Estimated daily rate for four (4) consecutive hours Saturday, Sunday, Holiday (overtime):
N/A

Estimated rate for hours worked in excess of eight (8) hours in any one day: N/A

NOTE: Pan Am has agreed to furnish a Flagman/Inspector as required at No Cost to the Project.

Rates charged will be those in effect at the time of the performing the inspection/ flagging which may be different than the rates used at the date of the Estimate. The Railroad agrees to notify the Department if rates used to calculate the above estimates change before the date of bids are received for this Contract.

(d) Definitions.

Man day (M.D.) - eight (8) consecutive hours or any portion thereof.

Overtime - Each additional hour or fraction thereof consecutive to and beyond the standard man day will count as 3/16 of a man day.

Standard Man day - Eight (8) consecutive hour, Monday - Friday between the hours of 07:00 a.m. to 15:30 p.m. unless otherwise noted and agreed to by all parties. *(Note: Does not include lunch period from 12:00 pm to 12:30 pm)*

Travel Time - Time required by flagger and/or inspector to commute between his or her point of headquarters to the project site. This time shall not be charged used in determining available man days.

15. OTHER CONTRACTOR RESPONSIBILITIES

The restoring and resurfacing of tracks, if disturbed due to Contractor's operations, shall be at the expense of the Contractor.

Any other changes made or services furnished by the Railroad as a result of the Contractor will be at the Contractor's expense.

16. EXTRA-CONTRACT SERVICES

Temporary and permanent changes of tracks and telephone, signal and electric supply lines made necessary by or to clear the permanent work of the Contractor as shown on the construction plans and included in the Railroad force account as recollectable from the State will be made or caused to be made by the Railroad without expense to the Contractor.

17. INDEMNIFICATION

Where work is being performed over, under, across or adjacent to Railroad premises, the Contractor shall defend, indemnify and save harmless the Railroad and the Maine Department of Transportation from and against any and all loss, cost, damage, claims, suits, demands, or liability for damages for personal injury including death and for damage to property, which may arise from or out of the operations conducted under his contract, occurring by reason of any act or omission of the Contractor, his agents, servants or employees, or by reason of any act or omission of any subcontractor, his agents, servants or employees.

18. INSURANCE

In addition to any other forms of insurance or bonds required under the terms of the Contract, the Contractor will be required to procure and maintain, at its sole cost and expense, the following insurance coverages naming the Railroad as an insured.

(a) Railroad Protective Liability Insurance with limits not less than N/A per single occurrence and N/A per aggregate total occurrences.

(b) Comprehensive General Liability Insurance protecting against liability from bodily injury or property damage arising out of the Construction Project with limits of not less than N/A per single occurrence and N/A per aggregate total occurrences.

(c) Workers Compensation and Occupational Disease Insurance, as required by law.

(d) Automobile Liability Insurance covering all motor vehicles used about or in connection with the Construction Project.

If any part of the work is sublet, these insurance coverages shall be provided by or on behalf of the subcontractors to cover their operations

Each policy shall carry an endorsement covering the “save harmless” clause in favor of the Railroad and the Maine Department of Transportation, as set forth in the paragraph, “Responsibility for Damage Claims”.

If blasting is to be done in the vicinity of the Railroad, the insurance policies shall include such coverage.

The policies shall be in force before any work is done on the project and shall remain in effect until all work required to be performed under the terms of the contract is satisfactorily completed as evidenced by the formal acceptance by the State and the Railroad.

Before any work is done on the project, the Department of Transportation and the Railroad's Chief Engineer shall be furnished certificates of each policy. Further, the original policy of the Comprehensive General Liability Insurance and the Railroad Protective Liability Insurance shall be furnished to the Railroad's Chief Engineer and a duplicate shall be furnished to the Department of Transportation.

The policy or policies of the Railroad’s protective public liability and property damage liability shall be written by a Company authorized to do business in the State of Maine, and shall be signed by the President and Secretary of the Insurance Company and shall be countersigned by an authorized representative of the Company.

19. ROADWAY WORKER SAFETY REGULATION

Notice to all Contractors/Subcontractors and individuals must be aware of the Federal Roadway Worker Safety Regulation, CFR 49, Part 214(c). They may be required to comply with this regulation. Any requirements for them to comply will be discussed at the pre-construction utility meeting.

EXHIBIT A
 ORIGINAL TO CONTRACTOR

MDOT/RAILROAD STOP WORK ORDER

Section A - Contractor <input type="checkbox"/>	Town <input type="checkbox"/>
	DOT Railroad Project #
Railroad Name	Location <input type="checkbox"/>
	Notice # <input type="checkbox"/>
DESCRIPTION OF SAFETY HAZARD/REASON FOR ORDER <input type="checkbox"/>	
Standard Violated <input type="checkbox"/>	RAC (Risk Assessment Code) <p style="text-align: center;">N/R</p>
Railroad Official (Flagger/Inspector) Name Signature	Date
<input type="checkbox"/>	
SECTION B - ACTION TAKEN: <input type="checkbox"/>	

cc: MDOT - R.E. or Inspector
 MDOT - Utility Section
 MDOT - Construction Division
 Railroad - Chief Engineer

1. Risk Assessment. Each identified/validated hazard shall be assigned a Risk Assessment Code (RAC) by the Safety Office. The RAC represents the degree of risk associated with the deficiency and combines the elements of hazard severity and mishap probability. The RAC is derived as follows:

a. Hazard Severity. The hazard severity is an assessment of the worst potential consequence: Defined by degree of injury, occupational illness, or property damage, which is likely to occur as a result of a deficiency. Hazard severity categories shall be assigned by roman numeral according to the following criteria.

- (1) Category I - Catastrophic: The hazard may cause death or loss of a facility.
- (2) Category II - Critical: May cause severe injury, severe occupational illness, or major property damage.
- (3) Category III - Marginal: May cause minor injury, minor occupational illness, or minor property damage.
- (4) Category IV - Negligible: Probably would not affect personnel safety or health, but is nevertheless in violation of a NAVOSH standard.

b. Mishap Probability. The mishap probability is the probability that a hazard will result in a mishap, based on an assessment of such factors as location, exposure in terms of cycles or hours of operation, and affected population. Mishap probability shall be assigned an Arabic letter according to the following criteria:

- (1) Sub-category A - Likely to occur immediately or within a short period of time.
- (2) Sub-category B - Probably will occur in time.
- (3) Sub-category C - May occur in time.
- (4) Sub-category D - Unlikely to occur.

c. Risk Assessment Code. The RAC is an expression of risk which combines the elements of hazard severity and mishap probability. Using the matrix shown below, the RAC is expressed as a single Arabic number that can be used to help determine hazard abatement priorities.

	Mishap Probability				RAC	
		A	B	C	D	
Hazard Severity	I	1	1	2	3	1 - Critical
	II	1	2	3	4	2 - Serious
	III	2	3	4	5	3 - Moderate
	IV	3	4	5	5	4 - Minor
						5 - Negligible

SPECIAL PROVISION 105
OVERLIMIT PERMITS

Title 29-A § 2382 MRSA Overlimit Movement Permits.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Section History:

PL 1993, Ch. 683, §A2 (NEW).

PL 1993, Ch. 683, §B5 (AFF).

PL 1997, Ch. 144, §1,2 (AMD).

PL 1999, Ch. 117, §2 (AMD).

PL 1999, Ch. 125, §1 (AMD).

PL 1999, Ch. 580, §13 (AMD).

PL 2001, Ch. 671, §30 (AMD).

PL 2003, Ch. 166, §13 (AMD).

PL 2003, Ch. 452, §Q73,74 (AMD).

PL 2003, Ch. 452, §X2 (AFF).

SPECIAL PROVISION
SECTION 105
General Scope of Work
(Limitations of Operations)

Contractor will be allowed to commence work and end work daily according to the Department of Marine Resources Sunrise/Sunset Table at the following Web address (http://www.maine.gov/dmr/sunrise_table.htm). Contractor will be allowed to enter roadway at Sunrise and must be off the roadway before Sunset. "Any work conducted outside these times will require that the contractor provide appropriate lighting and safety attire for their employees in compliance with the MUTCD."

**IM-1511(450)E, IM-1598(400)E
PIN 15114.50, 15984.00
Brunswick-West Gardiner
I-295 Northbound**

**SPECIAL PROVISION
SECTION 105
CONTROL OF WORK
(Cooperation with Municipalities)**

It is hereby brought to the Contractor's attention that the Department has begun to organize an incident management team with all the surrounding municipalities. The contractor shall be an active participant on this team and attend, at a minimum, weekly meetings discussing the incident management plan and contractor's work schedule and truck hauling route.

The contractor is expected to cooperate with the surrounding communities and follow through with any reasonable requests.

**IM-1511(450)E, IM-1598(400)E
PIN 15114.50, 15984.00
Brunswick-West Gardiner
I-295 Northbound**

**SPECIAL PROVISION
SECTION 105
CONTROL OF WORK
(Cooperation Between Contractors)**

It is hereby brought to the Contractor's attention that the Department intends to award a contract adjacent to the limits of this contract, which may be in progress simultaneously. This contract will be Pin 15114.60 which will entail the building of the northbound to southbound detour cross overs.

The Contractor shall cooperate with other Contractors at all times and provide project access as necessary and as directed by the Resident.

SPECIAL PROVISION
SECTION 105
GENERAL SCOPE OF WORK
(LIMITATIONS OF OPERATIONS)
Maine Turnpike toll plaza

Contractor vehicles used to install, maintain, and remove traffic control devices on the Maine Turnpike are granted free use of the Turnpike at the Interchange 103 (Gardiner I-295) toll plaza while completing the traffic control operation. All other vehicles shall pay the required toll. The placement of traffic control devices on the Maine Turnpike shall be coordinated in advance with the Maine Turnpike Authority.

The Contractor will not be allowed to use the median openings or the toll plaza on the Maine Turnpike to reverse direction unless the opening is located within a passing lane closures on both roadways.

The Contractor will not be allowed to change direction within the Toll Plaza area. The limits of this area extend from the terminals of the median guardrail north and south of the toll plaza. This may require NB traffic to use exit109 in Augusta to change direction.

The Contractor will be assessed a traffic control violation every time any employee of the Contractor, Subcontractor or Supplier is observed using a median opening or toll plaza area to change direction on the Maine Turnpike. The fine will be deducted from monies owed to the Contractor.

All work within 1500' of the toll plaza shall be coordinated with the Maine Turnpike Authority and be completed at night.

The Contractor will be required to keep a minimum of two lanes in each direction open to traffic at the toll plaza at all times. The Contractor will not be allowed to close any lane(s) at the toll plaza without prior notification to the Maine Turnpike.

Traffic Control devices shall have a maximum spacing of 40' within 300' of the plaza.

SPECIAL PROVISION 105
(Work within limits of the Maine Turnpike)

105.5.1 General Requirements

This Subsection is amended by the addition of the following:

The installation of construction signs on the Maine Turnpike shall be approved in advance by the Maine Turnpike Authority. The Contractor shall submit plans illustrating construction details and proposed locations. Signs shall be located behind guardrail or outside of the roadside recovery area or shall be installed on break away supports.

Change of Direction

The Contractor will not be allowed to use the median openings or toll plazas on the Maine Turnpike to reverse direction.

107.4.2 Schedule of Work Required

This Subsection is amended by the addition of the following:

The Contractor shall submit a schedule that shows all work on the Maine Turnpike that is anticipated for the following week. This schedule shall be transmitted to the Resident Engineer by noon Thursday of the preceding week. The Resident Engineer shall transmit this information to the Maine Turnpike Authority.

The following Subsections are added:

107.4.6 Prosecution of Work

The installation of signs on the Maine Turnpike will require a shoulder closure in accordance with the MUTCD. Shoulder closures are allowed Monday thru Friday from 7:00 am to 2:00 pm.

110.3.8 Administrative & General Provisions

A. Additional Insured

The Maine Turnpike Authority shall be named as an additional insured.

SPECIAL PROVISION
SECTION 105
GENERAL SCOPE OF WORK
(LIMITATIONS OF OPERATIONS)

1. The Interstate may be completely shut down to all traffic from Station 715+00+- to 1620+00+- starting June 16, 2009 at 12:00 am to August 23, 2009 at 11:59 pm. The contractor will not be allowed to shut down the Interstate until all work from 519+94 to 712+50 has been completed.
2. The completion date for 100% of all work with in Station 715+00+- to 1620+00+- excluding ramps is August 23, 2009 at 11:59 pm. Work on Ramps may continue after this date with shoulder closures only; however, traffic must be able to utilize the ramps between the hours of 6:00 am and 7:00 pm.
3. Ramps may be closed down between the hours of 7:00 pm to 6:00 am with 72 hours notice.
4. Interstate Crossovers will not be allowed to be utilized to change direction. Existing Crossovers shall be closed utilizing temporary concrete barriers. Crossovers may be used for storage areas; however sufficient room will be left for the utilization of law enforcement vehicles.
4. The maximum length of lane closure from Station 519+94 to 715+00 shall be 3.7 miles in length.
5. Any work done prior to the complete Interstate closure from Station 715+00 +- to 1620+00 +- shall be done in temporary lane closures not to exceed 2 miles in length.
6. The contractor will be allowed to work 24 hours a day, seven days a week and all Holidays except no work will be allowed on May 22 and 23 and September 4, 5, 6, 7 of 2009.
7. The contractor shall have both lanes available for traffic use, if at all possible on May 22 and 23 and September 4, 5, 6, 7 of 2009.
8. Items 605.09 Type B under-drain shall be completed 5 calendar days prior to rubblizing the concrete pavement in any one area.
9. The HMA surface layer/course on mainline will be required to be completed during daylight hours.
10. All pipe and rental items shall be completed in an area prior to the contractor commencing placement of HMA surface in a given area.
11. From Station 1620+00 +- to 1674+20 +- (end of the existing concrete) the contractor shall widen out the shoulders and place HMA for traffic use as directed by the department before any other work is done in this area. All work done in this area, including concrete rubblization and paving will be done in single lane closures.

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

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

I. In-Water Work shall not be allowed between the dates of 10/2 and 5/31.
(In-Water work is allowed from 6/1 to 10/1.)

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

1. 703+90
2. 759+50
3. 1082+50
4. 1212+00
5. 1562+00
6. 1632+50

III. Special Conditions:

1. All areas of temporary waterway or wetland fill will be restored to their original contour and character upon completion of the project.

IV. Approvals:

1. Temporary Soil Erosion and Water Pollution Control Plan

V. All activities are prohibited (including placement and removal of cofferdams unless otherwise permitted by Regulatory Agencies) below the normal high water mark if outside the prescribed in-water work window, except for the following:

1. Work within a cofferdam constructed according to MaineDOT’s Standard Specifications and in adherence with the contractors approved “Soil Erosion and Water Pollution Control Plan”.

VI. No work is allowed that completely blocks a river, stream, or brook without providing downstream flow.

NOTE: Regulatory Review and Approval is required to modify the existing In-Water work window. Procedure to modify the existing in-water work window can be found on the back of this document or the next page.

PROCEDURE FOR PROCESSING ANY IN-WATER WORK EXTENSION

MaineDOT will not incur any claims as a result of an In-Water modification being denied.

The following procedure will assist in processing a review by the Regulatory Agencies when the in-water work restrictions of a permit need modification:

1. The Contractor shall submit to the MaineDOT Resident in writing the in-water work extension request. The written request shall be submitted in accordance with State of MaineDOT Standard Specification section 107.4 Scheduling of Work. This is a change in the contract, and per MaineDOT Standard Specification section 109, a contract modification is required.
2. The Contractor's written request shall have the following items identified for the MaineDOT Environmental Office to evaluate adequate justification to continue forward with the modification of existing Contract Permit Conditions:
 - A) Description of the scope of In-Water work
 - B) Total number of working days requested to complete the scope of In-Water work
 - C) The reason(s) the In-Water work cannot be done in accordance with the Permit Conditions and/or Special Provision 105 Specification.
 - D) Benefit(s) to the MaineDOT for this change of Contract requirement
 - E) Photographs of the area of work described
3. MaineDOT is held harmless from claims and liability if the request to "Modify" the Contract Permit Conditions are denied.
Please Note: depending on the level of State and Federal Permitting required for the project, permit modification timeframes will vary depending on revised consultations and approvals. Timeframes will vary from project to project (even site to site on individual projects) and contractors will not count this review/modification "timeframe" as time lost from doing in-water work.
4. If the request is approved by the Regulatory Agencies, then a Contract Modification will be issued by the MaineDOT Resident indicating the monetary and time commitment this change has on the MaineDOT's contract.

SPECIAL PROVISION
SECTION 106
QUALITY
(Quality Level Analysis- Structural Concrete)

106.7.1 Standard Deviation Method Under H. Replace the Method A payfactor with the following;

“Method A: $PF = [32.5 + (\text{Quality Level} * 0.75)] * 0.01$ ”

SPECIAL PROVISION
SECTION 107
SCHEDULING OF WORK

Replace Section 107.4.2 with the following:

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

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

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

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

SPECIAL PROVISION

SECTION 107

TIME

(Scheduling of Work – Projected Payment Schedule)

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

SPECIAL PROVISION

SECTION 107

TIME

(Scheduling of Work and Truck Hauling Routes)

Description: The Contractor shall submit, at the time of their bid, a schedule of work and proposed locations of Hot Mix Asphalt Plants and proposed haul route for major construction material (such as hot mix asphalt and gravel).

SPECIAL PROVISION
SECTION 107
PROSECUTION AND PROGRESS
(CONTRACT TIME)

1. The contractor will be allowed to commence work anytime after the award of the contract provided that all applicable plans required under this contract have been submitted and approved and a preconstruction meeting has been held.
2. The completion date for 100% of all work on the portion of the Interstate scheduled for complete closure, excluding work on ramps, is August 23, 2009 at 11:59 pm. See Special Provision 108 for incentives and disincentives. If the contractor has not completed this work by August 23, 2009 at 11:59 pm, the contractor will be charged disincentives as per Special Provision 108.
3. The completion date for this contract is October 17, 2009. For every calendar day past this date that the contract is not complete, the contractor will be charged \$10,000 in liquidated damages.
4. All work from station 519+94 to 715+00 must be completed by June 15, 2009. For every calendar past this date, the contractor will be charged \$25,000 in liquidated damages.
5. All work from 1620+00 to 1736+68 and from 435+00 to 478+00 must be completed prior to June 15, 2009 or after the work from 715+00 to 1620+00 has been completed (complete Interstate closure section).
Note: 1736+68 equals station 435+00.

SPECIAL PROVISIONS
SECTION 108 PAYMENT
(Diesel fuel Adjustment)

108.4.2 Price Adjustment for Diesel Fuel: A price adjustment for diesel fuel will be made for all 403 items.

Price adjustments will be based on the variance in costs for diesel fuel. They will be determined as follows:

The quantity of hot mix asphalt, in tons, for each pay item will be multiplied by 2.75 times the difference in price in excess of 5 percent between the base price and the period price of diesel fuel. Adjustments will be made upward or downward, as prices increase or decrease.

Hot Mix Asphalt: The quantity of hot mix asphalt will be determined from the quantity shown on the progress estimate for each pay period.

Base Price: The base price of diesel fuel to be used is the price per gallon current with the **bid opening date**. This price is determined by using the weekly retail diesel price for the New England area, as listed on the Energy Information Administration's webpage.

Period Price: The period price of diesel fuel will be determined by the Department by using the weekly retail diesel price for the New England area, as listed on the Energy Information Administration's webpage current with the pay period ending date of when the hot mix asphalt was placed.

SPECIAL PROVISION
SECTION 108
PAYMENT
(Incentive/Disincentive)

The Contractor must complete all work as described in Special Provision 107 – Contract Time - #2, by 11:59 P.M., August 23, 2009.

The Contractor will be paid an incentive for early completion or charged a disincentive for late completion. The maximum incentive will be 20 days. There will be no maximum disincentive.

The amount of the incentive paid will be based on the following formula:

$$\$55,000 \times [\text{Calendar Days}]^{1,2}$$

$$\text{Calendar Days} = \text{August 23, 2009} - \text{Actual Completion Date}$$

The amount of the disincentive charged will be based on the following formula:

$$\$55,000 \times [\text{Calendar Days}]^{1,2}$$

$$\text{Calendar Days} = \text{Actual Completion Date} - \text{August 23, 2009}$$

All incentives/disincentives will be rounded to the nearest \$1,000 increment. Calendar Days will be calculated to the whole day; rounded down for early completion and rounded up for late completion.

Example:

<u>Calendar Days from August 23rd</u>	<u>Incentive/Disincentive</u>
5	\$379,000
10	\$872,000
15	\$1,418,000
20	\$2,003,000

SPECIAL PROVISION
SECTION 108
PAYMENT
 (Asphalt Escalator)

108.4.1 Price Adjustment for Hot Mix Asphalt: For all contracts with hot mix asphalt in excess of 500 tons total, a price adjustment for performance graded binder will be made for the following pay items:

- Item 403.206 Hot Mix Asphalt - 25 mm
- Item 403.207 Hot Mix Asphalt - 19 mm
- Item 403.208 Hot Mix Asphalt - 12.5 mm
- Item 403.2081 Hot Mix Asphalt - 12.5 mm
- Item 403.209 Hot Mix Asphalt - 9.5 mm (sidewalks, drives, & incidentals)
- Item 403.210 Hot Mix Asphalt - 9.5 mm
- Item 403.2102 Hot Mix Asphalt - 9.5 mm
- Item 403.211 Hot Mix Asphalt - Shim
- Item 403.212 Hot Mix Asphalt - 4.75 mm
- Item 403.213 Hot Mix Asphalt - 12.5 mm (base and intermediate course)
- Item 403.2131 Hot Mix Asphalt - 12.5 mm (base and intermediate course)
- Item 403.2132 Hot Mix Asphalt - 12.5 mm (base and intermediate course)

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

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

Item 403.206: 4.8%	Item 403.2102: 6.2%
Item 403.207: 5.2%	Item 403.211: 6.2%
Item 403.208: 5.6%	Item 403.212: 6.8%
Item 403.2081: 5.6%	Item 403.213: 5.6%
Item 403.209: 6.2%	Item 403.2131: 5.6%
Item 403.210: 6.2%	Item 403.2132: 5.6%

Hot Mix Asphalt: The quantity of hot mix asphalt will be determined from the quantity shown on the progress estimate for each pay period.

Base Price: The base price of performance graded binder to be used is the price per standard ton current with the bid opening date. This price is determined by using the average New England Selling Price, as listed in the Asphalt Weekly Monitor.

Period Price: The period price of performance graded binder will be determined by the Department by using the average New England Selling Price, listed in the Asphalt Weekly Monitor current with the pay period ending date of the progress estimate. The maximum Period Price for paving after the adjusted Contract Completion Date will be the Period Price on the adjusted Contract Completion Date.

SPECIAL PROVISIONS
SECTION 202
REMOVING STRUCTURES AND OBSTRUCTIONS
(Removing Portland Cement Concrete Pavement Surface)

Section 202-Removing Structures and Obstructions, subsection 202.01 Description and 202.04-Removing Pavement Surface of the December 2002 Revision of the Standard Specifications, has been removed and replaced in it's entirety by the following:

202.01 Description This work shall consist of removing, grinding, milling the top 3 inches +/- of the existing 9 inch +/- thick Portland Cement Concrete Pavement and salvaging or disposing of the material removed .

202.04 Removing Portland Cement Concrete Pavement The equipment for removing the Portland Cement Concrete Pavement shall be a power operated milling machine or grinder capable of removing the Portland Cement Concrete Pavement to the required depth, transverse cross slope, and profile grade by the use of an automated grade and slope control system. The controls shall automatically increase or decrease the pavement removal depth as required, and readily maintain desired cross slope, to compensate for surface irregularities in the existing pavement course. The equipment shall be capable of accurately establishing profile grades by referencing from a fixed reference such as a grade wire, or from the existing pavement surface using a 30 foot (9m) minimum contact ski (floating beam), or 24 foot (8m) non-contact grade control beam.

The Contractor shall locate and remove all objects in the pavement through the work area that would be detrimental to the milling or grinding machine.

The finished milled surface will be inspected before being accepted, and any deviations in the profile exceeding 1 inch under a 16 foot string line or straightedge placed parallel to the centerline will be corrected. Any deviations in the cross-slope that exceed 3/4 inch under a 3 10 foot string line or straightedge placed transversely to centerline will be corrected. All corrections will be made with approved methods and materials. Any areas that require corrective measures will be subject to the same acceptance tolerances. Excess material that becomes bonded to the milled surface will be removed to the Resident's satisfaction before the area is accepted.

<u>Pay Item</u>	<u>Description</u>	<u>Pay Unit</u>
202.11	Removing Portland Cement Concrete Pavement	Square Yard

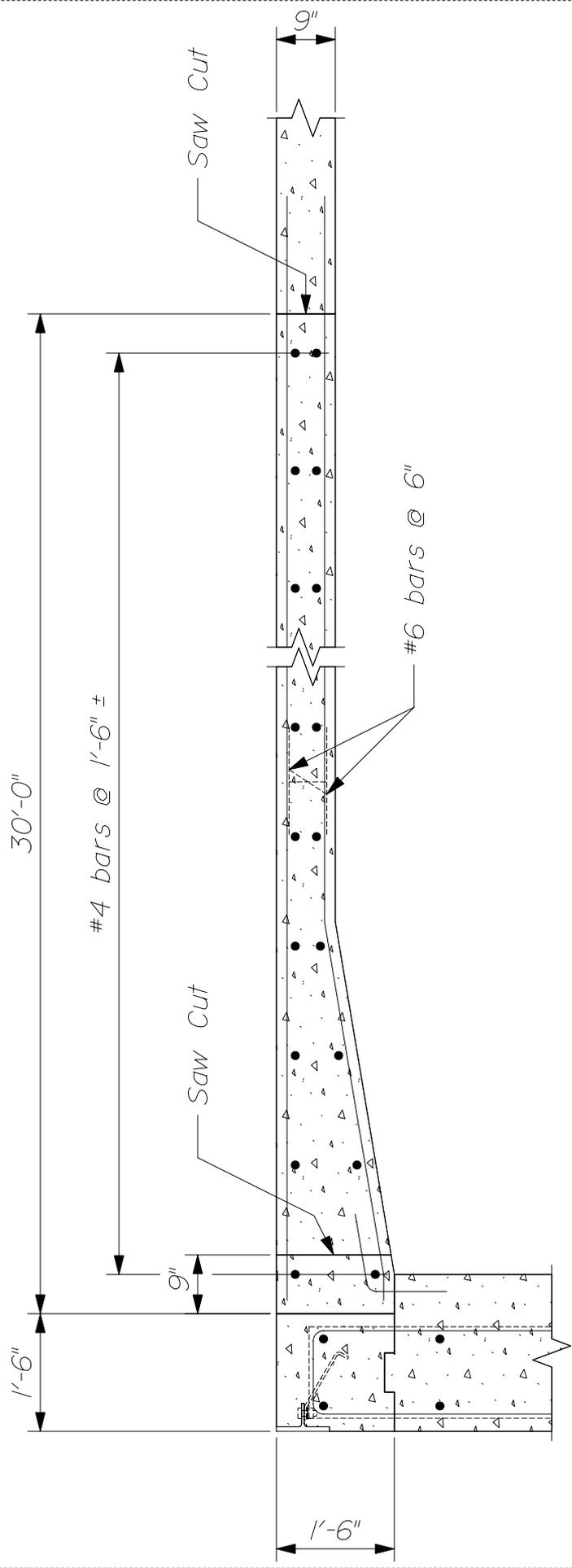
**SPECIAL PROVISIONS
SECTION 202
REMOVING STRUCTURES AND OBSTRUCTIONS
(Removing Portland Cement Concrete Pavement)**

Section 202-Removing Structures and Obstructions, subsection 202.01 Description of the December 2002 Revision of the Standard Specifications, has been removed and replaced in its entirety by the following and additions made to subsection 202.08 Basis of Payment:

202.01 Description This work shall consist of removing Portland Cement Concrete Pavement Slabs and salvaging or disposing of the material removed. The existing slabs measure approximately 12 feet wide by 20 feet long by 9 inches in depth. Reference the existing bridge plans on CD for detailed information regarding existing approach slabs. Existing slabs at bridge approaches shall be saw cut prior to removal according to the typical or as directed by the Resident.

Pay Item
202.126 Removing existing Concrete Slab Full Depth

Pay Unit
Square Yard



TYPICAL EXISTING BRIDGE APPROACH SLAB SECTION

SPECIAL PROVISION
SECTION 202
REMOVING STRUCTURES AND OBSTRUCTIONS
(Rumble Strip)

Description. This work shall consist of removing the surface of existing pavement to the depth, width and pattern shown on the plans or as directed to provide rumble strips.

CONSTRUCTION REQUIREMENTS

Removing Material. The bituminous material shall be removed by a cold milling machine capable of removing the pavement to the required depth and width. The pavement shall be removed such that crisp edges are provided.

Method of Measurement. Rumble strips will be measured by each group. A group consists of ten grooves.

Basis of Payment. The accepted quantity of rumble strips will be paid for at the unit price bid per group which price will be full compensation for removing and salvaging the bituminous material.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
202.204 Rumble Strip	Group

SPECIAL PROVISION
SECTION 202
REMOVING STRUCTURES AND OBSTRUCTIONS
(Shoulder Rumble Strip)

Description This work shall consist of milling a pattern onto highway shoulders at the spacing, offset, width, and depth shown on the plans. Rumble strips shall not be placed across ramp openings, crossover openings, or bridges.

CONSTRUCTION REQUIREMENTS

Removing Material The bituminous material shall be removed by a cold milling machine capable of removing the pavement to the required depth and width. The machine must be adjustable to grind or plane on various cross-slopes. Salvage and disposal of bituminous material shall be in accordance with Section 203.

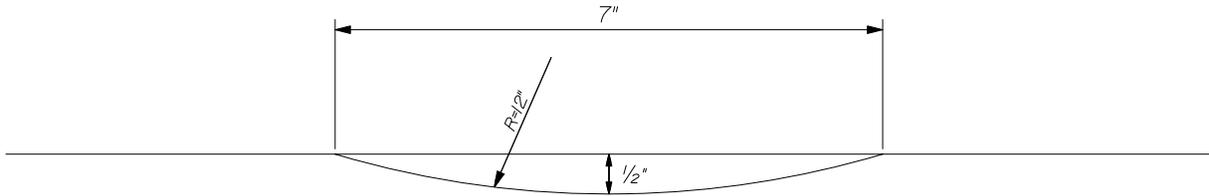
Equipment The equipment shall be a cold milling machine or a cold planing machine specially manufactured for rumble strips. This machine shall be capable of cutting 1200 rumble strips per hour of operation. The Contractor will perform a test section prior to rumble strip installation and at any time as directed by the Resident. The test section will be done to ensure that the machine is capable of milling the rumble strips in accordance with these specifications and the plans.

Method of Measurement Rumble strips will be measured by the meter [foot] longitudinally along the edge of the travelway. For rumbled strips that are broken at regular intervals to permit emergency stopping on shoulders for motorcycles, the length measured for payment shall include the full running length including the regular breaks. Breaks in rumble strip installation for acceleration lanes, deceleration lanes, and crossovers will not be included in the length measured for payment.

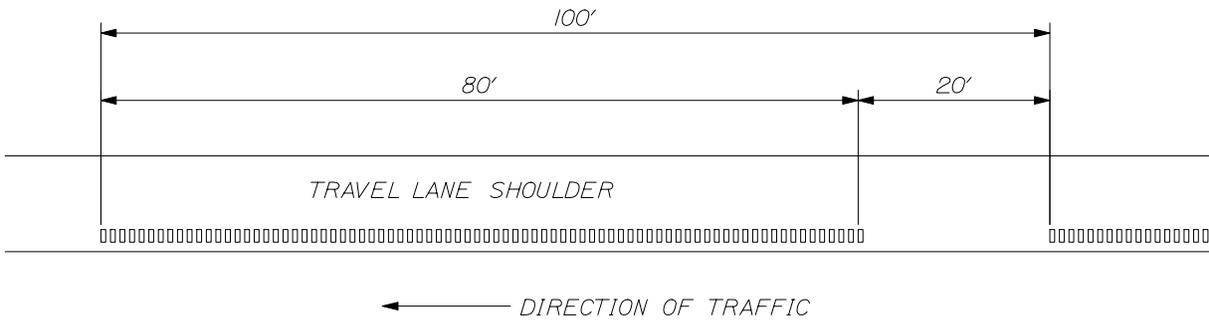
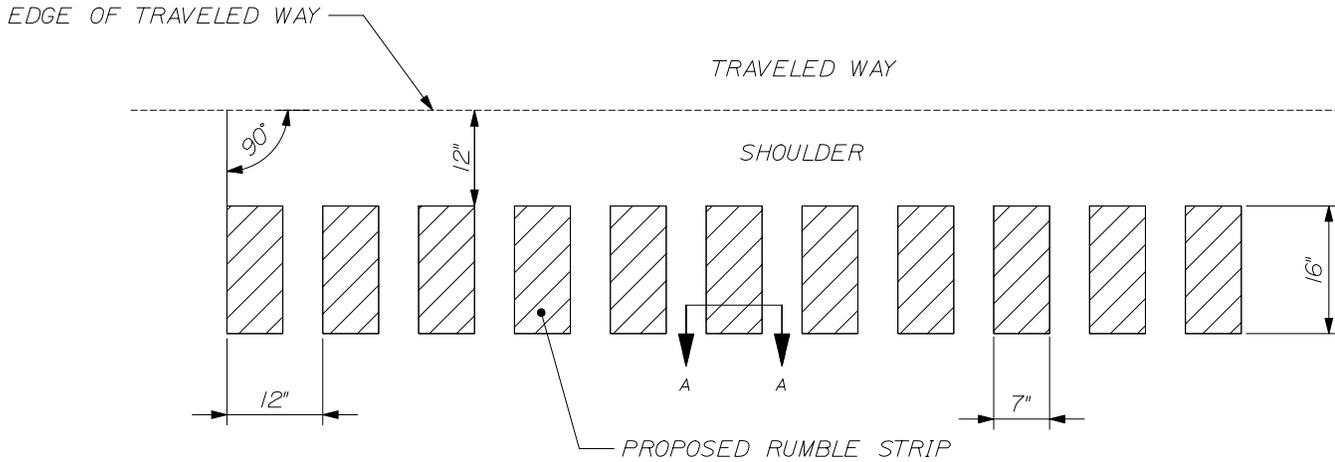
Basis of Payment The accepted quantity of rumble strips will be paid for at the unit price bid per foot [meter] which price will be full compensation for removing and salvaging the bituminous material and for any labor, equipment, and incidentals needed to complete this work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
202.205 Rumble Strip - Shoulder	Foot [Meter]



SECTION A - A



BREAK DETAIL

NOTES:

1. SHOULDER RUMBLE STRIPS SHALL BE PLACED ON THE MEDIAN AND OUTSIDE SHOULDER AS SHOWN IN THE ABOVE DETAIL.

2. ON THE OUTSIDE SHOULDER, THE RUMBLE STRIP PLACEMENT SHALL BE BROKEN FOR A DISTANCE OF 20 FT FOR EVERY 80 FT PLACED.

JANUARY 21, 2009

SPECIAL PROVISION
SECTION 203
EXCAVATION AND EMBANKMENT
(Dredge Materials)

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

Culvert work associated with the I-295 Highway Improvement Project will require the excavation of select Dredge Material at several stream locations. It is anticipated that less than 100-cubic yards of Dredge Material will be excavated at each site. There is onsite Beneficial Use for all of the Dredge Materials.

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

The contractor shall Beneficially Use all Dredge Material excavated from the various stream locations in areas adjacent to and draining into the dredged water body. No more than 100-cubic yards of Dredge Material may be excavated at the culvert location.

CONSTRUCTION REQUIREMENTS

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

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

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

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

**IM-1598(400)E
PIN 15984.00
Richmond
Exit 43, Route 197
I-295 Northbound & Southbound
July 31, 2008**

**SPECIAL PROVISION
SECTION 203
Excavation and Embankment**

Although no known contamination exists on the project, there are several potential sources adjacent to the project. The Contractor shall remain alert for evidence of contamination and shall employ appropriate health and safety measures to protect its workers against hazards associated with working near petroleum impacted soils. If the Contractor encounters evidence of soil or groundwater contamination, the Contractor shall secure the excavation, stop work in the contaminated area, and immediately notify the Resident. The Resident shall contact the Hydrogeologist in MDOT's Environmental Office at 207-624-3100 and the Maine Department of Environmental Protection at 800-482-0777. Work may only continue with authorization from the Resident

SPECIAL PROVISION
SECTION 204
ADD SHOULDER AGGREGATE

Description: This work shall consist of adding new aggregate to existing shoulders by furnishing, placing, grading, and compacting new shoulder aggregate to required grade.

MATERIALS

Aggregates: New shoulder aggregate shall be material meeting the requirements of Type B aggregate. See Standard Specifications section 703.06

Salvaged concrete from concrete milling operations or slabs removed and crushed may be used for shoulder aggregate as long as the material meets the following gradation. The crushed concrete material shall be free of all steel.

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
(4 inches)	100
(2 inches)	60-80
(1 inch)	50-80
(1/4 inch)	15-40
No. 40	5-20
No. 200	0-10

CONSTRUCTION REQUIREMENTS

Existing Shoulder: The existing bituminous pavement shall be removed from the shoulders under item 202.202 Remove Pavement Surface. The existing granular material shall be compacted with a minimum of one pass from a 10 ton vibratory soil compactor roller with a minimum width of 84 inches. New shoulder aggregate shall then be added to the existing shoulder to the widths and grades required by typical sections or as directed by the Department in the field.

New Aggregate: New shoulder aggregate shall be material meeting the requirements of Type B aggregate. New aggregate material shall then be shaped to the cross-slope and grades shown on the plans, typicals, or as directed by the Department. New aggregate shall then be compacted with a minimum 10 ton vibratory roller with a minimum width of 84 inches. The new aggregate shall then be compacted by making a minimum of four passes with the required roller with a pass being down and back. If the Department determines more compaction effort is needed, more passes will be required.

Surface Tolerance: The completed surface of the shoulder shall be shaped and maintained to a uniform machine finish above or below the required cross sectional shape by 3/8 inch.

Method of Measurement: Add Shoulder Aggregate will be measured by the square yard.

Basis of Payment: The accepted quantity of Add Shoulder Aggregate to existing shoulder will be paid for at the contract unit price per square yard. Payment will be full compensation for furnishing, placing, grading, and compacting new aggregate to the required depth and dimensions on the plans and typicals or as directed in the field by the Department.

Additional material required as a result of cross-slope variance of the pavement surface will not be paid for directly, but will be considered incidental to the contract unit price per square yard of existing shoulder.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
204.201 Add Shoulder Aggregate to Existing Shoulder	Square Yard

SPECIAL PROVISION
SECTION 205
SHOULDER RECONSTRUCTION

The following additions are made to Section 205 Subsections 205.06 and 205.11 of the December 2002 revision of the Standard Specifications.

205.06 Method of Measurement:

The quantity of widening of existing shoulders measured for payment will be the number of square yards [square meters] measured in place.

205.11 Basis of Payment:

<u>Pay Item</u>	<u>Pay Unit</u>
205.512 Widening of Existing Shoulder	Square Yard

SPECIAL PROVISION
SECTION 304
CRUSHED CONCRETE OPTION

Salvaged concrete slabs or concrete millings may be crushed and used as Type B Gravel. The crushed concrete material shall be free of all steel.

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

If salvaged concrete is used the material shall meet the grading requirements of the following table:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
90 mm (3 ½ inches)	100
75 mm (3 inches)	90-100
50 mm (2 inches)	75-100
25 mm (1 inch)	50-80
13 mm (½ inch)	30-70
No. 4	15-40
No. 200	0-7

SPECIAL PROVISION
SECTION 311
FULL DEPTH CONCRETE RUBBLIZATION

311.01 Description This work shall consist of pulverizing/rubblizing Portland cement concrete pavement full depth to provide a rubblized concrete base on which to pave. The contractor shall grade and compact this material to the lines, grades, and dimensions shown on the plans or established in the field by the Resident.

MATERIALS

311.02 Rubblized Material Rubblized material shall consist of the existing Portland cement concrete pavement being rubblized to a material where all particles are 6 inches or less in the largest dimension. In general, the particle sizes should be 2 inches or less at the surface of the rubblized base.

311.021 New Aggregate and Additional Recycled Material New aggregate shall meet the requirements of Standard Specification 411 and Special Provision 411 Aggregate for Untreated Surface Course. New aggregate if required will be measured and paid for under item 411.10.

Recycled pavement material salvaged from the project or from off-site stockpiles may be used when processed prior to use so that 100% of the material passes a $\frac{3}{4}$ inch square mesh sieve. Recycled material shall be conditionally accepted at the source by the Resident. It shall be free of winter sand, granular fill, construction debris, and other materials not generally considered bituminous pavement.

Recycled concrete pavement slabs salvaged from the project may be used when processed prior to use so that 100% of the material passes a $\frac{3}{4}$ inch square mesh sieve. Recycled material shall be conditionally accepted at the source by the Resident. It shall be free of winter sand, granular fill, steel, construction debris, and other materials not generally considered concrete pavement.

EQUIPMENT

311.03 Concrete Rubblizer Rubblizing shall be accomplished with a resonant breaker that breaks the PCC pavement into the required particle sizes without damaging the existing sub-base material and without excessively displacing the rubblized material into the base or subgrade. The rubblization equipment shall be a self-contained, self-propelled unit utilizing resonant frequency to produce a low amplitude breaking force. The concrete rubblizing machine shall be specifically manufactured for full-depth concrete rubblizing work and capable of reducing the required existing materials to a size that will meet the requirements of subsection 311.02 Rubblized Material. The rubblizing machine shall be equipped with an

approved watering system which shall be used as needed to suppress dust generated by the rubblizing operation.

311.04 Health and Safety/Right-to-Know Portland cement is considered a hazardous chemical under US OSHA Hazard Communication Rule 29 CFR 1910.120, therefore, all Contractors and Subcontractors are required to notify their workers of the potential health hazards associated with working with Portland cement.

In no area of the work site, where cement or cement-pavement-gravel combination is being applied, re-worked, rolled or graded, shall respirable dust be allowed to exceed the NIOSH [1974] established respirable dust standard (RDS) recommended exposure limit (REL) of 0.05 mg/m³ (for up to a 10 hour workday during a 40 hour work week).

The Contractor shall notify the Resident before commencing any work that involves Portland cement application, reclaiming, rolling, or grading.

The Contractor shall designate a Hazardous Waste Operations “Competent Person” to provide direct on-site supervision plus health and safety monitoring for work in the Portland cement impacted sections of the project. The Competent Person shall have certified training and experience in field implementation of the aforementioned regulations.

Submittals The Contractor shall submit a site specific Health and Safety Plan (HASP) to the Resident at least two weeks in advance of any Portland cement related work on the project.

Health and Safety Monitoring In any area of the project where Portland cement is being worked, the Contractor’s designated Competent Person shall monitor the worker breathing zone for respirable dust. In the event the OSHA respirable dust REL is exceeded, the Contractor’s Competent Person shall direct operations to cease. Operations will not recommence until the situation is corrected and respirable air returns to acceptable levels. The Contractor shall provide all required health and safety monitoring equipment.

311.05 Rollers The full depth concrete rubblized material shall be rolled with a 10 ton vibratory steel roller and Type II 18 ton pneumatic tire roller. The 10 ton steel roller shall have a minimum contact area per foot of 17 in² and a minimum width of 84 inches. The pneumatic tire roller shall meet the requirements of Section 401.10 and the minimum allowable tire pressure shall be 85 psi.

311.08 Surface Tolerance The completed surface of the Full Depth concrete rubblization shall be shaped and maintained to a tolerance of 1 inch above or below the required cross sectional template.

311.09 Full Depth Rubblizing Procedure The existing concrete pavement material shall pulverized/rubblized into a homogeneous mass passing the gradation as specified in section 311.02. Material found not to meet the gradation as specified in section 311.02 shall be required to be reprocessed by the rubblizer. The material shall then be shaped to the cross-slope and grade shown on the plans, typical, or as directed by the Resident and meeting the tolerances of section 311.08. The rubblized concrete shall then be compacted using the rollers specified in section 311.05. Each roller shall make four passes with a pass being down and back. The 10 ton vibratory roller shall make the initial four passes and then the Type II 18 ton pneumatic tire roller shall make the final four passes. If the rubblized material still shows signs of movement or lack of compaction more passes will be required.

If at this time it is apparent that the existing sub-grade and sub-base has been damaged, the contractor shall excavate down to sub-grade and replace with 304.13 Dense Graded Crushed Aggregate Sub-base from sub-grade to finish grade of the rubblized Portland Cement Concrete Pavement. If the Department determines the damage was caused by the contractor and their operations, The Department will not reimburse the contractor for any expenses to correct any damages.

Any exposed steel shall be removed prior to placing the leveling course.

After compaction of the rubblized concrete material, the contractor shall place a leveling course of new aggregate as needed and directed by the department. The new aggregate shall meet the requirements of section 311.021 and shall be paid for under item 411.10. This course will then be required to be compacted by making as many passes as needed with a 10 ton vibratory roller to assure the Department that the material is properly compacted. The leveling course of new aggregate shall be fine-graded to $\pm 3/8$ in tolerance.

Sufficient water shall be added during the compaction process to aide in the compaction of both the rubblized concrete material and the leveling course of new aggregate.

The resultant material shall be graded and compacted to the cross-slope and profile shown on the plans or as directed by the Resident. The Contractor will also be responsible for re-establishing the existing profile grade as specified on the typical, in the plans, or as directed by the resident in the field. The department's intent of the new profile grade is to be 5" +- higher than the old profile grade (except for areas like bridges and overpasses where the grade must be adjusted or for areas where the department wishes to correct minor depressions).

QUALITY CONTROL

311.10 Quality Control The Contractor shall operate in accordance with the approved Quality Control Plan (QCP) to assure a product meeting the contract requirements. The QCP shall meet the requirements of Section 106.4 - Quality Control and this Section. The Contractor shall not begin recycling operations until the Department approves the QCP in writing.

Prior to performing any rubblizing, the Department and the Contractor shall hold a Pre-rubblization conference to discuss the rubblizing schedule, type and amount of equipment to be used, sequence of operations, and traffic control. A copy of the QC random numbers to be used on the project shall be provided to the Resident. All field supervisors including the responsible onsite supervisor for the rubblizing operation shall attend this meeting.

The QCP shall address any items that affect the quality of the Rubblizing Process including, but not limited to, the following:

- A. Make and type of rollers including weight, weight per inch of steel wheels, and average contact pressure for pneumatic tired rollers.
- B. Rubblizing operations including type of equipment, speed of equipment, monitoring, methods to ensure that segregation is minimized, and procedures for grading and compacting operations.
- C. Method of grade checks.
- D. Name, responsibilities, and qualifications of the Responsible onsite Rubblizing Supervisor experienced and knowledgeable with the process.
- E. Access to operators manual on all equipment.

The Project Superintendent shall be named in the QCP, and the responsibilities for successful implementation of the QCP shall be outlined.

At the initiation of and during rubblizing, establish, demonstrate and document the capability of the equipment, including the machine's speed and impact frequency to achieve the required results.

At a minimum frequency of one every 2500 feet per lane, inspect the rubblized concrete pavement full depth to determine whether the gradation is being met and whether the reinforcement is de-bonded.

The completed rubblized surface shall have a uniform appearance without unbroken strips of pavement, exposed reinforcement steel, rubberized crack seal material, and excessive voids or cross slope issues.

Any Rubblization equipment will not be allowed to operate within 30 feet of any bridge structure.

311.12 Method of Measurement Full Depth Concrete Rubblization will be measured by square yard.

**IM-1511(450)E
PIN 15114.50
Brunswick-West Gardiner
I-295 Northbound**

311.13 Basis of Payment The accepted quantity of Full Depth Concrete Rubblization will be paid for at the contract unit price per square yard, complete in-place which price will be full compensation for furnishing all equipment and labor for rubblizing, grading, compacting, and for all incidentals necessary to complete the work.

The addition of materials to restore profile grade and/or cross-slope in areas shown on the plans or described in the construction notes will be paid separately under designated pay items within the contract.

Payments will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
311.36	Full Depth Concrete Rubblization	Square Yard

SPECIAL PROVISION
DIVISION 400
PAVEMENTS

SECTION 401 - HOT MIX ASPHALT PAVEMENT

401.01 Description The Contractor shall furnish and place one or more courses of Hot Mix Asphalt Pavement (HMA) on an approved base in accordance with the contract documents and in reasonably close conformity with the lines, grades, thickness, and typical cross sections shown on the plans or established by the Resident. The Department will accept this work under Quality Assurance provisions, in accordance with these specifications and the requirements of Section 106 – Quality, the provisions of AASHTO M 323 except where otherwise noted in sections 401 and 703 of these specifications, and the Maine DOT Policies and Procedures for HMA Sampling and Testing.

401.02 Materials Materials shall meet the requirements specified in Section 700 - Materials:

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

401.021 Recycled Asphalt Materials Recycled Asphalt Pavement (RAP) may be introduced into the mixture at percentages approved by the Department. If approved by the Department, the Contractor shall provide documentation stating the source, average residual asphalt content, and stockpile gradations showing RAP materials have been sized to meet the maximum aggregate size requirements of each mix designation. The Department will obtain samples for verification and approval prior to its use.

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

401.03 Composition of Mixtures 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 T312 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% reclaimed asphalt pavement (RAP) in any base, binder, surface, or shim course. The Contractor may be allowed to use more than 15% RAP, up to a maximum of 25% RAP, in a base, binder, or shim course provided that PG 58-34 asphalt binder is used in the mixture.

The Contractor shall submit for Department approval a JMF to the Central Laboratory in Bangor for each mixture to be supplied. The Department may approve 1 active design per nominal maximum size, per traffic level, per plant, plus a 9.5mm “fine” mix for shimming and where required, a non-RAP design for bridge decks. The Department shall then have 15 calendar days in which to process a new design before approval. The JMF shall establish a single percentage of aggregate passing each sieve size within the limits shown in section 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 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
- 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 asphalt contents
- 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

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 135 Mg [150 ton] for stone stockpiles, 70 Mg [75 ton] for sand stockpiles, and 45 Mg [50 ton] of blend sand before the Department will sample. The Department shall obtain samples for laboratory testing. The Contractor shall also make available to the Department 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 Department shall split a production sample for evaluation. The Contractor shall test its split of the sample and determine if the results meet the requirements of the Department's written policy for mix design verification (See Maine DOT Policies and Procedures for HMA Sampling and Testing available at the Central Laboratory in Bangor). If the results are found to be acceptable, the Contractor will forward their results to the Department's Lab, which will test the Department's split of the sample. The results of the two split samples will be compared and shared between the Department and the Contractor. If the Department finds the mixture acceptable, an approved JMF will be forwarded to the Contractor and 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. 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%. 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 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. The cold feed percentage for RAP may be adjusted up to 5 percentage points from the amount listed on the JMF but shall not exceed the maximum allowable percentage for RAP for the specific application.

TABLE 1: VOLUMETRIC DESIGN CRITERIA

Design ESAL's (Millions)	Required Density (Percent of G _{mm})			Voids in the Mineral Aggregate (VMA)(Minimum Percent)					Voids Filled with Binder (VFB) (Minimum %)	Fines/Eff. Binder Ratio
				Nominal Maximum Aggregate Size (mm)						
	N _{initial}	N _{design}	N _{max}	25	19	12.5	9.5	4.75		
<0.3	≤91.5	96.0	≤98.0	13.0	14.0	15.0	16.0	16.0	70-80	0.6-1.2
0.3 to <3	≤90.5								65-80	
3 to <10	≤89.0								65-80*	
10 to <30									≥30	

*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.

401.04 Temperature Requirements After the JMF is established, the temperatures of the mixture shall conform to the following tolerances:

- In the truck at the mixing plant – allowable range 135° to 163°C [275 to 325°F]
- At the Paver – allowable range 135° to 163°C [275 to 325°F]

The JMF and the mix subsequently produced shall meet the requirements of Tables 1 and Section 703.07.

401.05 Performance Graded Asphalt Binder Unless otherwise noted in Special Provision 403 - Hot Bituminous Pavement, PGAB shall be 64-28, except that for mixtures containing greater than 15% but no more than 25% RAP the PGAB shall be PG 58-34.

The PGAB shall meet the applicable requirements of AASHTO M320 - Standard Specification for PGAB. The Contractor shall provide the Department with an approved copy of the Quality Control Plan for PGAB in accordance with AASHTO R 26 _Certifying Suppliers of PGAB.

401.06 Weather and Seasonal Limitations The State is divided into two paving zones as follows:

- a. Zone 1 Areas north of US Route 2 from Gilead to Bangor and north of Route 9 from Bangor to Calais.
- b. Zone 2 Areas south of Zone 1 including the US Route 2 and Route 9 boundaries.

The Contractor may place Hot Mix Asphalt Pavement for use other than a traveled way wearing course in either Zone between the dates of April 15th and November 15th, provided that the air temperature as determined by an approved thermometer (placed in the shade at the paving location) is 4°C [40°F] or higher and the area to be paved is not frozen. The Contractor may place Hot Mix Asphalt Pavement as traveled way wearing course in Zone 1 between the dates of May 1st and the Saturday following October 1st and in Zone 2 between the dates of April 15th and the Saturday following October 15th, provided the air temperature determined as above is 10°C [50°F] or higher. For the purposes of this Section, the traveled way includes truck lanes, ramps, approach roads and auxiliary lanes. The atmospheric temperature for all courses on bridge decks shall be 10°C [50°F] or higher.

Hot Mix Asphalt Pavement used for curb, driveways, sidewalks, islands, or other incidentals is not subject to seasonal limitations, except that conditions shall be satisfactory for proper handling and finishing of the mixture. All mixtures used for curb, driveways, sidewalks, islands, or other incidentals shall conform to section 401.04 - Temperature Requirements. Unless otherwise specified, the Contractor shall not place Hot Mix Asphalt Pavement on a wet or frozen surface and the air temperature shall be 4°C [40°F] or higher.

On all sections of overlay with wearing courses less than 25 mm [1 in] thick, the wearing course for the travelway and adjacent shoulders shall be placed between the dates of May 15th and the Saturday following September 15th.

On all sections of overlay with wearing courses less than 1 inch thick, the wearing course for the travelway and adjacent shoulders shall be placed between the dates of June 1st and the Saturday following September 1st if the work is to be performed, either by contract requirement, or Contractor option, during conditions defined as “night work”.

401.07 Hot Mix Asphalt Plant

401.071 General Requirements HMA plants shall conform to AASHTO M156.

a. Truck Scales When the hot mix asphalt is to be weighed on scales meeting the requirements of Section 108 - Payment, the scales shall be inspected and sealed by the State Sealer as often as the Department deems necessary to verify their accuracy.

Plant scales shall be checked prior to the start of the paving season, and each time a plant is moved to a new location. Subsequent checks will be made as determined by the Resident. The Contractor will have at least ten 20 Kg [50 pound] masses for scale testing.

401.072 Automation of Batching Batch plants shall be automated for weighing, recycling, and monitoring the system. In the case of a malfunction of the printing system, the requirements of Section 401.074 c. of this specification will apply.

The batch plant shall accurately proportion the various materials in the proper order by weight. The entire batching and mixing cycle shall be continuous and shall not require any manual operations. The batch plant shall use auxiliary interlock circuits to trigger an audible alarm whenever an error exceeding the acceptable tolerance occurs. Along with the alarm, the printer shall print an asterisk on the delivery slip in the same row containing the out-of-tolerance weight. The automatic proportioning system shall be capable of consistently delivering material within the full range of batch sizes. When RAP is being used, the plant must be capable of automatically compensating for the moisture content of the RAP.

All plants shall be equipped with an approved digital recording device. The delivery slip load ticket shall contain information required under Section 108.1.3 - Provisions Relating to Certain Measurements, Mass and paragraphs a, b, and c of Section 401.073

401.073 Automatic Ticket Printer System on Automatic HMA Plant An approved automatic ticket printer system shall be used with all approved automatic HMA plants. The requirements for delivery slips for payment of materials measured by weight, as given in the following Sections, shall be waived: 108.1.3 a., 108.1.3 b., 108.1.3 c., and 108.1.3 d. The automatic printed ticket will be considered as the Weight Certificate.

The requirements of Section 108.1.3 f. - Delivery Slips, shall be met by the weigh slip or ticket, printed by the automatic system, which accompanies each truckload, except for the following changes:

- a. The quantity information required shall be individual weights of each batch or total net weight of each truckload.
- b. Signatures (legible initials acceptable) of Weighmaster (required only in the event of a malfunction as described in 401.074 c.).
- c. The MDOT designation for the JMF.

401.074 Weight Checks on Automatic HMA Plant At least twice during each 5 days of production either of the following checks will be performed:

a. A loaded truck may be intercepted and weighed on a platform scale that has been sealed by the State Sealer of Weights and Measures within the past 12 months. Whenever the discrepancy in net weights is greater than 1.0%, but does not exceed 1.5%, the plant inspector will notify the producer to take corrective action; payment will still be governed by the printed ticket. The producer will be allowed a period of two days to make any needed repairs to the plant and/or platform scales so that the discrepancy in net weights between the two is less than 1.0%. If the discrepancy exceeds 1.5%, the plant will be allowed to operate as long as payment is determined by truck platform scale net weight. Effective corrective action shall be taken within two working days.

b. Where platform scales are not readily available, a check will be made to verify the accuracy and sensitivity of each scale within the normal weighing range and to assure that the interlocking devices and automatic printer system are functioning properly.

c. In the event of a malfunction of the automatic printer system, production may be continued without the use of platform truck scales for a period not to exceed the next two working days, providing total weights of each batch are recorded on weight tickets and certified by a Licensed Public Weighmaster.

401.08 Hauling Equipment Trucks for hauling Hot Mix Asphalt Pavement shall have tight, clean, and smooth metal dump bodies, which have been thinly coated with a small amount of approved release agent to prevent the mixture from adhering to the bodies. Solvent based agents developed to strip asphalts from aggregates will not be allowed as release agents.

All truck dump bodies shall have a cover of canvas or other water repellent material capable of heat retention, which completely covers the mixture. The cover shall be securely fastened on the truck, unless unloading.

All truck bodies shall have an opening on both sides, which will accommodate a thermometer stem. The opening shall be located near the midpoint of the body, at least 300 mm [12 in] above the bed.

401.09 Pavers Pavers shall be self-contained, self-propelled units with an activated screed (heated if necessary) capable of placing courses of Hot Mix Asphalt Pavement in full lane widths specified in the contract on the main line, shoulder, or similar construction.

On projects with no price adjustment for smoothness, pavers shall be of sufficient class and size to place Hot Mix Asphalt Pavement over the full width of the mainline travel way with a 3 m [10 ft] minimum main screed with activated extensions.

The Contractor shall place Hot Mix Asphalt Pavement on the main line with a paver using an automatic grade and slope controlled screed, unless otherwise authorized by the Department. The controls shall automatically adjust the screed and increase or decrease the layer thickness to compensate for irregularities in the preceding course. The controls shall maintain the proper transverse slope and be readily adjustable so that transitions and superelevated curves can be properly paved. The controls shall operate from a fixed or moving reference such as a grade wire or ski type device (floating beam) with a minimum length of 10 m [30 ft], a non-contact grade control with a minimum span of 7.3 m [24 ft], except that a 12 m [40 ft] reference shall be used on Expressway projects.

The Contractor shall operate the paver in such a manner as to produce a visually uniform surface texture and a thickness within the requirements of Section 401.101 - Surface Tolerances. The paver shall have a receiving hopper with sufficient capacity for a uniform spreading operation and a distribution system to place the mixture uniformly, without segregation in front of the screed. The screed assembly shall produce a finished surface of the required evenness and texture without tearing, shoving, or gouging the mixture. Pavers with extendible screeds shall have auger extensions and tunnel extenders as per the manufacturer's recommendations, a copy of which shall be available if requested.

The Contractor shall have the paver at the project site sufficiently before the start of paving operations to be inspected and approved by the Department. The Contractor shall repair or replace any paver found worn or defective, either before or during placement, to the satisfaction of the Department. Pavers that produce an unevenly textured or non-uniform mat will be repaired or replaced before continuing to place HMA on MaineDOT projects.

On a daily basis, the Contractor shall perform nuclear density testing across the mat being placed, prior to being compacted by equipment., at 300 mm [12 in] intervals, If the density values vary by more than 2.0% from the mean, the Contractor shall make adjustments to the screed until the inconsistencies are remedied.

Failure to replace or repair defective placement equipment may result in a letter of suspension of work and notification of a quality control violation resulting in possible monetary penalties as governed by Section 106 - Quality

401.10 Rollers Rollers shall be static steel, pneumatic tire, or approved vibrator type. Rollers shall be in good mechanical condition, capable of starting and stopping smoothly, and be free from backlash when reversing direction. Rollers shall be equipped and operated in such a way as to prevent the picking up of hot mixed material by the roller surface. The use of rollers, which result in crushing of the aggregate or in displacement of the HMA will not be permitted. Any Hot Mix Asphalt Pavement that becomes loose, broken, contaminated, shows an excess or deficiency of Performance Graded Asphalt Binder, or is in any other way defective shall be removed and replaced at no additional cost with fresh Hot Mix Asphalt Pavement, which shall be immediately compacted to conform to the adjacent area.

The Contractor shall repair or replace any roller found to be worn or defective, either before or during placement, to the satisfaction of the Department. Rollers that produce grooved, unevenly textured or non-uniform mat will be repaired or replaced before continuing to place HMA on MaineDOT projects.

The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor's option, provided specification densities are attained and with the following requirements:

- a. On variable-depth courses, the first lift of pavement over gravel, reclaimed pavement, an irregular surface, or on bridges, at least one roller shall be 14.5 Mg [16 ton] pneumatic-tired. Unless otherwise allowed by the Resident, pneumatic-tired rollers shall be equipped with skirting to minimize the pickup of HMA materials from the paved surface. When required by the Resident, the roller shall be ballasted to 18.1 Mg [20 ton].
- b. Compaction with a vibratory or steel wheel roller shall precede pneumatic-tired rolling, unless otherwise authorized by the Department.
- c. Vibratory rollers shall not be operated in the vibratory mode when checking or cracking of the mat occurs, or on bridge decks.
- d. Any method, which results in cracking or checking of the mat, will be discontinued and corrective action taken.

The maximum operating speed for a steel wheel or pneumatic roller shall not exceed the manufacturer's recommendations, a copy of which shall be available if requested.

401.101 Surface Tolerances The Department will check surface tolerance utilizing the following methods :

- a.) A 5 m [16 ft] straightedge or string line placed directly on the surface, parallel to the centerline of pavement.
- b.) A 3 m [10 ft] straightedge or string line placed directly on the surface, transverse to the centerline of pavement.

The Contractor shall correct variations exceeding 6 mm [$\frac{1}{4}$ in] by removing defective work and replacing it with new material as directed by the Department. The Contractor shall furnish a 10 foot straightedge for the Departments use.

401.11 Preparation of Existing Surface The Contractor shall thoroughly clean the surface upon which Hot Mix Asphalt Pavement is to be placed of all objectionable material. When the surface of the existing base or pavement is irregular, the Contractor shall bring it to uniform grade and cross section. All surfaces shall have a tack coat applied prior to placing any new HMA course. Tack coat shall conform to the requirements of Section 409 – Bituminous Tack Coat, Section 702 – Bituminous Material, and all applicable sections of the contract.

401.12 Hot Mix Asphalt Documentation The Contractor and the Department shall agree on the amount of Hot Mix Asphalt Pavement that has been placed each day.

401.13 Preparation of Aggregates The Contractor shall dry and heat the aggregates for the HMA to the required temperature. The Contractor shall properly adjust flames to avoid physical damage to the aggregate and to avoid depositing soot on the aggregate.

401.14 Mixing The Contractor shall combine the dried aggregate in the mixer in the amount of each fraction of aggregate required to meet the JMF. The Contractor shall measure the amount of PGAB and introduce it into the mixer in the amount specified by the JMF.

The Contractor shall produce the HMA at the temperature established by the JMF.

The Contractor shall dry the aggregate sufficiently so that the HMA will not flush, foam excessively, or displace excessively under the action of the rollers. The Contractor shall introduce the aggregate into the mixer at a temperature of not more than 14°C [25°F] above the temperature at which the viscosity of the PGAB being used is 0.150 Pa·s.

The Contractor shall store and introduce into the mixer the Performance Graded Asphalt Binder at a uniformly maintained temperature at which the viscosity of the PGAB is between 0.150 Pa·s and 0.300 Pa·s. The aggregate shall be coated completely and uniformly with a thorough distribution of the PGAB. The Contractor shall determine the wet mixing time for each plant and for each type of aggregate used.

401.15 Spreading and Finishing On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impracticable, the Contractor shall spread, rake, and lute the HMA with hand tools to provide the required compacted thickness. Solvent based agents developed to strip asphalts from aggregates will not be allowed as release agents.

On roadways with adjoining lanes carrying traffic, the Contractor shall place each course over the full width of the traveled way section being paved that day, unless otherwise noted by the Department in Section 403 - Hot Bituminous Pavement.

401.16 Compaction Immediately after the Hot Mix Asphalt Pavement has been spread, struck off, and any surface irregularities adjusted, the Contractor shall thoroughly and uniformly compact the HMA by rolling.

The Contractor shall roll the surface when the mixture is in the proper condition and when the rolling does not cause undue displacement, cracking, or shoving. The Contractor shall prevent adhesion of the HMA to the rollers or vibrating compactors without the use of fuel oil or other petroleum based release agents. Solvents designed to strip asphalt binders from aggregates will not be permitted as release agents on equipment, tools, or pavement surfaces.

The Contractor shall immediately correct any displacement occurring as a result of the reversing of the direction of a roller or from other causes to the satisfaction of the Department. Any operation other than placement of variable depth shim course that results in breakdown of the aggregate shall be discontinued. Any new pavement that shows obvious cracking, checking, or displacement shall be removed and replaced for the full lane width as directed by the Resident at no cost to the Department.

Along forms, curbs, headers, walls, and other places not accessible to the rollers, the Contractor shall thoroughly compact the HMA with mechanical vibrating compactors. The Contractor shall only use hand tamping in areas inaccessible to all other compaction equipment. On depressed areas, the Contractor may use a trench roller or cleated compression strips under a roller to transmit compression to the depressed area.

Any HMA that becomes unacceptable due to cooling, cracking, checking, segregation or deformation as a result of an interruption in mix delivery shall be removed and replaced, with material that meets contract specifications at no cost to the Department.

401.17 Joints The Contractor shall construct wearing course transverse joints in such a manner that minimum tolerances shown in Section 401.101 - Surface Tolerances are met when measured with a straightedge.

The paver shall maintain a uniform head of HMA during transverse and longitudinal joint construction.

The HMA shall be free of segregation and meet temperature requirements outlined in section 401.04. Transverse joints of the wearing course shall be straight and neatly trimmed. The Contractor may form a vertical face exposing the full depth of the course by inserting a header, by breaking the bond with the underlying course, or by cutting back with hand tools. The Department may allow feathered or "lap" joints on lower base courses or when matching existing base type pavements.

Longitudinal joints shall be generally straight to the line of travel, and constructed in a manner that best ensure joint integrity. Methods or activities that prove detrimental to the construction of straight, sound longitudinal joints will be discontinued.

The Contractor shall apply a coating of emulsified asphalt immediately before paving all joints to the vertical face and 75 mm [3 in] of the adjacent portion of any pavement being overlaid except those formed by pavers operating in echelon. The Contractor shall use an approved spray apparatus designed for covering a narrow surface. The Department may approve application by a brush for small surfaces, or in the event of a malfunction of the spray apparatus, but for a period of not more than one working day.

Where pavement under this contract joins an existing pavement, or when the Department directs, the Contractor shall cut the existing pavement along a smooth line, producing a neat, even, vertical joint. The Department will not permit broken or raveled edges. The cost of all work necessary for the preparation of joints is incidental to related contract pay items.

401.18 Quality Control Method A, B & C The Contractor shall operate in accordance with the approved Quality Control Plan (QCP) to assure a product meeting the contract requirements. The QCP shall meet the requirements of Section 106.6 - Acceptance and this Section. The Contractor shall not begin paving operations until the Department approves the QCP in writing.

Prior to placing any mix, the Department and the Contractor shall hold a Pre-paving conference to discuss the paving schedule, source of mix, type and amount of equipment to be used, sequence of paving pattern, rate of mix supply, random sampling, project lots and sublots and traffic control. A copy of the QC random numbers to be used on the project shall be provided to The Resident. The Departments' random numbers for

Acceptance testing shall be generated and on file with the Resident and the Project Manager. All field and plant supervisors including the responsible onsite paving supervisor shall attend this meeting.

The QCP shall address any items that affect the quality of the Hot Mix Asphalt Pavement including, but not limited to, the following:

- a. JMF(s)
- b. Hot mix asphalt plant details
- c. Stockpile Management (to include provisions for a minimum 2 day stockpile)
- d. Make and type of paver(s)
- e. Make and type of rollers including weight, weight per inch of steel wheels, and average contact pressure for pneumatic tired rollers
- f. Name of QCP Administrator, and certification number
- g. Name of Process Control Technician(s) and certification number(s)
- h. Name of Quality Control Technicians(s) and certification number(s)
- i. Mixing & transportation including process for ensuring that truck bodies are clean and free of debris or contamination that could adversely affect the finished pavement
- j. Testing Plan
- k. Laydown operations including longitudinal joint construction, procedures for avoiding paving in inclement weather, type of release agent to be used on trucks tools and rollers, compaction of shoulders, tacking of all joints, methods to ensure that segregation is minimized, procedures to determine the maximum rolling and paving speeds based on best engineering practices as well as past experience in achieving the best possible smoothness of the pavement. Solvent based agents developed to strip asphalts from aggregates will not be allowed as release agents.
- l. Examples of Quality Control forms including a daily plant report and a daily paving report
- m. Silo management and details (can show storage for use on project of up to 36 hours)
- n. Provisions for varying mix temperature due to extraordinary conditions
- o. Name and responsibilities of the Responsible onsite Paving Supervisor
- p. Method for calibration/verification of Density Gauge
- q. A note that all testing will be done in accordance with AASHTO and the Maine DOT Policies and Procedures for HMA Sampling and Testing.
- r. A note detailing conditions under which the percent of RAP will vary from that specified on the JMF.
- s. A detailed procedure outlining when production will be halted due to QC or Acceptance testing results.
- t. A plan to address the change in PGAB source or supplier and the potential co-mingling of differing PGAB's.
- u. A procedure to take immediate possession of acceptance samples once released by MaineDOT and deliver said samples to the designated acceptance laboratory.

The QCP shall include the following technicians together with these minimum requirements:

- a. QCP Administrator - A qualified individual shall administer the QCP. The QCP Administrator must be a full-time employee of or a consultant engaged by the Contractor or paving subcontractor. The QCP Administrator shall have full authority to institute any and all actions necessary for the successful operation of the QCP. The QCP Administrator (or its designee in the QCP Administrator's absence) shall be available to communicate with the Department at all times. The QCP Administrator shall be certified as a Quality Assurance Technologist certified by the New England Transportation Technician Certification Program (NETTCP).

b. Process Control Technician(s) (PCT) shall utilize test results and other quality control practices to assure the quality of aggregates and other mix components and control proportioning to meet the JMF(s). The PCT shall inspect all equipment used in mixing to assure it is operating properly and that mixing conforms to the mix design(s) and other Contract requirements. The QCP shall detail how these duties and responsibilities are to be accomplished and documented, and whether more than one PCT is required. The Plan shall include the criteria to be utilized by the PCT to correct or reject unsatisfactory materials. The PCT shall be certified as a Plant Technician by the NETTCP.

c. Quality Control Technician(s) (QCT) shall perform and utilize quality control tests at the job site to assure that delivered materials meet the requirements of the JMF(s). The QCT shall inspect all equipment utilized in transporting, laydown, and compacting to assure it is operating properly and that all laydown and compaction conform to the Contract requirements. The QCP shall detail how these duties and responsibilities are to be accomplished and documented, and whether more than one QCT is required. The QCP shall include the criteria utilized by the QCT to correct or reject unsatisfactory materials. The QCT shall be certified as a Paving Inspector by the NETTCP.

The QCP shall detail the coordination of the activities of the Plan Administrator, the PCT and the QCT. The Project Superintendent shall be named in the QCP, and the responsibilities for successful implementation of the QCP shall be outlined.

The Contractor shall sample, test, and evaluate Hot Mix Asphalt Pavement in accordance with the following minimum frequencies:

TABLE 2 : MINIMUM QUALITY CONTROL FREQUENCIES

Test or Action	Frequency	Test Method
Temperature of mix	6 per day at street and plant	-
Temperature of mat	4 per day	-
%TMD (Surface)	1 per 125 Mg [125 ton] (As noted in QC Plan)	ASTM D2950
%TMD (Base)	1 per 250 Mg [250 ton] (As noted in QC Plan)	AASHTO T269
Fines / Effective Binder	1 per 500 Mg [500 ton]	AASHTO T 312*
Gradation	1 per 500 Mg [500 ton]	AASHTO T30
PGAB content	1 per 500 Mg [500 ton]	AASHTO T164 or T308
Voids at N_{design}	1 per 500 Mg [500 ton]	AASHTO T 312*
Voids in Mineral Aggregate at N_{design}	1 per 500 Mg [500 ton]	AASHTO T 312*
Rice Specific Gravity	1 per 500 Mg [500 ton]	AASHTO T209
Coarse Aggregate Angularity	1 per 5000 Mg [5000 ton]	ASTM D5821
Flat and Elongated Particles	1 Per 5000 Mg [5000 ton]	ASTM D4791
Fine Aggregate Angularity	1 Per 5000 Mg [5000 ton]	AASHTO T304

*Method A and B only.

The Contractor may utilize innovative equipment or techniques not addressed by the Contract documents to produce or monitor the production of the mix, subject to approval by the Department.

The Contractor shall submit all Hot Mix Asphalt Pavement plant test reports, inspection reports and updated pay factors in writing, signed by the appropriate technician and present them to the Department by 1:00 P.M. on the next working day, except when otherwise noted in the QCP due to local restrictions. The Contractor shall also

retain splits of the previous 5 QC tests, with QC results enclosed for random selection and testing by The Department during QA inspections of the HMA production facility. Test results of splits that do not meet the Dispute Resolution Variance Limits in Table 10 shall trigger an investigation by the MDOT Independent Assurance Unit, and may result in that lab losing NETTCP certification and the ability to request a dispute [Section 401.223 - Process for Dispute Resolution (Methods A , B and C only)].

The Contractor shall make density test results, including randomly sampled densities, available to the Department onsite. Summaries of each day's results, including a daily paving report, shall be recorded and signed by the QCT and presented to the Department by 1:00 p.m. the next working day.

The Contractor shall have a testing lab at the plant site, equipped with all testing equipment necessary to complete the tests in Table 2. The Contractor shall locate an approved Gyrotory Compactor at the plant testing lab or within 30 minutes of the plant site.

The Contractor shall fill all holes in the pavement resulting from cutting cores by the Contractor or the Department with a properly compacted, acceptable mixture no later than the following working day. Before filling, the Contractor shall carefully clean the holes and apply a coating of emulsified asphalt. On surface courses, cores shall not be cut except for Verification of the Nuclear Density Gauge, at a rate not to exceed 3 per day or 2 per 900 Mg [1000 ton] placed.

The Contractor shall monitor plant production using running average of three control charts as specified in Section 106 - Quality. Control limits shall be as noted in Table 3 below. The UCL and LCL, shall not exceed the allowable control points for the particular type of mixture as outlined in Table 1 of section 703.09

TABLE 3: Control Limits

Property	UCL and LCL
Passing 4.75 mm and larger sieves	Target +/-4.0
Passing 2.36 mm sieve	Target +/-2.5
Passing .075 mm sieve	Target +/-1.2
PGAB Content*	Target +/-0.3
Voids in the Mineral Aggregate	LCL = LSL + 0.2
% Voids at N_{design}	JMF Target +/-1.3

*Based on AASHTO T 308

The Contractor shall cease paving operations whenever one of the following occurs on a lot in progress:

- a. Method A: The Pay Factor for VMA, Voids @ N_d , Percent PGAB, composite gradation, VFB, fines to effective binder or density using all Acceptance or all Quality Control tests for the current lot is less than 0.85.
- b. Method B: The Pay Factor for VMA, Voids @ N_d , Percent PGAB, composite gradation, VFB, fines to effective binder or density using all Acceptance or all Quality Control tests for the current lot is less than 0.90.
- c. Method C: The Pay Factor for VMA, Voids @ N_d , Percent PGAB, percent passing the nominal maximum sieve, percent passing 2.36 mm sieve, percent passing 0.300 mm sieve or percent passing 0.075 mm sieve using all Acceptance or all available Quality Control tests for the current lot is less than 0.85.
- d. The Coarse Aggregate Angularity or Fine Aggregate Angularity value falls below the requirements of Table 3: Aggregate Consensus Properties Criteria for the design traffic level.

- e. Each of the first 2 control tests for a Method A or B lot fall outside the upper or lower limits for VMA, Voids @ Nd, or Percent PGAB; or under Method C, each of the first 2 control tests for the lot fall outside the upper or lower limits for the nominal maximum, 2.36 mm, 0.300 mm or 0.075 mm sieves, or percent PGAB.
- f. The Flat and Elongated Particles value exceeds 10% by ASTM D4791.
- g. There is any visible damage to the aggregate due to over-densification other than on variable depth shim courses.
- h. The Contractor fails to follow the approved QCP.
- i. The Contractor's control chart shows the process to be out of control (defined as a single point outside of the control limits on the running average of three chart.) on any property listed in Table 3: Control Limits.

The Contractor shall immediately notify the Resident in writing as to the reason for shutdown, as well as the proposed corrective action. Failure to do so will be treated as a second incident under 106.4.6 QCP Non-compliance. The Department will consider corrective action acceptable if the pay factor for the failing property increases, based on samples already in transit, or a verification sample is tested and the property falls within the specification limits.

In cases where the corrective action can be accomplished immediately, such as batch weight or cold feed changes, the Contractor may elect to resume production once the corrective action is completed. Additional QC testing shall be performed to verify the effectiveness of the corrective action. Subsequent occurrences of shutdown for the same property in a Lot in progress will require paving operations to cease. Paving operations shall not resume until the Contractor and the Department determines that material meeting the Contract requirements will be produced. The Department may allow the Contractor to resume production based upon a passing QC sample, with a split of the sample being sent to the Department for verification testing. If the submitted verification sample test results fall outside the specification limits, the Contractor shall cease production until a passing verification sample is submitted to the Department for testing.

The Department retains the exclusive right, with the exception of the first day's production of a new JMF, to determine whether the resumption of production involves a significant change to the production process. If the Department so determines, then the current lot will be terminated, a pay factor established, and a new lot will begin.

401.19 Quality Control Method D For Items covered under Method D, the Contractor shall submit a modified QC Plan detailing, how the mix is to be placed, what equipment is to be used, and what HMA plant is to be used. All mix designs (JMF) shall be approved and verified by MDOT prior to use. Certified QC personnel shall not be required. The Contractor shall certify the mix and the test results for each item by a Certificate of Compliance.

401.20 Acceptance Method A, B & C These methods utilizes Quality Level Analysis and pay factor specifications.

For Hot Mix Asphalt Pavement designated for acceptance under Quality Assurance provisions, the Department will sample once per subplot on a statistically random basis, test, and evaluate in accordance with the following Acceptance Criteria:

TABLE 4: ACCEPTANCE CRITERIA

PROPERTIES	POINT OF SAMPLING	TEST METHOD
Gradation	Paver Hopper	AASHTO T30
PGAB Content	Paver Hopper	AASHTO T308
%TMD (Surface)	Mat behind all Rollers	AASHTO T269
%TMD (Base or Binder)	Mat behind all Rollers	AASHTO T269
Air Voids at N_d	Paver Hopper	AASHTO T 312
%VMA at N_d	Paver Hopper	AASHTO T 312
Fines to Effective Binder	Paver Hopper	AASHTO T 312
%VFB	Paver Hopper	AASHTO T 312

On the first day of production of a JMF the Department will take three random samples, which will be used to calculate the quality level of the in-place material in the event the lot is terminated prematurely. Only one of the three will be tested, the other two will be held onsite until at least three random samples have been taken, at which time the other two will be discarded.

Lot Size For purposes of evaluating all acceptance test properties, a lot shall consist of the total quantity represented by each item listed under the lot size heading.

If the Department terminates a Lot prematurely, the samples from the first day's production will be used to calculate a volumetric pay factor, and a minimum of three cores will be used for a density pay factor, if applicable, for quantities placed to date.

Sublot size - Refer to section 401.201, 401.202, and 401.203 for minimum size and number of sublots. The quantity represented by each sample will constitute a sublot.

If there is less than one-half of a sublot remaining at the end, then it shall be combined with the previous sublot. If there is more than one-half sublot remaining at the end, then it shall constitute the last sublot and shall be represented by test results. If it becomes apparent partway through a Lot that, due to an underrun, there will be insufficient mix quantity to obtain the minimum number of sublots needed, the Resident may adjust the size of the remaining sublots and select new sample locations based on the estimated quantity of material remaining in the Lot.

Acceptance Testing The Department will obtain samples of Hot Mix Asphalt Pavement in conformance with AASHTO T168 Sampling Bituminous Paving Mixtures, and the Maine DOT Policies and Procedures for HMA Sampling and Testing, which will then be transported by the Contractor to the designated MDOT Laboratory within 48 hours (except when otherwise noted in the project specific QCP due to local restrictions), as directed by MDOT in approved transport containers to be provided by the Department, unless otherwise directed by the Resident. Failure to deliver an acceptance sample to the designated acceptance laboratory will be considered the second incident under 106.4.6-QCP Non-Compliance.

The Department will take the sample randomly within each subplot. Target values shall be as specified in the JMF. The Department will use Table 5 for calculating pay factors for gradation, PGAB Content, Air Voids at N_{design} , VMA, Fines to Effective Binder and VFB. The Department will withhold reporting of the test results for the Acceptance sample until 7:00 AM, on the second working day of receipt of the sample, or after receipt of the Contractors results of the Acceptance sample split. Upon conclusion of each lot, where there is a minimum of four sublots, results shall be examined for statistical outliers, as stated in Section 106.7.2 - Statistical Outliers.

Isolated Areas During the course of inspection, should it appear that there is an isolated area that is not representative of the lot based on a lack of observed compactive effort, excessive segregation or any other questionable practice, that area may be isolated and tested separately. An area so isolated that has a calculated pay factor below 0.80, based on three random tests shall be removed and replaced at the expense of the Contractor for the full lane width and a length not to be less than 50 m [150 ft].

Pavement Density The Department will measure pavement density using core samples tested according to AASHTO T-166. The Department will randomly determine core locations. The Contractor shall cut 6 inch diameter cores at no additional cost to the Department by the end of the working day following the day the pavement is placed, and immediately give them to the Department. The cores will be placed in a transport container provided by the Department and transported by the Contractor to the designated MDOT Lab as directed by the Department. Pre-testing of the cores will not be allowed. At the time of sampling, the Contractor and the Department shall mutually determine if a core is damaged. If it is determined that the core(s) is damaged, the Contractor shall cut new core(s) at the same offset and within 1 m [3 ft] of the initial sample. At the time the core is cut, the Contractor and the Department will mutually determine if saw cutting of the core is needed, and will mark the core at the point where sawing is needed. The core may be saw cut by the Contractor in the Department's presence onsite, or in an MDOT Lab by The Department, without disturbing the layer being tested to remove lower layers of Hot Mix Asphalt Pavement, gravel, or RAP. No recuts are allowed at a test location after the core has been tested. Upon conclusion of each lot, density results shall be examined for statistical outliers as stated in Section 106.7.2.

On all sections of overlay with wearing courses designed to be 19 mm [3/4 in] or less in thickness, there shall be no pay adjustment for density otherwise noted in Section 403 - Hot Bituminous Pavement. For overlays designed to be 19 mm [3/4 in] or less in thickness, density shall be obtained by the same rolling train and methods as used on mainline travelway surface courses with a pay adjustments for density, unless otherwise directed by the Department.

There shall be no pay adjustment for density on shoulders unless otherwise noted in Section 403 - Hot Bituminous Pavement. Density for shoulders shall be obtained by the same rolling train and methods as used on mainline travelway, unless otherwise directed by the Department. Efforts to obtain optimum compaction will not be waived by the Department unless it is apparent during construction that local conditions make densification to this point detrimental to the finished pavement surface course.

401.201 Method A Lot Size will be the entire production per JMF for the project, or if so agreed at the Pre-paving Conference, equal lots of up to 4500 Mg [4500 tons], with unanticipated over-runs of up to 1500 Mg [1500 ton] rolled into the last lot. Sublot sizes shall be 750 Mg [750 ton] for mixture properties, 500 Mg [500 ton] for base or binder densities and 250 Mg [250 ton] for surface densities. The minimum number of sublots for mixture properties shall be 4, and the minimum number of sublots for density shall be five.

TABLE 5: METHOD A ACCEPTANCE LIMITS

Property	USL and LSL
Passing 4.75 mm and larger sieves	Target +/-7%
Passing 2.36 mm to 1.18 mm sieves	Target +/-4%
Passing 0.60 mm	Target +/-3%
Passing 0.30 mm to 0.075 mm sieve	Target +/-2%
PGAB Content	Target +/-0.4%
Air Voids	4.0% +/-1.5%
Fines to Effective Binder	0.6 to 1.2
Voids in the Mineral Aggregate	LSL Only from Table 1
Voids Filled with Binder	Table 1 values plus a 4% production tolerance for USL only
% TMD (In place density)	95.0% +/- 2.5%

401.202 Method B Lot Size will be the entire production per JMF for the project and shall be divided into 3 equal sublots for Mixture Properties and 3 equal sublots for density.

TABLE 6: METHOD B ACCEPTANCE LIMITS

Property	USL and LSL
Percent Passing 4.75 mm and larger sieves	Target +/-7
Percent Passing 2.36 mm to 1.18 mm sieves	Target +/-5
Percent Passing 0.60 mm	Target +/-4
Percent Passing 0.30 mm to 0.075 mm sieve	Target +/-3
PGAB Content	Target +/-0.5
Air Voids	4.0% +/-2.0
Fines to Effective Binder	0.6 to 1.4
Voids in the Mineral Aggregate	LSL from Table 1
Voids Filled with Binder	Table1 plus a 4% production tolerance for USL.
% TMD (In-place Density)	95.0% +/- 2.5%

401.203 Testing Method C Lot Size will be the entire production per JMF for the project, or if so agreed at the Pre-paving Conference, equal lots of up to 4500 Mg [4500 tons], with unanticipated over-runs of up to 1500 Mg [1500 ton] rolled into the last lot. Sublot sizes shall be 750 Mg [750 ton] for mixture properties, 500 Mg [500 ton] for base or binder densities and 250 Mg [250 ton] for surface densities. The minimum number of sublots for mixture properties shall be 4, and the minimum number of sublots for density shall be five.

TABLE 7: METHOD C ACCEPTANCE LIMITS

Property	USL and LSL
Passing 4.75 mm and larger sieves	Target +/-7%
Passing 2.36 mm to 1.18 mm sieves	Target +/-5%
Passing 0.60 mm	Target +/-4%
Passing 0.30 mm to 0.075 mm sieve	Target +/-2%
PGAB Content	Target +/-0.4%
Air Voids	4.0% +/-1.5%
Fines to Effective Binder	0.6 to 1.2
Voids in the Mineral Aggregate	LSL Only from Table 1
Voids Filled with Binder	Table 1 values plus a 4% production tolerance for USL only
% TMD (In place density)	95.0% +/- 2.5%

401.204 Testing Method D For hot mix asphalt items designated as Method D in Section 403 - Hot Bituminous Pavement, one sample will be taken from the paver hopper or the truck body per 250 Mg [250 ton] per pay item. The mix will be tested for gradation and PGAB content. Disputes will not be allowed. If the mix is within the tolerances listed in Table 8: Method D Acceptance Limits, the Department will pay the contract unit price. If the test results for each 250 Mg [250 ton] increment are outside these limits, the following deductions (Table 8b) shall apply to the HMA quantity represented by the test.

TABLE 8: METHOD D ACCEPTANCE LIMITS

Property	USL and LSL
Percent Passing 4.75 mm and larger sieves	Target +/-7
Percent Passing 2.36 mm to 1.18 mm sieves	Target +/-5
Percent Passing 0.60 mm	Target +/-4
Percent Passing 0.30 mm to 0.075 mm sieve	Target +/-3
PGAB Content	Target +/-0.5
% TMD (In-place Density)	95.0% +/- 2.5%

TABLE 8b Method "D" Price Adjustments

PGAB Content	-5%
2.36 mm sieve	-2%
0.30 mm sieve	-1%
0.075 mm sieve	-2%
Density	-10%*

*Only applies when called for in Section 403 - Hot Bituminous Pavement. Contractor shall cut two 150 mm [6 in] cores, which shall be tested for percent TMD per AASHTO T-269. If the average for the two tests falls below 92.5% the disincentive shall apply.

401.21 Method of Measurement The Department will measure Hot Mix Asphalt Pavement by the Mg [ton] in accordance with Section 108.1 - Measurement of Quantities for Payment.

401.22 Basis of Payment The Department will pay for the work, in place and accepted, in accordance with the applicable sections of this Section, for each type of HMA specified.

The Department will pay for the work specified in Section 401.11, for the HMA used, except that cleaning objectionable material from the pavement and furnishing and applying bituminous material to joints and contact surfaces is incidental.

Payment for this work under the appropriate pay items shall be full compensation for all labor, equipment, materials, and incidentals necessary to meet all related contract requirements, including design of the JMF, implementation of the QCP, obtaining core samples, transporting cores and samples, filling core holes, applying emulsified asphalt to joints, and providing testing facilities and equipment.

The Department will make a pay adjustment for quality as specified below.

401.221 Pay Adjustment The Department will sample, test, and evaluate Hot Mix Asphalt Pavement in accordance with Section 106 - Quality and Section 401.20 - Acceptance, of this Specification.

401.222 Pay Factor (PF) The Department will use the following criteria for pay adjustment using the pay adjustment factors under Section 106.7 - Quality Level Analysis:

Density If the pay factor for Density falls below 0.80 for Method A or C or 0.86 for Method B, all of the cores will be randomly recut by Sublot. A new pay factor will be calculated that combines all initial and retest results. If the resulting pay factor is below 0.80 for Method A or C or below 0.86 for Method B, the entire Lot shall be removed and replaced with material meeting the specifications at no additional cost to the Department, except that the Department may, when it appears that there is a distinct pattern of defective material, isolate any defective material by investigating each mix sample subplot and require removal of defective mix sample sublots only, leaving any acceptable material in place if it is found to be free of defective material. Pay factors equal to or greater than the reject level will be paid accordingly.

Gradation For HMA evaluated under Acceptance Method A or B, the Department will determine a composite pay factor (CPF) using applicable price adjustment factors “f” from Table 9: Table of Gradation Composite “f” Factors, and Acceptance limits from Table 5: Method A Acceptance Limits, for Method A or Table 6: Method B Acceptance Limits, for Method B. The Department will not make price adjustments for gradation on Methods A and B, but will monitor them as shutdown criteria.

TABLE 9: TABLE OF GRADATION COMPOSITE "f" FACTORS
(Methods A and B)

Constituent		"f" Factor			
		19 mm	12.5 mm	9.5 mm	4.75 mm
Gradation	25 mm	-	-	-	-
	19 mm	4	-	-	-
	12.5 mm		4	4	-
	9.50 mm				4
	2.36 mm	6	6	6	8
	1.18 mm				
	0.60 mm	2	2	2	2
	0.30 mm	2	2	2	2
	0.075 mm	6	6	6	8

For HMA evaluated under Acceptance Method C, the Department will determine a pay factor using acceptance limits from Table 7: Method C Acceptance Limits.

VMA, Air Voids, VFB and Fines to Effective Binder The Department will determine a pay factor (PF) using the applicable Acceptance Limits.

The following variables will be used for pay adjustment:

- PA = Pay Adjustment
- Q = Quantity represented by PF in Mg [ton]
- P = Contract price per Mg [ton]
- PF = Pay Factor

Pay Adjustment Method A

The Department will use the following criteria for pay adjustment: density, Performance Graded Asphalt Binder content, voids @N_d, VMA, VFB, F/B_{eff}, and the screen sizes listed in Table 9 for the type of HMA represented in the JMF. If any single pay factor for PGAB Content, VMA, or Air Voids falls below 0.80, then the composite pay factor for PGAB Content, VMA, and Air Voids shall be 0.55.

Density: For mixes having a density requirement, the Department will determine a pay factor using Table 5: Method A Acceptance Limits:

$$PA = (\text{density PF} - 1.0)(Q)(P) \times 0.50$$

PGAB Content, VMA and Air Voids: The Department will determine a pay adjustment using Table 5: Method A Acceptance Limits as follows:

$$PA = (\text{voids @ } N_d \text{ PF} - 1.0)(Q)(P) \times 0.20 + (\text{VMA @ } N_d \text{ PF} - 1.0)(Q)(P) \times 0.20 + (\text{PGAB PF} - 1.0)(Q)(P) \times 0.10$$

VFB and Fines to Effective Binder The Department will determine a pay factor (PF) using Table 5: Method A Acceptance Limits. The Department will not make price adjustments for VFB or Fines to Effective Binder, but will monitor them as shutdown criteria.

Pay Adjustment Method B

The Department will use the following criteria for pay adjustment: density, Performance Graded Asphalt Binder content, voids @ N_d , VMA, VFB, F/B_{eff}, and the screen sizes listed in Table 9 for the type of HMA represented in the JMF. If any single pay factor for PGAB Content, VMA, or Air Voids falls below 0.86, then the composite pay factor for PGAB Content, VMA, and Air Voids shall be 0.70.

Density: For mixes having a density requirement, the Department will determine a pay factor using Table 6: Method B Acceptance Limits:

$$PA = (\text{density PF} - 1.0)(Q)(P) \times 0.50$$

PGAB Content, VMA and Air Voids: The Department will determine a pay adjustment using Table 6: Method B Acceptance Limits as follows:

$$PA = (\text{voids @ } N_d \text{ PF} - 1.0)(Q)(P) \times 0.20 + (\text{VMA @ } N_d \text{ PF} - 1.0)(Q)(P) \times 0.20 + (\text{PGAB PF} - 1.0)(Q)(P) \times 0.10$$

VFB and Fines to Effective Binder The Department will determine a pay factor (PF) using Table 6: Method B Acceptance Limits. The Department will not make price adjustments for VFB or Fines to Effective Binder, but will monitor them as shutdown criteria.

Pay Adjustment Method C

The Department will use density, Performance Graded Asphalt Binder content, and the percent passing the nominal maximum, 2.36 mm, 0.300 mm and 0.075 mm sieves for the type of HMA represented in the JMF. If the PGAB content falls below 0.80, then the PGAB pay factor shall be 0.55.

Density: For mixes having a density requirement, the Department will determine a pay factor using Table 7: Method C Acceptance Limits:

$$PA = (\text{density PF} - 1.0)(Q)(P) \times 0.50$$

PGAB Content and Gradation The Department will determine a pay factor using Table 7: Method C Acceptance Limits. The Department will calculate the price adjustment for Mixture Properties as follows:

$$PA = (\% \text{ Passing Nom. Max PF-1.0})(Q)(P)X0.05 + (\% \text{ passing 2.36 mm PF-1.0})(Q)(P)X0.05 + (\% \text{ passing 0.30 mm PF-1.0})(Q)(P)X0.05 + (\% \text{ passing 0.075 mm PF-1.0})(Q)(P)X0.10 + (PGAB \text{ PF-1.0})(Q)(P)X0.25$$

VMA, Air Voids, VFB and Fines to Effective Binder The Department will determine a pay factor (PF) using Table 7: Method C Acceptance Limits. The Department will not make price adjustments for VMA, Air Voids, VFB or Fines to Effective Binder, but will monitor them as shutdown criteria.

Pay Adjustment Method D

The Department will use density, Performance Graded Asphalt Binder content, and the screen sizes listed in Table 8b for the type of HMA represented in the JMF. If test results do not meet the Table 8 requirements, deducts as shown in Table 8b shall be applied to the quantity of mix represented by the test.

401.223 Process for Dispute Resolution (Methods A B & C only)

a. Dispute Resolution sampling At the time of Hot-Mix Asphalt sampling, the Department will obtain a split sample of each Acceptance test random sample for possible dispute resolution testing. The Contractor shall also obtain a split sample of the HMA at this same time. If the Contractor wishes to retain the option of requesting dispute testing of the initial Acceptance sample, the Contractor will test their split of the

Acceptance sample and shall report their results to the Resident, with a copy to the QA Engineer at the Central Laboratory in Bangor by 7:00 AM, on the second working day from time of QA sampling, otherwise dispute resolution will not be initiated. The Department's dispute resolution split sample will be properly labeled and stored for a period of not more than two weeks, or until the sample is tested.

b. Disputing Acceptance results The Contractor may dispute the Department's Acceptance results and request (Methods A, B, & C) that the dispute resolution split sample be tested by notifying the Department's Resident and the QA Engineer at the Central Laboratory in Bangor in writing within two working days after receiving the results of the Acceptance test. The following shall be provided in the request:

- Acceptance sample reference number
- The specific test result(s) or property(ies) being disputed, and
- The complete, signed report of the Contractor's testing (In a lab certified by the NETTCP and MDOT) of their split of the Acceptance sample indicating that the variances in Table 10: Dispute Resolution Variance Limits, for the specific test result(s) or property(ies) were exceeded.

c. Disputable items The Contractor may dispute any or all of the following Method A or B test results when the difference between the Department's value and the Contractor's value for that test equals or exceeds the corresponding allowable variation in Table 10: Dispute Resolution Variance Limits, PGAB content, G_{mb} , and G_{mm} . In addition, if the allowable variation for these tests is not met or exceeded, the Contractor may dispute either or both of the following material properties provided the difference between results for them equals or exceeds the corresponding allowable variation in Table 10: Voids at N_{design} , and VMA.

For Method C only: The results for PGAB content and the screen sizes used for pay adjustment may be disputed.

d. Outcome The value of any disputed result or property reported for the initial Acceptance sample shall stand if the value reported for the dispute resolution sample is not closer to the value the Contractor reported for their split sample than to the value reported for the initial Acceptance sample. If the value reported for the dispute resolution falls precisely half-way between the other two values the value reported for the dispute resolution will replace the original acceptance value. Otherwise, the value reported for the dispute resolution sample will replace the value reported for the initial Acceptance sample, and will be used to re-calculate any other affected results or properties.

TABLE 10: DISPUTE RESOLUTION VARIANCE LIMITS

PGAB Content	+/-0.4%
G _{mb}	+/-0.030
G _{mm}	+/-0.020
Voids @ N _d	+/-0.8%
VMA	+/-0.8%
Passing 4.75 mm and larger sieves	+/- 4.0%
Passing 2.36 mm to 0.60 mm sieves	+/- 3.0%
Passing 0.30 mm to 0.15	+/- 2.0 %
0.075 mm sieve	+/- 1.0%

SECTION 402 - PAVEMENT SMOOTHNESS

402.00 Smoothness Projects Projects to have their pavement smoothness analyzed in accordance with this Specification will be so noted in Special Provision 403 - Bituminous Box

402.01 Pavement Smoothness The final pavement surface shall be evaluated for smoothness using a Class I or Class II profiler as defined by ASTM E950 (94). Smoothness measurements will be expressed in terms of the International Roughness Index (IRI) as defined by the World Bank, in units of inches/mile.

402.02 Lot Size Lot size for smoothness will be 1000 lane-meters [3000 lane-feet]. A subplot will consist of 20 lane-meters [50 lane-feet]. Partial lots will be included in the previous lot if less than one-half the size of a normal lot. If equal to or greater than one-half the normal lot size, it will be tested as a separate lot.

402.03 Acceptance Testing The Department will conduct Acceptance testing following completion of the surface course. Sections to be excluded from testing include the following:

- Bridge decks and joints (no smoothness measurements will be taken within 30 m [100 ft] of bridge joints)
 - Acceleration and deceleration lanes
 - Shoulders and ramps
 - Side streets and roads
 - Within 30 m [100 ft] of transverse joints at the beginning and end of the project
 - Within 30 m [100 ft] of railroad crossings
 - Urban areas with speed limits of 50 kph [30 mph] or lower
- Each lot shall have 2 measurements made in each wheel path. The average of the 4 measurements will determine the smoothness for that lot.

The smoothness measurements will be statistically evaluated for pay factors as described in Subsection 106.7 - Quality Level Analysis, using the specification limits shown below.

ACCEPTANCE LIMITS

Level	USL
I	0.95 m/km [60 in/mile]
II	1.10 m/km [70 in/mile]
III	1.25 m/km [80 in/mile]

Computation of Smoothness Pay Adjustment:

$$PA = (PF-1.0)(Q)(P)$$

where:

Q = Quantity of surface course in the Lot (excluding shoulders, side streets, bridge decks, ramps, acceleration and deceleration lanes)

PF = smoothness pay factor for the Lot

P = Contract unit price for surface pavement

PA = pay adjustment

402.04 Unacceptable Work In the event that any Lot is found to have a pay factor less than 0.80, the Contractor shall take whatever remedial action is required to correct the pavement surface in that Lot at no additional expense to the Department. Such remedial action may include but is not limited to removal and replacement of the unacceptable pavement. In the event remedial action is necessary, the Contractor shall

submit a written plan to the Resident outlining the scope of the remedial work. The Resident must approve this plan before the remedial work can begin. Following remedial work, the Lot shall be retested, and will be subject to the specification limits listed above. The resulting pay factor, if within the acceptable range, will be used in the final pay adjustment. The Contractor shall pay the cost of retesting the pavement following corrective action.

Localized surface tolerance defects will be subject to the provisions outlined in Section 401.101 Surface Tolerances.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
402.10 Incentive/Disincentive - Pavement Smoothness	Lump Sum

SECTION 403 - HOT BITUMINOUS PAVEMENT

403.01 Description This work shall consist of constructing one or more courses of bituminous pavement on an approved base in accordance with these specifications, and in reasonably close conformity with the lines, grades, thickness and typical cross sections shown on the plans or established.

The bituminous pavement shall be composed of a mixture of aggregate, filler if required, and bituminous material.

403.02 General The materials and their use shall conform to the requirements of Section 401 - Hot Mix Asphalt Pavement.

403.03 Construction The construction requirements shall be as specified in Section 401 - Hot Mix Asphalt Pavement.

In addition, hot bituminous pavement placed on bridges shall also conform to the following requirements.

- a. The mixture shall be composed of aggregate, PGAB and mineral filler but no recycled asphalt pavement and placed in courses as specified in the Special Provisions.
- b. The bottom course shall be placed with an approved rubber mounted bituminous paver of such type and operated in such a manner that the membrane waterproofing will not be damaged in any way.
- c. The top course shall not be placed until the bottom course has cooled sufficiently to provide stability.
- d. The Contractor will not be required to cut sample cores from the compacted pavement on the bridge deck.
- e. After the top course has been placed, the shoulder areas shall be sealed 1 meter [3 ft] wide with two applications of an emulsified bituminous sealer meeting the requirements of Section 702.12 - Emulsified Bituminous Sealing Compound. The first application shall be pre-mixed with fine, sharp sand, similar to mortar sand, as needed to fill all voids in the mix in the area being sealed. The second application may be applied without sand. The sealer shall be carried to the curb at the gutter line in sufficient quantity to leave a bead or fillet of material at the face of the curb. The area to be sealed shall be clean, dry and the surface shall be at ambient temperature.
- f. The furnishing and applying of the required quantity of sealer for the bridge shoulder areas shall be incidental to placing the hot bituminous pavement.
- g. The atmospheric temperature for all courses on bridge decks shall be 10°C [50°F] or higher.

403.04 Method of Measurement Hot bituminous pavement will be measured as specified in Section 401.21-Method of Measurement.

403.05 Basis of Payment The accepted quantities of hot bituminous pavement will be paid for at the contract unit price per Megagram [ton] for the bituminous mixtures, including bituminous material complete in place.

Method A, Method B, Method C and Method D shall be used for acceptance as specified in Section 401 - Hot Mix Asphalt Pavements. (See Complementary Notes, Section 403 - Hot Bituminous Pavement, for Method location).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
403.102 Hot Mix Asphalt Pavement for Special Areas	MG [Ton]
403.206 Hot Mix Asphalt, 25 mm Nominal Maximum Size	MG [Ton]
403.207 Hot Mix Asphalt, 19.0 mm Nominal Maximum Size	MG [Ton]
403.208 Hot Mix Asphalt, 12.5 mm Nominal Maximum Size	MG [Ton]
403.209 Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (sidewalks, drives, islands & incidentals)	MG [Ton]
403.210 Hot Mix Asphalt, 9.5 mm Nominal Maximum Size	MG [Ton]
403.211 Hot Mix Asphalt (shimming)	MG [Ton]
403.212 Hot Mix Asphalt, 4.75 mm Nominal Maximum Size	MG [Ton]
403.213 Hot Mix Asphalt, 12.5 mm Nominal Maximum Size, Base	MG [Ton]

SPECIAL PROVISION
DIVISION 400
PAVEMENTS

(Hot Mix Asphalt Pavement Longitudinal Joint Construction)

Description This work shall consist of furnishing all labor, equipment and materials necessary to trim, clean, heat, seal, and compact hot mix asphalt mixtures used to construct longitudinal and transverse bituminous concrete pavement joints. All bituminous materials are to be thoroughly compacted during the construction of bituminous pavement courses.

The asphalt rubber joint sealer shall be used where specified to seal the longitudinal construction joint in the 12.5mm polymer modified (PGAB 70-28 or 76-28) intermediate base and surface course, to adhere the adjoining HMA materials together.

The Contractor shall utilize infrared technology to heat the base course longitudinal joint immediately before being matched with the adjoining material.

CONSTRUCTION REQUIREMENTS

2.0 Joint Construction

2.1 Transverse Joints The Contractor shall construct wearing course transverse joints in such a manner that minimum tolerances shown in Section 401.101 - Surface Tolerances are met when measured with a straightedge.

The paver shall maintain a uniform head of HMA during transverse joint construction.

The HMA shall be free of segregation and meet the temperature requirements outlined in section 401.04. All joints shall be straight and neatly trimmed. The Contractor may form a vertical face exposing the full depth of the course by inserting a header, by breaking the bond with the underlying course, or by cutting back with hand tools.

2.2 Longitudinal Joints Longitudinal joints shall be generally straight to the line of travel, and constructed in a manner that best ensure joint integrity. Methods or activities that prove detrimental to the construction of straight, sound longitudinal joints will be discontinued.

On Contracts requiring multiple lifts or courses, the width of the individual lifts shall be arranged such that the centerline longitudinal joints of each successive lift are offset from the previous lift approximately 150mm (6 inch).

2.22 Surface and Intermediate Course On the top two lifts/courses of pavement under this contract, or when the Department directs, the Contractor shall pave a minimum of 3” and a maximum of 6” over the proposed centerline on the first pass and then shall cut or mill the pavement back to the proposed centerline prior to placing the second pass. Prior to placing the second lift, the contractor shall cut or mill the pavement back to the proposed centerline and the joint shall be a neat, even and vertical joint that is straight. The Department will not permit broken or raveled edges and joints that are not straight.

All construction joints shall be swept or blown free of loose material, dirt, and other debris. Material removed from the joint shall be removed from the pavement surface by means of a power sweeper or appropriate hand tools as required. Joints shall additionally be cleaned by appropriate hand tools if contaminants remain on the face. All debris and water shall be removed to enhance adhesion of the crack sealing material.

On the surface and intermediate course, or as otherwise outlined in the contract, the Contractor shall apply a coating of Low Modulus Asphalt Joint Sealer, as per Special Provision 424) to the vertical face of the course being matched, except for those formed by pavers operating in echelon.

The Department will pay for all Hot Mix Asphalt Pavement, All pavement cutting or milling under Item 2020.202 and all Joint Sealing under Item 424.3333. All other costs of work necessary for the preparation of joints is incidental to related contract pay items.

The final longitudinal joint in the traveled way surface course of two lane roadways shall be at the centerline, and at the lane widths shown in the plans on roadways with more than two lanes.

2.23 Base Courses On base mix courses, not in the top two lifts/courses, the Contractor shall apply a coating of emulsified asphalt, or PGAB 64-28 asphalt to the vertical face and 3 in of the adjacent portion of any pavement being overlaid, except for those formed by pavers operating in echelon.

The Contractor shall utilize infrared technology to heat the base course longitudinal joints immediately before being matched with the adjoining HMA material. Infrared equipment shall be thermostatically controlled to provide a uniform, consistent temperature increase within a 275 – 325 F degree range.

In areas of bridge approaches and underpasses the base courses shall be placed wide enough to allow the joint to be constructed and or to be trimmed prior to placing the pavement course in the other lane or as directed by the Department.

3.0 Alternatives The Contractor shall submit a detailed plan to the Department for the construction of sound longitudinal joints. The detailed plan shall address the manner in which centerline control will be established, the placement of all courses, action plan to correct deficiencies in alignment, thickness, or soundness of the joint materials, methods of trimming and removal of the required excess materials, and methods of compaction of the longitudinal joints. Innovative methods, such as specialized joint construction screed modifications, infrared technology, or echelon paving may be allowed by the Department. Once approved, this plan will become part of the QCP, and be subject to penalties outlined in section 106- Quality.

4.0 Research The contractor shall cut cores on centerline at a rate of 1/2000' on the top two lifts/courses of Hot Mix Asphalt Pavement. The cores shall be cut either the day of or the day after pavement has been placed. The cores will become property of the Department and will be tested as Research. The results will be shared with the contractor and the results may be used in decision making by the Department and contractor on how best to proceed with constructing joints.

SPECIAL PROVISION
SECTION 401
PLANT MIX PAVEMENTS - GENERAL
(Material Transfer Vehicle)

The hot bituminous mix shall be transferred to the paver for mainline on the **final two lifts/courses** of pavement by a material transfer vehicle (MTV) on main line paving.

The MTV shall operate as an independent unit not attached to the paver. It shall be a commercially manufactured unit specifically designed to transfer the hot mix from haul trucks to the paver without depositing the mix on the roadway.

Also required is a separate hopper with a capacity of 18 Mg [20 ton] that shall be inserted into the regular paver hopper.

The MTV or the hopper insert shall be designed so that the mix receives additional mixing action either in the MTV unit or the paver hopper.

The MTV and the hopper insert will not be paid for directly, but will be considered incidental to the related contract pay items.

SPECIAL PROVISION
DIVISION 401
HOT MIX ASPHALT PAVEMENTS
(Asphalt Rich Base Mixture)

The Special Provision 400 – Pavements; Section 401 – Hot Mix Asphalt Pavements ; the following subsections have been modified with the following :

Description The Contractor shall furnish and place one or more courses of Asphalt Rich Base Hot Mix Asphalt (ARBHMA) on an approved base in accordance with the contract documents and in reasonably close conformity with the lines, grades, thickness, and typical cross sections shown on the plans or established by the Resident. The Department will accept this work under Quality Assurance provisions, in accordance with these specifications and the requirements of Section 106 – Quality, the provisions of AASHTO M 323 except where otherwise noted in sections 401 and 703 of these specifications, and the Maine DOT Policies and Procedures for HMA Sampling and Testing.

MATERIALS

401.02 Materials This section has been modified with the following revision:

The Asphalt Rich Base HMA shall be designed for an Air Void Target of 2.5 % at 50 Gyration.

401.03 Composition of Mixtures This section has been modified with the following revision:

The Asphalt Rich Base HMA shall meet the following design criteria.

DESIGN CRITERIA

Gradation	PGAB Targets
9.5mm mixture	7.0 %
12.5mm mixture	6.5 %
19.0mm mixture	6.0 %

The mixture shall meet the gradation requirements of a current MaineDOT approved 9.5mm, 12.5mm, or 19.0mm 50 Gyration JMF, as required by the contract, and the minimum PGAB content noted above. The Acceptance Limit targets for gradation will be as specified on the JMF.

401.201 Method A Lot Size will be the entire production per JMF for the project, or if so agreed at the Pre-paving Conference, equal lots of up to 4050 Mg [4500 tons], with unanticipated over-runs of up to 1350 Mg [1500 ton] rolled into the last lot. Sublot sizes shall be 675 Mg [750 ton] for mixture properties, 450 Mg [500 ton] for base or binder densities and 225 Mg [250 ton] for surface densities. The minimum number of sublots for mixture properties shall be 4, and the minimum number of sublots for density shall be five.

TABLE 5: METHOD A ACCEPTANCE LIMITS

Property	USL and LSL
Passing 4.75 mm and larger sieves	Target +/-7%
Passing 2.36 mm to 1.18 mm sieves	Target +/-4%
Passing 0.60 mm	Target +/-3%
Passing 0.30 mm to 0.075 mm sieve	Target +/-2%
PGAB Content	Target +/-0.4%
Air Voids	2.5% +/-1.5%
Fines to Effective Binder	0.4 to 1.2
Voids in the Mineral Aggregate	LSL Only from Table 1
Voids Filled with Binder	72 – 91.0 including production tolerance
% TMD (In place density)	96.0% +/- 2.5%

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
403.2102 – 9.5mm Asphalt Rich Base HMA	Ton
403.2132 – 12.5mm Asphalt Rich Base HMA	Ton
403.2072 – 19.0mm Asphalt Rich Base HMA	Ton

SPECIAL PROVISION
SECTION 403
HOT BITUMINOUS PAVEMENT

The following additions are made to Section 403 Subsection 403.05 of the December 2002 revision of the Standard Specifications.

403.05 Basis of Payment:

<u>Pay Item</u>	<u>Pay Unit</u>
403.2081 12.5mm Polymer Modified Hot Mix Asphalt	Ton [Megagram]
403.2102 9.5mm Asphalt Rich Base Mixture	Ton [Megagram]
403.2131 12.5mm Polymer Modified HMA Base	Ton [Megagram]
403.2132 12.5mm Asphalt Rich Base Mixture	Ton [Megagram]

SPECIAL PROVISION
SECTION 403
HOT MIX ASPHALT OVERLAY

Desc. of Course	Grad. Design	Item Number	Bit Cont. % of Mix	Total Thick	No. Of Layers	Comp. Notes
<u>Sta. 519+94 to 533+13 Travel and Passing Lane</u>						
<u>With Passing Lane Shoulder</u>						
<u>3" Mill and 3" HMA Resurfacing</u>						
Wearing	12.5mm	403.2081	N/A	1 ½"	1	1,5,7,12,22
Base	12.5mm	403.2131	N/A	1 ½"	1	1,5,7,12
<u>Sta. 519+94 to 533+13 10 foot Shoulders</u>						
<u>3" Existing Pavement Mill</u>						
<u>3" HMA Resurfacing</u>						
Wearing	12.5mm	403.208	N/A	1 ½"	1	5,7,12
Base	12.5mm	403.213	N/A	1 ½"	1	5,7,12
<u>Miscellaneous Areas</u>						
Shim	9.5 mm	403.211	N/A	variable	1	2,4,7,11

COMPLEMENTARY NOTES

1. The required PGAB for this mixture will meet a **PG 70-28** to **PG 76-28** grading. The use of Recycled Asphalt Pavement (RAP) will not be permitted in mixtures utilizing modified PGAB's.
2. The density requirements are waived.
4. The design traffic level for mix placed shall be 0.3 to <3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **50 gyrations.**
5. 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 **75 gyrations.**
7. Section 106.6 Acceptance, (1) Method A.
11. The combined aggregate gradation required for this item shall be classified as a 9.5mm "**fine graded**" mixture, (using the Primary Control Sieve control point) as defined in 703.09.
12. The combined aggregate gradation required for this item shall be classified as a 12.5mm "**fine graded**" mixture (using the Primary Control Sieve control point) as defined in 703.09.
22. The final pavement surface shall be evaluated for smoothness in accordance with Special Provision section 402 – Pavement Smoothness dated 1-27-09. Acceptance limits shall be as outlined under the **Level 1** classification.

Tack Coat

A tack coat of emulsified asphalt, RS-1 Item #409.15 shall be applied to any existing pavement at a rate of approximately 0.025 G/SY, and on milled pavement approximately 0.05 G/SY, prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim / intermediate course and the surface course, at a rate not to exceed 0.025 G/SY. Tack used between layers of pavement will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

SPECIAL PROVISION
SECTION 403
HOT MIX ASPHALT OVERLAY

Desc. of Course	Grad. Design	Item Number	Bit Cont. % of Mix	Total Thick	No. Of Layers	Comp. Notes
<u>Sta. 533+13 to 737+74 Travel and Passing Lane with Shoulder</u>						
<u>4" HMA Resurfacing</u>						
Wearing	12.5mm	403.2081	N/A	1 1/2"	1	1,5,7,12,22
Base	12.5mm	403.2131	N/A	1 1/2"	1	1,5,7,12
Shim	9.5 mm	403.211	N/A	variable	1	2,4,7,11
SAMI	12.5mm	410.25	N/A	5/8"	1	18
<u>Sta. 533+13 to 737+74 - 10 foot Shoulders and Guardrail Shoulders</u>						
<u>3" HMA Resurfacing</u>						
Wearing	12.5mm	403.208	N/A	1 1/2"	1	1,5,7,12
Base	12.5mm	403.213	N/A	1 1/2"	1	1,5,7,12
<u>Miscellaneous Areas</u>						
Shim	9.5 mm	403.211	N/A	variable	1	2,4,7,11

COMPLEMENTARY NOTES

- The required PGAB for this mixture will meet a **PG 70-28** to **PG 76-28** grading. The use of Recycled Asphalt Pavement (RAP) will not be permitted in mixtures utilizing modified PGAB's.
- The density requirements are waived.
- The design traffic level for mix placed shall be 0.3 to <3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **50 gyrations.**
- 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 **75 gyrations.**
- Section 106.6 Acceptance, (1) Method A.
- The combined aggregate gradation required for this item shall be classified as a 9.5mm "**fine graded**" mixture, (using the Primary Control Sieve control point) as defined in 703.09.
- The combined aggregate gradation required for this item shall be classified as a 12.5mm "**fine graded**" mixture (using the Primary Control Sieve control point) as defined in 703.09.
- Refer to Special Provision 410 – Asphalt Rubber Chip Seal for project specifics.
- Refer to Special Provision 401 – Asphalt Rich Base Mixture for project specifics.
- The final pavement surface shall be evaluated for smoothness in accordance with Special Provision section 402 – Pavement Smoothness dated 1-27-09. Acceptance limits shall be as outlined under the **Level 1** classification.

**Brunswick – West Gardiner
IM-1511(450)E
I - 295 Northbound
4 inch Overlay Sections
Highway Rehabilitation
January 27, 2009**

Tack Coat

A tack coat of emulsified asphalt, RS-1, Item #409.15 shall be applied to any existing pavement at a rate of approximately 0.025 G/SY, and on milled pavement approximately 0.05 G/SY, prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim / intermediate course and the surface course, at a rate not to exceed 0.025 G/SY.

Tack used between layers of pavement will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

SPECIAL PROVISION
SECTION 403
HOT MIX ASPHALT OVERLAY

Desc. of Course	Grad. Design	Item Number	Bit Cont. % of Mix	Total Thick	No. Of Layers	Comp. Notes
<u>Sta. 737+74 to 1674+20</u>						
<u>8” HMA Pavement Reconstruction Areas</u>						
<u>Travel and Passing Lanes</u>						
Wearing	12.5mm	403.2081	N/A	1 ½”	1	1,5,7,12,22
Base	12.5mm	403.2131	N/A	1 ½”	1	1,5,7,12
Base	12.5mm	403.213	N/A	2 ½”	1	5,7,13
Base	12.5mm	403.2132	N/A	2 ½”	1	4,7,13,19
<u>Sta. 737+74 to 1674+20</u>						
<u>3” HMA Pavement Reconstruction</u>						
<u>Passing Lane Shoulders</u>						
Wearing	12.5mm	403.2081	N/A	1 ½”	1	1,5,7,12
Base	12.5mm	403.2131	N/A	1 ½”	1	1,5,7,12
<u>Sta. 737+74 to 1674+20</u>						
<u>3” HMA Pavement Reconstruction</u>						
<u>Travel Lane Shoulders and Guardrail Areas</u>						
Wearing	12.5mm	403.208	N/A	1 ½”	1	5,7,12
Base	12.5mm	403.213	N/A	1 ½”	1	5,7,12
<u>Miscellaneous Areas</u>						
Shim	9.5 mm	403.211	N/A	variable	1	2,4,7,11

COMPLEMENTARY NOTES

- The required PGAB for this mixture will meet a **PG 70-28** to **PG 76-28** grading. The use of Recycled Asphalt Pavement (RAP) will not be permitted in mixtures utilizing modified PGAB’s.
- The density requirements are waived.
- The design traffic level for mix placed shall be 0.3 to <3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **50 gyrations.**
- 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 **75 gyrations.**
- Section 106.6 Acceptance, (1) Method A.
- The combined aggregate gradation required for this item shall be classified as a 9.5mm “**fine graded**” mixture, (using the Primary Control Sieve control point) as defined in 703.09.
- The combined aggregate gradation required for this item shall be classified as a 12.5mm “**fine graded**” mixture (using the Primary Control Sieve control point) as defined in 703.09.
- The combined aggregate gradation required for this item shall be classified as a 12.5mm “**fine graded**” mixture, or a 19.0mm “**fine graded**” mixture (using the Primary Control Sieve control point) as defined in 703.09.

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IM-1511(450)E
I - 295 Northbound
8 inch Overlay Section
Highway Rehabilitation
January 27, 2009**

19. Refer to Special Provision 401 – Asphalt Rich Base Mixture for project specifics.
22. The final pavement surface shall be evaluated for smoothness in accordance with Special Provision section 402 – Pavement Smoothness dated 1-27-09. Acceptance limits shall be as outlined under the **Level 1** classification.

Tack Coat

A tack coat of emulsified asphalt, RS-1 Item #409.15 shall be applied to any existing pavement at a rate of approximately 0.025 G/SY, and on milled pavement approximately 0.05 G/SY, prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim / intermediate course and the surface course, at a rate not to exceed 0.025 G/SY. Tack used between layers of pavement will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

SPECIAL PROVISION
SECTION 403
HOT MIX ASPHALT OVERLAY

Desc. of Course	Grad. Design	Item Number	Bit Cont. % of Mix	Total Thick	No. Of Layers	Comp. Notes
<u>Sta. 1674+20 to 478+00</u>						
<u>1 1/2" Mill and Fill HMA Resurface</u>						
<u>Travel and Passing Lanes</u>						
Base	12.5mm	403.2131	N/A	1 1/2"	1	1,5,7,12
<u>Sta. 1674+20 to 478+00 1 1/2" Overlay</u>						
<u>HMA Resurface Travel and Passing Lanes</u>						
<u>and Passing Lane Shoulders</u>						
Wearing	12.5mm	403.2081	N/A	1 1/2"	1	1,5,7,12,22
<u>Sta. 1674+20 to 478+00 1 1/2" Overlay</u>						
<u>HMA Resurface Travel Lane Shoulders</u>						
<u>and Guardrail Shoulders</u>						
Wearing	12.5mm	403.208	N/A	1 1/2"	1	5,7,12
<u>3" HMA Guardrail widening</u>						
Wearing	12.5 mm	403.208	N/A	1 1/2"	1	5,7,12
Wearing	12.5 mm	403.213	N/A	1 1/2"	1	5,7,12
<u>Overlay and Miscellaneous Areas</u>						
Shim	9.5 mm	403.211	N/A	variable	1	2,4,10,11

COMPLEMENTARY NOTES

1. The required PGAB for this mixture will meet a **PG 70-28** to **PG 76-28** grading. The use of Recycled Asphalt Pavement (RAP) will not be permitted in mixtures utilizing modified PGAB's.
2. The density requirements are waived.
4. The design traffic level for mix placed shall be 0.3 to <3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **50 gyrations.**
5. 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 **75 gyrations.**
7. Section 106.6 Acceptance, (1) Method A.
10. Section 106.6 Acceptance, (2) Method D.
11. A **"FINE"** 9.5 mm mix with a gradation above or through the restricted zone shall be used for this item

**Brunswick - West Gardiner
IM-1511(450)E
I - 295 Northbound
Mill and Overlay
January 27, 2009**

12. A “**Fine**” 12.5mm mixture with a gradation above or through the restricted zone shall be used for this item.
22. The final pavement surface shall be evaluated for smoothness in accordance with Special Provision section 402 – Pavement Smoothness dated 1-27-09. Acceptance limits shall be as outlined under the **Level 1** classification.

Tack Coat

A tack coat of emulsified asphalt, RS-1 or HFMS-1, Item #409.15 shall be applied to any existing pavement at a rate of approximately 0.025 G/SY, and on milled pavement approximately 0.05 G/SY, prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim / intermediate course and the surface course, at a rate not to exceed 0.025 G/SY.

Tack used between layers of pavement will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

SPECIAL PROVISION
SECTION 403
HOT MIX ASPHALT OVERLAY

Desc. of Course	Grad. Design	Item Number	Bit Cont. % of Mix	Total Thick	No. Of Layers	Comp. Notes
<u>9" HMA Pavement Reconstruction Areas</u>						
<u>Travel and Passing Lanes</u>						
Wearing	12.5mm	403.2081	N/A	1 ½"	1	1,5,7,12,22
Base	12.5mm	403.2131	N/A	1 ½"	1	1,5,7,12
Base	12.5mm	403.213	N/A	3"	1	5,7,13
Base	12.5mm	403.2132	N/A	3"	1	4,7,13,19
<u>3" HMA Pavement Reconstruction</u>						
<u>Passing Lane Shoulders</u>						
Wearing	12.5mm	403.2081	N/A	1 ½"	1	1,5,7,12
Base	12.5mm	403.2131	N/A	1 ½"	1	1,5,7,12
<u>3" HMA Pavement Reconstruction</u>						
<u>Travel Lane Shoulders and Guardrail Areas</u>						
Wearing	12.5mm	403.208	N/A	1 ½"	1	5,7,12
Base	12.5mm	403.213	N/A	1 ½"	1	5,7,12
<u>Miscellaneous Areas</u>						
Shim	9.5 mm	403.211	N/A	variable	1	2,4,7,11

COMPLEMENTARY NOTES

- The required PGAB for this mixture will meet a **PG 70-28** to **PG 76-28** grading. The use of Recycled Asphalt Pavement (RAP) will not be permitted in mixtures utilizing modified PGAB's.
- The density requirements are waived.
- The design traffic level for mix placed shall be 0.3 to <3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **50 gyrations**.
- 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 **75 gyrations**.
- Section 106.6 Acceptance, (1) Method A.
- The combined aggregate gradation required for this item shall be classified as a 9.5mm "**fine graded**" mixture, (using the Primary Control Sieve control point) as defined in 703.09.
- The combined aggregate gradation required for this item shall be classified as a 12.5mm "**fine graded**" mixture (using the Primary Control Sieve control point) as defined in 703.09.
- The combined aggregate gradation required for this item shall be classified as a 12.5mm "**fine graded**" mixture, or a 19.0mm "**fine graded**" mixture (using the Primary Control Sieve control point) as defined in 703.09.
- Refer to Special Provision 401 – Asphalt Rich Base Mixture for project specifics.
- The final pavement surface shall be evaluated for smoothness in accordance with Special Provision section 402 – Pavement Smoothness dated 1-27-09. Acceptance limits shall be as outlined under the **Level 1** classification.

**Brunswick-West Gardiner
IM-1511(450)E
I - 295 Northbound
9 inch Overlay Sections
Highway Rehabilitation
January 27, 2009**

Tack Coat

A tack coat of emulsified asphalt, RS-1, Item #409.15 shall be applied to any existing pavement at a rate of approximately 0.025 G/SY, and on milled pavement approximately 0.05 G/SY, prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim / intermediate course and the surface course, at a rate not to exceed 0.025 G/SY. Tack used between layers of pavement will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

SPECIAL PROVISION
SECTION 403
HOT MIX ASPHALT OVERLAY

Desc. of Course	Grad. Design	Item Number	Bit Cont. % of Mix	Total Thick	No. Of Layers	Comp. Notes
<u>3" HMA Overlay</u>						
<u>Exit 28 Off Ramp Main line and Shoulders</u>						
Wearing	12.5mm	403.208	N/A	1 ½"	1	5,7,12
Base	12.5mm	403.213	N/A	1 ½"	1	5,7,12
Shim	9.5mm	403.211	N/A	Variable	1	2,4,7,11
<u>2" Mill and Shim and 1 ½" HMA Overlay Main line and Shoulders</u>						
<u>Exit 49 Off and On Ramps</u>						
<u>Exit 51 Off and On Ramps</u>						
Wearing	12.5mm	403.208	N/A	1 ½"	1	5,7,12
Shim	9.5mm	403.211	N/A	Variable	2	2,4,7,11
<u>Pavement Reclaim and 5 ½" HMA Overlay Main line and Shoulders</u>						
<u>Exit 28 Northbound On Ramp</u>						
<u>Exit 31 On Ramp</u>						
<u>Exit 43 On and Off Ramps</u>						
Wearing	12.5mm	403.208	N/A	1 ½"	1	5,7,12
Shim	9.5mm	403.211	N/A	Variable	1	2,4,7,11
Base	12.5mm	403.213	N/A	3"	1	5,7,12
<u>1 ½" HMA Shim and Overlay Main line and Shoulder</u>						
<u>Exit 28 Southbound On Ramp</u>						
<u>Exit 31 Off Ramp</u>						
<u>Exit 37 Off and On Ramp</u>						
Wearing	12.5mm	403.208	N/A	1 ½"	1	5,7,12
Shim	9.5mm	403.211	N/A	Variable	1	2,4,7,11
<u>Overlay, and Miscellaneous Areas as directed</u>						
Shim	9.5 mm	403.211	N/A	variable	1	2,4,7,11

COMPLEMENTARY NOTES

- The density requirements are waived.
- The design traffic level for mix placed shall be 0.3 to <3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **50 gyrations.**

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IM-1511(450)E
I - 295 Northbound
On ramps and Off ramps
Highway Rehabilitation
January 27, 2009**

5. 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 **75 gyrations**.
7. Section 106.6 Acceptance, (1) Method A.
11. The combined aggregate gradation required for this item shall be classified as a 9.5mm “**fine graded**” mixture, (using the Primary Control Sieve control point) as defined in 703.09.
12. The combined aggregate gradation required for this item shall be classified as a 12.5mm “**fine graded**” mixture (using the Primary Control Sieve control point) as defined in 703.09.

Tack Coat

A tack coat of emulsified asphalt, RS-1, Item #409.15 shall be applied to any existing pavement at a rate of approximately 0.025 G/SY, and on milled pavement approximately 0.05 G/SY, prior to placing a new course. A fog coat of emulsified asphalt, RS-1, shall be applied between shim and intermediate course and the surface course, at a rate not to exceed 0.025 G/SY. Tack used between layers of pavement will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

SPECIAL PROVISION
SECTION 403
HOT MIX ASPHALT OVERLAY

Desc. of Course	Grad. Design	Item Number	Bit Cont. % of Mix	Total Thick	No. Of Layers	Comp. Notes
<u>2" Mill and 2 1/4" HMA Resurfacing</u>						
<u>Bridge Deck Travel and Passing Lanes</u>						
Wearing	12.5 mm	403.2081	N/A	1 3/4"	1/more	1,2,5,7,12
Shim	9.5 mm	403.211	N/A	Variable	1	1,2,4,7,11
<u>3" Mill and 3" HMA Resurfacing</u>						
<u>Cobbosseecontee Bridge</u>						
Wearing	12.5mm	403.2081	N/A	1 1/2"	1	1,2,5,7,12
Base	12.5mm	403.2131	N/A	1 1/2"	1	1,2,5,7,12

COMPLEMENTARY NOTES

- The required PGAB for this mixture will meet a **PG 70-28** to **PG 76-28** grading. The use of Recycled Asphalt Pavement (RAP) will not be permitted in mixtures utilizing modified PGAB's.
- The density requirements are waived. The use of an oscillating steel roller shall be required to compact all HMA pavements placed on bridge decks.
- The design traffic level for mix placed shall be 0.3 to <3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **50 gyrations.**
- 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 **75 gyrations.**
- Section 106.6 Acceptance, (1) Method A.
- The combined aggregate gradation required for this item shall be classified as a 9.5mm "**fine graded**" mixture, (using the Primary Control Sieve control point) as defined in 703.09.
- The combined aggregate gradation required for this item shall be classified as a 12.5mm "**fine graded**" mixture (using the Primary Control Sieve control point) as defined in 703.09.

Tack Coat

A tack coat of emulsified asphalt, RS-1, Item #409.15 shall be applied to any existing pavement at a rate of approximately 0.025 G/SY, and on milled pavement approximately 0.05 G/SY, prior to placing a new course. A fog coat of emulsified asphalt, RS-1, shall be applied between shim and intermediate course and the surface course, at a rate not to exceed 0.025 G/SY. Tack used between layers of pavement will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

SPECIAL PROVISION
SECTION 410
CHIP SEAL

(ASPHALT-RUBBER SURFACE TREATMENT WITH AGGREGATE COVER)

Description The Contractor shall furnish and place one or more courses of Asphalt Rubber Surface Treatment with Aggregate Cover on an approved base in accordance with the Contract Documents and in reasonably close conformity with the lines, grades, and thicknesses and typical cross sections shown on the plans or otherwise established. References to Standard Specifications, Special Provisions, or other documents, shall be determined as the most current version available at the time of bid.

1.0 MATERIALS

1.1 Performance graded binder Performance graded binder for the asphalt-rubber mixture shall be PG 58-28 OR PG 64-28 conforming to the requirements of AASHTO M 320, Section 700 - Materials: 702.01 Asphalt Cement, and 703.07 Aggregates for HMA Pavement. The grade selected shall be based on laboratory testing by the asphalt-rubber supplier.

1.2 Anti-stripping Agent If required by the job-mix formula to produce appropriate water resistance, an anti-stripping agent that is heat stable and approved for use by the Department shall be incorporated into the asphalt-rubber material at the dosage required by the job-mix formula (up to 1.0% by weight of asphalt). It shall be added to the asphalt cement prior to blending with the granulated rubber.

1.3 Rubber The granulated rubber shall be vulcanized rubber product from the ambient temperature processing of scrap, pneumatic tires. The granulated rubber shall meet the following gradations: No substitutions will be accepted.

<u>Sieve Size</u>	<u>% Passing</u>
2.00 mm, [#10]	100
1.18 mm, [#16]	90 – 100
0.60 mm, [#30]	25 – 100
0.18 mm, [#80]	0 - 20

The use of rubber of multiple types from multiple sources is acceptable provided that the overall blend of rubber meets the gradation requirements. The length of the individual rubber particles shall not exceed 3 mm, [1/8"]. The rubber shall be accepted by certification from the rubber supplier.

1.4 Aggregate The aggregate shall be of quarried stone and conform to the requirements of Section 703.07 Aggregates for HMA Pavements. Crushed gravel stone will not be permitted. Percentage of wear as determined by the Los Angeles Abrasion Test (AASHTO-T96) shall be a maximum of 30. The aggregate shall be pre-heated to a temperature between 93°C and 149°C, [200°F and 300°F], and be pre-coated with 0.4% to 0.8% (by weight of aggregate) of PG 64-28, or PG 58-28 prior to application. It is required that the gradation of the aggregate shall meet the following limits:

<u>Sieve Size</u>	<u>% Passing – Nominal Size</u>
	12.5 mm, [1/2"]
15.8 mm, [5/8"]	100%
12.5 mm, [1/2"]	85 – 100%
9.5 mm, [3/8"]	15 – 60%
4.75 mm, [#4]	0 – 15%
2.36 mm, [#8]	0 – 5%
0.30 mm, [#50]	0 – 2%
0.075 mm, [#200]	0 – 2%

1.5 Materials Testing A minimum of 60 days prior to construction the Maine DOT or contractor (if asphalt-rubber supplier is acting as a sub-contractor) shall send a representative sample of the Performance graded binder and the aggregate proposed for use to the asphalt-rubber supplier for testing. Testing for stripping and asphalt content will be performed to assure that appropriate characteristics are achieved when blended with the granulated rubber.

2.0 ASPHALT-RUBBER MIXING AND REACTION

2.1 Mixing and Reaction The percent of rubber shall be a minimum of 15% by weight of total asphalt-rubber mixture. The exact granulated rubber content shall be determined by the mix design submitted by the asphalt-rubber supplier based on laboratory testing.

The temperature of the asphalt shall be between 177°C and 218°C, [350°F and 425°F], at the time of addition of the granulated reclaimed rubber. The asphalt and rubber shall be combined and mixed together in a blender unit and reacted for a minimum of one hour. The temperature of the asphalt-rubber mixture shall be above 163°C, [325°F], during the reaction period.

2.2 Delays If a job delay occurs after full reaction, the asphalt-rubber asphalt blend may be allowed to cool. The asphalt-rubber shall be reheated slowly in the tank just prior to application, but not to a temperature exceeding 204°C, [400°F]. An additional quantity of granulated rubber or additive not exceeding 3% by volume of the hot asphalt-rubber mixture will be added after reheating.

2.3 Viscosity Each load of blended asphalt-rubber shall be tested by the supplier using a Haake type field viscometer. The viscosity of the final product shall be in the range of 1,500 to 5,000 centipoise.

3.0 EQUIPMENT

3.1 Mechanical Blender A mechanical blender for proper proportioning and thorough mixing of the asphalt-cement and granulated rubber is required. This unit shall be equipped with: an asphalt totaling meter (liters or gallons); a flow rate meter (liters per minute or gallons per minute); a positive displacement auger to feed the rubber properly to mixing chamber at the specified rate; and a static motionless mixer. Blender will have a separate asphalt cement feed pump and finished product pump to maximize production. Blender shall be capable of providing 100% proportional mix at any given time during the blending cycle and documentation from the manufacturer, supporting this, shall be submitted to the Maine DOT if requested.

3.2 Distributor Truck On projects exceeding 31.8 metric tons, [35 tons], of liquid asphalt rubber, at least two pressure-type bituminous distributor trucks in good condition will be required. The distributor shall be equipped with an internal heating device capable of heating the material evenly up to 218°C, [425° F]; an internal mixing unit capable of maintaining a proper mixture of asphalt cement and granulated rubber; have adequate pump capacity to maintain a high rate of circulation in the tank and to spray the asphalt-rubber at a viscosity of 1,000 to 3,500 centipoise; have adequate pressure devices and suitable manifolds to provide constant positive cut-off to prevent dripping from the nozzles. Distributor shall be equipped with an electronically controlled computerized compensation unit for controlling application rates at various width and speed changes. The application unit shall have electronic controls and a digital read out installed and operated from the inside of the cab of the distributor. The distribution bar on the distributor shall be fully circulating. Any distributor that produces a streaked or irregular distribution of the material shall be promptly repaired or removed from the project.

Distributor equipment shall include a tachometer, pressure gauges, volume measuring devices, and a thermometer for reading temperature of tank contents. Controls for spray bar shall be located in cab of truck, for controlling width and rate of spray of product. It shall be so constructed that uniform applications may be made at the specified rate per square meter with a tolerance of plus or minus 0.2 liters per square meter, [0.05 gal. / Sq. Yd].

3.3 Hauling Equipment Trucks for hauling cover material shall be rear discharge conveyor-fed or “live bottom” trucks and shall be equipped with a device to lock onto the hitch at the rear of the chip spreader to prevent aggregate spillage.

Sufficient hauling vehicles will be available to ensure continuous operation of the distributor and chip spreader.

3.4 Aggregate Spreader The aggregate spreader shall be hydrostatically driven and self propelled. It must be equipped with a hydraulically controlled variable adjustable head that is capable of spreading stone in widths from 1.4 to 5.4 meters, [4.5 to 18 feet]. The spreader shall be mounted on pneumatic tires, and shall apply the stone on the road surface in a manner that ensures that the tires do not contact the road surface until after the stone has been applied. The unit shall be equipped with an electronic radar type sensor used to measure ground speed and will automatically adjust the stone application rate depending on width of application and the speed of chip spreader. It shall have the ability to apply stone on any grade from 0 - 6%. The spreader shall be equipped with an integral hopper with a minimum capacity of 4.5 metric tons, [5 tons], of stone which shall be filled by trucks in a manner which ensures that the truck tires never come in contact with asphalt treated road surfaces until the stone has been properly applied. To maintain constant stone application, a self-locking truck hitch will permit towing of aggregate trucks without stopping the chip spreader. It will be capable of maintaining positive engagement over irregular terrain.

3.5 Pneumatic-Tired Roller Two (2) self-propelled, multiple wheel, pneumatic-tired rollers shall be used and shall weigh between 6.5 and 10.9 metric tons, [7 and 12 tons], each roller shall have a total compacting width of at least 1.4 meters, [56 inches], have a minimum tire pressure of 414 kPa, [60 psi].

3.6 Steel-Wheel Roller One (1) self-propelled, 2-axle (tandem) steel-wheel roller shall be used and shall weigh between 7.3 and 10.9 metric tons, [8 and 12 tons], and be equipped with scrapers. Combination pneumatic and steel drum-type rollers are acceptable, as one unit only.

4.0 CONSTRUCTION PROCEDURES

4.1 Preparation Potholes, other areas of pavement failure, and major depressions in the existing pavement surface shall be repaired under the appropriate contract items, if required. A leveling course shall be placed on planed, milled, or existing surface under the appropriate contract items, if required.

Immediately prior to application of the asphalt-rubber, the surface shall be thoroughly cleaned by sweeping. Contractor shall be responsible for covering all utility irons just prior to application and uncovering after aggregate is spread.

4.2 Seasonal and Weather Limitations The asphalt-rubber shall not be applied prior to May 15th, after the Saturday following September 15th, or when weather conditions are unfavorable to obtaining a uniform spread. Construction shall proceed only when the atmospheric temperature is at least 10°C, [50°F], and rising. No water shall be present on the road surface.

4.3 Application The asphalt-rubber mixture shall be applied at a temperature of 170° to 215°C, [338°F to 419°F], at a rate of 2.5 to 2.9 liters per square meter, [0.65 gallons per square yard]. The exact rate to be determined by the aggregate gradation, traffic volume and pavement condition. The asphalt-rubber shall not be spread further in advance of the aggregate spread than can be immediately covered.

Longitudinal joints shall be reasonably true to line and parallel to centerline. Where any construction joint occurs, the edges shall be broomed back and blended so there are no gaps and the elevations are the same, and free from ridges and depressions. Longitudinal joints shall be overlapped from 10.2 to 15.2 centimeters, [4 to 6 inches].

During application, adequate provision shall be made to prevent marring and discoloration of adjacent pavements, structures, vehicles, foliage or personal property. The Contractor shall provide a person to continuously monitor the application of the asphalt-rubber. This person shall have an unobstructed view of the spray bar at all times, and shall be responsible for assuring a uniform application of the asphalt-rubber material.

4.4 Aggregate Application The application of aggregate shall follow as close as possible behind the application of the hot asphalt-rubber. Construction equipment or other vehicles shall not drive on the uncovered asphalt-rubber. The precoated aggregate shall be spread uniformly by a self-propelled spreader at a rate of spread directed by the Agency, generally between 16.3 to 21.7 kilograms per square meter, [30 to 40 lb/yd²]. Any deficient areas shall be covered with additional material.

4.5 Rolling A minimum of three (3) rollers shall be used for aggregate compaction into the hot asphalt-rubber. Two rollers must be pneumatic-tired and one must be steel-wheel unless otherwise directed by the Department.

Rolling shall commence immediately following the spreading of the aggregate. There shall be at least three coverages by the pneumatic-tired rollers to embed the aggregate particles firmly into the asphalt-rubber. A coverage shall be as many passes as are necessary to cover the entire width being spread with a pass being one movement of a roller in either direction. Additional coverage of the steel-wheel roller will follow.

4.6 Sweeping When the maximum amount of aggregate has been embedded into the asphalt-rubber and the pavement has cooled, all loose material shall be swept or otherwise removed. This will be done at a time and in a manner which, will not displace any embedded aggregate or damage the asphalt-rubber. Pre and post sweeping is the responsibility of the Prime Contractor. Your bid form shows this as an option

5.0 METHOD OF MEASUREMENT AND BASIS OF PAYMENT

5.1 Acceptance Material acceptance shall be in accordance with Section 401.203 - Testing Method C.

The Lot size will be the entire production for the project. Sublot sizes shall be 30,000 square yards for gradation properties, with unanticipated over-runs of up to 1650 square yards rolled into the last subplot. The minimum number of sublots per Lot for gradation properties shall be 4.

TABLE 4: ACCEPTANCE CRITERIA

PROPERTIES	POINT OF SAMPLING	TEST METHOD
Gradation	Stockpile	AASHTO T27

TABLE 7: METHOD C ACCEPTANCE LIMITS

Property	USL and LSL
Passing 4.75 mm and larger sieves	Target +/-7%
Passing 2.36 mm to 1.18 mm sieves	Target +/-4%
Passing 0.60 mm	Target +/-3%
Passing 0.30 mm to 0.075 mm sieve	Target +/-2%

5.2 Pay Adjustment The Department will sample, test, and evaluate aggregate in accordance with Section 106 - Quality and Section 401.20 - Acceptance, of Division 400 – Pavements. The Department will use the sieve sizes listed in this specification for the type of aggregate represented in the JMF.

The Department will determine a pay factor using Table 7: Method C Acceptance Limits. The Department will calculate the price adjustment for Mixture Properties as follows:

$$PA = (\% \text{ Passing Nom. Max PF-1.0})(Q)(P)X0.05+(\% \text{ passing 2.36 mm PF-1.0})(Q)(P)X0.05+(\% \text{ passing 0.30 mm PF-1.0})(Q)(P)X0.05+(\% \text{ passing 0.075 mm PF-1.0})(Q)(P)X0.10$$

5.3 Method of Measurement The Department will measure Asphalt Rubber Surface Treatment with Aggregate Cover (Chip Seal) by the square the yard. Payment will be for the actual number of square yards applied in accordance with the typicals and Standard Specifications Section 109 - Measurement and Payment. Payment shall be full compensation for all labor, materials and equipment required to complete the work in accordance with these specifications.

5.4 Basis of Payment The Department will pay for the Work, in place and accepted, in accordance with the applicable sections of this Special Provision, at the contract unit price per square yard applied.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
410.25 Asphalt-Rubber Surface Treatment With Aggregate Cover	Square Meter [square yard]

SPECIAL PROVISION
SECTION 411
UNTREATED AGGREGATE SURFACE COURSE

The following changes and additions are made to Subsection 411.02.

411.02 Aggregate:

Aggregates for untreated aggregate surface course shall conform to the Standard Specifications Revision of December 2002 requirements of section 703.12.

Recycled pavement material salvaged from the project or from off-site stockpiles may be used when processed prior to use so that 100% of the material passes a $\frac{3}{4}$ inch square mesh sieve. Recycled material shall be conditionally accepted at the source by the Resident. It shall be free of winter sand, granular fill, construction debris, and other materials not generally considered bituminous pavement.

Recycled concrete pavement slabs salvaged from the project may be used when processed prior to use so that 100% of the material passes a $\frac{3}{4}$ inch square mesh sieve. Recycled material shall be conditionally accepted at the source by the Resident. It shall be free of winter sand, granular fill, steel, construction debris, and other materials not generally considered concrete pavement.

The following additions are made to subsection 411.04 Compaction.

411.04 Compaction:

Compaction shall be obtained by using a minimum 10 ton steel vibratory roller with a minimum width of 84 inches.

**SPECIAL PROVISION
SECTION 424
LOW MODULUS CRACK SEALER**

Description This work shall consist of the furnishing and placement of crack sealing material in the cracks of existing bituminous concrete pavement in accordance with these Special Provisions. Placement shall consist of: 1) crack cleaning and drying, 2) material preparation and application, 3) material finishing and shaping and 4) barrier material and application.

Materials low modulus crack sealant material shall conform to ASTM D-3405 and the following specification.

Cone Penetration	90 - 150
Flow @ 60°C [140°F]	< 3.0mm [1/8 in]
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.

CONSTRUCTION REQUIREMENTS

Weather Low Modulus Crack Sealer shall not be applied on a wet surface or when the atmospheric temperature is below 10°C [50°F] in a shaded area at the job site, or when weather conditions are otherwise unfavorable to proper construction procedures.

Equipment Equipment used in the performance of the work shall be subject to the Resident's or authorized representative's approval and shall be maintained in a satisfactory working condition at all times.

(a) Air Compressor: Air compressors shall be portable and capable of furnishing not less than 3 m³ [4 yd³] of air per minute at not less than 620 kPa [90 psi] pressure at the nozzle. The

compressor shall be equipped with traps that will maintain the compressed air free of oil and water.

(b) Sweeper: Manually operated, gas powered air-broom or self-propelled sweeper designed especially for use in cleaning pavements shall be used to remove debris, dirt, and dust from the cracks.

(c) Hot Air Lance: Should operate with propane and compressed air in combination at 1100°C - 1650°C [2000°F - 3000°F], exit air heated at 310 m/s [1000 ft/s]. The lance should draw propane from no smaller than a 45 Kg [100 lb] tank using separate hoses for propane and air draw. The hoses shall be wrapped together with reflectorized wrap to keep them together and to protect workers in low light situations.

(d) Hand Tools: Shall consist of V-shaped squeegee, brooms, shovels, metal bars with chisel shaped ends, and any other tools which may be satisfactorily used to accomplish this work.

(e) Melting Kettle: The unit used to melt the joint sealing compound shall be a double boiler, indirect fired type. The space between inner and outer shells shall be filled with a suitable heat transfer oil or substitute having a flash point of not less than 320°C [608°F]. The kettle shall be equipped with a satisfactory means of agitating and mixing the joint sealer at all times. This may be accomplished by continuous stirring with mechanically operated paddles and/or a continuous circulating gear pump attached to the heating unit. The kettle must be equipped with thermostatic control calibrated between 94°C [200°F] and 290°C [550°F].

(f) Application Wand: The application wand shall apply a controlled flow of material via an insulated or heated hose. The nozzle shall distribute the material as called for in this specification. A pressure regulator shall be provided to regulate pressure at the nozzle. A bypass line into the holding tank is required for use when the nozzle is shut off.

Preparation All cracks greater than 5 mm [$\frac{1}{4}$ in] shall be blown free of loose material, dirt, vegetation, and other debris by high pressure air. Material removed from the crack shall be removed from the pavement surface by means of a power sweeper or appropriate hand tools as required. Cracks showing evidence of vegetation after being blown out shall be additionally cleaned by appropriate hand tools and additionally blown out. All cracks must be blown and heated via the hot air lance 10 minutes prior to the crack being sealed. Distance between the hot air lance and the crack sealing unit should be no more than 15 m [50 ft] to eliminate reinvasion of water, debris, and other incompressibles. All debris, vegetation, and water shall be removed to enhance adhesion of the crack sealing material. THIS WORK SHALL NOT BE DONE IN INCLEMENT WEATHER.

Preparation and Placement of Sealer The low modulus crack sealer material shall be heated and applied at the temperature specified by the manufacturer and approved by the Resident or authorized representative. Any material that has been heated above the manufacturer's specification shall not be used. Material that is reheated or held at temperature for an extended

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period of time may be used as allowed by the manufacturer's specification and approval of the Resident or authorized representative. The Contractor shall provide the Resident or authorized representative with a suitable device for verifying the sealant temperature in the kettle and at the application site.

Any over application or spills are to be removed to the satisfaction of the Resident or authorized representative. Any sealed areas with damaged or contaminated sealer or visible voids are to be removed, prepared and resealed.

Sealer shall be delivered to the crack while the cracks are still hot from the hot air lance preparation through a pressure hose line and applicator shoe. The shoe width and the sealer overbanding area shall vary from 50 mm - 100 mm [2 in - 4 in] depending on the severity of the cracks. The applicator shall be followed by a V-shaped squeegee to minimize the thickness of the overband. Any loose material on the surface or in the crack, which may contaminate the crack sealer or impede bonding of the sealant to the pavement, is to be removed by hand tools prior to crack filling. No crack filling material shall be applied in a crack that is wet or where frost, snow, or ice is present. The ambient air temperature must be 10°C [50°F] or higher.

If the sealed area is to be opened to traffic immediately, a barrier material such as Glenzoil or an equivalent approved by the Resident shall be provided by the Contractor and shall be applied to the crack sealer to prevent pickup as directed by the Resident or authorized representative. **Areas which are designated by the Department to be overlaid shall have a cure time of 7 days.**

Quality of Work Excess of spilled sealer shall be removed from the pavement by approved methods and discarded. Any quality of Work determined to be below normal acceptable standards will not be accepted, and will be corrected and/or replaced as directed by the Resident or authorized representative.

Method of Measurement Asphalt Low Modulus Crack Sealer will be measured by the kilogram (pound) of sealant used. The manufacturer's weights of the sealant will be accepted as the basis for measurement.

Basis of Payment. The accepted quantity of Low Modulus Crack Sealer will be paid for at the contract unit price per kilogram [pound] complete in place. This price shall be full compensation for furnishing and placing crack sealer, including cleaning cracks and furnishing and placing barrier materials if necessary.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
424.3331 Low Modulus Crack Sealer, Applied	Kilogram [Pound]

SPECIAL PROVISION
SECTION 424
LOW MODULUS JOINT SEALER

Description This work shall consist of furnishing all labor, equipment and materials necessary to clean and seal longitudinal and transverse joints that result in the construction of bituminous concrete pavement courses. This material is to be thoroughly applied to the joints during the construction of bituminous pavement courses, to seal the construction joint from deterioration due to the elements, and to adhere the joint materials together.

Materials 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 D-3405 and the following specification.

Cone Penetration	90 - 150
Flow @ 60°C [140°F]	< 3.0mm [? in]
Bond, non-immersed	Three 12.7mm [½ 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

CONSTRUCTION REQUIREMENTS

Weather Low modulus joint sealer shall not be applied on a wet surface, or when the atmospheric temperature is below 10°C [50°F] in a shaded area at the job site, or when weather conditions are otherwise unfavorable to proper construction procedures. An atmospheric temperature of 2°C [36°F] and rising will be permitted on intermediate and base courses, with the time and weather constraints remaining.

Preparation and Placement This work shall be constructed using a low modulus joint sealer. The sealer shall be heated and applied at a temperature between 170°C - 200°C [340°F - 390°F] or as specified by the manufacturer and approved by the Resident. Sealer shall be delivered to

the joint through a pressure hose line and applicator shoe. **The shoe width and the sealer overbanding area shall include the entire vertical height of the joint and vary from 25 mm+- [1 in] on the horizontal surface.** The sealer shall be applied at a rate that produces a coating thickness of 3 mm [1/8 in], typical. The material shall not be applied more than 12 hours prior to the placement of any pavement course, and subject to approval by the Resident.

Preparations of Joints All joints shall be swept or blown free of loose material, dirt, and other debris. Material removed from the joint shall be removed from the pavement surface by means of a power sweeper or appropriate hand tools as required. Joints shall additionally be cleaned by appropriate hand tools if contaminants remain on the face. All debris and water shall be removed to enhance adhesion of the joint sealing material. THIS WORK SHALL NOT BE DONE IN INCLEMENT WEATHER.

Equipment Equipment used in the performance of the work shall be subject to the Resident's approval and shall be maintained in a satisfactory working condition at all times.

(a) Sweeper: The sweeper shall be a manually operated, gas powered air-broom, or self-propelled sweeper designed especially for use in cleaning pavements shall be used to remove all debris, dirt, and dust from the joints.

(b) Melting Kettle: The unit used to melt the joint sealing compound shall be a double boiler, indirect fired type. The space between inner and outer shells shall be filled with a suitable heat transfer oil or substitute having a flash point of not less than 320°C [608°F]. The kettle shall be equipped with a satisfactory means of agitating and mixing the joint sealer at all times. This may be accomplished by continuous stirring with mechanically operated paddles and/or a continuous circulating gear pump attached to the heating unit. The kettle must be equipped with thermostatic control calibrated between 94°C [170°F] and 290°C [525°F].

Quality of Work Excess sealer shall be removed from the pavement by approved methods and discarded. Any quality of Work determined to be below normal acceptable standards will not be accepted, and will be corrected and/or replaced as directed by the Resident.

Method of Measurement Low modulus joint sealer will be measured by the meter [foot] applied.

Basis of Payment The accepted quantity of Low modulus joint sealer will be paid for at the contract unit price per meter [foot] complete in place, which price shall be full compensation for furnishing and placing sealer, including all cleaning of joints, and furnishing and placing all materials necessary to perform the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
424.3333 Low Modulus Joint Sealer, Applied	Meter [Foot]

SPECIAL PROVISION
SECTION 429
PAVEMENT REINFORCING SYSTEM
 (Grid/Paving Fabric Composite Pavement Interlayer)

Description This work shall consist of furnishing and placing a grid/paving fabric reinforcement composite as a strip interlayer in the HMA base layers prior to the placement of the final HMA base layer. The composite shall be installed over the initial HMA base layer placed, as indicated on the plans and as manufacturer's recommendations.

Materials The composite paving material shall consist of a non-woven paving fabric bonded to an epoxy coated glass fiber structural grid. The composite paving material shall meet the physical properties as specified in the following tables.

Composite

Property	Test Method	Requirement
Unit Weight of Grid/Fabric - oz/yd ² [g/m ²]	ASTM D-5261-92	16 [550]
Tensile Strength by single strand method ¹ - lbs/in [kN/m]	ASTM D-6637-01	560 [100]
Ultimate Elongation - %	ASTM D-6637-01	< 5
Strength @ 2% Strain ¹ - lbs/in [kN/m]	ASTM D-6637-01	280 [50]
Grid Junction Strength ¹ - lbs [N]	GSI/GG-2	18 [80]
Peel Strength ¹ - lbs/in [kN/m]	ASTM D-413	10 [146]
Aperture Size ² - MD/XD - in [mm]	-----	.80/.80 [20/20]
Melting Point - ° F [° C]	ASTM D-276	> 425 [> 218]

Nonwoven Paving Fabric

Property	Test Method	Requirement
Grab Tensile ¹ - lbs [N]	ASTM D-4632	101 [450]
Elongation ¹ - %	ASTM D-4632	50
Asphalt Retention - gal/yd ² [l/m ²]	ASTM D-6140	0.20 [0.90]
Weight - oz/yd ² [g/m ²]	ASTM D-5261	4.1 [140]

Notes: 1- Minimum average roll values, 2 - tested with grid adhered to fabric

Tack Coat A PGAB 64-28, or product recommended by the manufacturer shall be applied in accordance with manufacturer's recommendations. The use of cutbacks or emulsions that contain solvents shall not be permitted.

CONSTRUCTION REQUIREMENTS

Shipping and Storage The paving composite shall be kept dry and protected from the elements during shipping and storage. If stored outdoors, the composite shall be elevated and protected with a waterproof cover.

Weather Limitations The air and pavement temperatures shall be at least 50°F [10°C] and rising for the placement of the PG 64-28 asphalt binder. The paving composite or the asphalt tack coat shall not be placed in wet weather conditions.

Surface Preparation The membrane shall be applied between the Hot Mix Asphalt (HMA) base course and binder course. The area being repaired shall first be cleaned by sweeping or with compressed air and maintained free of accumulation of debris such as dirt, dust, gravel, grass, and other material. Non-compressible objects shall be removed from the pavement joints prior to repair.

PGAB Tack Coat Application The PGAB tack coat shall be applied using a calibrated distributor spray bar, hand spraying, squeegee or brush. The tack coat shall be uniformly applied at a rate sufficient to saturate the paving fabric and to bond the fabric to the HMA base pavement surface. The PGAB tack coat application rate 0.232 to 0.27 gallons per square yard [1.05 to 1.2 liters per square meter] as required by the roadway surface and environmental conditions. The temperature of the PGAB tack coat shall be sufficiently high to permit a uniform spray pattern. PGAB tack coat shall be sprayed between 290° F to 325° F [144° C to 163°C]. The target width of the tack coat application shall be equal to the paving fabric width plus 4" to 6" [101 mm to 152 mm]. Traffic shall not be allowed on the tack coat. Excess tack coat shall be cleaned from the pavement.

Paving Composite Placement The paving composite shall be placed onto the tack coat using mechanical or manual laydown equipment capable of providing a smooth installation with a minimum amount of wrinkling or folding. The minimum thickness of HMA over the composite shall be 1.5 inches [38 mm]. Composite wrinkles severe enough to cause folds shall be slit and laid flat. Brooming and/or rubber-tire rolling will be required to maximize paving composite contact with the HMA base layer surface. Additional hand-placed tack may be required at overlays or repair areas as determined by the Resident. No traffic except necessary construction traffic for the installation of the composite shall be allowed to drive on the paving composite. Turning and braking of the paver and other construction vehicles shall be done gradually and kept to a minimum to avoid damaging or moving the composite. Damaged composite shall be removed and replaced with the same composite and tack coat as per the requirements of this special provision. All paving composite shall be paved the same day it is placed.

Joints and Overlaps At joints, composite rolls shall overlap 2” to 6” [50 mm to 150 mm]. End joints and joints from repairs of wrinkles should be made to overlay or “shingle” in the direction that the final HMA base layer is placed. Excess material shall be cut and removed to ensure that overlaps do not exceed 6” [150 mm]. A uniform application of tack coat shall be applied between all fabric overlaps.

HMA Final Base Layer Placement The HMA base layer shall be placed on the same day that the paving composite is placed. Excess tack coat that bleeds through the composite shall be removed by broadcasting sand on the paving composite. Excess sand shall be removed before the beginning of the paving operation. In the event of rainfall on the composite occurs prior to the placement of the final HMA base layer, the paving composite must be allowed to dry completely before the final base layer is placed. The minimum compacted thickness of the first lift on HMA over the paving composite shall be 1.5” [38 mm].

Method of Measurement The membrane system shall be measured by the square foot [square meter] in place.

Basis of Payment The accepted quantity of Grid/Fabric Fabric Composite Pavement Interlayer will be paid for at the contract unit price per square foot (m²). Payment will be full compensation for furnishing and placing the paving composite and for all labor and other incidentals necessary to complete the work.

Payment shall be made under:

<u>Pay Items</u>	<u>Pay Unit</u>
429.34 Grid/Fabric Fabric Composite Pavement Interlayer	square foot (square meter)

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

CLASS OF CONCRETE	ITEM NUMBER	DESCRIPTION	P	METHOD
LP	502.29	Structural Concrete Wearing Surface	\$450	A
A	502.31	Structural Concrete Approach Slabs	-	C
A	518.50	Repair of Upward facing Surfaces to reinforcing steel	-	C
A	518.51	Repair of Upward facing Surfaces to below reinforcing steel	-	C
A	518.60	Repair of Vertical Surfaces < 7.9 in.	-	C
A	518.61	Repair of Vertical Surfaces > 7.9 in.	-	C
LP	520.241	Bridge Joint Modification Type 1	\$450	A
LP	520.242	Bridge Joint Modification Type 2	\$450	A
LP	520.243	Bridge Joint Modification Type 3	\$450	A
LP	526.34	Permanent Concrete Transition Barrier	\$450	A

P values listed above reflect the price per cubic (yd³) for all pay adjustment purposes.

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SPECIAL PROVISION
SECTION 502
STRUCTURAL CONCRETE
(Concrete Wearing Surface)

The following shall be added to Sections:

502.11 Placing Concrete, Sub-Section G

Preplacement Concrete Wetting

After cleaning has been accepted, thoroughly wet the structural slab surface and all porous surfaces to be in contact with new concrete for at least 12 hours immediately prior to placement. Remove all standing water with oil-free compressed air, and protect the deck from drying, so the concrete remains in a saturated surface dry condition.

502.14 Finishing Concrete Surfaces

F. Transverse Saw Cut Grooving of Concrete Wearing Surface

Description A transverse saw cut finish will be applied to the concrete wearing surface.

Materials Use a multi-bladed wet saw cutting equipment using circular saw blades. The Resident Engineer may allow the use of a single blade, circular saw equipment, where it is determined such equipment is necessary to complete the work as required. The equipment the Contractor proposes to use will be subject to the approval of the Resident Engineer, prior to use.

Construction Requirements Start saw cutting only after the specified curing period has elapsed and the resident has been assured that the wearing surface is within the tolerances of 502 14.

The contractor shall provide reference points at 10 foot intervals across the bridge to assure that the grooving operations are running parallel to the joints.

Cut transverse grooves perpendicular to the centerline of the roadway using a single pass. Cut all grooves in a rectangular shape conforming to the following dimensions:

Spacing: Center-to-Center $\frac{3}{4}$ " to $1\frac{1}{4}$ "

Width: $\frac{1}{8}$ " +/- $\frac{1}{32}$ "

Depth: $\frac{1}{4}$ " +/- $\frac{1}{16}$ "

Terminate grooves within 6" to 12" of the vertical face of curb or parapet.

During the grooving operations, the Resident Engineer will verify, at random, that the minimum grooved depth is being achieved. Should the Resident Engineer determine the minimum groove depth is not being achieved; the contractor shall stop grooving operations and make all adjustments necessary to achieve the minimum depth.

The Contractor will supply the Resident Engineer with two (2) accurate, easily readable gauges with which to verify groove depth. Deliver the gauges and applicable manufacturer's instructions for use, if necessary, no later than one week prior to the anticipated beginning of grooving operations.

The contractor shall continuously collect and properly dispose of all slurry or debris created by this activity.

502.18 Method of Measurement The quantity will not be measured directly for payment.

502.19 Basis of Payment The Payment for the Transverse Saw Cut Grooving will include, but not limited to, all materials, equipment and labor to perform the work and shall be considered incidental to item 502.29 Structural Concrete Wearing Surfaces.

SPECIAL PROVISION
 SECTION 502
 STRUCTURAL CONCRETE
 (Quality Level Analysis)

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

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

TABLE 1- Methods A and B

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

502.503 Delete and replace with the following;

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

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

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

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

and a maximum of 10 sublots per lot. If there is insufficient quantity in a lot to meet the recommended minimum subplot size, then the lot shall be divided into 3 equal sublots.

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

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

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

TABLE 3

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

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

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

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

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

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

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

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

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

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

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

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

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

C. The Contractor fails to follow the QC Plan”

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

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

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

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

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

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

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

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

Add the following Section;

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

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

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

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

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

SPECIAL PROVISION
SECTION 504
CONCRETE PIPE TIES

Description This work shall consist of furnishing and installing concrete pipe ties in conformance with the Standard Details.

Materials All materials shall meet the requirements shown in the Standard Details.

Method of Measurement Concrete pipe ties shall be measured per Group (2 ties per Group).

Basis of Payment The accepted quantity of concrete pipe ties will be paid for at the contract unit price per Group. Such payment will be full compensation for furnishing, installing, and all other necessary incidentals for satisfactory completion of the work. Any grout or mortar necessary to repair chipping shall be incidental to the installation of the pipe ties.

<u>Pay Item</u>	<u>Pay Unit</u>
504.07 Concrete Pipe Ties	Group

SPECIAL PROVISION
SECTION 518
REHABILITATION OF STRUCTURAL CONCRETE BRIDGE DECKS
(Repairing Granite Curb Bedding Mortar)

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

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

Construction Requirements After the existing wearing surface is removed, the Resident will designate areas where the existing granite bedding mortar is to be repaired.

In areas designated to be repaired, the existing granite bedding mortar shall be removed under the curb to a depth of 25 mm [1 in] from the face of curb. The mortar shall be replaced with new mortar and finished with a 45° bevel at the face of curb. The mortar shall be proportioned, mixed, and applied in accordance with the Manufacturer's recommendations.

Method of Measurement Repairing Granite Curb Bedding Mortar will be measured for payment by the meter [foot], complete and accepted.

Basis of Payment Repairing Granite Curb Bedding Mortar will be paid for at the contract unit price, 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>
518.39 Repairing Granite Curb Bedding Mortar	Meter [Foot]

SPECIAL PROVISION
SECTION 520
EXPANSION DEVICES
(Bridge Joint Modifications)

Description This work shall consist of removal, adjustment, repair, modification, and replacement of bridge joints, as indicated on the plans, and in accordance with the specifications.

Materials All structural concrete removed shall be replaced with Class LP concrete, per Section 502. A bonding agent from the Departments pre approved products list shall be used for bonding fresh concrete or patching material to existing hardened concrete.

The Elastomeric Concrete shall be one of the products listed on the Maine Department of Transportations Pre-qualified List for Bridge Expansion Joints Systems.

The Joint and Seals, as required, new material shall be as indicated on the plans and shall meet the material, fabrication, and construction requirements of Section 520 - Expansion Devices - Non-Modular.

Construction Requirements The removal, adjustments, modifications and replacement of bridge joints shall be done in a manner to accommodate maintenance of traffic requirements and coordinated with the highway paving.

The Contractor shall construct the joint to the dimensions shown on the plans and as approved by the manufacturer. The Contractor shall construct the joint system in one continuous length across the bridge unless otherwise approved by the Resident.

The contractor shall install the joint or joint system according to the manufacturer's recommendations. A manufacturer representative shall be on-site at the start of this work to ensure an acceptable installation.

The contractor shall cut a neat line for the substrate blockout per the dimensions indicated on the plans and standard details. The contractor shall sand blast the substrate, blow it clean with dry oil-free compressed air, and thoroughly dry the substrate prior to placing joint material. Care shall be taken where reinforcing steel is uncovered not to damage the steel or its bond to the surrounding concrete. All existing reinforcing steel exposed by the joint and concrete removal shall be cleaned by sandblasting, or by other means approved by the Resident.

Method of Measurement Bridge joint modifications Types 1, 2, 3, and 5 will be measured by each unit, complete in place and accepted for the type(s) identified on the plans.

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Longitudinal Bridge Joint Modifications will be measured by lineal feet, complete in place and accepted for the type(s) identified on the plans.

Basis of Payment The accepted quantity of bridge joint modifications Type 1, 2, 3, and 5 will be paid for at the contract unit price each.

The accepted quantity of Longitudinal Bridge Joint Modifications will be paid for at the contract lineal foot price.

Payment will be full compensation for all materials, labor, equipment, and incidentals necessary to complete the work, including removing and replacing structural concrete & steel, adjusting and cleaning existing joint materials and reinforcing steel, and fabricating and installing new joint material and new seals, as required.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
520.241 Bridge Joint Modifications- Type 1	Each
520.242 Bridge Joint Modifications- Type 2	Each
520.243 Bridge Joint Modifications- Type 3	Each
520.245 Bridge Joint Modifications- Type 5	Each
520.26 Longitudinal Bridge Joint Modifications	LF

SPECIAL PROVISION
SECTION 526
CONCRETE BARRIER
(Temporary Concrete Barrier)

Materials

Temporary concrete barriers must be connected using a 1-1/8 inch diameter rod, with a washer and cotter pin on the bottom as shown on the Standard Detail 526(02).

SPECIAL PROVISION
SECTION 605
UNDERDRAINS

The following changes and additions are made to Subsection 605.03.

605.03 General:

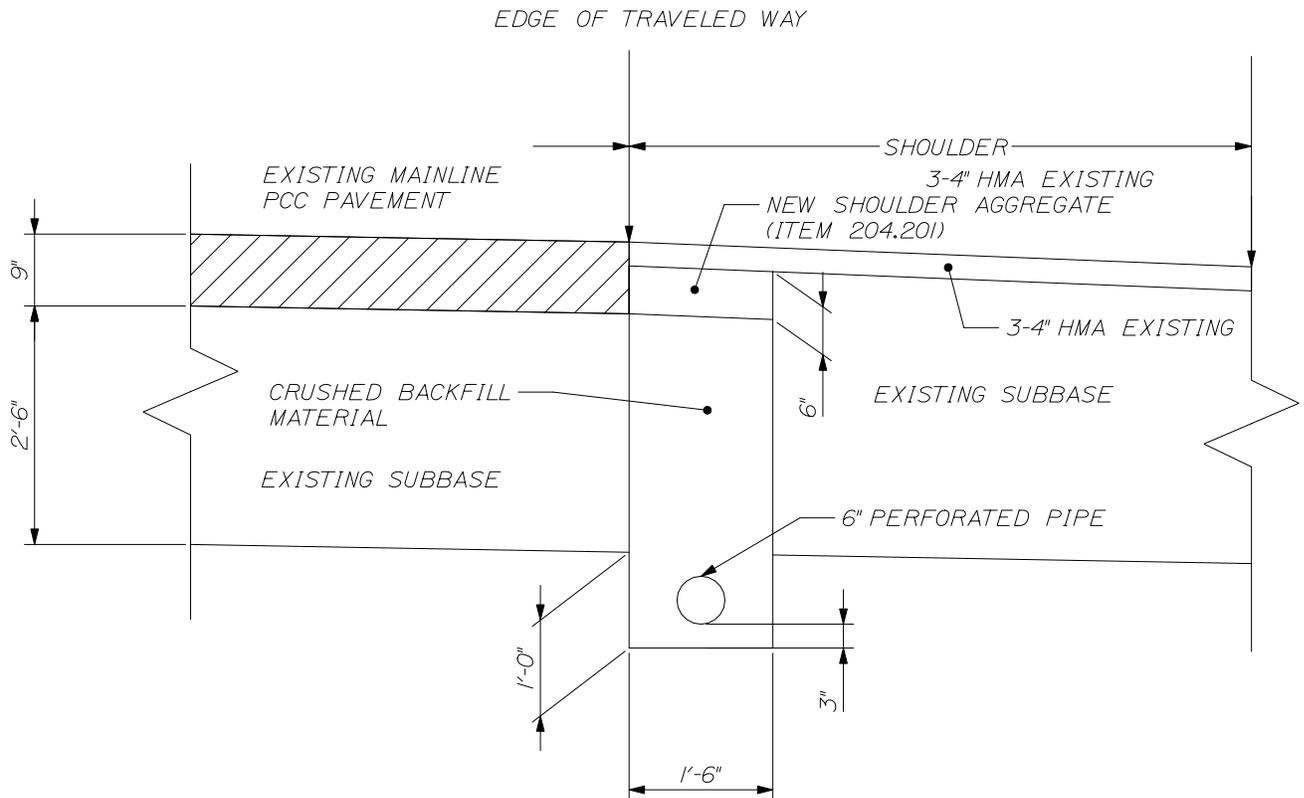
Underdrain pipe for underdrain, type B shall consist of one of the following:

Corrugated Polyethylene Pipe for Underdrain (Smoothlined)
Polyvinylchloride (PVC) Perforated Pipe

605.035 Materials

Backfill material for Underdrain Type B shall meet the following:

Sieve Designation		Percentage by Weight Passing Square Mesh Sieves
Metric	US Customary	
25.0 mm	1 in	100
19.0 mm	¾ in	90-100
9.5 mm	¾ in	0-75
4.75 mm	No. 4	0-25
2.00 mm	No. 10	0-5



NOTES:

1. EDGEDRAIN OUTLETS SHALL BE INSTALLED ONE PER EVERY 250 FT OF EDGEDRAIN. THE OUTLETS SHALL HAVE A MINIMUM SLOPE OF 1.0%. PIPE USED FOR OUTLETS SHALL BE NON-PERFORATED AND WILL BE PAID FOR UNDER ITEM 605.10.
2. THE MATERIAL FOR ELBOWS, TEES, AND WYES FOR EDGE DRAIN SHALL BE AT LEAST AS THICK AS THE LARGEST SIZE PIPE BEING CONNECTED.
3. THE INVERT ELEVATION OF EDGEDRAIN OUTLETS SHALL BE AT LEAST 6 INCHES ABOVE THE FLOW LINE OF A DITCH OR THE ORIGINAL GROUND.
4. NO ALLOWANCE FOR PAYMENT WILL BE MADE FOR EXCAVATING OR MATERIAL EXCAVATED BEYOND THE HORIZONTAL DIMENSIONS SHOWN FOR EDGEDRAIN.
5. EDGEDRAIN SHALL MEET ALL THE REQUIREMENTS OF STANDARD SPECIFICATION 605 AS WELL AS THE ADDITIONAL REQUIREMENTS OF SPECIAL PROVISION 605 OF THE CONTRACT. EDGEDRAIN SHALL BE PAID FOR UNDER ITEM 605.09, EDGEDRAIN OUTLETS SHALL BE PAID FOR UNDER ITEM 605.10.

EDGEDRAIN DETAIL

SPECIAL PROVISION
SECTION 606
GUARDRAIL

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

Type 3-Galvanized steel "w" beam, wood posts or galvanized steel posts.

Type 3a-Galvanized steel "w" beam, wood posts, wood or composite offset blocks.

Type 3aa-Corrosion resistant steel "w" beam, wood posts, wood or composite offset blocks.

Type 3b-Galvanized steel "w" beam, galvanized steel posts, galvanized steel offset blocks.

Type 3c-Galvanized steel "w" beam, wood posts or galvanized steel posts, wood or composite offset blocks.

Type 3d-Galvanized steel "w" beam, galvanized steel posts, wood or composite offset blocks.

Thrie Beam-Galvanized steel thrie beam, wood posts or galvanized steel posts, wood or composite offset blocks.

Median barriers shall consist of two beams of the above types, mounted on single posts. Except for thrie beam, median barriers may include rub rails when called for.

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

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

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

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

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

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

Posts for underdrain delineators shall be "U" channel steel, 2.44m [8 ft] long, 3.72 kg/m [2 ½ lb/ft] minimum and have 9.5 mm [3/8 in] round holes, 25 mm [1 in] center to center for a minimum distance of 610 mm [2 ft] from the top of the post.

Reflectorized Flexible Guardrail Markers shall be mounted on all guardrails. A marker shall be mounted onto guardrail posts at the flared end treatment's terminal and its tangent point, both at the leading and trailing ends of each run of guardrail. The marker's flexible posts shall be grey with either silver-white or yellow reflectors (to match the edge line striping) at the tangents, red at leading ends, and green at trailing ends. Whenever the end treatment is not flared, markers will only be required at the end treatment's terminal. These shall be red or green as appropriate. Markers shall be installed on the protected side of guardrail posts unless otherwise approved by the Resident. Reflectorized flexible guardrail markers shall be from the Maine DOT's Approved Product List of Guardrail Material. The marker shall be grey, flexible, durable, and of a non-discoloring material to which 75 mm [3 in] by 225 mm [9 in] reflectors shall be applied, and capable of recovering from repeated impacts. Reflective material shall meet the requirements of Section 719.01 for ASTM D 4956 Type III reflective sheeting. The marker shall be secured to the guardrail post with two fasteners, as shown in the Standard Details.

Reflectorized beam guardrail ("butterfly"-type) delineators shall be mounted on all "w"-beam guardrail. The delineators shall be mounted within the guardrail beam at guardrail posts. Delineators shall be fabricated from high-impact, ultraviolet & weather resistant thermoplastic. Reflectorized beam guardrail delineators shall be placed at approximately 20 m [62.5 ft] intervals or every tenth post on tangents and at approximately 10 m [31.25 ft] intervals or every fifth post on curves. Exact locations of the delineators shall be as directed by the Resident. On divided highways, the left hand delineators shall be yellow and the right hand delineators shall be silver/white. On two directional highways, the right hand side shall be silver/white and no reflectorized delineator used on the left. All reflectors shall have reflective sheeting applied to only one side of the delineator facing the direction of traffic as shown in the Standard Detail 606(07). Reflectorized sheeting for guardrail delineators shall meet the requirements of Section 719.01.

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

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

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

Acceptable multiple mailbox assemblies shall be listed on the Department's Approved Products List and shall be NCHRP 350 tested and approved.

The Guardrail 350 Flared Terminal shall be a terminal with a 1.2 m [4 ft] offset as shown in the Manufacturer's installation instructions.

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

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

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

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

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

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

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

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

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

All bolts shall be of sufficient length to extend beyond the nuts but not more than 13 mm [$\frac{1}{2}$ in]. Nuts shall be drawn tight.

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

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

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

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

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

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

Terminal section, low volume end, NCHRP 350 end treatments, reflectorized flexible guardrail marker, terminal end, bridge transition, bridge connection, multiple mailbox post, and single post will be measured by each unit of the kind specified and installed.

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

Excavation in solid rock for placement of posts will be measured by the cubic meter [cubic yard] determined from the actual depth of the hole and a hypothetical circle diameter of 600 mm [2 ft].

606.09 Basis of Payment The accepted quantities of guardrail will be paid for at the contract unit price per meter [linear foot] for the type specified, complete in place. Reflectorized beam guardrail (“butterfly”-type) delineators will not be paid for directly, but will be considered incidental to guardrail items. Terminal section, buffer end, NCHRP 350 end treatment, bridge connection, single post and reflectorized flexible guardrail markers will be paid for at the contract unit price each for the kind specified complete in place.

NCHRP 350 end treatments and low volume guardrail ends will be paid for at the contract price each, complete in place which price shall be full payment for furnishing and installing all components including the terminal section, posts, offset blocks, "w" beam, cable foundation posts, plates and for all incidentals necessary to complete the installation within the limits as shown on the Standard Details or the Manufacturer’s installation instructions. Each end treatment will be clearly marked with the manufacturers name and model number to facilitate any future needed repair. Such payment shall also be full compensation for furnishing all material, excavating, backfilling holes, assembling, and all incidentals necessary to complete the work, except that for excavation for posts or anchorages in solid ledge rock, payment will be made under Pay Item 206.07. Type III Retroreflective Adhesive Sheeting

shall be applied to the approach buffer end sections and sized to substantially cover the end section. On all roadways, the ends shall be marked with alternating black and retroreflective yellow stripes. The stripes shall be 75 mm [3 in] wide and sloped down at an angle of 45 degrees toward the side on which traffic is to pass the end section. Guardrail 350 flared terminal shall also include a set of installation drawings supplied to the Resident.

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

Guardrail to be placed on a radius of curvature of 45 m [150 ft] or less will be paid for under the designated radius pay item for the type guardrail being placed.

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

Adjust guardrail will be paid for at the contract unit price per meter and will be full compensation for adjusting to grade. Payment shall also include adjusting terminal end treatments where required.

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

Remove and Reset guardrail will be paid for at the contract unit price per meter and will be full compensation for removing, transporting, storing, reassembling all parts, necessary cutting, furnishing new parts when necessary, reinstalling at the new location, and all other incidentals necessary to complete the work. Payment shall also include removing and resetting terminal ends when required. No payment will be made for guardrail removed, but not reset and all costs for such removal shall be considered incidental to the various contract pay items.

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

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

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

Payment will be made under:

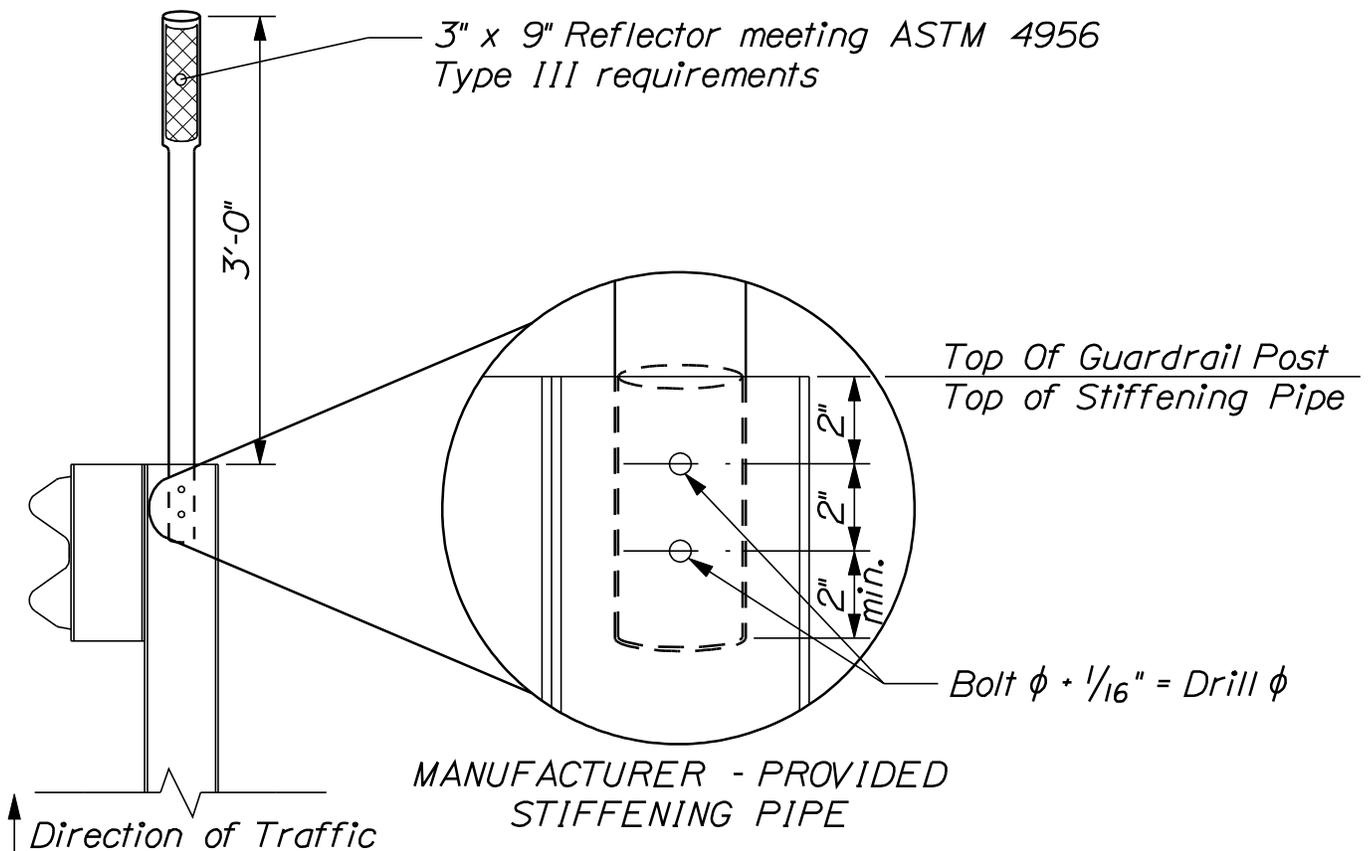
<u>Pay Item</u>	<u>Pay Unit</u>	
606.15	Guardrail Type 3a-Single Rail	meter [Linear Foot]
606.151	Guardrail Type 3aa-Single Rail	meter [Linear Foot]
606.17	Guardrail Type 3b-Single Rail	meter [Linear Foot]
606.1721	Bridge Transition - Type I	Each
606.1722	Bridge Transition - Type II	Each
606.1731	Bridge Connection - Type I	Each
606.1732	Bridge Connection - Type II	Each
606.178	Guardrail Beam	meter [Linear foot]
606.18	Guardrail Type 3b - Double Rail	meter [Linear foot]
606.19	Guardrail Type 3a - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.191	Guardrail Type 3aa - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.20	Guardrail Type 3a - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.201	Guardrail Type 3aa - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.21	Guardrail Type 3b - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.22	Guardrail Type 3b - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.23	Guardrail Type 3c - Single Rail	meter [Linear Foot]
606.2301	Guardrail Type 3c - Double Rail	meter [Linear Foot]
606.231	Guardrail Type 3c - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.232	Guardrail Type 3c - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.24	Guardrail Type 3d - Single Rail	meter [Linear Foot]
606.2401	Guardrail Type 3d - Double Rail	meter [Linear Foot]
606.241	Guardrail Type 3d - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.242	Guardrail Type 3d - over 4.5 m [15 feet] radius	meter [Linear Foot]
606.25	Terminal Connector	Each
606.257	Terminal Connector - Thrie Beam	Each
606.265	Terminal End-Single Rail - Galvanized Steel	Each
606.266	Terminal End-Single Rail - Corrosion Resistant Steel	Each
606.275	Terminal End-Double Rail - Galvanized Steel	Each
606.276	Terminal End-Double Rail - Corrosion Resistant Steel	Each
606.353	Reflectorized Flexible Guardrail Marker	Each
606.354	Remove and Reset Reflectorized Flexible Guardrail Marker	Each
606.356	Underdrain Delineator Post	Each
606.358	Guardrail, Modify, Type 3b to 3c	meter [Linear Foot]
606.3581	Guardrail, Modify Existing to Type 3d	meter [Linear Foot]
606.362	Guardrail, Adjust	meter [Linear Foot]
606.365	Guardrail, Remove, Modify, and Reset, Type 3b to 3c	meter [Linear Foot]
606.3651	Guardrail, Remove, Modify, and Reset Existing to Type 3d	meter [Linear Foot]
606.366	Guardrail, Removed and Reset, Type 3c	meter [Linear Foot]
606.367	Replace Unusable Existing Guardrail Posts	Each
606.47	Single Wood Post	Each
606.48	Single Galvanized Steel Post	Each
606.50	Single Steel Pipe Post	Each

606.51	Multiple Mailbox Support	Each
606.55	Guardrail Type 3 - Single Rail	meter [Linear Foot]
606.551	Guardrail Type 3 - Single Rail with Rub Rail	meter [Linear Foot]
606.56	Guardrail Type 3 - Double Rail	meter [Linear Foot]
606.561	Guardrail Type 3 - Double Rail with Rub Rail	meter [Linear Foot]
606.568	Guardrail, Modify Type 3c -Double Rail	meter [Linear Foot]
606.59	Guardrail Type 3 - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.60	Guardrail Type 3 - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.63	Thrie Beam Rail Beam	meter [Linear Foot]
606.64	Guardrail Thrie Beam - Double Rail	meter [Linear Foot]
606.65	Guardrail Thrie Beam - Single Rail	meter [Linear Foot]
606.66	Terminal End Thrie Beam	Each
606.70	Transition Section - Thrie Beam	Each
606.71	Guardrail Thrie Beam - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.72	Guardrail Thrie Beam - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.73	Guardrail Thrie Beam - Single Rail Bridge Mounted	meter [Linear Foot]
606.74	Guardrail Type 3 - Single Rail Bridge Mounted	meter [Linear Foot]
606.753	Widen Shoulder for Low Volume Guardrail End - Type 3	Each
606.754	Widen Shoulder for Guardrail 350 Flared Terminal	Each
606.78	Low Volume Guardrail End - Type 3	Each
606.79	Guardrail 350 Flared Terminal	Each

1. ReflectORIZED Flexible Guardrail Markers shall be from Maine DOT's Approved Product List of Guardrail Material.

2. Installation:

- a. Each bolt-hole diameter shall be the bolt diameter + $1/16$ ".
- b. Wood post attachment - attach marker with 2, $5/16$ " diameter zinc-coated lag bolts, having 2" of embedment into wood post.
- c. Steel post attachment - attach marker with 2, $1/4$ " diameter zinc-coated bolt, washer and nut assemblies, having $1/2$ " of bolt extension behind steel post.
- d. When provided by the marker manufacturer, a stiffening pipe shall be inserted into the base of the marker prior to drilling bolt holes and shall remain in-place.



REFLECTORIZED FLEXIBLE GUARDRAIL MARKER DETAILS

606(34)

SPECIAL PROVISION
SECTION 610
 STONE DITCH, RIPRAP, STONE BLANKET, AND STONE DITCH
 PROTECTION
 (Granular Filter)

610.01 Description This work shall consist of placing and compacting a granular filter beneath riprap.

610.02 Materials Material for the granular filter shall meet the following requirements:

Sieve Designation		Percentage by Weight Passing Square Mesh Sieves
Metric	US Customary	
12.5 mm	½ in	35 - 70
6.3 mm	¼ in	20 - 60
2.00 mm	No. 10	10 - 40
425 µm	No. 40	0-15
75 µm	No. 200	0-3

Material for the granular filter shall only contain particles that will pass the 2 inch [50 mm] sieve.

610.032 Placing Granular Filter Material for the granular filter shall be placed on a slope properly excavated, graded and compacted as shown on the plans or as directed by the Resident. The material shall be placed in one lift to the thickness as shown on the plans and tamped in place.

610.05 Method of Measurement The granular filter will be measured by cubic yard [cubic meter], complete in place.

610.06 Basis of Payment The accepted quantities of the granular filter will be paid for at the contract unit price per cubic yard [cubic meter] complete in place.

Costs of all required excavation for the placement of the granular filter will be considered incidental to Pay Item 610.08.

	Pay Item	Pay Unit
610.24	Granular Filter	cubic yard [cubic meter]

SPECIAL PROVISION
SECTION 620
REINFORCEMENT GEOGRID

Description

This work shall consist of furnishing and installing reinforcement geogrid in accordance with these specifications and in reasonably close conformity with the lines, grades, and dimensions shown on the plans or as directed by the Resident.

Material

Geogrids shall consist of a regular network of integrally connected polymeric tensile elements with aperture geometry sufficient to permit significant mechanical interlock with the surrounding soil, aggregate or other material. The geogrid structure shall be dimensionally stable to retain its geometry under construction stresses and shall have high resistance to damage during construction, ultraviolet degradation, and all forms of chemical and biological degradation encountered in the soil being reinforced.

The reinforcement geogrid shall meet or exceed the Minimum Average Roll Values (MARV) of the properties in Table 1.

Acceptable manufacturers for reinforcement geogrids must be approved by the Resident.

Table 1. - Physical Property Requirements
 (Biaxial Reinforcement Geogrid)

Reinforcement Mechanical Property	Geogrid	Test Method	Minimum Average Roll Value (MARV) ¹
Tensile Modulus at 5% Strain MD		ASTM D-6637	236.0 kN/m (16,000 lb/ft)
Tensile Modulus at 5% Strain XD		ASTM D-6637	396.0 kN/m (26,500 lb/ft)
Rib Junction Strength		GRI-GG2	14.6 kN/m (1000 lb/ft) in both directions
Aperture Openings			Between 19.0 and 75.0 mm (0.75 and 3 inches)
Percent Open Area			50 to 80%

¹ Values are minimum average roll values determined in accordance with ASTM D-4759.

Certification

Prior to construction the Contractor shall submit to the Resident the Manufacturer's certification that the geogrid supplied has been evaluated in full compliance with this Specification and is fit for long-term, critical soil reinforcement applications. The Contractor's submittal package shall include, but not be limited to, actual tests for tension/creep, durability/aging, construction damage, and quality control tensile testing.

Delivery, Storage and Handling

The Contractor shall check the reinforcing geogrid upon delivery to ensure that the proper material has been received. Each geogrid roll shall be shipped in a protective bag and clearly marked with roll number, lot number, geogrid style and principle strength direction. During all periods of shipment and storage, the geogrid shall be protected from temperatures greater than 60°C (140°F) and all deleterious materials that might otherwise become affixed to the geogrid and affect its performance. The manufacturer's recommendations shall be followed with regard to protection from direct sunlight. The geogrid shall be stored off the ground in a clean, dry environment out of the pathway of construction equipment.

Construction Requirements

Reinforcement geogrid shall be installed, in accordance with the manufacturer's recommendations, to the proper elevation and alignment, as shown on the plans or as directed by the Resident.

1. The geogrid shall be laid at the proper elevation and alignment as shown on the plans. The Contractor shall verify correct orientation of the geogrid. Geogrid may be temporarily secured in-place with staples, pins, sand bags or backfill as required by fill properties, fill placement procedures, or weather conditions, or as directed by the Resident.
2. Reinforcement geogrid shall be oriented such that the roll length runs parallel to the construction centerline.
3. Adjacent rolls of reinforcement geogrid shall be overlapped a minimum of 300 mm (1 foot).
4. Lengths of reinforcement geogrid shall be continuous, splicing along the length will not be allowed.
5. Seams along adjacent lengths of reinforcement geogrid shall be tied together with hog rings or cable ties every 1.2 to 1.8 meters (4 to 6 feet).
6. The reinforcement geogrid shall be anchored at each end, and pulled taut, to reduce any considerable slack, as directed by the Resident.
7. Fill shall not be dumped directly onto the Reinforcement Geogrid or Reinforcement Geotextile. It shall be dumped at the edge of Reinforcement Geogrid/Reinforcement Geotextile or on a previous course of fill with a minimum compacted depth of 200 mm (8 inches).
8. The geogrid shall be covered with fill materials within 5 days of placement to protect against unnecessary exposure.
9. Fill may then be pushed onto the reinforcement geogrid using a track mounted bulldozer. At no time shall construction equipment be allowed directly onto the reinforcement geogrid. Track mounted equipment shall be allowed on previous courses of fill with a minimum compacted depth of 200 mm (8 inches). Smooth drum roller compaction equipment shall be allowed on previous courses of fill with a minimum compacted depth of 200 mm (8 inches) and spread fill with a minimum depth of 300 mm (12

inches), loose measure. At no time shall rubber tired or sheeps-foot rollers be allowed onto the reinforced fill. Turning of vehicles should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid. Sudden breaking and sharp turning shall be avoided. Equipment speeds over 15 MPH shall not be allowed.

10. Placement, spreading, and compaction of soil on top of the reinforcement geogrid shall advance from one end of the reinforcement geogrid and move towards the other. Care shall be taken to minimize the development of wrinkles and to ensure that the reinforcement geogrid doesn't move from its position during fill placement. Limited stacking may be permitted, as directed by the Resident.

11. Fill shall be compacted as specified in (1) the Standard Specifications or (2) to at least 90 percent of the maximum dry density determined in accordance with AASHTO T-180, whichever is greater. Density testing shall be made at a minimum frequency of one (1) test per lift or as otherwise specified in the Standard Specifications.

12. During construction the surface of the fill shall be kept approximately horizontal. Fill shall be graded away from the slope crest and rolled at the end of each work day to prevent ponding of water on surface of the reinforced soil mass.

13. Any geogrid damage shall be repaired or replaced in accordance with the manufacturer's recommendations. The Contractor, at no additional cost to the Department, shall replace any geogrid damaged during installation.

14. Rutting may develop within the initial granular lift but rut depths should not exceed 75 mm (3 inches). It may be necessary to decrease the size and/or weight of the construction equipment or increase the thickness of the granular lift if rut depths of 75 mm (3 inches) or less cannot be maintained.

15. All rutting formed during construction shall be filled with new base material. In no case shall rutting be filled by blading down

Method of Measurement

Reinforcement Geogrid measurement will be by the square yard of material installed. Incidental overlaps for connections, splices, etc. are not included in the pay item.

Basis of Payment

Reinforcement geogrid placement will be paid for at the Contract unit price per square yard which shall be full compensation for all off-loading, inspection, storage, labor, materials, equipment, tools and any incidentals to complete the installation.

Pay Item	Description	Pay Unit
620.65	Reinforcement Geogrid	Square Yard (Square Meter)

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

ADD the following paragraph to subsection 626.032:

METALLIC CONDUIT INSTALLATION

Where noted on the drawings, under pavement ducts shall be provided to facilitate conduit crossing of the existing highway and ramps without disruption to the existing highway and ramp pavement surface. Under pavement ducts shall consist of metallic conduit to be hydraulically jacked or directional bored below the highway and ramp at a depth of not less than 900 mm (36 inches). Under pavement duct shall extend for a distance of 3 meters (10 feet) beyond the highway or ramp edge at each side.

ADD the following paragraph to subsection 626.05

Payment will be made for the total number of meters (linear feet) of under pavement duct actually furnished, installed and accepted at the contract price per meter (linear foot). This price shall include the cost of: furnishing and installing the conduit; excavating; furnishing special backfilling materials, pull wire, fittings, grounding and bonding; test cleaning interiors of conduits and all materials, labor, equipment and incidentals necessary to complete the work.

Pay Item	Pay Unit
626.25 Under pavement duct	Meter (Linear Foot)

SPECIAL PROVISION
SECTION 627
PAVEMENT MARKINGS

The following additions are made to Section 627 Subsection 627.10 of the December 2002 revision of the Standard Specifications.

627.10 Basis of Payment:

<u>Pay Item</u>	<u>Pay Unit</u>
627.72 6 Inch White Pavement Marking Line	Linear Foot [Meter]
627.74 6 Inch Yellow Pavement Marking Line	Linear Foot [Meter]
627.781 Temporary 6 Inch Painted Pavement Painted Marking Line, White or Yellow	Linear Foot [Meter]

**SPECIAL PROVISION
SECTION 631
EQUIPMENT RENTAL
SIGN CREW**

The following are added to Subsection 631.01, 631.02 and 631.08.

631.01 Description

This item is to be used to modify detour signs and or other traffic control items at various locations when emergencies arise or when Maine DOT is unavailable or unreachable. This item may be used at any time do to emergency situations and must be available on short notice if needed. It is the intent of the Department that the “Sign Crew” be a separate crew and equipment from what is being used by the contractor for item 652.36. The contractor may be allowed to use crew and equipment that is being used for item 652.36 on a limited basis if approved in advance by the Resident.

631.02 General

Equipment

A sign crew shall consist of a minimum of 2 laborers and 1 truck capable of carrying at least four signs (4’x 4’ in size) including all hardware and equipment necessary to install and remove them as needed.

631.08 Basis of Payment

Payment will be made under:

Pay Item

Pay Unit

631.52 Sign Crew

Hour

SPECIAL PROVISION
SECTION 634 and 643
Highway Lighting and Traffic Signals

Section 634.09 testing of highway lighting, the first sentence shall be amended as follows:

Before acceptance of the work, the contractor shall cause the following tests to be made on all lighting circuits, by a licensed electrician.

The tests do not need to be performed in the presence of the Resident, but the test results shall be recorded on the Highway Lighting Quality Control Check List and submitted to the Resident by the Contractor for acceptance. The form shall be signed by the licensed electrician certifying that the highway lighting meets the requirements of section 634.09.

Subsection 634.14, field testing of Traffic Signals, the first sentence shall be amended as follows:

Before acceptance of the work the contractor shall cause the following tests to be made on all traffic signal equipment and circuits, by a licensed electrician.

The tests do not need to be performed in the presence of the Resident, but the test results shall be recorded on the Traffic Signal Quality Control Check List and submitted to the Resident by the Contractor for acceptance. The form shall be signed by the licensed electrician certifying that the signal equipment and circuits meet the requirements of section 634.14.

Highway Lighting Quality Control Checklist

Subsection 634.09 Field Testing

Project Pin # _____

Location (if multiple services, please be specific)- _____

Grounding Electrode Resistance at service _____

Number of Circuits _____

Hand-Off-Auto Switch? _____

Circuit #1

Open Circuit Resistance- (Ohm out both hot legs at the cabinet while they are shorted together at the last pole and the fuse holders are disconnected at each pole) _____

Megger Test- (Meg out both hot legs to ground at the cabinet while they are shorted together at the last pole and the fuse holders are disconnected at each pole) _____

Current draw- (during normal operation) Leg #1 Leg #2

Operating Voltage at last pole _____

Circuit #2

Open Circuit Resistance- (Ohm out both hot legs at the cabinet while they are shorted together at the last pole and the fuse holders are disconnected at each pole) _____

Megger Test- (Meg out both hot legs to ground at the cabinet while they are shorted together at the last pole and the fuse holders are disconnected at each pole) _____

Current draw- (during normal operation) Leg #1 Leg #2

Operating Voltage at last pole _____

I, _____, certify that this work was done in accordance with subsection 643.14 and current NEC _____ guidelines, and when tested, was functioning as intended. (YEAR)

Electrician's Signature _____

Electrician's License # _____

Highway Lighting Quality Control Checklist

Subsection 634.09 Field Testing

Project Pin # _____

Location (if multiple services, please be specific)- _____

Grounding Electrode Resistance at service _____

Number of Circuits _____

Hand-Off-Auto Switch? _____

Circuit #3

Open Circuit Resistance- (Ohm out both hot legs at the cabinet while they are shorted together at the last pole and the fuse holders are disconnected at each pole) _____

Megger Test- (Meg out both hot legs to ground at the cabinet while they are shorted together at the last pole and the fuse holders are disconnected at each pole) _____

Current draw- (during normal operation) Leg #1 _____ Leg #2 _____

Operating Voltage at last pole _____

Circuit #4

Open Circuit Resistance- (Ohm out both hot legs at the cabinet while they are shorted together at the last pole and the fuse holders are disconnected at each pole) _____

Megger Test- (Meg out both hot legs to ground at the cabinet while they are shorted together at the last pole and the fuse holders are disconnected at each pole) _____

Current draw- (during normal operation) Leg #1 _____ Leg #2 _____

Operating Voltage at last pole _____

I, _____, certify that this work was done in accordance with subsection 643.14 and current NEC _____ guidelines, and when tested, was functioning as intended. (YEAR)

Electrician's Signature _____

Electrician's License # _____

Traffic Signal Quality Control Checklist

Subsection 643.14 Field Testing

Project Pin # _____

Grounding Electrode Resistance at service _____

ID tags on loop amps / detector cards? _____

Location _____

Street Approach	_____		
Loop #	Resistance		_____
Phase #	Meg to ground		_____
L,C, or R Lane	Amount of bondo covering loop		_____
Pulse or Presence			_____

Street Approach	_____		
Loop #	Resistance		_____
Phase #	Meg to ground		_____
L,C, or R Lane	Amount of bondo covering loop		_____
Pulse or Presence			_____

Street Approach	_____		
Loop #	Resistance		_____
Phase #	Meg to ground		_____
L,C, or R Lane	Amount of bondo covering loop		_____
Pulse or Presence			_____

I, _____, certify that this work was done in accordance with subsection 643.14 and current NEC _____ guidelines, and when tested, was functioning as intended. (YEAR)

Electrician's Signature _____

Electrician's License # _____

SPECIAL PROVISION
SECTION 634
Highway Lighting
and
SECTION 643
Traffic Signals

634.08 Service

643.09 Service Connection

Add the following to each of these sections:

METER POSITION

All meter mounting devices shall be installed so that the meters will be upright (plumb). They shall be installed with the top of the meter not less than 48 inches or more than 60 inches from the floor or final grade. Exceptions to this height requirement will be made where special permission has been given to install group or modular metering, overall meter enclosures or pole-mounted meters. Level grade shall be maintained for a minimum of 36 inches in front of the meter enclosure to provide a safe working space. In order to meet this requirement on uneven terrain, as an option, the contractor may install a pressure treated wood platform.

For any **non-residential** (industrial or commercial) self-contained meter socket, the **by-pass requirements** are as follows:

Meter Socket By-Pass

Single-Phase: 100 or 150 amp *Single handle lever operated by-pass required.

The Contractor shall meet all requirements and regulations of Utility Companies when installing equipment on their poles and for the service connection. It is the responsibility of the Contractor to contact the Utility Companies to determine specific requirements.

SPECIAL PROVISION
SECTION 639
ENGINEERING FACILITIES
(Telephone)

639.03 General

639.09 Telephone

Paragraph 1 is amended as follows:

The contractor shall provide **three** telephone lines and two telephones,....

Add-

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

SPECIAL PROVISION
SECTION 652
MAINTENANCE OF TRAFFIC
Construction Sign Sheeting Material

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

SPECIAL PROVISION
SECTION 652
 MAINTENANCE OF TRAFFIC
 (Traffic Control)

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

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

SPECIAL PROVISION
SECTION 652
MAINTENANCE OF TRAFFIC

Approaches. Approach signing for the work on the Interstate shall include the following

Road Work 3 Miles	Road Work 500 Feet
Road Work 2 Miles	Road Work Next x Miles
Road Work 1 Mile	End Road Work

Work Areas Interstate. At the work sites, signs, flashing arrow boards and channeling devices as shown on the Work Zone Signing details shall be used as directed by the Resident.

Signs Include:

Right or Left Lane Closed 2 Miles
Lane Ends 1 mile Merge Right or Left Now
Right or Left Lane Closed 1/2 Mile
Speed Limit 55* ¹ (Existing speed limit signs will be covered when in use)
Fines Doubled* ¹
Work Zone ¹
Do Not Pass*
Right/Left Merge Symbol (W 4-2)
End Work Zone
Resume Speed
Exit (green with white legend and border)
Road Work Ahead
Merging Traffic Symbol (At on-ramp in right lane closure)
Stop Ahead (At on-ramp in right lane closure)
Single Lane Ahead (At on-ramp in left lane closure)
Stop (At on-ramp in right lane closure)
Directional Arrows (At on-ramp in right lane closure)
Bump
Trucks Entering
Left Turning Trucks with 500 Feet Advisory Plate
Flagger Sign
Caution Rumble Strip
Ramp Closed

* White with black legend and border

¹ In addition to work zone package these signs will also be required at the end of any on ramps that are within the lane closure

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

General Requirements-Interstate.

There shall be no diverting of traffic between northbound and southbound lanes.

The Contractor shall provide a minimum traveled way width of 14 Feet through an expressway lane closure.

The maximum length of lane closure in the area of Station 519+94 to 715+00 shall be 3.7 miles in length.

The maximum length of lane closure in the area of Station 715+00 to 1674+20 shall be 2 miles in length. These shall be temporary closures and will not be allowed unless work is being performed.

Lane closures shall not be set up until work in the area is to be performed and must be removed when no work is being performed.

Lane closures shall be separated by at least 2 miles.

All construction work shall be confined to the lane closed to traffic.

Slow moving construction equipment may travel the closed lane for short distances.

All trucking shall be done in the lane open to traffic.

No equipment or vehicles of the Contractor, his Subcontractor or employees engaged in work on this contract, shall be parked or stopped on lanes carrying traffic, or on lanes or shoulders adjacent to lanes carrying traffic, at any time.

The Contractor shall keep all paved areas of the roadway as clear as possible at all times. The Contractor's men and equipment shall avoid crossing traffic lanes whenever possible.

Road Work Ahead signs shall be used on roads adjacent to the interstate when the Contractor is working on or near an on-ramp or when the on-ramp enters a lane closure area.

Existing pavement markings at centerline in the taper to the lane closure shall be removed or painted over with an approved paint beginning at the first drum in the taper in overnight lane closures.

A temporary pavement marking line, or at the Contractor's option temporary approved raised pavement markers, shall be placed from the existing lane edge line through the length of the taper in overnight lane closures. Temporary painted lines shall only be used where the pavement is to be overlaid. Temporary plastic lines or raised pavement markers shall be used on pavement that it not to be overlaid. Removing existing pavement markings and **installing and removing raised pavement markers in lane closure tapers** shall be incidental to item 652.36. Placing all other temporary pavement

marking lines or markers will be paid under Item 627.781 Temporary 6 Inch Painted Pavement Marking Line, White or Yellow.

12:1 paved tapers shall be placed at all Ramps to be used by traffic immediately following paving and milling operations.

Interstate crossovers will not be used to reverse direction. They may be used as storage areas as long as sufficient room is left for the utilization of law enforcement.

The Contractor, his Subcontractor or employees shall conduct all work in a safe and professional manner as it relates to the traveling public (i.e. not adversely disrupting the flow of traffic in an unsafe manner when exiting or entering a lane closure or crossover, negative verbal or physical gestures).

The Interstate will be completely shut down to all northbound traffic from Station 712+50 +- (Southerly limits of the project) to 1620+00 +- (Northerly limits of the project) starting June 16 at 12:00 am to August 23 at 11:59 pm. The Maine DOT will have a detour in place prior to June 16, 2009. Southbound I-295 traffic will be detoured onto route 201 as it was in 2008. Northbound I-295 traffic will be detoured onto I-295 southbound lanes (x-over's to be built under contract Pin 15114.60). The Maine DOT will be responsible for all signs, installation, adjusting and maintenance of the detour on route 201. The Maine DOT will be responsible for all initial non-construction signs, installation, adjusting and maintenance of the detour on I-295 SB.

Channelization. Channelization devices shall include the following:

Flashing Arrow Boards

Vertical Panel Markers

Drums (**The contractor shall place 3 drums across a closed lane every 1500'**)

Cones (**Cones may be used for temporary lanes closures or while work is in progress**)

Temporary Raised Pavement Markers

Channelization devices shall be installed and maintained at the spacing determined by the MUTCD to delineate travel lanes through the project. Vertical Panel markers shall be placed 2 feet from the outside edge of the shoulder on the passing lane at 600 feet intervals when the travel lane is closed in overnight lane closures. The vertical panel marker size shall be 12 inches x 24 inches. When directed by the Engineer, drums or other channelization devices shall be placed in the closed lane at a maximum spacing of 2 x speed limit.

Temporary Centerline or Edge Line. A temporary painted centerline and edge line shall be marked each day on all new pavement to be used by traffic. The temporary line shall conform to the standard marking patterns used for permanent markings and will be paid for under Section 627. Failure to apply a temporary line daily will result in suspension of paving until temporary markings are applied to all previously placed pavement.

Roadside Recovery Area. The Contractor shall not store material nor park equipment within 15 feet of the edge of the established travel lanes.

No long term storage of equipment or material will be allowed within 30 feet of the edge of the established travel lanes. Short term storage of equipment or material less than 30 feet from the edge of the established travel lanes must be approved by the Department and shall be clearly marked by **drums and cones**. Short term storage shall be defined as less than 12 hours. No equipment or material will be allowed within 30 feet of the edge of the established travel lanes at night.

Vehicles shall not be parked in the median, except at crossovers. Crossovers shall not be blocked from the normal use of maintenance or State Police Forces. Equipment parked in crossovers shall be well delineated with **drums**.

Speed Limits in Work Zones. The Contractor shall sign all approved reduced speed limits on Construction project according to APM #431 - A Policy on the Establishment of Speed Limits in Work Zones.

The following is a list of some of the contractor's responsibilities:

1. The contractor will be responsible closing down all on and off ramps including signs, drums, barricades, installation, and maintenance and ensuring the public has no access to I-295 southbound and northbound (except specified ramps to be left open) during the full closure and the closed section of the northbound I-295. Devices used to close the ramps shall be placed so that vehicles will not be able to physically drive between the devices. **(Items incidental to Item 652.36)**
2. Placing barriers to close the existing x-over. Barriers shall be placed as directed to allow emergency vehicles and law enforcement access to park. **(Items incidental to Item 652.36)**
3. Installing construction signs and placing lane closure at the beginning of the southbound I-295 detour and maintenance there of (roughly from the Cobbosseecontee bridge to the route 201 off ramp).
4. Construction signing for northbound detour for the x-over's going from northbound to southbound and southbound going back to northbound during the full interstate closure.
5. Patching of potholes on the northbound lane from the start of construction until the complete closure is in effect. **(Items incidental to Item 652.36)**

SPECIAL PROVISION
SECTION 652
MAINTENANCE OF TRAFFIC
(Portable-Changeable Message Sign)

Description This work shall consist of furnishing a portable-changeable message signs. The signs shall be used as directed by the Resident, for the duration of this project. The signs shall be available for use before the start of the work on the project.

General The portable message sign shall be a Winko-matic, or an approved equal.

The sign message shall have a minimum of three lines and eight characters per line. It shall have a minimum clear visibility of 275 m [900 ft]. The changeability of the sign message shall be done with so-called, LED technology. The sign shall be lighted form above and below the message for night use.

The sign shall be mounted on a heavy duty trailer. The trailer shall have leveling jacks and a 50 mm [2 in] ball hitch. The sign shall have capability of being raised to a minimum of 2 m [7 ft] above the trailer, measured for the bottom of the sign. It shall be capable of being rotated 360 degrees with respect to the trailer. The sign shall be solar powered.

The controller shall be a high performance laptop computer with LCD display. It shall have a standard 72 Keyboard. The controller shall have the capability of a minimum 200 messages with a minimum 150 preprogrammed commonly used messages and 50 user created messages. It shall be enclosed in a weather proof cabinet on the trailer. The sign shall have the capability of flashing the message.

There shall be a battery back-up power source in the event of failure.

Method of Measurement The quantity of portable-changeable message signs will be measured for payment by each unit furnished and satisfactorily maintained.

Basis of Payment The accepted quantity of portable-changeable message signs will be paid for at the contract unit price each, which payment shall be full compensation for all labor, materials, equipment required for furnishing, installation of, Operation of, maintenance of, relocation of, and adjustment of the portable-changeable message sign and removing the signs.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
652.41 Portable-Changeable Message Sign	Each

SPECIAL PROVISION
SECTION 652- PORTABLE DYNAMIC MESSAGE SIGN

Description This work consists of furnishing new, trailer-mounted portable dynamic message signs (signs) and providing sign-related testing, up to 20 hours of class room training, spare parts, control software, 12-months of technical assistance, and warranty.

General

Project Summary The signs will be installed by others on gravel pads next to freeways. The manufacturer shall deliver the signs to the Maine Department of Transportation's (the Department's) Fairfield facility (10 Mountain Avenue, Fairfield, ME, near the I-95/Rt. 201 interchange). There, the manufacturer shall test each sign (and certain spare parts) in the presence of Department personnel and the installation contractor. The manufacturer shall also train the installation contractor's staff and Department personnel in the proper installation and set-up of the signs.

The signs will be installed near Portland and Bangor. When the first sign is installed, the sign manufacturer shall supervise the installation contractor's work and shall conduct additional training, if needed, to ensure that the trainees are competent to install the remaining signs.

The manufacturer shall install sign control software on computers supplied by the Department, test the software, and train Department personnel in its use.

Manufacturer Qualifications The sign must be made by a manufacturer meeting the following qualifications:

- Little risk of financial problems that could impair the manufacturer's ability to provide warranty service, technical support, and spare parts over the next year.
- A record of satisfied customers for products equivalent to those to be furnished under this contract.
- Ability to produce products in compliance with the National Transportation Communications for ITS Protocol (NTCIP).

Required Submittals Five copies of the following items shall be submitted.

a. With the bid The bid will not be deemed acceptable unless these items demonstrate that the manufacturer meets the requirements of the above.

1. Dunn & Bradstreet's "Comprehensive Insight Plus" report on the manufacturer's financial condition. If the manufacturer is a subsidiary, provide the report for the parent.

2. Names, titles, and telephone numbers of individuals at five or more transportation agencies that have purchased the manufacturer's trailer-mounted LED signs with NTCIP-enabled central control software. Do not include customers who have had the products less than six months.

3. Letter from an independent testing agency certifying that the manufacturer's signs are compliant with NTCIP 1203. The signs and software subjected to the independent test need not be identical to those proposed for this project.

b. Prior to shipping any signs Each of these items must be revised until found acceptable by the Department.

1. Shop drawings and descriptive literature demonstrating that the signs meet these specifications.

2. Test report and certification by an independent testing agency that the sign meets the environmental requirements of NEMA TS 4, Hardware Standards for Dynamic Message Signs (DMS) with NTCIP Requirements. The test must have been performed on sample components that are essentially identical to those provided in this project.

3. Certification by an independent testing agency or a professional engineer registered in Maine that the sign meets the structural integrity requirements of NEMA TS 4. The certification need only cover those aspects of structural integrity for which TS 4 requires certification.

4. Calculations demonstrating that the sign meets the battery capacity and solar recharging requirements of below, as well as the recharging requirement of Paragraph 3.3.5.3 of NEMA TS 4. For solar recharging, take into account the azimuth and tilt of the panels as they will be mounted. If these cannot be aimed, assume the panels are facing north.

5. A user manual for the central software.

6. A manual or manuals for the installation, operation, and maintenance of the signs.

7. A proposed plan for testing the signs, software, and spare parts at the time of delivery.

8. Resumes demonstrating the qualifications of the individuals who will train the installation contractor and Department staff.

9. An outline of the proposed training activities with the estimated duration of each activity.

c. With the Signs

1. A CD containing the management information bases (MIBs) and electronic copies of the manuals and drawings provided earlier. The MIBs shall be ASCII files in Abstract Syntax Notation 1 (ASN.1) format. The supported range shall be indicated in ASN.1 format in the SYNTAX field of the associated OBJECT TYPE macro for devices that do not support the full range of any object within a standard MIB module. The manuals and drawings shall be in Acrobat or Word. The manufacturer shall allow the use of this documentation by any party authorized by the Department for systems integration purposes.

2. Warranty covering the signs for the manufacturer's standard warranty period, but not less than one year.

Conformance Testing of Display The manufacturer is not required to provide independent certification that the display meets the requirements in Section 5 of NEMA TS 4. However if, after inspecting the signs, the Department believes that the display properties do not fully comply with TS 4 and these specifications, then the manufacturer must either remedy the defects or present third party certification that the signs are in compliance.

Portable Sign The sign shall consist of an all-LED (light emitting diode) matrix message board, support post, power system, and a controller assembly, all mounted on a heavy duty, towable trailer. The sign shall conform to NEMA TS 4, except for requirements of NEMA TS 4 that conflict with the requirements in this specification.

General

a. Finish All exterior surfaces except the sign face shall be cleaned, primed and finished with two coats of Highway Safety Orange. An exception is the border around the display, which shall be black. The finish shall be either polyester powdercoat or baked enamel.

b. Wiring All wiring shall be inaccessible to vandals. Connections to power and telephone service supplied by others shall be via wires enclosed in liquid-tight flexible metal conduit, so the sign must have provision for connecting such conduit to the sign.

c. Labeling All terminals and connections shall be clearly labeled. Labels shall be permanent, waterproof and machine-printed.

Message Board

a. Dimensions The display shall be a matrix of LED pixels approximately six feet high by 12 feet wide. Center-to-center pixel spacing shall be the same horizontally and vertically and shall be 2.6 inches or less. If the spacing is 2.6 inches, the display shall be at least 50 pixels wide and 27 pixels high. If the spacing is less, the number of pixels shall be proportionally larger. The sign shall be capable of displaying three lines of 18" high characters.

b. Finish The inside of the display enclosure shall be painted black to facilitate heat dissipation.

c. Display Modules The display shall be composed of at least ten display modules that can quickly be replaced in the field. They must be designed so they cannot warp.

d. Glazing If the display modules are not weatherproof, they shall be protected by a watertight sheet of UV-protected acrylic or polycarbonate.

e. LEDs The LEDs shall be amber and have a viewing angle of 30 degrees in the horizontal plane. That is, brightness at 15 degrees off axis shall be at least 50 percent of the on-axis brightness.

f. Enclosure The enclosure shall be made of aluminum with aluminum and/or stainless steel fasteners.

g. Brightness When all pixels are illuminated at maximum brightness, the display shall have an on-axis luminance intensity of at least 3,720 candelas per square meter. The sign shall have an automatic intensity control feature in order to keep the LED lamp matrix intensity constant with a reduction in voltage.

h. Sighting Device The housing shall include a sighting device to facilitate proper directional alignment of the message board.

Support Post The message board shall be mounted on a mast that is raised and lowered by an electrically powered hydraulic pump (with attached fluid reservoir).

a. Backup Pump The hydraulic system shall include an auxiliary manual pump with release for emergency use.

b. Rotation When fully raised in the display position, the message board shall be able to rotate so the sign can be aimed at traffic.

c. Locking Mechanisms The sign's rotation-locking device shall be independent from the sign's raise/lower-locking device

d. Protection The hydraulic system shall be inside a locked housing.

Power System The sign shall be powered by batteries that are recharged by 120 volt AC power when available and by solar power at other times.

a. Batteries The batteries must be available from multiple manufacturers. The number and type of batteries shall be sufficient to operate a full display of characters for 30 continuous days with no recharging.

b. Recharging During recharging of low batteries from 120-volt power, the sign shall operate normally.

Power control circuitry shall protect the batteries from overcharging by the 120-volt and solar chargers. It shall also protect the all components from damage in the event of a short circuit, overload, or similar problem. It shall disconnect the load from the batteries when further discharging could damage the batteries.

The battery charger shall include an ammeter for monitoring the charging process, as well as a display of the battery voltage.

c. Automatic Sensing of 120-Volt Power The system shall automatically switch between solar and 120-volt power (when available) for battery charging with no operator intervention.

d. Operation without Batteries If the batteries have been disconnected, the sign and controller shall operate using 120 VAC.

e. Solar Recharging Under average conditions for Bangor in winter, the solar charging system shall produce more power in a 24 hour period than the sign needs to display a 3-line message continuously for 24 hours.

Controller Assembly

a. Control Architecture The sign shall support both types of control architecture described in Section 8.10 of TS 4. The controller shall be able to store at least 30 messages in non-volatile memory.

b. Fonts Section 5.6 of TS 4 does not apply to this sign. The controller shall be capable of storing at least four fonts in memory and shall be shipped with at least two fonts in memory. The user shall be able to create at least two additional fonts, download them to the controller, and store them there.

Both fonts shall be 18 inches high. One shall be comparable to that shown in Figure 7-1 of Federal Highway Administration publication # FHWA-TS-90-043. The other shall be a similar, compressed font. Both fonts shall include:

- All upper case letters,
- The following punctuation marks . , / ? ‘ : and “.
- All numerals 0 to 9,
- The following special characters #& * +< >← →↑ ↓↖ ↗↘ ↙

c. Alarms The sign controller shall automatically notify the central sign control computer when the batteries are low.

Communication Section 8.7 of TS 4 does not apply to this sign. All communication with the sign controller shall use the latest recommended NTCIP standards at the time of bidding.

a. Communication Ports The controller shall have at least two communication ports that can be used for remote control. The controller shall accept commands via either port and respond via the same port that received the command, so that each port automatically functions as a backup communication link for the other port and include cell phone modems for AT&T, GPS and web server service

- One port shall be equipped with an internal modem and shall communicate over a dial-up telephone line, which may be a cellular connection. It shall operate in accordance with the latest version of NTCIP 2103, Point-to-Point Protocol over RS232 Subnetwork Profile. All Challenge Handshake Authentication Protocol (CHAP) secrets shall be user configurable via the CHAP Secret Table.
- The other port shall be an RJ-45 Ethernet port, which may be used for a wireless data communication service. The Ethernet port shall also be suitable for connecting a notebook computer for local control and maintenance. It shall operate in accordance with the latest version of NTCIP 2104, Ethernet Subnetwork Profile. The medium shall be 10Base-T.

b. Cellular Antenna An antenna suitable for cellular telephone or data service shall be installed on top of the message board. Install the antenna in a way that does not permit water to enter the message board. A 50 Ohm coaxial cable, 100 percent shielded and designed for outdoor use, shall run from the antenna to the controller compartment. The cable may not pass through the top of the compartment and the hole where the cable enters must be sealed watertight. Immediately upon entering the controller compartment, the cable shall terminate on a grounded lightning protector. The antenna shall be omnidirectional, designed for both the 806-894 MHz range and the 1850-1990 MHz range. It shall have a built-in ground plane and vertical polarization. The antenna gain shall be at least 5 dBi.

c. Information Level Standards

1. Global Objects. The sign shall support the following objects defined in NTCIP 1201, Global Object Definitions:

- All objects in the Global Configuration Node.
- The following objects in the Global Time Management Node: globalTime; globalDaylightSaving; maxTimeBaseScheduleEntries; timeBaseScheduleTable; maxDayPlans; maxDayPlanEvents; timeBaseDayPlanTable.
- All objects in the Report Parameters Node.

The module table required by Clause 2.2.3 of NTCIP 1201 shall contain at least one row with moduleType equal to 3 (software).

2. Dynamic Message Sign Objects At least the following objects, if defined in NTCIP 1203

◆ Sign Configuration and Capability Objects

- dmsSignAccess
- dmsSignType
- dmsSignHeight
- dmsSignWidth
- dmsSignTechnology
- vmsCharacterHeightPixels
- vmsCharacterWidthPixels
- vmsSignHeightPixels
- vmsSignWidthPixels
- vmsHorizontalPitch
- vmsVerticalPitch
- vmsMaxNumberPages
- vmsMaxMultiStringLength

◆ Font Objects

- numFonts
- fontTable and subsidiary objects
- maxFontCharacters
- characterTable and subsidiary objects
- fontMaxCharacterSize

◆ MULTI Configuration Objects

- defaultFlashOn
- defaultFlashOff
- defaultFont
- defaultJustificationLine
- defaultJustificationPage
- defaultPageOnTime
- defaultPageOffTime
- defaultCharacterSet
- dmsColorScheme
- dmsSupportedMultiTags

◆ Message Objects

- messageIDCode
- messageActivationCode
- dmsNumPermanentMsg
- dmsNumChangeableMsg
- dmsMaxChangeableMsg
- dmsFreeChangeableMemory

- dmsNumVolatileMsg
- dmsMaxVolatileMsg
- dmsFreeVolatileMemory
- dmsMessageTable and subsidiary objects
- dmsValidateMessageError

◆ Sign Control Objects

- dmsControlMode
- dmsSWReset
- dmsActivateMessage
- dmsMessageTimeRemaining
- dmsMsgTableSource
- dmsMsgRequesterID
- dmsMsgSourceMode
- dmsShortPowerRecoveryMessage
- dmsLongPowerRecoveryMessage
- dmsShortPowerLossTime
- dmsResetMessage
- dmsCommunicationLossMessage
- dmsTimeCommLoss
- dmsPowerLossMessage
- dmsEdDurationMessage
- dmsActivateMsgError
- dmsMultiSyntaxError
- dmsMultiSyntaxErrorPosition
- dmsMultiOtherErrorDescription
- dmsActivateMessageState

◆ Brightness Objects

- dmsIllumControl
- dmsIllumMaxPhotocellLevel
- dmsIllumPhotocellLevelStatus
- dmsIllumManLevel
- dmsIllumBrightnessValues
- dmsIllumBrightnessValuesError
- dmsIllumLightOutputStatus

◆ Scheduling Action Objects

- numActionTableEntries
- dmsActionTable and subsidiary objects

◆ Sign Status Objects, to the extent supported by the sign hardware.

- statMultiFieldRows
- statMultiFieldTable and subsidiary objects
- watchdogFailureCount

- dmsStatDoorOpen
 - shortErrorStatus
 - controllerErrorStatus
 - dmsPowerStatusMap
 - dmsPowerNumRows
 - dmsPowerStatusTable and subsidiary objects
 - fanFailures
 - pixelFailureTableNumRows
 - pixelFailureTable and subsidiary objects
 - pixelTestActivation
 - dmsPixelStatusTable and subsidiary objects
 - dmsPixelFailureTestRows
 - dmsPixelFailuresMessageRows
 - dmsLightSensorStatusMap
 - dmsLightSensorNumRows
 - dmsLightSensorStatusTable and subsidiary objects
 - dmsTepSensorStatusMap
 - dmsTemSensorNumRows
 - dmsTempSensorStatusTable and subsidiary objects
 - powerSource
 - tempMinAmbient
 - temptMaxAmbient
 - tempMinSignHousing
 - tempMaxSignHousing
 - tempSensorWarningMap
 - tempSensorCriticalTempMap
- ◆ Graphic Definition Objects
- dmsGraphicMaxEntries
 - dmsGraphicNumEntries
 - dmsGraphicVertSpacing
 - dmsGraphicHorzSpacing
 - dmsGraphicMaxSize
 - availableGraphicMemory
 - dmsGraphicBlockSize
 - dmsGraphicTable and subsidiary Objects
 - dmsGraphicsBitmapTable and subsidiary objects

Any mandatory objects that are required by NTCIP1203 but that are missing from the above list shall also be supported.

3. Object Range Requirements Every object required by these specifications shall have full standardized object range support except:

OBJECT	MINIMUM PROJECT REQUIREMENTS
Max Time Base Schedule Entries	28
Max Day Plans	14
Max Day Plan Events	12
Max Event LogConfigurations	50
Event Configuration Mode	2, 3, and 4
Max Event Log Size	200
Max Event Classes	16
Max Group Address	1
Number Fonts	4
Max. Font Characters	100
Number Action Table Entries	Equal to message capacity of sign
Number of User-Define Events	0
Number of External Devices	0
Number of brightness Levels	16 or more

d. Blanking Displaying a blank sign shall be achieved in the same way that any message is displayed (i.e., by using an object that has a syntax of either MessageActivationCode or MessageIDCode). However, a new memory type, dmsMessageMemoryType equal to 'blank (7)', shall be created to support this operation. It shall function as follows: The dmsMessageNumber for this memory type shall be reflective of the run time priority and shall be between 1 and 255, inclusive. The CRC for this memory type shall be 0x00 00 and the normal CRC algorithm shall not be applied to blank messages. The dmsMessageMultiString shall be an octet string of length 0. The activate priority for any MessageActivationCode using this type of memory shall be used as the actual activation priority.

e. Mark Up Language for Transportation Information (MULTI) The software shall implement the following tags (opening and closing where defined) of MULTI as defined in NTCIP 1203.

- Fields for 12 hour time, day of month, month, four digit year, and current speed in mph.
- Flash
- Font
- Justification Line
- Justification Page
- Moving Text
- New Line
- New Page
- Page Time
- Hexadecimal Character

f. Other NTCIP Standards All communication shall conform to NTCIP 2202, Internet (TCP/IP and UDP/IP) Transport Protocol; NTCIP 1102, Octet Encoding Rules (OER) Base Profile; and NTCIP 1103, Transportation Management Protocols. Communication with the signs shall use SNMP only.

Trailer

- a. Hitch The trailer shall have a fixed height, two-inch ball hitch.
- b. Dimensions The trailer shall be no more than 20 feet (6 m) long with the tongue in place, and no more than eight feet (2.5 m) wide.
- c. Tongue The tongue shall be removable. No tools shall be required for removal or remounting of the tongue. It shall not be necessary to disconnect any hydraulic brake lines to effect complete removal, and it shall not be necessary to bleed the brake system upon reinstallation of the tongue.
- d. Safety Chains Both the tongue and coupler shall have safety chains attached.
- e. Compartments The trailer shall have lockable, weatherproof compartments for the controller and batteries. The battery compartment shall be centrally positioned to promote stability of the trailer
- f. Leveling Jacks The trailer chassis shall have at each corner a leveling jack affixed in such a manner that the jacks may be readily placed and locked in a horizontal position for traveling without the use of any tools.
- g. Conspicuity Material The face of the trailer shall be delineated on a permanent basis by affixing retro-reflective material, known as conspicuity material, in a continuous line as seen by oncoming drivers.”

Miscellaneous Requirements

a. Radar-Ready The sign shall be fully capable of having an on-board Doppler radar speed detector installed, such that the speed of approaching vehicles can be displayed on the sign..

b. Grounding All electrical systems, surge protectors, antenna grounds, and the trailer shall connect to a common ground that also connects to a grounding lug on the outside of the trailer. Label the lug “EARTH GROUND”.

Control Software The software is to enable traffic management staff to control and monitor the signs. It is also to enable a maintenance technician at a sign to exercise all sign features, examine event logs, and run diagnostic tests. It is expected that the software will be the DMS manufacturer’s standard product, with minimal customization. The software for use by maintenance technicians need not be identical to that used by the traffic management staff, although it must have equivalent capabilities.

The manufacturer is to install the software on six of the Department’s existing computers and provide the Department with the right and means to install the same software on at least ten other computers.

It is expected that this software will be used to control additional portable and permanent dynamic message signs that the Department will buy.

Computer Compatibility Three of the computers will be stationary desktop computers with Intel Pentium IV (1.8 GHz) processors and the other three will be notebook computers with Intel Pentium M (1.5 GHz) processors. All will have Windows XP operating systems (with Service Pack 2), 512 MB or more of memory, a 20 GB hard drive, and an internal V.34 modem. The software shall work with these computers.

The manufacturer shall visit four Department facilities to install this software. The main control computer, a desktop, will be in the radio room at the Department’s Augusta Headquarters. Backup control computers will be in the regional offices in Portland and Bangor. The three notebook computers will be at the Fairfield facility when the signs are tested. Addresses for the Departments Augusta, Portland, and Bangor office locations are as follows:

Augusta: Maine Department of Transportation
Child Street
Augusta, Maine 04333

Portland: Maine Department of Transportation
Region 1 Office
Pleasant Hill Road
Scarborough, Maine 04070

Bangor: Maine Department of Transportation
Region 4 Office
Hogan Road
Bangor, Maine 04401

Password Protection Only users, who have proper authorization, as indicated by their passwords, shall be able to undertake the following actions:

- Place equipment on standby.
- Change sign messages, blank signs, and change message priority.
- Replace or delete messages stored in a DMS controller's memory.
- Display test patterns on a sign.
- Change or delete the sign computer's schedule.
- Modify the message library on the sign computer's hard disk.
- Change sign configuration parameters.
- Delete the event log.
- View passwords.
- Change passwords and privileges.

Each user shall have a different password. Users may be granted or denied permission to use each protected command independently. Via an encrypted lookup table, the computer shall determine which of the protected commands a user may use.

The software shall ask the user for his password at the time the protected command is entered. The computer shall not carry out these commands unless the user has the proper privileges.

Off Line Status A user shall be able to take a sign off line, causing it to be ignored by the sign computer. This will be used when a malfunctioning sign is generating an excessive number of alarms. When a user attempts to control an off line sign, a message shall appear on his screen informing him that the sign is out of service. When a user takes a sign off line, the software shall ask the user to type in a comment of up to 100 characters explaining the action. The comment field may be left blank. The computer shall also record the user's name, based on his password, and include the name and comment in the failure report described below.

Message Library The sign computer shall store a library of at least 999 messages on its hard disk. In addition to the message text, the file shall contain all the MULTI control codes needed for a sign to properly display the message.

When adding a message to the library, a user shall specify the message name. If a message with the same name already exists in the library, the software shall notify the user and give him the options of replacing the existing file or selecting a new name for the message he has just created. A user shall also be able to delete library messages from within the program. The program shall ask the user to confirm each message deletion before actually deleting the file.

If the user is seeking a message to display, the software shall present a list so that the user can choose one. When the user makes his selection, the software shall display the entire message, exactly as it would appear on a sign, and shall ask the user to confirm that this is the message desired. The user shall then be able to post the message on one or more signs, edit the message, or do nothing with it.

Sign Control Future signs may have different line lengths and heights (measured in pixels) than the signs provided in this project, and may have more or fewer lines. The software shall display messages as a matrix of dots that replicate the way the message will actually appear on a selected sign. The presentation should be based on the assigned font and the height and width (in pixels) of the display, as stored in a data base maintained by the sign computer. This type of display will be used during message creation and editing, as well as when displaying to a user the message currently on a sign. If the user is displaying a message from the library or creating a message without specifying what sign it will go on, the display shall be based on the characteristics of the signs provided in this project.

Upon creating or revising a message, the user shall be able to save it in the message library on the sign computer's hard disk or send it directly to one or more DMS controllers for storage or display.

When a user sends a message to one or more signs, the sign computer shall automatically check to be sure that the message will fit on the sign. This checking shall take into account the selected fonts and the size of the sign's display. If the message won't fit, the computer shall alert the user and not post the message.

If a user chooses to send the same message to multiple signs, the software shall present the user with a list of all signs, so that the user can check off which signs the new message goes to. The screen shall also give the user a choice of "All Signs". The list shall identify signs by roadway and milepost. Using a single command, the user shall be able to cause the message to be stored in all the signs he specified, replacing those previously stored in the controllers. Similarly, the user shall be able to use a single command to have all the selected signs display the same message, or the same message number.

In addition to entering commands for immediate execution, a user may store commands in the sign computer for future execution. For example, the user may want to conduct a pixel test of every sign each night at 3:00 AM. A user shall be able to quickly and easily create, modify,

suspend, or cancel a schedule of commands for the sign computer to issue to specified DMS controllers. The user shall be able to specify the same action at the same time for multiple signs, in the same way as was described in the preceding paragraph. A user shall also be able to schedule the printing of sign-related reports. A user shall not be able to schedule any command that he does not have the privilege to execute directly. The schedule shall show the name of the user who scheduled each command, based on his password. Actions that would be recorded in the event log if a user commanded them directly shall also be logged when they result from a scheduled command. The record shall include the user's name and an indication that the command was scheduled.

The software shall provide a single command that not only transmits a message to a sign (after confirming that it fits) but also causes the sign to immediately display that message on the sign (after confirming that the transmission was error free).

Status Monitoring The sign computer shall maintain an event log file on its hard disk with a record for each appearance or disappearance of an alarm from a sign. The file shall be in ASCII format with fixed-length fields separated by spaces, suitable for transfer to spreadsheet and data base management software. The record shall include the date, time, sign ID, and nature of the change. If the alarm indicates a change in the sign display, the log shall include the exact text of the message, the device from which it was commanded, and, if commanded via the sign computer, the name of the person posting the message, based on his password. The log file shall include this same information each time a message is downloaded to a sign's memory from the sign computer.

The log shall also record each time a user at the sign computer does the following:

- Changes the priority of a message.
- Changes the schedule.
- Changes a message in the library on the computer's hard disk.

The record shall include the user's name based on his password.

The log shall also record the beginning and end of communication failures. The sign computer shall deem a communication failure to have occurred if it does not get an error-free response to two consecutive commands to a controller. The computer shall deem a controller recovered if it responds properly to a command.

Reports The system shall provide the following reports to the user's screen, a disk file named by the user, or to the printer, as specified by the user:

- Equipment Failures. Lists each sign that is currently malfunctioning, along with the time and date of failure and a phrase indicating the nature of the problem. Also lists each DMS controller that is off line, along with the date and time it was taken off line, the comment written by the user who took it off line, and the user's name based on his password.
- Sign System Configuration. Lists the current values of all configuration parameters stored in the sign computer, clearly labeled. It includes such things as communication address. It does not include operating parameters stored in the DMS controllers.
- Individual Sign Configuration. Lists the current values of all changeable parameters stored in a DMS controller, clearly labeled. It includes such things as temperature thresholds. This report shall cover all signs, or a particular sign, as specified by the user. The information displayed shall be uploaded from the DMS controllers at the time the report is requested. If the sign computer is unable to upload the data from a particular sign, it shall use the corresponding data on its hard disk, but shall indicate in the report that the data is from the hard disk and may not be current.
- Current Sign Status. Lists sign location, text of message currently displayed, the priority value of the message, storage location of the message in the sign's memory, entity that caused the message to be displayed, and controller status (failed, working, or off line) for each sign in the system. This report shall cover all signs, or a particular sign, as specified by the user.
- Event Log. Lists all information in the control computer's event log file, with each field clearly labeled. The user shall be able to specify that only events between certain times, or pertaining to a certain sign, or pertaining to a certain type of event, or any combination of the foregoing, shall be included in the report. Events shall be listed chronologically.
- Message Library. Lists the text of each frame of each message in the message library, along with the duration for which the frame is displayed. Also lists the message's file name and latest revision date. Each frame shall be displayed in the report in the same way it would appear on a sign, with regard to text centering, bolding, and justification. Flashing text shall be underlined. Messages shall be grouped by subdirectory, and a user shall be able to specify that only certain subdirectories be included.
- Sign Computer's Schedule. Lists all information in the sign computer's schedule, clearly labeled. The user shall be able to specify that only events between certain times, or pertaining to a certain sign, or pertaining to a certain type of event, or any combination of the foregoing, shall be included in the report. Events shall be listed chronologically.

- Sign Memory. Lists sign ID and location and the text of each message stored in the sign. The message portion of the report shall indicate the message's memory location number and shall display the text of each frame of the message, along with the duration for which the frame is displayed. Each frame shall be displayed in the report in the same way it would appear on a sign, with regard to text centering, bolding, and justification. Flashing text shall be underlined. All information shall be clearly labeled. The user shall be able to specify that the report cover only a particular sign, or all signs. The information displayed shall be uploaded from the DMS controllers at the time the report is requested. If the sign computer is unable to upload the data from a particular sign, it shall use the corresponding data on its hard disk, but shall indicate in the report that the data is from the hard disk and may not be current.

- Bad Pixel Maps. Consist of a matrix display indicating which display elements of a sign have failed, according to the DMS controller. The user shall be able to specify that the report cover only a particular sign or all signs with display problems. If the user specifies all signs with display problems, the report will cover all signs whose controllers are currently reporting malfunctioning drivers or display elements.

The time and date for which the information is current shall appear on every page of each printed report. All pages shall be numbered.

Alarms The sign computer shall issue alarms by beeping and displaying a message clearly identifying the problem in a prominent box that pops up on the user's screen. The box shall disappear when the user clicks on it and the beeping shall stop. If the alarm is of the type called "recurring", the beeping and screen message recur every 15 minutes as long as the condition persists. The sign computer shall issue a single alarm for the following situations:

- A new sign failure.

- The sign computer is unable to change a sign's display as scheduled because the currently displayed message has a higher priority.

A sign computer shall issue a recurring alarm if its hard disk is over 90 percent full.

User Interface The user shall enter commands by selecting from menus. The user shall make selections from menus and from lists of signs, messages, and options using a mouse. The interface shall be easy to use, minimizing memorization and opportunities for errors. The interface shall automatically check commands for out-of-range values and other errors. When it checks an error, it shall beep, reject the command or data, and provide the user with a clear explanation.

The software shall have the complete text of the software operator's manual stored on disk, readily available to the user.

Communication Interface The software shall be capable of contacting signs by dial-up telephone and over an Ethernet network. It shall use the appropriate communication method for each sign, based on information stored in the computer's database. If a sign is connected to both telephone and Ethernet networks, the software shall use the dial-up link as a backup when the Ethernet network is not successful.

Spare Parts Provide the following spare parts:

- Display modules: 20 percent of the total provided.
- Controllers: two.
- Display power supplies: ten percent of total provided.
- Other circuit boards used in the sign, if not covered by the previous items: one of each type.
- Surge protectors: two of each type.
- Battery charging unit: one.
- Battery: one

Testing. The manufacturer shall test the signs, software, and spare parts. The manufacturer shall develop the test procedures and revise them as necessary to meet the Engineer's approval. Prior to the testing, the manufacturer shall deliver all signs and spare parts to the Department's Fairfield facility, shall successfully install the software on the Department's computers, shall conduct all the tests in the test plans, and shall correct any deficiencies found.

When the manufacturer is confident that the signs, software, and parts will pass the test, he shall arrange for the Department's representative's to witness the testing. He shall contact the Engineer at least two weeks in advance of the proposed testing date and shall arrange for testing to begin at a mutually convenient time. All testing will be done on the same day (or two days, if necessary) at the Department's Fairfield facility. The installation contractor may witness this testing if he or she chooses. The manufacturer shall provide all materials and equipment needed for testing and shall prepare a written report of the test results.

Sign Testing The test procedure shall be designed to uncover manufacturing defects and shipping damage of all types. The test shall include a visual inspection of the sign. Among the aspects that must be tested are the following:

- All diagnostic routines provided by the manufacturer.
- Proper operation of every pixel, including uniform brightness at all brightness levels and proper current consumption.
- Proper wiring of the display modules, checked by displaying a text message that identifies the modules' proper row and column positions.
- Appropriate display brightness for day and night conditions, and brightness when the sun at its worst condition for the location.
- Proper aiming of the display modules.
- Proper entry of messages into memory.
- Proper operation of sign monitoring.

- Proper operation of sensors for alarm conditions.
- Correct wiring of sensors and alarms to the controller's inputs.
- Proper remote access and control using the central and laptop software provided in this project.

Software Testing The purpose of the sign computer software test is to demonstrate that the software operates reliably and is in full compliance with the specifications. The manufacturer shall conduct the tests following the approved test plan but, if practical, shall also perform any supplemental tests requested by the Department's representatives at the time of testing. To be accepted, the software must pass all the tests.

The test plan shall test every interface, feature, and function of the software, including features present but not required by these specifications. The testing shall demonstrate that the software deals appropriately with communication errors and operator errors. The testing shall confirm that the signs can be monitored and controlled from each of the Department's computers on which software was installed.

Spare Parts Testing Test the parts by substituting them into a working sign.

Training

General Within two weeks of successful completion of testing, the manufacturer shall train the Department's operations and maintenance staff at the Fairfield facility. All the signs will still be at that facility for use during training.

In the training, each trainee shall receive copies of the appropriate manuals. The training shall be conducted in such a way as to familiarize the trainees with the manuals (and any other handouts provided) so that the trainees are able to make efficient use of those materials after the training. All course material, in reproducible form, shall be delivered to the Engineer immediately following course completion.

The manufacturer shall provide all tools and instruments needed for the training.

Installation Training The class will consist of up to 15 people, some from the Department and others from the contractor who is to install the signs. It shall cover proper towing and positioning of the sign, leveling, removing the tongue, raising and lowering the message board, aiming the message board, aiming the solar panels, connections to communication and power, and all other setup activities. It shall last four hours.

Maintenance Training The maintenance training shall be provided for 12 hours for at least ten maintenance technicians with electronics backgrounds. These trainees will also attend the training session for sign operators, so material in that class need not be repeated in the maintenance training. The training shall include theory of operation, circuit description, field adjustments, preventive maintenance procedures, troubleshooting, operation of diagnostic and configuration software, use of the event log, and repair of components.

In addition to classroom training, it shall include “hands on” training using the signs provided in this project. That training shall include use of the control panels (if provided), control of the signs using the Department’s notebook computers, display module replacement, controller replacement, battery replacement, and troubleshooting. Spare parts furnished under this contract may be used for the replacement activities. Each trainee shall use the Department’s laptop software to run all the diagnostic messages, create a message, schedule the message, and adjust the sign’s brightness. Each shall use the sign controller’s front panel to run stored messages and determine the sign’s current status.

Operator Training The training shall be provided for a minimum of four hours for at least ten engineering and operations personnel. The training shall include a complete demonstration of the operation and capabilities of the signs and software, as well as opportunities for the trainees to create and store messages, post messages, and schedule messages.

Technical Support Phone numbers provided for technical support must be attended by a person who can answer questions or promptly find the answer to questions. An answering machine or answering service does not constitute technical support. The telephone support required by these specifications shall be provided at least eight hours a day on all work days.

On-Site Support The manufacturer shall have a representative present when the installation contractor installs the first sign. The representative shall observe the installation, provide additional training to the contractor as required, and ensure that the sign is installed correctly. If the manufacturer’s representative is not confident that the contractor can install the remaining signs without assistance, the representative shall immediately notify the Engineer.

Telephone Support During Installation The manufacturer shall provide telephone support to the installation contractor during installation. This support shall be available until all the signs have been installed.

Telephone Support for Operation and Maintenance The manufacturer shall provide telephone support to the Department’s operations and maintenance staff for a period of one year following the acceptance of the signs.

Method of Measurement Portable Dynamic Message Signs will be measured by lump sum.

Basis of Payment The accepted portable dynamic message signs will be paid for at the lump sum price. Such price will be full compensation for furnishing and testing the signs, as well as all sign-related documentation. Control software, spare parts, training and technical support as described within this Special Provision will be included in the lump sum price for the Portable Dynamic Message Signs. **The contractor will deliver to the Maine DOT the message boards. The Maine DOT will retain complete ownership of the message boards.**

Payment will be made under:

<u>Pay item</u>	<u>Item</u>	<u>Pay Unit</u>
652.43	Portable Dynamic Message Sign	Each

(To be retained by MaineDOT)

SPECIAL PROVISION
SECTION 652
MAINTENANCE OF TRAFFIC

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

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

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

Road Work xxxx¹
One Lane Road Ahead
Flagger Sign

Other typical signs include:

Be Prepared to Stop
Low Shoulder
Bump
Pavement Ends

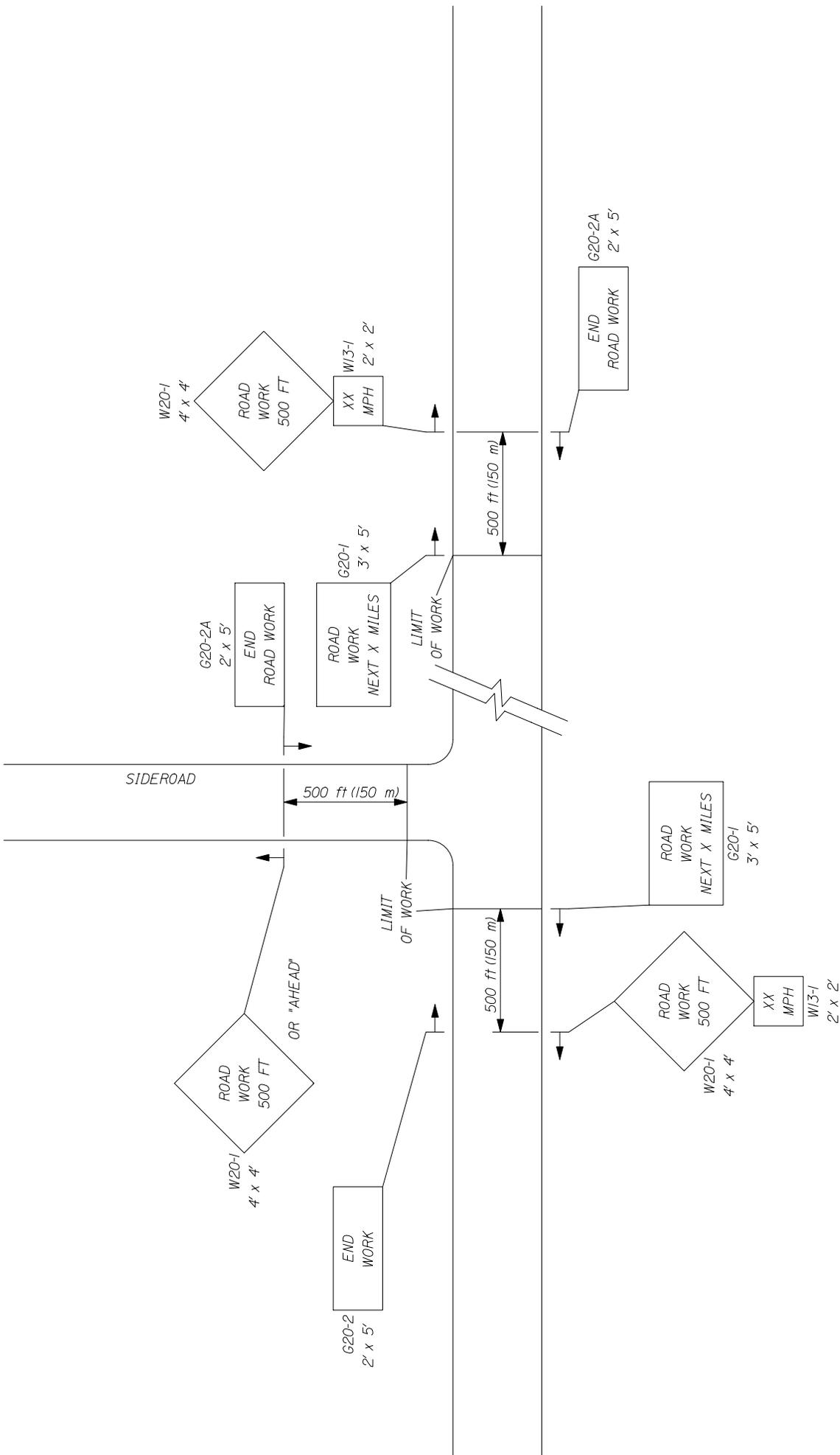
The above lists of Approach signs and Work Area signs are representative of the contract requirements. Other sign legends may be required.

The Contractor shall conduct their operations in such a manner that the roadway will not be restricted to one lane for more than 800 m [2,500 ft] at each work area. Where more than one work area restricts traffic to one lane operation, these work areas shall be separated by at least 1.6 km [1 mile] of two way operation.

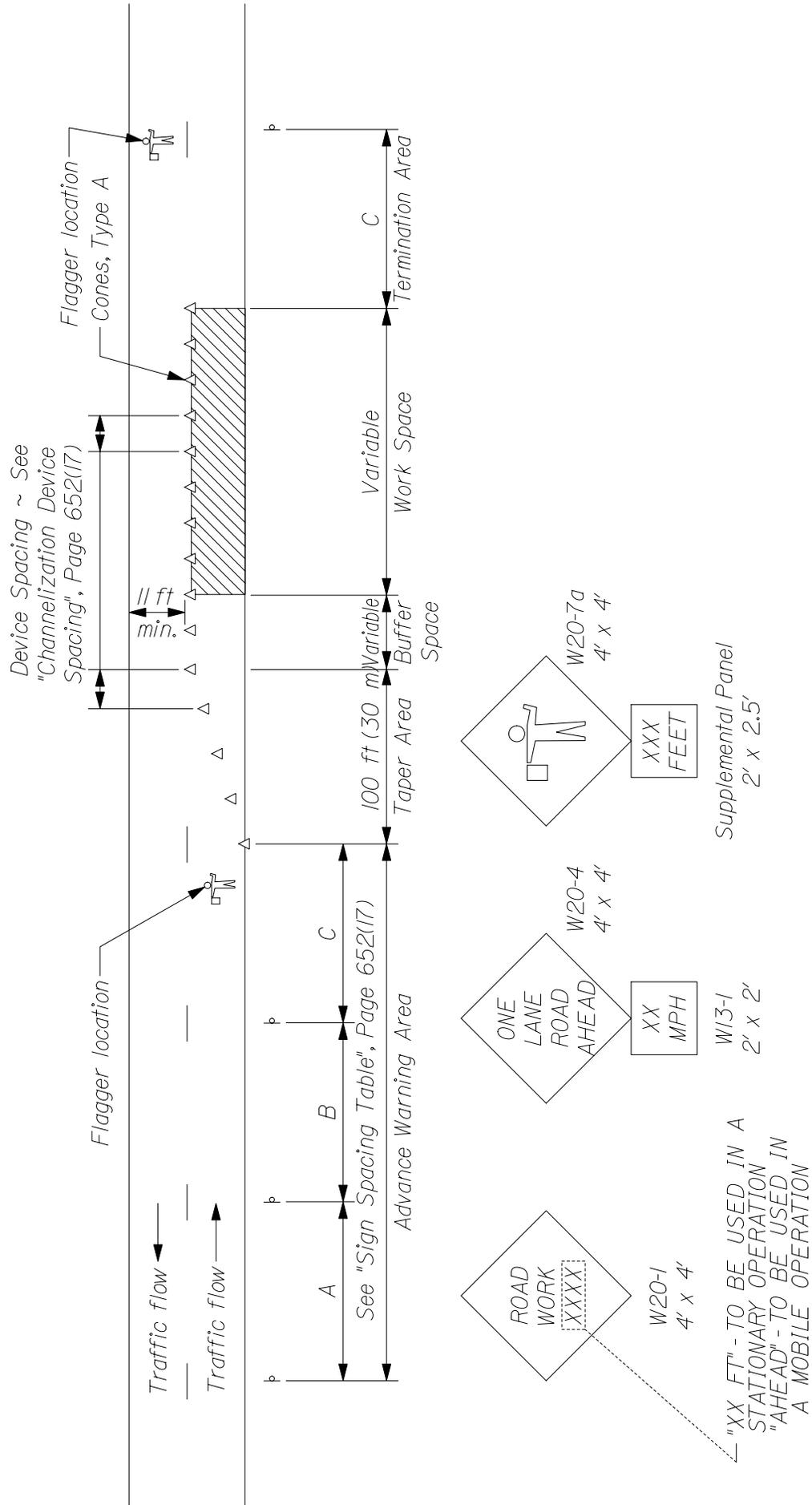
Temporary Centerline A temporary centerline shall be placed each day on all new pavement to be used by traffic. The temporary centerline, when specified of reflectorized traffic paint, shall conform to the standard marking patterns used for permanent markings.

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

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



-- PROJECT APPROACH SIGNING --
TWO WAY TRAFFIC



TYPICAL APPLICATION: TWO - WAY, TWO LANE ROADWAY, CLOSING ONE LANE USING FLAGGERS

* Formulas for L are as follows:

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

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

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

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

* Formulas for L are as follows:

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

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

CHANNELIZATION DEVICE SPACING

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

GENERAL NOTES;

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

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

**Distances are shown in feet (meters).

SUGGESTED BUFFER ZONE LENGTHS

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

**SPECIAL PROVISION
SECTION 656**

Temporary Soil Erosion and Water Pollution Control

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

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

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

Project Specific Information and Requirements

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

This project is considered SENSITIVE in accordance with Section IID of the 2008 BMP Manual.

A preconstruction field review is mandatory for this project. The preconstruction field review shall take place before commencing any work that involves soil disturbance or potential impacts on water quality. Attendees shall include the Environmental Coordinator, the preparer of the SEWPCP, the Construction Manager, and a representative from the Department's ENV Water Resources Unit. The date and time shall be set by the Contractor in consultation with the Construction Manager and ENV Water Resources Unit representative.

Disturbed areas shall be mulched on a daily basis.

Where vegetation is planned, slopes and ditches shall be seeded on a weekly basis.

Permanent slope stabilization measures shall be applied within one week of the last soil disturbance.

Permanent seeding shall be done in accordance with *Special Provision, Section 618, Seeding* unless the Contract states otherwise.

Dust control items other than those under Standard Specification 637 and Special Provision 637, if applicable, shall be included in the plan.

After November 1 the Contractor shall use winter stabilization methods, such as Wood Waste Erosion Control Mix as specified in Special Provision § 617. If required, spring procedures for permanent stabilization shall also be described in the plan. Use of this product for over-winter temporary erosion control will be incidental to the contract and be paid for as part of Pay Item 656.75.

**SPECIAL PROVISION
SECTION 656**

Temporary Soil Erosion and Water Pollution Control

All disturbed ditches shall be stabilized on a daily basis. Temporary erosion control blanket shall be installed in the bottoms of all ditches except where a stone lining is planned. Seed shall be applied prior to the placement of the blanket. Stabilization shall be maintained on a daily basis.

If check dams are used, they shall be constructed of stone in accordance with BMP Manual, Section III.E.1. *Hay Bale Temporary Check Dams are not allowed.* Delete all reference to them.

Stream flow shall be maintained at all times.

A cofferdam sedimentation basin is required if cofferdams are used. The basin shall be located in an upland area where the water can settle and seep into the ground or be released slowly to the resource in a manner that will not cause erosion. The location of such a cofferdam sedimentation basin shall be addressed in the SEWPCP.

The Contractor's SEWPCP shall address in-stream work at the following locations:

sta.703+90, sta. 759+50, sta.1082+50, sta.1212+00, sta. 1562+00, sta. 1632+50

Please note that all material excavated at station 1082+50 MUST remain onsite due to the presence of invasive species, *Phragmites*. Any equipment, tools, etc. that comes in contact with any exposed soil in this location MUST be thoroughly washed off onsite before being used at another location to prevent transfer of the *Phragmites*.

SPECIAL PROVISION
SECTION 656

Temporary Soil Erosion and Water Pollution Control

Standard Specifications, Section 656 is deleted and replaced by this Special Provision. The following information and requirements apply specifically to this Project.

- 1) If the Work includes the handling or storage of petroleum products or Hazardous Materials including the on site fueling of Equipment, the Resident must be provided with a Spill Prevention Control and Countermeasure Plan (SPCCP) plan for his/her approval. At a minimum, the SPCCP shall include:
 - a) The name and emergency response numbers (telephone number, cellular phone and pager numbers, if applicable) of the Contractor's representative responsible for spill prevention;
 - b) General description and location of (1) handling, transfer, storage, and containment facilities of such products or Materials ("activities and facilities") and (2) potential receptors of such products or Materials including oceans, lakes, ponds, rivers, streams, wetlands, and sand and gravel aquifers ("sensitive resources") including the distances between said activities and facilities and said sensitive resources;
 - c) Description of preventative measures to be used to minimize the possibility of a spill including Equipment and/or Materials to be used to prevent discharges including absorbent Materials,
 - d) A contingency response plan to be implemented if a spill should occur including a list of emergency phone/pager numbers including the Contractor's representative, MDEP Spill Response, the Resident, and local police and fire authorities. For a related provision, see *Standard Specification, Section 105.2.2 - Project Specific Emergency Planning*.

- 2) The following information and requirements will constitute the Soil Erosion and Water Pollution Control Plan for this Project. The soil erosion and water pollution control measures associated with this work are as follows:
 - a) All work shall be done in accordance with the latest revision of the Maine Department of Transportation Best Management Practices for Erosion and Sediment Control (a.k.a. Best Management Practices manual or BMP Manual). The latest version is dated "February 2008", and is available at <http://www.maine.gov/mdot/environmental-office-homepage/surface-water-resources.php>
 - b) The on-site person responsible for implementation of this plan, shall be the Contractor's Superintendent or other supervisory employee (the "Environmental Coordinator") with

SPECIAL PROVISION
SECTION 656

Temporary Soil Erosion and Water Pollution Control

the authority to immediately remedy any deficient controls and shall provide the Resident with their numbers (telephone number, cellular phone and pager numbers, if applicable) where the Environmental Coordinator can be reached 24 hours a day.

- c) A sediment control BMP, such as silt fence or Erosion Control Mix Berm shall be installed on the contour and down-gradient from any earth disturbance before that disturbance begins.
- d) All areas where soil is disturbed shall be mulched on a daily basis and seeded on a weekly basis (if seeded by hand, it shall be done on a daily basis). All previously mulched areas shall be maintained and re-mulched on a daily basis if bare areas develop until an acceptable growth of grass has been obtained.
- e) Disturbed earth materials shall be disposed of in accordance with all federal, state, and local laws and regulations. If the materials will be stockpiled on-site they shall be contained on-site to prevent sediments from entering any drainage system or from washing into a protected water body or resource.
- f) If the earth materials will be reused on-site, they shall be mulched at the end of each working day, and seeded in accordance with *Standard Specification, Section 618 - Seeding*, unless the contract states otherwise. The materials shall be contained, as necessary, to prevent sediments from entering any drainage system or from washing into a protected water body or resource.
- g) Winter stabilization BMPs such as Erosion Control Mix shall be applied in accordance with the MDOT BMP Manual between November 1 and April 15 or during frozen ground conditions.
- h) The Environmental Coordinator must inspect and maintain daily all erosion and sediment controls for the duration of the project.
- i) Any costs related to this plan shall be considered incidental to the contract.
- j) If the Project Resident directs activity that involves soil disturbance beyond the project scope, all necessary permits shall be obtained by the MaineDOT, the Standard Specification 656 shall be re-instituted, and a full SEWPCP will be required and paid for as Extra Work, prior to the start of the new activity.

SUPPLEMENTAL SPECIFICATION

SECTION 715

LIGHTING MATERIAL

DELETE paragraph 715.10 and replace with the following new paragraph 715.10:

715.10 PHOTOELECTRIC/TIMER CONTROL The control will meet the following minimum requirements:

- a. Unit Design The photoelectric/Timer Control unit will consist of a silicon photocell sensor and solid state timer device which control an integral single pole, single throw relay having contacts which are in the normally closed position at night.
- b. Housing The photoelectric/Timer Control housing will be constructed of UV stabilized high-impact polypropylene and be of weatherproof design.
- c. Operating Levels The operating levels will be factory set to turn on at dusk (2.6 foot-candles) with a 60 second time delay and turn off at a pre-set time as determined and adjusted by the user.
- d. Supply Voltage The photoelectric/Timer Control unit will be capable of operation on a supply voltage of 105 to 285 VAC.
- e. Base The base of the unit will be of high temperature engineered polymer material rated at 125 degrees C and be provided with a 3-prong, EEI-NEMA standard twist lock plug mounting.
- f. Directional Design The photoelectric/Timer Control unit will be oriented in a northerly direction as recommended by the manufacturer.
- g. Surge Protection The photoelectric/Timer Control unit will have built-in surge protection consisting of a 320 joule rated Metal Oxide Varistor for protection of the unit from induced high voltage surges.
- h. The photoelectric/Timer Control unit will be Model ESC-124DS as manufactured by Precision Multiple Controls or approved equal by Tork or Intermatic.

STANDARD DETAIL UPDATES

Standard Details and Standard Detail updates are available at:

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

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

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

535(05)	Precast Superstructure - Post Tensioning	5/20/08
502(03)	Concrete Curb - Bituminous Wearing Surface	2/2/09
502(03)A	Concrete Curb - Concrete Wearing Surface	2/2/09
502(07)	Precast Concrete Deck Panels - Layout Plan	2/2/09
502(07)A	Precast Concrete Deck Panels - Layout Plan	2/2/09
502(08)	Precast Concrete Deck Panels - Panel Plan	2/2/09
502(09)	Precast Concrete Deck Panels - Blocking Detail	2/2/09
502(10)	Precast Concrete Deck Panels	2/2/09
502(11)	Precast Concrete Deck Panels	2/2/09
502(12)	Precast Concrete Deck Panels - Notes	2/2/09
502(12)A	Precast Concrete Deck Panels - Notes	2/2/09
526(06)	Permanent Concrete Barrier	2/2/09
526(08)	Permanent Concrete Barrier – Type IIIA	2/2/09
526(08)A	Permanent Concrete Barrier – Type IIIA	2/2/09
526(13)	Permanent Concrete Barrier – Type IIIB	2/2/09
526(14)	Permanent Concrete Barrier – Type IIIB	2/2/09
526(21)	Concrete Transition Barrier	2/2/09
526(39)	Texas Classic Rail – Between Window	2/2/09
526(40)	Texas Classic Rail – Through Window	2/2/09
526(41)	Texas Classic Rail – Through Post	2/2/09
526(42)	Texas Classic Rail – Through Nose	2/2/09
606(20)	Guardrail - Type 3 - Single Rail - Bridge Mounted	2/2/09
606(21)	Guardrail - Type 3 - Single Rail - Bridge Mounted	2/2/09
606(22)	Guardrail - Type 3 - Single Rail - Bridge Mounted	2/2/09

606(23)	Guardrail - Type 3 - Single Rail - Bridge Mounted	2/2/09
609(06)	Vertical Bridge Curb	2/2/09
609(08)	Precast Concrete Transition Curb	2/2/09

SUPPLEMENTAL SPECIFICATION

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

SECTION 101

CONTRACT INTERPRETATION

101.2 Definitions

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

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

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

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

SECTION 102

DELIVERY OF BIDS

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

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

SECTION 103

AWARD AND CONTRACTING

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

SECTION 104

GENERAL RIGHTS AND RESPONSIBILITIES

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

Delete the entire Section 104.5.9 and replace with the following:

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

SECTION 105 GENERAL SCOPE OF WORK

Delete the entire Section 105.6 and replace with the following:

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

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

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

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

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

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

SECTION 106 QUALITY

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

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

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

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

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

SECTION 107 TIME

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

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

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

SECTION 108 PAYMENT

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

SECTION 109 CHANGES

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

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

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

109.5.1 Definitions - Types of Delays

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

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

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

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

109.7.5 Force Account Work

C. Equipment

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

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

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

Add the following section;

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

SECTION 110 INDEMNIFICATION, BONDING, AND INSURANCE

Delete the entire Section 110.2.3 and replace with the following:

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

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

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

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

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

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

SECTION 202 REMOVING STRUCTURES AND OBSTRUCTIONS

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

SECTION 203 EXCAVATION AND EMBANKMENT

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

SECTION 502
STRUCTURAL CONCRETE

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

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

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

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

502.10 Forms and False work

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

502.11 Placing Concrete

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

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

Second paragraph; delete the first two sentences.

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

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

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

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

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

SECTION 503 REINFORCING STEEL

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

SECTION 504 STRUCTURAL STEEL

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

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

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

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

SECTION 535 PRECAST, PRESTRESSED CONCRETE SUPERSTRUCTURE

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

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

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

SECTION 603
PIPE CULVERTS AND STORM DRAINS

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

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

SECTION 604
MANHOLES, INLETS, AND CATCH BASINS

604.02 Materials Add the following:

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

SECTION 605
UNDERDRAINS

605.05 Underdrain Outlets Make the following change:

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

SECTION 606
GUARDRAIL

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

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

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

SECTION 609 CURB

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

SECTION 615 LOAM

615.02 Materials Make the following change:

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

SECTION 618 SEEDING

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

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

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

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

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

SECTION 620 GEOTEXTILES

620.03 Placement Section (c)

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

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

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

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

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

620.09 Basis of Payment

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

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

SECTION 621
LANDSCAPING

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

SECTION 626
HIGHWAY SIGNING

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

SECTION 627
PAVEMENT MARKINGS

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

SECTION 637
DUST CONTROL

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

SECTION 639
ENGINEERING FACILITIES

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

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

SECTION 652

MAINTENANCE OF TRAFFIC

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

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

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

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

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

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

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

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

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

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

652.2.5 Portable Changeable Message Sign Trailer mounted Portable Changeable Message Signs (PCMS) must be of a type that has been submitted to AASHTO's National Transportation Product Evaluation Program (NTPEP) for evaluation and placed on the Maine

Department of Transportation's Approved Products List of Portable Changeable Message Signs & Flashing Arrow Panels. The PCMS unit shall meet or exceed the current specifications of the Manual on Uniform Traffic Control Devices (MUTCD), 6F.55.

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

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

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

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

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

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

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

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

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

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

652.4 Flaggers Replace the first paragraph with the following; “The Contractor shall furnish flaggers as required by the TCP or as otherwise specified by the Resident. All flaggers must have successfully completed a flagger test approved by the Department and administered by a Department-approved Flagger-Certifier who is employing that flagger. All flaggers must carry an official certification card with them while flagging that has been issued by their employer. Flaggers shall wear safety apparel meeting ANSI 107-1999 Class 2 risk exposure and clearly identify the wearer as a person, shall be visible at a minimum distance of 300 m [1000 ft], and shall wear a hardhat with retroreflectivity. For nighttime conditions, Class 3 apparel should be considered, retroreflective or flashing SLOW/STOP paddles shall be used, and except in emergency situations the flagger station shall be illuminated to assure visibility.”

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

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

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

SECTION 653 POLYSTYRENE PLASTIC INSULATION

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

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

SECTION 656

TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL

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

SECTION 701

STRUCTURAL CONCRETE RELATED MATERIALS

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

SECTION 703

AGGREGATES

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

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

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

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

AGGREGATE GRADATION CONTROL POINTS

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

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

GRADATION CLASSIFICATION

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

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

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

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

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

SECTION 706 NON-METALLIC PIPE

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

SECTION 709 REINFORCING STEEL AND WELDED STEEL WIRE FABIC

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

SECTION 710 FENCE AND GUARDRAIL

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

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

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

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

The engineer may take one piece of guardrail, a backup plate, and end or buffer section from each 200 pieces in a lot, or from each lot if less than 200 pieces are included therein for determination of compliance with specification requirements. If one piece fails to conform to the requirements of this specification, two other pieces shall be tested. If either of these pieces fails to conform to the requirements of this specification, the lot of material represented by

these samples shall be rejected. A lot shall be considered that quantity of material offered for inspection at one time that bears the same heat and coating identification.”

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

SECTION 712 MISCELLANEOUS HIGHWAY MATERIALS

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

Add the following:

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

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

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

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

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

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

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

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

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

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

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

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

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

case shall have a weep hole to allow the escape of moisture from condensation. Photoelectric controls, if provided, shall keep the light operating whenever the ambient light falls below 215 lx [20 foot candles]. Each light shall be plainly marked as to the manufacturer's name and model number.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SECTION 717 ROADSIDE IMPROVEMENT MATERIAL

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

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

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

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

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

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

SECTION 722
GEOTEXTILES

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

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

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

APPENDIX A TO DIVISION 100

SECTION 1 - BIDDING PROVISIONS

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

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

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

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

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

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

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

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

CERTIFICATION REGARDING NONCOLLUSION Under penalty of perjury as provided by federal law (28 U.S.C. §1746), the Bidder hereby certifies, to the best of its knowledge and belief, that:

the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with the Contract.

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

B. Bid Rigging Hotline To report bid rigging activities call: **1-800-424-9071**

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

SECTION 2 - FEDERAL EEO AND CIVIL RIGHTS REQUIREMENTS

Unless expressly otherwise provided in the Bid Documents, the provisions contained in this Section 2 of this "Federal Contract Provisions Supplement" are hereby incorporated into the Bid Documents and Contract.

A. Nondiscrimination & Civil Rights - Title VI The Contractor and its subcontractors shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the Department deems appropriate. The Contractor and subcontractors shall comply with Title VI of the Civil Rights Act of 1964, as amended, and with all State of Maine and other Federal Civil Rights laws.

For related provisions, see Subsection B - "Nondiscrimination and Affirmative Action - Executive Order 11246" of this Section 2 and Section 3 - Other Federal Requirements of this "Federal Contract Provisions Supplement" including section II - "Nondiscrimination" of the "Required Contract Provisions, Federal Aid Construction Contracts", FHWA-1273.

B. Nondiscrimination and Affirmative Action - Executive Order 11246 Pursuant to Executive Order 11246, which was issued by President Johnson in 1965 and amended in 1967 and 1978, this Contract provides as follows.

The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its efforts to achieve maximum results from its actions. The Contractor shall

document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

1. Ensure and maintain a working environment free of harassment, intimidations, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all forepersons, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
2. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its union have employment opportunities available, and to maintain a record of the organization's responses.
3. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
4. Provide immediate written notification to the Department's Civil Rights Office when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Design-Builder's efforts to meet its obligations.
5. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under B above.
6. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligation; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
7. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review

of these items with on-site supervisory personnel such as Superintendents, General Forepersons, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

8. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractor's and Subcontractors with whom the Contractor does or anticipates doing business.
9. Direct its recruitment efforts, both orally and written to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above describing the openings, screenings, procedures, and test to be used in the selection process.
10. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth, both on the site and in other areas of a Contractor's workforce.
11. Validate all tests and other selection requirements.
12. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
13. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
14. Ensure that all facilities and company activities are non segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
15. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractor's and suppliers, including circulation of solicitations to minority and female Contractor associations and other business associations.
16. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

C. Goals for Employment of Women and Minorities Per Executive Order 11246, craft tradesperson goals are 6.9% women and .5% minorities employed. However, goals may be adjusted upward at the mutual agreement of the Contractor and the Department. Calculation of these percentages shall not include On-the-Job Training Program trainees, and shall not include clerical or field clerk position employees.

For a more complete presentation of requirements for such Goals, see the federally required document "Goals for Employment of Females and Minorities" set forth in the next 6 pages below.

Start of GOALS FOR EMPLOYMENT OF FEMALES AND MINORITIES
Federally Required Contract Document

§60-4.2 Solicitations

(d) The following notice shall be included in, and shall be part of, all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts in excess of \$10,000 to be performed in geographical areas designated by the Director pursuant to §60-4.6 of this part (see 41 CFR 60-4.2(a)):

Notice of Requirement for Affirmative Action to Ensure Equal Opportunity (Executive Order 11246)

1. The Offeror's or bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

Goals for female participation in each trade 6.9%

Goals for minority participation for each trade

Maine

001 Bangor, ME 0.8%

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

002 Portland-Lewiston, ME

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

6403 Portland, ME 0.6%
(Cumberland, Sagadahoc)

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

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non federally involved construction.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be in violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor, estimated dollar amount of the subcontract; estimated started and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the Contract resulting from this solicitation, the "covered area" is (insert description of the geographical areas where the contract is to be performed giving the state, county and city, if any).

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION
CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
 - c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department form 941;
 - d. "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

- (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of the North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
 3. If the contractor, is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors for Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
 4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a. through p. of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical areas where the work is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specific.
 5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant, thereto.
 6. In order for the non working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the

apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as expensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, when possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organization's responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment sources or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources complied under 7b above.
 - f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific

review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment, efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing prior to the date for the acceptance of applications for apprenticeship or the openings, screening procedures, and tests to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on site and in other areas of a Contractor's work force.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
- n. Ensure that all facilities and company activities are non segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
- o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of

solicitation to minority and female contractor associations and other business associations.

- p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7 a through p.). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7 a through p. of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program and reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions take on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
 9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, specific minority group of women is underutilized.)
 10. The Contractor shall not use the goals and timetables or affirmative action even through the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if standards to discriminate against any person because of race, color, religion, sex, or national origin.
 11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
 12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementation regulations by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
 13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the

requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.6.

- 14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g. mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and location at which the work was performed. Records be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
- 15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

End of GOALS FOR EMPLOYMENT OF FEMALES AND MINORITIES
Federally Required Contract Document

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

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

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

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

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

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

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

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

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

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

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

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

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

SECTION 3 - OTHER FEDERAL REQUIREMENTS

Unless expressly otherwise provided in the Bid Documents, the provisions contained in this Section 3 of this "Federal Contract Provisions Supplement" are hereby incorporated into the Bid Documents and Contract.

A. Buy America

If the cost of products purchased for permanent use in this project which are manufactured of steel, iron or the application of any coating to products of these materials exceeds 0.1 percent of the contract amount, or \$2,500.00, whichever is greater, the products shall have been manufactured and the coating applied in the United States. The coating materials are not subject to this clause, only the application of the coating. In computing that amount, only the cost of the product and coating application cost will be included.

Ore, for the manufacture of steel or iron, may be from outside the United States; however, all other manufacturing processes of steel or iron must be in the United States to qualify as having been manufactured in the United States.

United States includes the 50 United States and any place subject to the jurisdiction thereof.

Products of steel include, but are not limited to, such products as structural steel, piles, guardrail, steel culverts, reinforcing steel, structural plate and steel supports for signs, luminaries and signals.

Products of iron include, but are not limited to, such products as cast iron grates.

Application of coatings include, but are not limited to, such applications as epoxy, galvanized and paint.

To assure compliance with this section, the Contractor shall submit a certification letter on its letterhead to the Department stating the following:

“This is to certify that products made of steel, iron or the application of any coating to products of these materials whose costs are in excess of \$2,500.00 or 0.1 percent of the original contract amount, whichever is greater, were manufactured and the coating, if one was required, was applied in the United States.”

B. Materials

a. Convict Produced Materials References: 23 U.S.C. 114(b)(2), 23 CFR 635.417

Applicability: FHWA's prohibition against the use of convict material only applies to Federal-aid highways. Materials produced after July 1, 1991, by convict labor may only be incorporated in a Federal-aid highway construction project if: 1) such materials have been produced by convicts who are on parole, supervised release, or probation from a prison; or 2) such material has been produced in a qualified prison facility, e.g., prison industry, with the amount produced during any 12-month period, for use in Federal-aid projects, not exceeding the amount produced, for such use, during the 12-month period ending July 1, 1987.

Materials obtained from prison facilities (e.g., prison industries) are subject to the same requirements for Federal-aid participation that are imposed upon materials acquired from other sources. Materials manufactured or produced by convict labor will be given no preferential treatment.

The preferred method of obtaining materials for a project is through normal contracting procedures which require the contractor to furnish all materials to be incorporated in the work. The contractor selects the source, public or private, from which the materials are to be obtained (23 CFR 635.407). Prison industries are prohibited from bidding on projects directly (23 CFR 635.112e), but may act as material supplier to construction contractors.

Prison materials may also be approved as State-furnished material. However, since public agencies may not bid in competition with private firms, direct acquisition of materials from a prison industry for use as State-furnished material is subject to a public interest finding with the Division Administrator's concurrence (23 CFR 635.407d). Selection of materials produced by convict labor as State-furnished materials for mandatory use should be cleared prior to the submittal of the Plans Specifications & Estimates (PS&E).

b. Patented/Proprietary Products References: 23 U.S.C. 112, 23 CFR 635.411

FHWA will not participate, directly or indirectly, in payment for any premium or royalty on any patented or proprietary material, specification, or process specifically set forth in the plans and specifications for a project, unless:

- the item is purchased or obtained through competitive bidding with equally suitable unpatented items,
- the STA certifies either that the proprietary or patented item is essential for synchronization with the existing highway facilities or that no equally suitable alternative exists, or
- the item is used for research or for a special type of construction on relatively short sections of road for experimental purposes. States should follow FHWA's procedures for "Construction Projects Incorporating Experimental Features" ([expermnt.htm](#)) for the submittal of work plans and evaluations.

The primary purpose of the policy is to have competition in selection of materials and allow for development of new materials and products. The policy further permits materials and products that are judged equal may be bid under generic specifications. If only patented or proprietary products are acceptable, they shall be bid as alternatives with all, or at least a

reasonable number of, acceptable materials or products listed; and the Division Administrator may approve a single source if it can be found that its utilization is in the public interest.

Trade names are generally the key to identifying patented or proprietary materials. Trade name examples include 3M, Corten, etc. Generally, products identified by their brand or trade name are not to be specified without an "or equal" phrase, and, if trade names are used, all, or at least a reasonable number of acceptable "equal" materials or products should be listed. The licensing of several suppliers to produce a product does not change the fact that it is a single product and should not be specified to the exclusion of other equally suitable products.

c. State Preference References: 23 U.S.C. 112, 23 CFR 635.409

Materials produced within Maine shall not be favored to the exclusion of comparable materials produced outside of Maine. State preference clauses give particular advantage to the designated source and thus restrict competition. Therefore, State preference provisions shall not be used on any Federal-aid construction projects.

This policy also applies to State preference actions against materials of foreign origin, except as otherwise permitted by Federal law. Thus, States cannot give preference to in-State material sources over foreign material sources. Under the Buy America provisions, the States are permitted to expand the Buy America restrictions provided that the STA is legally authorized under State law to impose more stringent requirements.

d. State Owned/Furnished/Designated Materials References: 23 U.S.C. 112, 23 CFR 635.407

Current FHWA policy requires that the contractor must furnish all materials to be incorporated in the work, and the contractor shall be permitted to select the sources from which the materials are to be obtained. Exceptions to this requirement may be made when there is a definite finding, by MDOT and concurred in by Federal Highway Administration's (FHWA) Division Administrator, that it is in the public interest to require the contractor to use materials furnished by the MDOT or from sources designated by MDOT. The exception policy can best be understood by separating State-furnished materials into the categories of manufactured materials and local natural materials.

Manufactured Materials When the use of State-furnished manufactured materials is approved based on a public interest finding, such use must be made mandatory. The optional use of State-furnished manufactured materials is in violation of our policy prohibiting public agencies from competing with private firms. Manufactured materials to be furnished by MDOT must be acquired through competitive bidding, unless there is a public interest finding for another method, and concurred in by FHWA's Division Administrator.

Local Natural Materials When MDOT owns or controls a local natural materials source such as a borrow pit or a stockpile of salvaged pavement material, etc., the materials may be designated for either optional or mandatory use; however, mandatory use will require a public interest finding (PIF) and FHWA's Division Administrator's concurrence.

In order to permit prospective bidders to properly prepare their bids, the location, cost, and any conditions to be met for obtaining materials that are made available to the contractor shall be stated in the bidding documents.

Mandatory Disposal Sites Normally, the disposal site for surplus excavated materials is to be of the contractor's choosing; although, an optional site(s) may be shown in the contract provisions. A mandatory site shall be specified when there is a finding by MDOT, with the concurrence of the Division Administrator, that such placement is the most economical or that the environment would be substantially enhanced without excessive cost. Discussion of the mandatory use of a disposal site in the environmental document may serve as the basis for the public interest finding.

Summarizing FHWA policy for the mandatory use of borrow or disposal sites:

- mandatory use of either requires a public interest finding and FHWA's Division Administrator's concurrence,
- mandatory use of either may be based on environmental consideration where the environment will be substantially enhanced without excessive additional cost, and
- where the use is based on environmental considerations, the discussion in the environmental document may be used as the basis for the public interest finding.

Factors to justify a public interest finding should include such items as cost effectiveness, system integrity, and local shortages of material.

C. Standard FHWA Contract Provisions - FHWA 1273

Unless expressly otherwise provided in the Bid Documents, the following "Required Contract Provisions, Federal Aid Construction Contracts", FHWA-1273, are hereby incorporated into the Bid Documents and Contract.

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

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.
2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

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

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

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.
6. Selection of Labor: During the performance of this contract, the contractor shall not:
 - a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or
 - b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

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

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:
 - a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.
 - b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment,

upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

2. EEO Officer. The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.
3. Dissemination of Policy. All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:
 - a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
 - b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.
 - c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.
 - d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
 - e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.
4. Recruitment. When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.
 - a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

- b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)
 - c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.
5. Personnel Actions. Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:
- a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
 - b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
 - c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
 - d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.
6. Training and Promotion.
- a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.
 - b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision

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

- c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.
 - d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.
7. Unions. If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:
- a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.
 - b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.
 - c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.
 - d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.
8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment. The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

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

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

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

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

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

1. General:

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

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

- b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.
- c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

- a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.
- b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:
 - (1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;
 - (2) the additional classification is utilized in the area by the construction industry;
 - (3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and
 - (4) with respect to helpers, when such a classification prevails in the area in which the work is performed.
- c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

- d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary
- e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

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

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

a. Apprentices:

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

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

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

b. Trainees:

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

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

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

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

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

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

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

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

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

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

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).
 - a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor,

with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

- b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.
2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.
3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.
4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.
2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).
3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health

standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

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

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

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

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

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

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

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

1. Instructions for Certification - Primary Covered Transactions:
(Applicable to all Federal-aid contracts - 49 CFR 29)
 - a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.
 - b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
 - c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.
 - d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
 - e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out

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

- f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
- g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
- h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.
- i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

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

- 1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
 - a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or

local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and
- d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

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

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

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
- h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

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

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

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

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

- 1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:
 - a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
 - b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a

December 14, 2005
Supersedes September 1, 2005

Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.
3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

End of FHWA 1273

Environmental Summary Sheet

PIN #: 15114.50

Town: Brunswick-West Gardiner

Environmental Office Contact: Laurie Rowe (laurie.rowe@maine.gov) 215-5072

Coordination & Permits Manager: Matt Steele

Date Submitted: 1/26/09

Database/Projex

Section 106 and Tribal Consultation

Architectural Resources
Archeological Resources
Tribal Consultation

PA Applicable Approved
PA Applicable Approved
Tribal Letters Sent Approved

4(f) and 6(f) – No ROW takes on this project.

Maine Department of Inland Fisheries and Wildlife (MDIFW) Essential Habitat

GIS Essential Habitats Checked

Eagle Nest N/A Applicable Approved
Piping Plover N/A Applicable Approved
Roseate Tern N/A Applicable Approved

Maine Department of Environmental Protection (MDEP), Natural Resource Protection Act

No permit required

Exempt (Must use erosion and sediment control and not block fish passage.)

PBR Approved

Tier 1 Approved

Tier 2 Approved

Individual Approved

Army Corps of Engineers (ACOE), Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act.

No permit required

Category 1-NR Approved

Category 2 Approved

Category 3 Approved

NOTE: If project requires a Category 2 or 3 Permit from the ACOE, then the MaineDOT Resident **must** fill out a “Work Start Notification Form” and a “Compliance Certification Form” (when project has been completed) and send them to the address listed on the forms.

IN-STREAM TIMING RESTRICTIONS: 105 Special Provision n/a

Dates instream work is allowed: June 1st to October 1st

NEPA Complete

Special Provision 656, Erosion Control Plan Special Provision 203, Dredge Spec and/or Hazardous Waste Spec

Environmental Summary Sheet

PIN #: 15984.00

Town: Richmond

Environmental Office Contact: Josh Nichols (joshua.nichols@maine.gov) 592-3107

Coordination & Permits Manager: Matt Steele

Date Submitted: Sept 22, 2008

Database/Projex

Section 106 and Tribal Consultation

Architectural Resources	PA-E <input checked="" type="checkbox"/>	Applicable <input type="checkbox"/>	Approved <input type="checkbox"/>
Archeological Resources	PA-E <input checked="" type="checkbox"/>	Applicable <input type="checkbox"/>	Approved <input type="checkbox"/>
Tribal Consultation	Tribal Letters Sent <input checked="" type="checkbox"/>		Approved <input type="checkbox"/>

4(f) and 6(f)

<u>Section 4(f)</u>	Are there Right of Way Takes or Easements on Public Park Property	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	Are there Right of Way Takes or Easements on Public Recreational Property	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	Are there Right of Way Takes or Easements on Public Wildlife Refuge Property	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	Are there Right of Way Takes or Easements on Historic Eligible or Listed Property	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	Are there Right of Way Takes or Easements on Property within a Historic District	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	Has MHPC Determined an Adverse Effect	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	Is a Programmatic or Full 4(f) Document Required	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<u>LAWCON 6(f)</u>	N/A <input checked="" type="checkbox"/>	Applicable <input type="checkbox"/>	Approved <input type="checkbox"/>

FEMA GIS Floodplains Checked N/A Applicable Approved

Maine Department of Inland Fisheries and Wildlife (MDIFW) Essential Habitat

GIS Essential Habitats Checked <input checked="" type="checkbox"/>			
Eagle Nest	N/A <input checked="" type="checkbox"/>	Applicable <input type="checkbox"/>	Approved <input type="checkbox"/>
Piping Plover	N/A <input checked="" type="checkbox"/>	Applicable <input type="checkbox"/>	Approved <input type="checkbox"/>
Roseate Tern	N/A <input checked="" type="checkbox"/>	Applicable <input type="checkbox"/>	Approved <input type="checkbox"/>

Maine Department of Conservation/ Public Lands, Submerged Land Lease N/A Applicable

Land Use Regulation Commission (LURC) Not Applicable No permit Required

Notice	<input type="checkbox"/>	Approved <input type="checkbox"/>
Permit	<input type="checkbox"/>	Approved <input type="checkbox"/>

Maine Department of Environmental Protection (MDEP) Site Location of Development

N/A Applicable Approved

Maine Department of Environmental Protection (MDEP), Natural Resource Protection Act

No permit required <input checked="" type="checkbox"/>	
Exempt <input type="checkbox"/>	(Must use erosion and sediment control and not block fish passage.)
PBR <input type="checkbox"/>	Approved <input type="checkbox"/>
Tier 1 <input type="checkbox"/>	Approved <input type="checkbox"/>
Tier 2 <input type="checkbox"/>	Approved <input type="checkbox"/>
Individual <input type="checkbox"/>	Approved <input type="checkbox"/>

Army Corps of Engineers (ACOE), Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act.

No permit required <input checked="" type="checkbox"/>	
Category 1-NR <input type="checkbox"/>	Approved <input type="checkbox"/>
Category 2 <input type="checkbox"/>	Approved <input type="checkbox"/>
Category 3 <input type="checkbox"/>	Approved <input type="checkbox"/>

NOTE: If project requires a Category 2 or 3 Permit from the ACOE, then the MaineDOT Resident **must** fill out a "Work Start Notification Form" and a "Compliance Certification Form" (when project has been completed) and send them to the address listed on the forms.

IN-STREAM TIMING RESTRICTIONS: 105 Special Provision n/a

Dates instream work is allowed: N/A

Special Provision 656, Erosion Control Plan



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

REPLY TO
ATTENTION OF

**MAINE PROGRAMMATIC GENERAL PERMIT (PGP)
 AUTHORIZATION LETTER AND SCREENING SUMMARY**

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

CORPS PERMIT # NAE-2009-00178
 CORPS PGP ID# 09-030
 STATE ID# PBR

DESCRIPTION OF WORK:

Place temporary and permanent fill below the ordinary high water line of 6 unnamed streams and in adjacent wetlands off I-295 between Brunswick and Gardiner, Maine in order to rehabilitate the northbound lane in this section of the highway. The project will impact approximately 1000 s.f. (0.022 acres) of wetland and stream bed. This work is shown on the attached plans entitled "ME DOT I-295 NORTHBOUND, BRUNSWICK - GARDINER, ME" in 9 sheets undated.
DOT PIN: 15114.50

LAT/LONG COORDINATES : 43.9443342° N 69.9634907° W USGS QUAD: BRUNSWICK, ME

I. CORPS DETERMINATION:

Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. **Your work is therefore authorized by the U.S. Army Corps of Engineers under the enclosed Federal Permit, the Maine Programmatic General Permit (PGP).**

You must perform the activity authorized herein in compliance with all the terms and conditions of the PGP [including any attached Additional Conditions and any conditions placed on the State 401 Water Quality Certification including any required mitigation]. Please review the enclosed PGP carefully, including the PGP conditions beginning on page 7, to familiarize yourself with its contents. You are responsible for complying with all of the PGP requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

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

Condition 38 of the PGP (page 15) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the PGP on October 11, 2010. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by October 11, 2011.

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

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. **This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.** Also, this permit requires you to notify us before beginning work and allow us to inspect the project. Hence, you must complete and return the attached Work Start Notification Form(s) to this office no later than 2 weeks before the anticipated starting date. (For projects requiring mitigation, be sure to include the MITIGATION WORK START FORM).

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

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

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: 10/22/08 LEVEL OF REVIEW: CATEGORY 1: _____ CATEGORY 2:

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

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

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

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Manchester, Maine Project Office.

JAY L. CLEMENT
 SENIOR PROJECT MANAGER
 MAINE PROJECT OFFICE

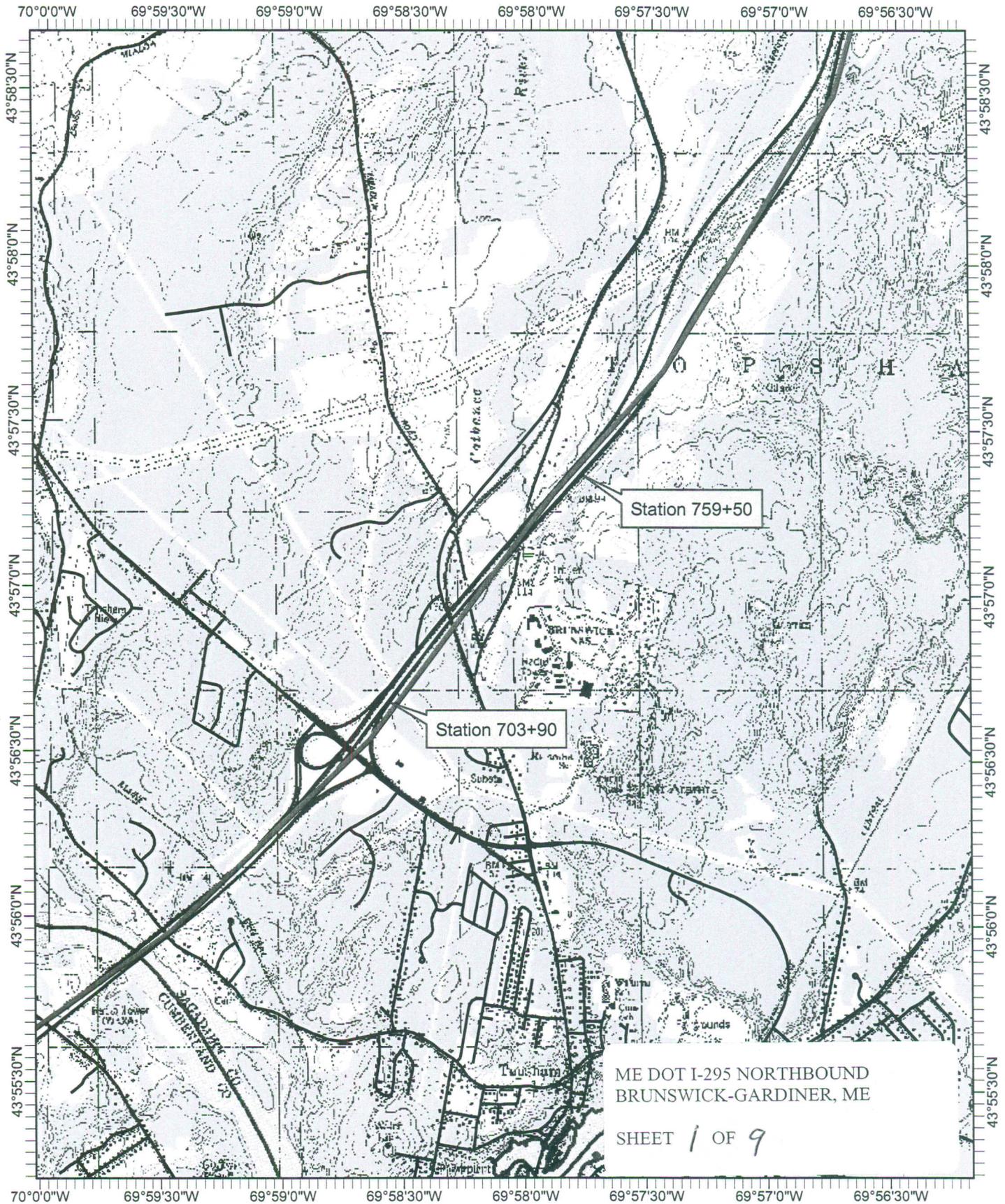
PHILIP T. FEIR
 COLONEL, CORPS OF ENGINEERS
 DISTRICT ENGINEER
 DATE 1/15/09



**US Army Corps
of Engineers**®
New England District

**SPECIAL CONDITIONS FOR
DEPARTMENT OF THE ARMY
PROGRAMMATIC GENERAL PERMIT
NO. NAE-2009-00178**

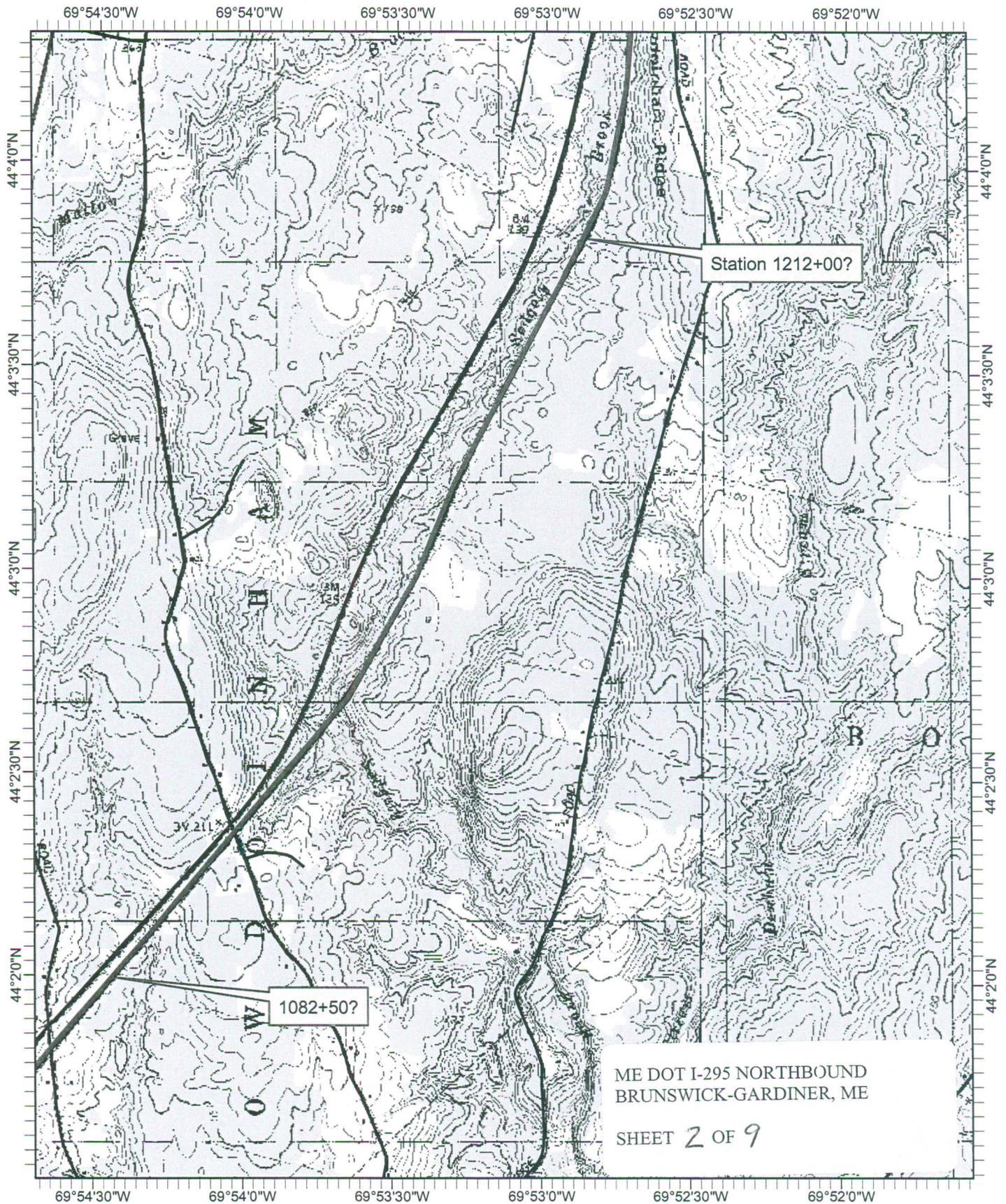
1. This authorization requires you to 1) notify us before beginning work so we may inspect the project, and 2) submit a Compliance Certification Form. You must complete and return the enclosed Work Start Notification Form(s) to this office at least two weeks before the anticipated starting date. You must complete and return the enclosed Compliance Certification Form within one month following the completion of the authorized work and any required mitigation (but not mitigation monitoring, which requires separate submittals).
2. The permittee shall assure that a copy of this permit is at the work site whenever work is being performed and that all personnel performing work at the site of the work authorized by this permit are fully aware of the terms and conditions of the permit. This permit, including its drawings and any appendices and other attachments, shall be made a part of any and all contracts and sub-contracts for work which affects areas of Corps of Engineers' jurisdiction at the site of the work authorized by this permit. This shall be done by including the entire permit in the specifications for the work. If the permit is issued after construction specifications but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. The term "entire permit" includes permit amendments. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions of the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps of Engineers jurisdiction.
3. Adequate sedimentation and erosion control devices, such as geotextile silt fences or other devices capable of filtering the fines involved, shall be installed and properly maintained to minimize impacts during construction. These devices must be removed upon completion of work and stabilization of disturbed areas. The sediment collected by these devices must also be removed and placed upland, in a manner that will prevent its later erosion and transport to a waterway or wetland.
4. All exposed soils resulting from the construction will be promptly seeded and mulched in order to achieve vegetative stabilization.
5. The permittee shall ensure that the repair/placement/replacement of culverts conforms to the provisions of the current Maine DOT Fish Passage & Design Guide.
6. All areas of temporary waterway or wetland fill will be restored to their original contour and character upon completion of the project.



ME DOT I-295 NORTHBOUND
BRUNSWICK-GARDINER, ME

SHEET 1 OF 9

Date: 1/13/09	703+90 43.9443342	Location:
Road Names: Interstate 295	09.9760026	Project ID: 15114.50
Town(s): Brunswick-Gardiner		Project Manager: James Andrews
1 inch equals 2,343 feet	759+50 43.9958212	Page 1
	69.9634907	

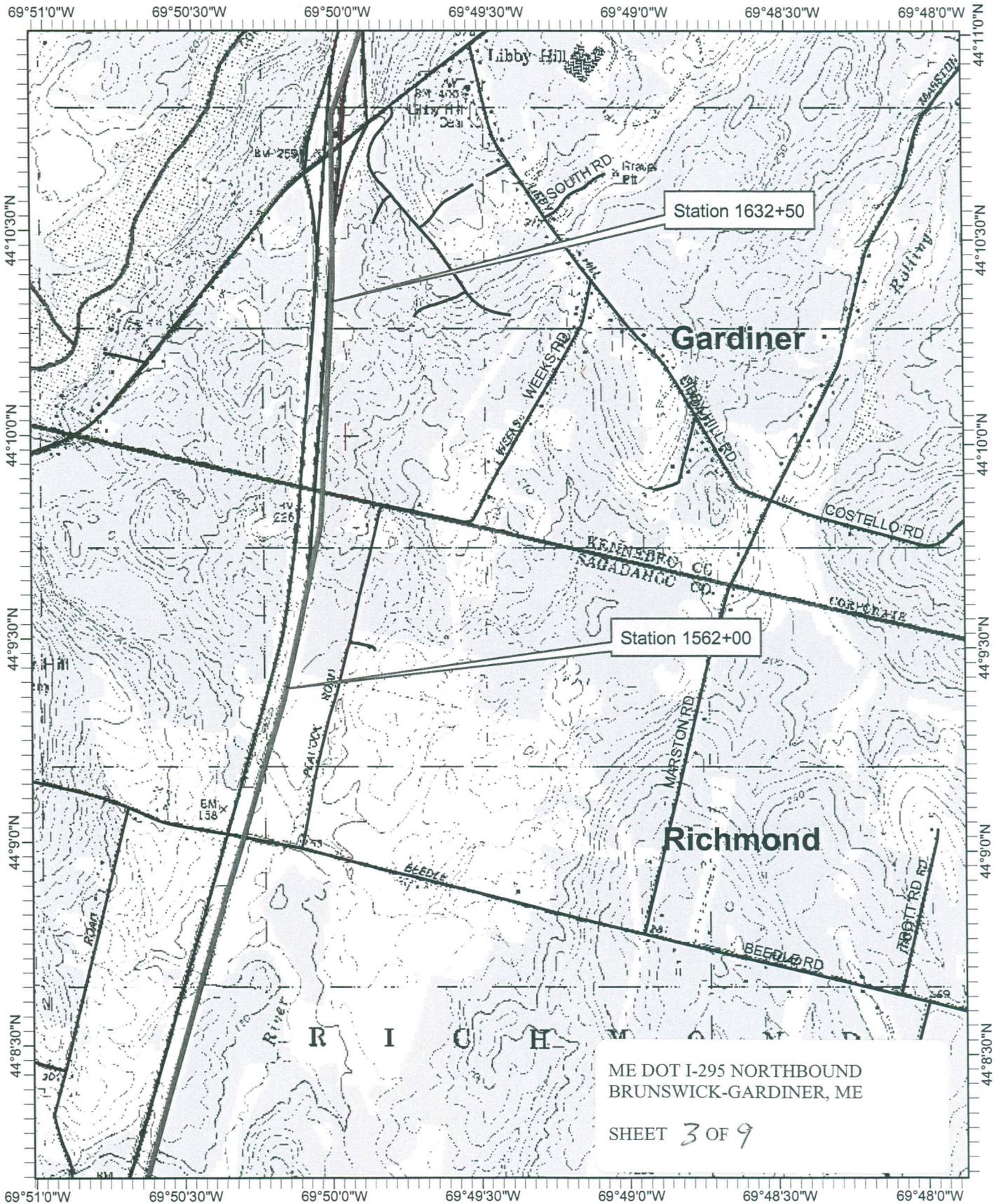


Station 1212+00?

1082+50?

ME DOT I-295 NORTHBOUND
BRUNSWICK-GARDINER, ME
SHEET 2 OF 9

Date: 1/13/09	1082+50 44.0335623; 69.9070706	Location:
Road Names: Interstate 295		Project ID: 15114.50
Town(s): Brunswick-Gardiner	1212+00 44.0636044; 69.8812024	Project Manager: James Andrews
1 inch equals 1,901 feet		Page 2

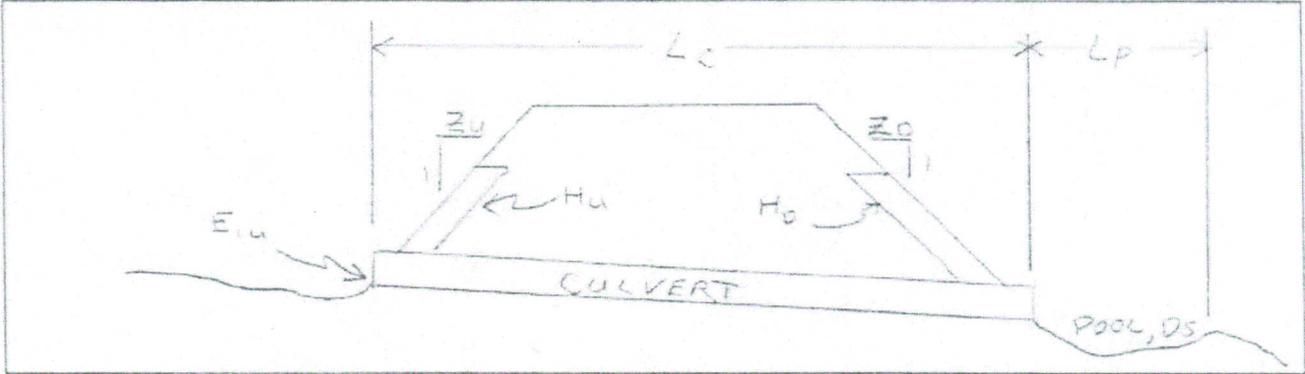


ME DOT I-295 NORTHBOUND
 BRUNSWICK-GARDINER, ME
 SHEET 3 OF 9

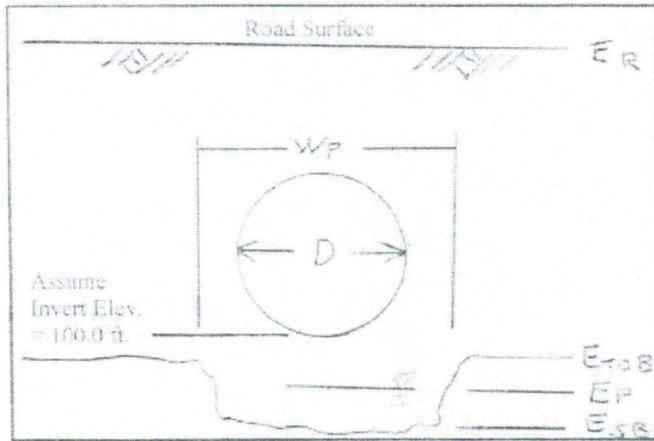
Date: 1/13/09	1562+00 44.1565179; 69.8363630	Location:
Road Names: Interstate 295	1632+50 44.1725185; 69.8341196	Project ID: 15114.50
Town(s): Brunswick-Gardiner		Project Manager: James Andrews
1 inch equals 1,901 feet		Page 3

Project Name: BRUNSWICK GARDINER Investigator's Name: Mike Lenko Date: 1/6/09
 Project PIN: 15114.50 Culvert Location: 703+90 0.24 miles N of Rt 196 overpass in Topsham
 Additional Notes: DITCH OUTLET RT TO ALLOW DRAINAGE

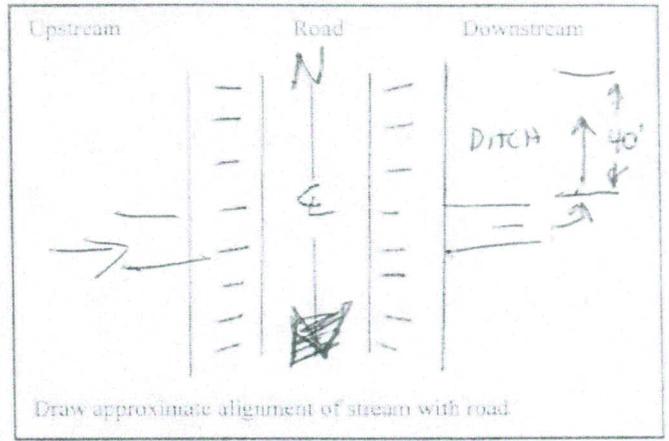
Profile of Culvert



Cross Section of Culvert



Plan View of Culvert



All dimensions in feet		Existing	Proposed
L _c	Length of Culvert	324'	324'
L _p	Length of Pool, DS	12.5'	12.5'
W _p	Width of Pool, DS	16.0'	16.0'
E _U	Elevation invert US	101.2	101.2
E _p	Elevation of Water-DS Pool	102.4	101.5
E _{SB}	Elevation of Streambed one pipe diameter DS	100.0	100.0

All dimensions in feet		Existing	Proposed
E _R	Elevation of CL Road	114.5	114.8
E _{TOB}	Elev. of Top of Bank, DS	94.8	94.5
H _U *	Headwall Treatment, US	V	V
H _D *	Headwall Treatment, DS	V	V
Z _U	Slope Value, US	4:1	4:1
Z _D	Slope Value, DS	4:1	4:1

US = Upstream; DS = Downstream; HW = Headwall

Elevation of lowest downstream invert is assumed to be 100.0 all other elevations relative to it.

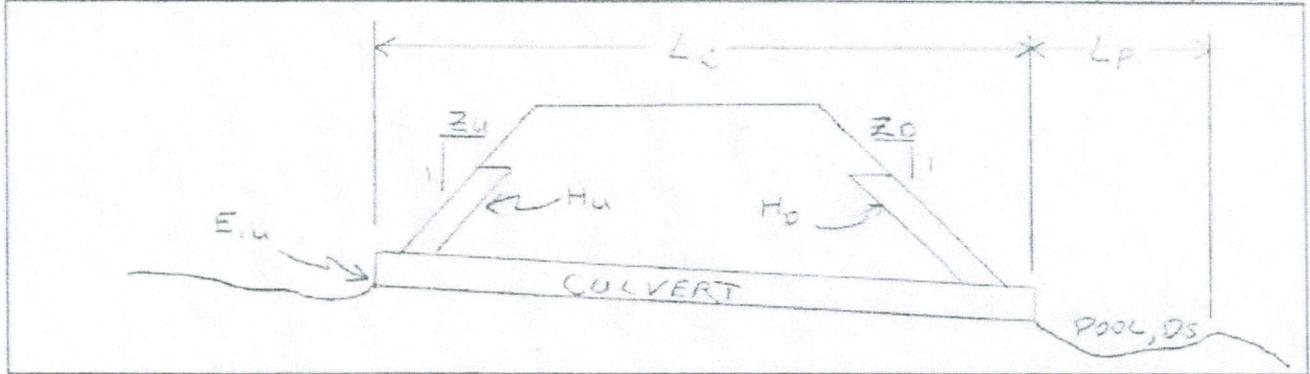
* Types of Headwall Treatment: RR - Rip Rap; CC - Concrete; SB - Stone Block; V - Vegetation (may enter multiple values)

All dimensions in feet	Existing			Proposed		
	Pipe 1	Pipe 2	Pipe 3	Pipe 1	Pipe 2	Pipe 3
D	Diameter of Pipe	3.0'		3.0'		
P ₁	Type of Pipe *	RCP		RCP		
P ₃	Shape of Pipe **	ROUND		ROUND		

* Types of Pipes: RCP - Reinforced Concrete Pipe, CMP - Corrugated Metal Pipe, HDPE - High Density Polyethylene, Stone Box (may enter multiple values)

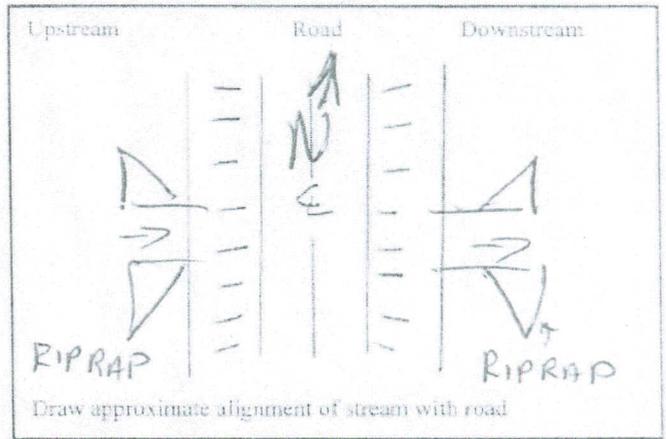
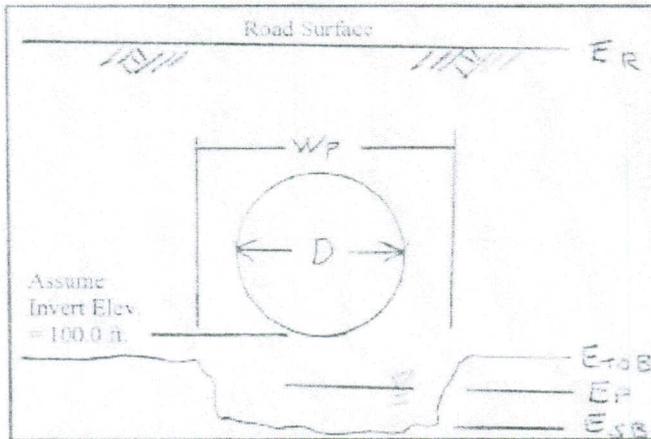
** Shape of Pipes: Round, Oval (for diameter enter horizontal dimension), Box (for diameter enter horizontal dimension)

Project Name: BRUNSWICK GARDINER Investigator's Name: M. Kelemku Date: 1/7/08
 Project PIN: 15114.50 Culvert Location: 759+50 2.8 miles S of Topsham/Bowdoin TL
 Additional Notes: REMOVE 30" X 120' BCCMP & REPLACE W 30" X 120' RCP
RIP RAP PENDS. INLET & OUTLET TO REMAIN AT
 Profile of Culvert SAME ELEVATION. ELEVATION LISTED FROM ASBULTS



Cross Section of Culvert

Plan View of Culvert



All dimensions in feet		Existing	Proposed
L _c	Length of Culvert	120.0	120.0
L _p	Length of Pool, DS	10.0	10.0
W _p	Width of Pool, DS	3.0	4.0
E _u	Elevation Invert US	100.5	100.5
E _p	Elevation of Water-DS Pool	102.4	101.0
E _{SR}	Elevation of Streambed one pipe diameter DS	100.0	100.0

All dimensions in feet		Existing	Proposed
E _R	Elevation of CL Road	114.87	115.27
E _{topB}	Elev. of Top of Bank, DS	3.5	3.5
H _u *	Headwall Treatment, US	V	RR
H _D *	Headwall Treatment, DS	V	RR
Z _U	Slope Value, US	4:1	4:1
Z _D	Slope Value, DS	4:1	4:1

US = Upstream; DS = Downstream; HW = Headwall

Elevation of lowest downstream invert is assumed to be 100.0 all other elevations relative to it.

* Types of Headwall Treatment: RR - Rip Rap; CC - Concrete; SB - Stone Block; V - Vegetation (may enter multiple values)

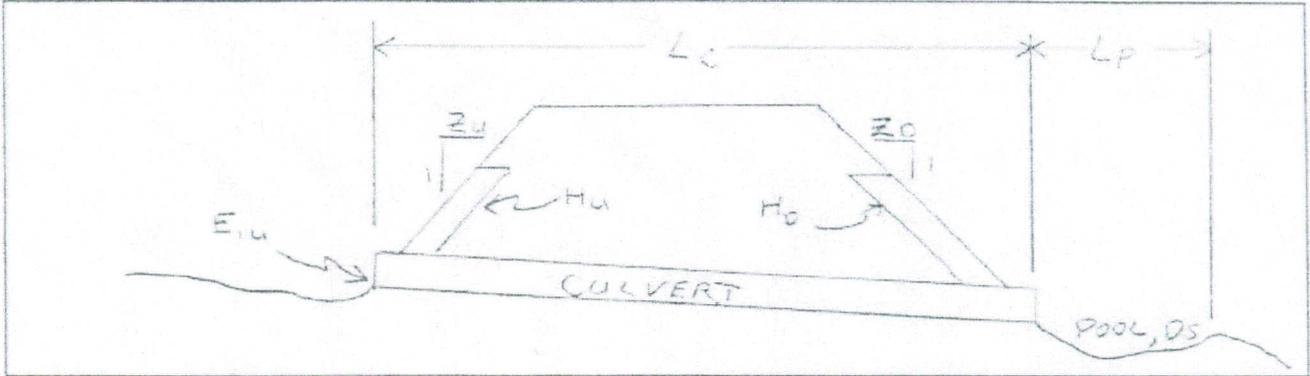
All dimensions in feet	Existing			Proposed		
	Pipe 1	Pipe 2	Pipe 3	Pipe 1	Pipe 2	Pipe 3
D	Diameter of Pipe	2.0		2.5		
P ₁	Type of Pipe *	CMP		RCP		
P ₂	Shape of Pipe **	ROUND		ROUND		

* Types of Pipes: RCP - Reinforced Concrete Pipe; CMP - Corrugated Metal Pipe; HDPE - High Density Polyethylene; Stone Box (may enter multiple values)

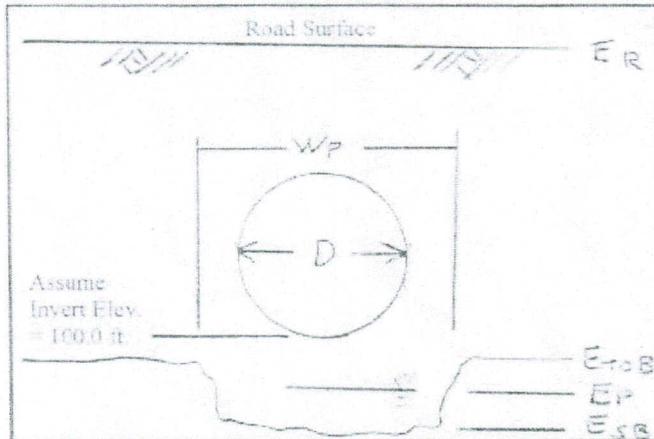
** Shape of Pipes: Round, Oval (for diameter enter horizontal dimension), Box (for diameter enter horizontal dimension)

Project Name: BRUNSWICK GARDINER Investigator's Name: MIKE LENKU Date: 7/6/09
 Project PIN: 15114.50 Culvert Location: 1082+50 2.97 miles N of Bowden/Bowden turnoff
 Additional Notes: REMOVE/RESET 16' LEFT DITCH TO SOUTHBOUND LANES
DREDGE MATERIAL TO BE USED ON SITE DITCH LENGTH 88'

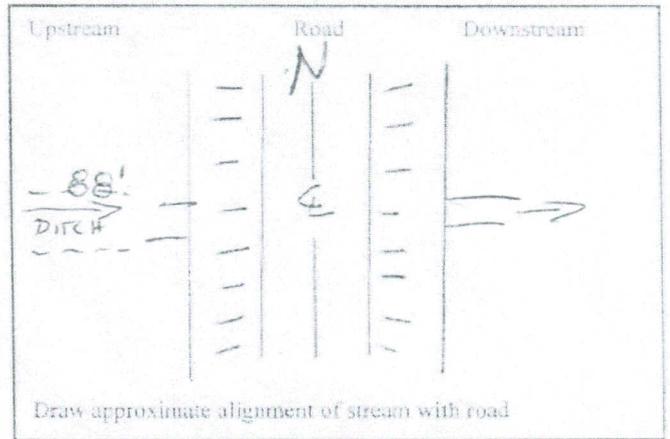
Profile of Culvert ALL WORK ON INLET END.



Cross Section of Culvert



Plan View of Culvert



All dimensions in feet		Existing	Proposed
Lc	Length of Culvert	96'	96'
Lp	Length of Pool, DS	9.5'	9.5'
Wp	Width of Pool, DS	3.5'	3.5'
Eiu	Elevation Invert US	100.5	100.5
Ep	Elevation of Water-DS Pool	100.0	100.0
Esb	Elevation of Streambed one pipe diameter DS	100.0	100.0

All dimensions in feet		Existing	Proposed
ER	Elevation of CI. Road	110.75'	111.15'
EtoB	Elev. of Top of Bank, DS	103.0	103.0
Hu*	Headwall Treatment, US	RR	RR
Hd*	Headwall Treatment, DS	RR	RR
Zu	Slope Value, US	4:1	4:1
Zd	Slope Value, DS	4:1	

US = Upstream; DS = Downstream; HW = Headwall

Elevation of lowest downstream invert is assumed to be 100.0 all other elevations relative to it.

* Types of Headwall Treatment: RR - Rip Rap; CC - Concrete; SB - Stone Block; V - Vegetation (may enter multiple values)

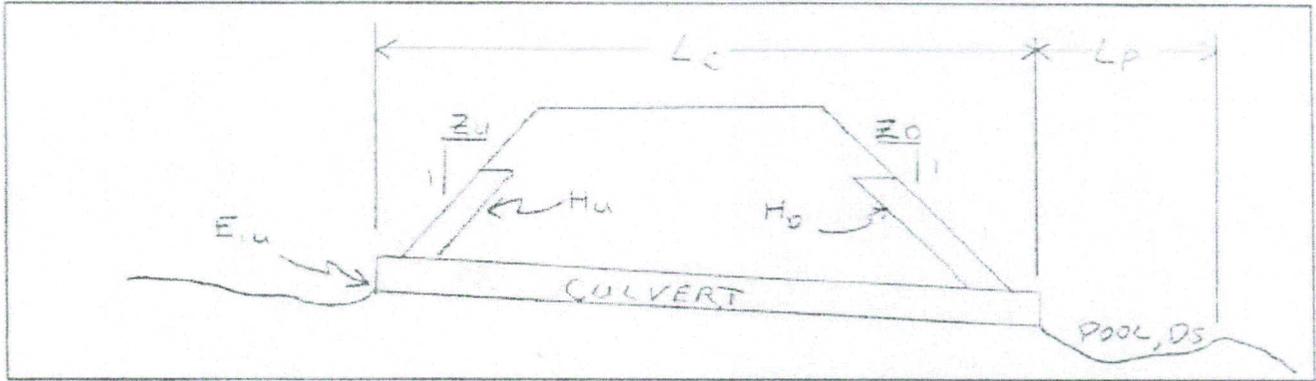
All dimensions in feet	Existing			Proposed		
	Pipe 1	Pipe 2	Pipe 3	Pipe 1	Pipe 2	Pipe 3
D	Diameter of Pipe	3.5'		3.5'		
P	Type of Pipe *	RCP		RCP		
Ps	Shape of Pipe **	ROUND		ROUND		

* Types of Pipes: RCP - Reinforced Concrete Pipe; CMP - Corrugated Metal Pipe; HDPE - High Density Polyethylene Pipe; PA - Pipe Arch; OB - Open Bottom; SB - Stone Box (may enter multiple values)

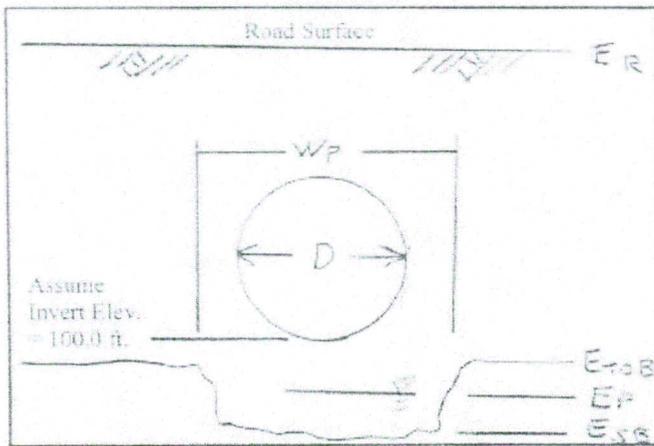
** Shape of Pipes: Round, Oval (for diameter enter horizontal dimension), Box (for diameter enter horizontal dimension)

Project Name: BRUNSWICK GARDINER Investigator's Name: MIKE LENKO Date: 1/6/09
 Project PIN: 15114-50 Culvert Location: 1562+00 0.79 mile S of Richmond/Gardiner TL
 Additional Notes: REMOVE 16' CMP LT ALL WORK ON INLET SIDE

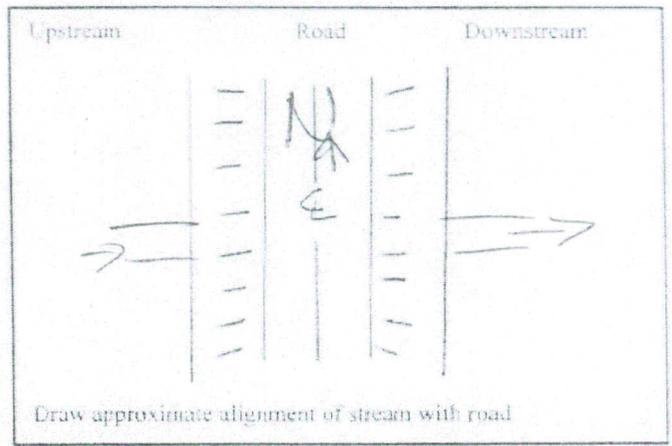
Profile of Culvert



Cross Section of Culvert



Plan View of Culvert



All dimensions in feet		Existing	Proposed
L_C	Length of Culvert	164.0	148.0
L_P	Length of Pool, DS	15.0	5.0
W_P	Width of Pool, DS	17.0	11.0
E_U	Elevation Invert US	100.2	100.2
E_P	Elevation of Water-DS Pool	102.5	102.5
E_{SB}	Elevation of Streambed one pipe diameter DS	100.2	100.2

All dimensions in feet		Existing	Proposed
E_R	Elevation of CL Road	112.6	113.0
E_{TOB}	Elev. of Top of Bank, DS	103.0	103.0
H_U^*	Headwall Treatment, US	RR	RR
H_D^*	Headwall Treatment, DS	V	V
Z_U	Slope Value, US	4:1	4:1
Z_D	Slope Value, DS	4:1	4:1

US = Upstream; DS = Downstream; HW = Headwall

Elevation of lowest downstream invert is assumed to be 100.0 all other elevations relative to it.

* Types of Headwall Treatment: RR - Rip Rap; CC - Concrete; SB - Stone Block; V - Vegetation (may enter multiple values)

All dimensions in feet	Existing			
	Pipe 1	Pipe 2	Pipe 3	
D	Diameter of Pipe	4.5'		
P_1	Type of Pipe *	RMP		
P_3	Shape of Pipe **	ROUND		

All dimensions in feet	Proposed			
	Pipe 1	Pipe 2	Pipe 3	
D	Diameter of Pipe	4.5		
P_1	Type of Pipe *	CMP		
P_3	Shape of Pipe **	ROUND		

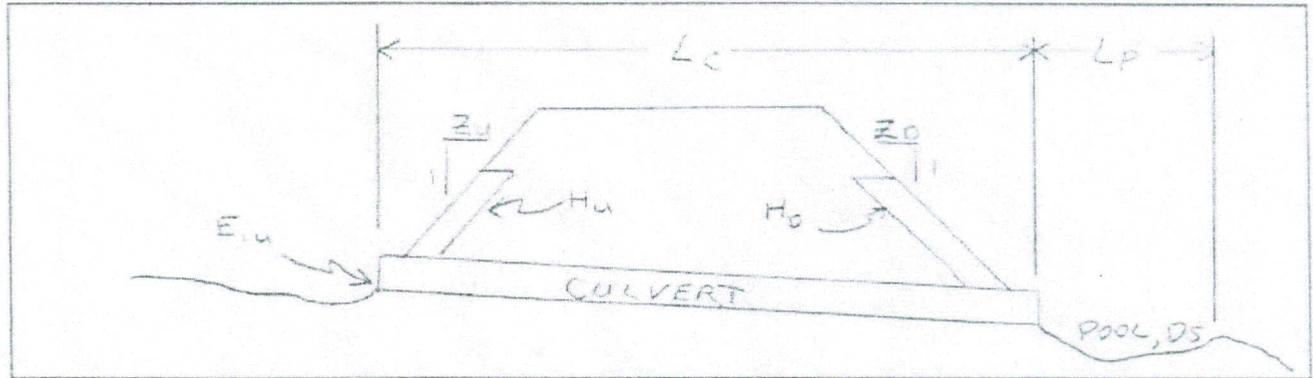
* Types of Pipes: RCP - Reinforced Concrete Pipe, CMP - Corrugated Metal Pipe, HDPE - High Density Polyethylene
 Stone Box (may enter multiple values)

** Shape of Pipes: Round, Oval (for diameter enter horizontal dimension), Box (for diameter enter horizontal dimension)

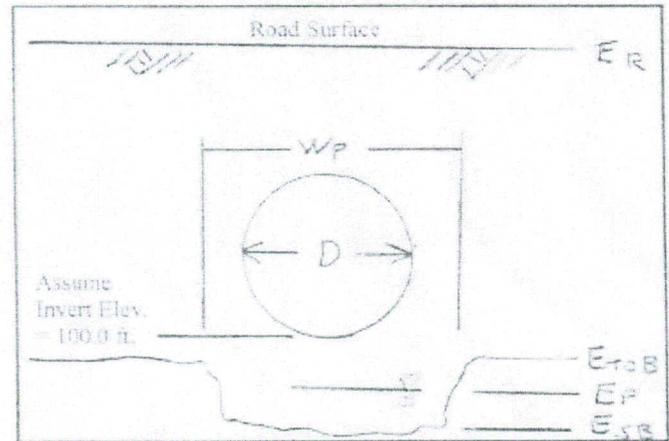
ME DOT I-295 NORTHBOUND
 BRUNSWICK-GARDINER, ME

Project Name: BRUNSWICK GARDINER Investigator's Name: MIKE LENKU Date: 1/6/09
 Project PIN: 15114-50 Culvert Location: 1632+50 0.54 miles N Richmond/Gardiner T/L
 Additional Notes: INSPECTION OF PIPE NEEDED AFTER REMOVAL OF BEAVER DAM LOCATED IN SB EXIT 49 ON RAMP AREA TYPE OF WORK UNKNOWN ELEVATION/LENGTH TO BE SAME

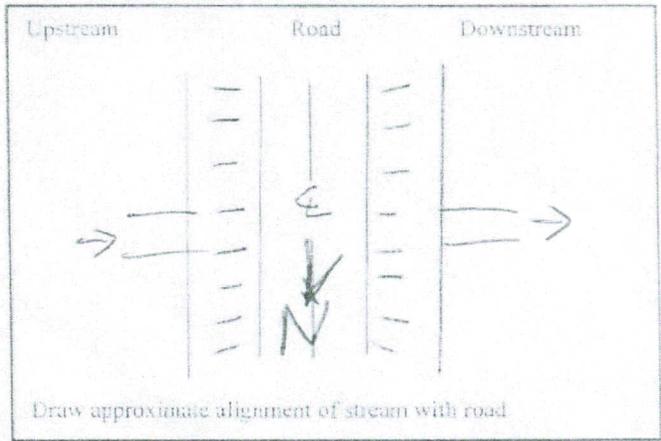
Profile of Culvert



Cross Section of Culvert



Plan View of Culvert



All dimensions in feet		Existing	Proposed
Lc	Length of Culvert	116.0	116.0
Lp	Length of Pool, DS	30.0	30.0
Wp	Width of Pool, DS	25.5	25.5
Eu	Elevation invert US	101.5	101.5
Ed	Elevation of Water-DS Pool	103.5	101.5
EsB	Elevation of Streambed one pipe diameter DS	100.0	100.0

All dimensions in feet		Existing	Proposed
ER	Elevation of Cl. Road	119.0	119.4
EtoB	Elev. of Top of Bank, DS	103.5	103.5
Hu*	Headwall Treatment, US	RR	RR
Hd*	Headwall Treatment, DS	RR	RR
Zu	Slope Value, US	2:1	2:1
ZD	Slope Value, DS	2:1	2:1

US = Upstream; DS = Downstream; HW = Elevation of lowest downstream invert is assumed to be 100.0 all other elevations relative to it.
 * Types of Headwall Treatment: RR - Rip Rap; CC - Concrete; SB - Stone Block; V - Vegetation (may enter multiple values)

All dimensions in feet	Existing			Proposed		
	Pipe 1	Pipe 2	Pipe 3	Pipe 1	Pipe 2	Pipe 3
D	Diameter of Pipe	3.5		3.5		
P1	Type of Pipe *	RCP		RCP		
P2	Shape of Pipe **	ROUND		ROUND		

* Types of Pipes: RCP - Reinforced Concrete Pipe, CMP - Corrugated Metal Pipe, HDPE - High Density Polyethylene, Stone Box (may enter multiple values)
 ** Shape of Pipes: Round, Oval (for diameter enter horizontal dimension), Box (for diameter enter horizontal dimension)



**US Army Corps
of Engineers®**
New England District

(Minimum Notice: Permittee must sign and return notification
within one month of the completion of work.)

COMPLIANCE CERTIFICATION FORM

Corps of Engineers Permit No: _____

Name of Permittee: _____

Permit Issuance Date: _____

Please sign this certification and return it to the following address upon completion of the activity and any mitigation required by the permit. You must submit this after the mitigation is complete, but not the mitigation monitoring, which requires separate submittals.

```

*****
* MAIL TO: U.S. Army Corps of Engineers, New England District      *
*           Policy Analysis/Technical Support Branch, ATTN: Marie Farese *
*           Regulatory Division                                     *
*           696 Virginia Road                                     *
*           Concord, Massachusetts 01742-2751                    *
*****

```

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

Printed Name

Date of Work Completion

() _____
Telephone Number

() _____
Telephone Number



**US Army Corps
of Engineers**
New England District

PGP WORK START NOTIFICATION FORM
(Minimum Advance Notice: Two Weeks)

MAIL TO: U.S. Army Corps of Engineers, New England District
Regulatory Branch
Policy Analysis/Technical Support Section
696 Virginia Road
Concord, Massachusetts 01742-2751

A Corps of Engineers Permit (_____) was issued to _____. The permit authorized the permittee(s) to _____

The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

PLEASE PRINT OR TYPE

Name of Person/Firm: _____

Business Address: _____

Telephone: (_____) _____ (_____) _____

Proposed Work Dates: Start: _____
Finish: _____

PERMITTEE'S SIGNATURE: _____ DATE: _____

PRINTED NAME: _____ TITLE: _____

FOR USE BY THE CORPS OF ENGINEERS

PM _____ Submittals Required: _____

Inspection Recommendation: _____

Chapter 305: PERMIT BY RULE Section 11
State Transportation Facilities

- 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.

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".

- 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.

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 2 (Soil disturbance) and 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.

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.

- (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.

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).

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 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).

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).

Chapter 305 Section 11

State transportation facilities

A. Applicability

- (1) This section applies to the maintenance, repair, reconstruction, rehabilitation, replacement or minor construction of a State Transportation Facility carried out by, or under the authority of, the Maine Department of Transportation or the Maine Turnpike Authority, including any testing or preconstruction engineering, and associated technical support services.
- (2) This section does not apply to an activity within a coastal sand dune system.

NOTE: The construction of a transportation facility other than roads and associated facilities may be subject to the Storm Water Management Law, 38 M.R.S.A. Section 420-D.

B. Standards

- (1) Photographs of the area to be altered by the activity must be taken before work on the site begins. The photographs must be kept on file and be made available at the request of the DEP.
- (2) The activity must be reviewed by the Department of Inland Fisheries and Wildlife, the Department of Marine Resources, the Atlantic Salmon Authority, and the DEP's Division of Environmental Assessment prior to the notification being filed with the DEP. The activity must be performed according to any recommendations from these authorities.
- (3) The activity must be performed in accordance with erosion control measures conforming with the State of Maine Department of Transportation Standard Specifications for Highways and Bridges Revision of April 1995 and with the Department of Transportation's Best Management Practices for Erosion and Sediment Control, September 1997.

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

- (4) Alignment changes may not exceed a distance of 200 feet between the old and new center lines in any natural resource.
- (5) The activity may not alter more than 300 feet of shoreline (both shores added together) within a mile stretch of any river, stream or brook, including any bridge width or length of culvert.
- (6) The activity may not alter more than 150 feet of shoreline (both shores added together) within a mile stretch of any outstanding river segment identified in 38 M.R.S.A. 480-P, including any bridge width or length of culvert.
- (7) The activity must minimize wetland intrusion. The activity is exempt from the provisions of Chapter 310, the Wetland Protection Rules, if the activity alters less than 15,000 square feet of natural resources per mile of roadway (centerline measurement) provided that the following impacts are not exceeded within the 15,000 square foot area:

- (a) 1,000 square feet of coastal wetland consisting of salt tolerant vegetation or shellfish habitat; or
- (b) 5,000 square feet of coastal wetland not containing salt tolerant vegetation or shellfish habitat; or
- (c) 1,000 square feet of a great pond.

All other activities must be performed in compliance with all sections of Chapter 310, the Wetland Protection Rules, except 310.2(C), 5(A), 9(1), 9(B) and 9(C).

- (8) The activity may not permanently block any fish passage in any watercourse containing fish. The applicant must improve passage beyond what restriction may already exist unless the Department of Inland Fisheries and Wildlife, the Department of Marine Resources, the Atlantic Salmon Authority and the DEP's Division of Environmental Assessment concur that the improvement is not necessary.
- (9) Rocks may not be removed from below the normal high water line of any coastal wetland, freshwater wetland, great pond, river, stream or brook except to the minimum extent necessary for completion of work within the limits of construction.
- (10) If work is performed in a river, stream or brook that is less than three feet deep at the time and location of the activity, with the exception of culvert installation, the applicant must divert flow away from the activity while work is in progress.
 - (a) Diversion may be accomplished by the use of stable, inert material. No more than two thirds (2/3) of stream width may be diverted at one time.
 - (b) Any material used to divert water flow must be completely removed upon completion of the activity, and the stream bottom must be restored to its original condition.
 - (c) A pump may be operated, where necessary, for a temporary diversion. The pump outlet must be located and operated such that erosion or the discharge of sediment to the water is prevented.

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

- (11) Wheeled or tracked equipment may not operate in the water. Equipment operating on the shore may reach into the water with a bucket or similar extension. Equipment may cross streams on rock, gravel or ledge bottom.
- (12) All wheeled or tracked equipment that must travel or work in a vegetated wetland area must travel and work on mats or platforms.
- (13) Any debris or excavated material must be stockpiled either outside the wetland or on mats or platforms. Hay bales or silt fence must be used, where necessary, to prevent sedimentation. Any debris generated during the activity must be prevented from washing downstream and must be removed from the wetland or water body. Disposal of debris must be in conformance with the Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. Section 1301 et seq.

- (14) Work below the normal high water line of a great pond, river, stream or brook must be done at low water except for emergency work or work agreed to by the resource agencies listed in paragraph 2 above. Measures, such as a silt boom or staked fencing, must be employed to reduce and isolate turbidity.
- (15) Perimeter controls must be installed before the work starts. Disturbance of natural resources beyond the construction limits shown on the plans is not allowed under this rule.

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

- (16) The use of untreated lumber is preferred. Lumber pressure treated with chromated copper arsenate (CCA) may be used, provided it is cured on dry land in a manner that exposes all surfaces to the air for a period of at least 21 days prior to construction. Wood treated with creosote or pentachlorophenol may not be used where it will contact water.
- (17) A temporary road for equipment access must be constructed of crushed stone, blasted ledge, or similar materials that will not cause sedimentation or restrict fish passage. Such roads must be completely removed at the completion of the activity. In addition, any such temporary roads which are in rivers, streams or brooks, must allow for a passage of stormwater flows associated with a 10-year storm.
- (18) Soil may not be disturbed during any period when soils are saturated due to rain or snow melt, except as necessary to protect work in progress or as required for bridge maintenance activities. Areas where soils are saturated (i.e. water drips from the soil when squeezed by hand, or the soil is capable of being rolled into a rod 1/8th inch in diameter that does not crumble) must be immediately mulched if they are disturbed.
- (19) Disturbed soil must be protected within one week from the time it was last actively worked, and prior to any storm event, using temporary or permanent measures such as the placement of riprap, sod, mulch, erosion control blankets, or other comparable measures.
- (20) Hay bale or straw mulch, where used, must be applied at a rate of at least one bale per 500 square feet (1 to 2 tons per acre).
- (21) If mulch is likely to be moved because of steep slopes or wind exposure, it must be anchored with netting, peg and twine, binder or other suitable method and must be maintained until a catch of vegetation is established over the entire disturbed area.
- (22) In addition to the placement of riprap, sod, erosion control blankets or mulch, additional steps must be taken where necessary to prevent sedimentation of the water. Evidence of sedimentation includes visible sheet, rill or gully erosion, discoloration of water by suspended particles and/or slumping of banks. Silt fences, staked hay bales and other sedimentation control measures, where planned for, must be in place prior to the commencement of an activity, but must also be installed whenever necessary to prevent erosion and sedimentation.

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

- (23) Temporary erosion control measures must be maintained and inspected weekly until the site is permanently stabilized with vegetation or other permanent control measures. Erosion control measures must also be inspected immediately prior to and following storms.
- (24) Permanent erosion control measures protecting all disturbed areas must be implemented within 30 days from the time the areas were last actively worked, or for fall and winter activities by the following June 15, except where precluded by the type of activity (e.g. riprap, road surfaces, etc.). The permanent erosion control measures must be maintained.
- (25) The applicant shall immediately take appropriate measures to prevent erosion or sedimentation from occurring or to correct any existing problems, regardless of the time of year.
- (26) Non-native species may not be planted in restored areas.
- (27) Disposal of debris must be in conformance with Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. Sections 1301 et seq.
- (28) Disturbance of vegetation must be avoided, if possible. Where vegetation is disturbed outside of the area covered by any road or structure construction, it must be reestablished immediately upon completion of the activity and must be maintained.
- (29) A vegetated area at least 25 feet wide must be established and maintained between any new stormwater outfall structure and the high water line of any open water body. A velocity reducing structure must be constructed at the outlet of the stormwater outfall that will create sheet flow of stormwater, and prevent erosion of soil within the vegetated buffer. If the 25 foot vegetated buffer is not practicable, the applicant must explain the reason for a lesser setback in writing. Approval from the DEP must be in writing and any recommendations must be incorporated into the activity.

C. Definitions. The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

- (1) Diversion. A rerouting of a river, stream or brook to a location outside of its established channel.
- (2) Fill. a. (verb) To put into or upon, supply to, or allow to enter a water body or wetland any earth, rock, gravel, sand, silt, clay, peat, or debris; b. (noun) Material, other than structures, placed in or immediately adjacent to a wetland or water body.
- (3) Floodplain wetlands. Freshwater wetlands that are inundated with flood water during a 100-year flood event based on flood insurance maps produced by the Federal Emergency Agency or other site specific information.
- (4) Riprap. Rocks that are fit into place, usually without mortar, on a slope as defined in the State of Maine, Department of Transportation, Standard Specifications for Highway and Bridges, revision of April 1995.

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

The New England District of the U.S. Army Corps of Engineers hereby issues a Programmatic General Permit (PGP) that expedites review of minimal impact work in coastal and inland waters and wetlands within the State of Maine.

I. GENERAL CRITERIA

Activities with minimal impacts, as specified by the terms and conditions of this PGP and on the attached Appendix A, Definition of Categories, are either:

Category 1: Non-reporting. Eligible without screening (provided the authorizations are obtained which this permit states are necessary for activities to be eligible for authorization under this non-reporting category), or,

Category 2: Reporting. Require screening and a written determination of eligibility under the PGP by the Corps after coordination with the U.S. Fish and Wildlife Service (U.S. FWS), U.S. Environmental Protection Agency (EPA) and the National Marine Fisheries Service (NMFS).

This PGP does not affect the Corps Individual Permit review process or activities exempt from Corps jurisdiction.

II. ACTIVITIES COVERED:

Work and structures that are located in, or that affect, navigable waters of the United States (U.S.) (Corps regulates under Section 10 of the Rivers and Harbors Act of 1899); the discharge of dredged or fill material into waters of the United States (Corps regulates under Section 404 of the Clean Water Act); and the transportation of dredged material for the purpose of disposal in the ocean (Corps regulates under Section 103 of the Marine Protection, Research and Sanctuaries Act).

III. PROCEDURES:

A. State Approvals

For projects authorized pursuant to this PGP, the following State approvals are also required. The applicable permits must be obtained in order for this PGP authorization to be valid (applicants are responsible for ensuring that all required State permits and approvals have been applied for and obtained):

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

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

B. Corps Authorizations

CATEGORY 1 (Non-Reporting)

Eligibility Criteria

Activities in Maine may proceed without application or notification to the Corps if they:

- Are subject to Corps jurisdiction (see General Condition 2, Page 7),
- Meet the definition of Category 1 in Appendix A - Definition of Categories, and
- Meet the General Conditions of the PGP (see Pages 7 - 15).

If the State or the Corps does not contact the applicant for DEP's Tier One permits during the DEP's Tier One 30-day review period, Corps approval may be assumed and the project may proceed. Refer to the Federal Screening Procedures (see Page 4) for additional information regarding screening.

Project proponents seeking Category 1 authorizations are not relieved of the obligation to comply with this PGP's General Conditions (see Page 7) and other Federal laws such as the National Historic Preservation Act, the Endangered Species Act (ESA) and the Wild and Scenic Rivers Act. Therefore, consultation with the Corps and/or outside experts such as the Maine Historic Preservation Commission and the appropriate Indian tribes is recommended when there is a high likelihood of the presence of resources of concern.

Although Category 1 projects are non-reporting, the Corps reserves the right to require screening under Category 2 or Individual Permit review if there are concerns for the aquatic environment or any other factor of the public interest (see General Condition 4, Discretionary Authority, Page 7).

Work that is not regulated by the State of Maine, but is subject to Corps jurisdiction, is eligible for Corps authorization under this PGP in accordance with the review thresholds and conditions contained herein. The Maine DEP and LURC have waived WQC for projects authorized under Categories 1 and 2 of this PGP and not subject to jurisdiction under the NRPA and LURC Land Use Districts and Standards.

Enforcement cases. This PGP does not apply to any existing or proposed activity in Corps jurisdiction associated with an on-going Corps or EPA enforcement action until such time as the enforcement action is resolved or the Corps determines that the activity may proceed independently without compromising the enforcement action. The Corps may choose not to accept applications or issue permits to any applicant with outstanding violations.

CATEGORY 2 (Reporting – Requiring Screening)

Eligibility Criteria

Activities in Maine require written approval from the Corps if they:

- Are subject to Corps jurisdiction (see General Condition 2, Page 7),
- Meet the definition of Category 2 in Appendix A - Definition of Categories, and
- Meet the General Conditions of the PGP (see Pages 7 - 15),

These projects will be reviewed through interagency screening (see Federal Screening Procedures below) to determine whether such activities may be authorized under this PGP. To be eligible and

subsequently authorized, an activity must result in minimal impacts to the aquatic environment as determined by the Corps based on comments from the review team and the criteria listed above. Mitigation may be required to compensate for unavoidable impacts to ensure net effects of a project are minimal.

For Category 2 projects, applicants must obtain a written authorization from the Corps and State approvals as stated on Page 1.

To ensure compliance with the conditions of this PGP, consultation with the Corps and outside experts is required. This includes consultation with the Maine Historic Preservation Commission and the appropriate Native American Indian tribes to ensure compliance with Condition 8. Also, note the review thresholds under Category 2 apply to single and complete projects only (see General Condition 5).

Enforcement cases. See previous section.

Application Procedures

The Corps must review and approve in writing all Category 2 activities. Generally, the State will provide the Corps with a copy of State applications received, but it is ultimately the applicant's responsibility to ensure the Corps receives the application from the State. Therefore, it is recommended that applicants either verify with the Corps receipt of their application from the State (DEP or LURC), or apply directly to the Corps with either a copy of their State application or a Corps application (ENG Form 4345). Applicants must apply directly to the Corps using ENG Form 4345 if the work is not State regulated.

Upon receipt of the application, the Corps will determine if it:

- (a) requires additional information (see "information typically required" on the following page);
- (b) is appropriate for screening with the Federal resource agencies (see Category 2 Federal Screening Procedures on the following page);
- (c) is ineligible under the terms and/or conditions of this PGP; or
- (d) will require Individual Permit review, regardless of whether the terms and conditions of this PGP are met, based on concerns for the aquatic environment or any other factor of the public interest (see General Condition 4, Discretionary Authority).

If open water disposal is proposed, the Corps will make a suitability determination, fully coordinated with the Federal resource agencies, before coordinating a project at a joint processing meeting.

All Category 2 applicants shall submit a copy of their application materials to the Maine Historic Preservation Commission and the Indian tribe(s) listed on Page 17, at the same time, or before, they apply to the DEP, LURC, or the Corps, to be reviewed for the presence of historic, archaeological or tribal resources in the permit area that the proposed work may affect. Submittals to the DEP or Corps shall include information to indicate that this has been done (a copy of the applicant's cover letter to Maine Historic Preservation Commission and tribes or a copy of the Historic Preservation Commission and tribal response letters is acceptable).

Information Typically Required

The following information may not be necessary for all projects. Please see www.nae.usace.army.mil for a more comprehensive checklist. Select "Regulatory/Permitting," "Forms" and then "Application and Plan Guideline Checklist." Please check with our Maine office for project-specific requirements.

- (a) purpose of project;
- (b) 8½"x 11" locus map. 8½"x 11" plan views of the entire property, including property lines, and project limits with existing and proposed conditions;
- (c) typical cross-section views of all wetland and waterway fill areas and wetland replication areas;
- (d) legible, reproducible plans. Show mean low water (MLW), mean high water (MHW) and high tide line (HTL) elevations in navigable waters;
- (e) each plan should show the NGVD 1929 equivalent for the project's vertical datum (MLW, MLLW, MHW, HTL or other tidal datum for tidal projects) with the vertical units. Do not use local datum;
- (f) wetland delineation for the site, Corps wetland delineation data sheets (see web site), and calculations of waterway and wetland impact areas (see General Condition 2);
- (g) delineation of submerged aquatic vegetation, e.g., eel grass beds, in tidal waters;
- (h) 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 ordinary high water in inland waters and below the high tide line in coastal waters;
- (i) limits of any Federal Navigation Project in the vicinity and State Plane Coordinates for the limits of the proposed work closest to the Federal Navigation Project;
- (j) on-site alternatives analysis. Please contact Corps for guidance;
- (k) identify and describe potential impacts to Essential Fish Habitat. See General Condition 11 and contact Corps for guidance;
- (l) photographs of wetland/waterway to be impacted.

Information typically required for dredging projects:

- (a) 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.
- (b) the area in square feet and volume of material to be dredged below mean high water;
- (c) existing and proposed water depths;
- (d) type of dredging equipment to be used;
- (e) nature of material (e.g., silty sand);
- (f) any existing sediment grain size and bulk sediment chemistry data for the proposed or any nearby projects;
- (g) information on the location and nature of municipal or industrial discharges and occurrence of any contaminant spills in or near the project area, location of the disposal site (include locus sheet);
- (h) shellfish survey;
- (i) identify and describe potential impacts to Essential Fish Habitat (see General Condition 11);
- (j) delineation of submerged aquatic vegetation (e.g., eelgrass beds).

Federal Screening Procedures

The Corps will review all complete applications for Category 2 projects requiring Corps approval at interagency screening meetings (or "joint processing" meetings) with the Federal resource agencies (U.S. FWS, EPA and NMFS) to determine whether such activities may be authorized under this PGP. The Federal resource agencies will comprise the interagency review team. The meetings are held at the Corps every three weeks, or coordinated as necessary to provide applicants with a timely response. The Corps and Federal resource agencies, at the branch chief or equivalent level, may agree on certain activities that do not need to be coordinated at these meetings.

If the Corps and Federal resource agencies determine that the activity is eligible for the PGP, the Corps will send an authorization letter directly to the applicant. The Corps will generally issue an eligibility determination within the State's review period, not to exceed 60 days. If the Corps determines that the activity is not eligible under the PGP or that additional information is required, the Corps will notify the applicant in writing and will send a copy of this notification to DEP or LURC.

For projects reviewed with the Federal resource agencies, the agencies may recommend, within ten business days, either 1) special conditions for projects to avoid or minimize adverse environmental effects and to ensure the terms and conditions of the PGP are met, or 2) Individual Permit review. The Corps will determine that a project is ineligible under this PGP and will begin its Individual Permit review procedures if any one of the Federal resource agencies, within ten business days of the screening meeting, expresses a concern within their area of expertise, states the resource or species that could be impacted by the project, and describes the impacts that, either individually or cumulatively, will be more than minimal.

This ten-day notice may be spoken and is not required to be fully documented, but must be confirmed with a written response within an additional ten working days from the date of the spoken comment. Written responses must be signed by the Federal resource agency field supervisor or branch chief, as appropriate, and must identify the affected resource within their area of expertise. The intent of the spoken notification is to allow the Corps to give timely notification to the applicant that additional information is needed and/or an Individual Permit may be required. The Corps may reinstate a project's eligibility under the PGP provided the Federal agencies' concerns are satisfied. The Federal resource agencies may request additional information within their area of expertise within ten business days of the screening meeting. This information shall be commensurate to the level of impact and agreed upon by the Corps. The agencies are allowed an additional ten business days after their receipt of additional information to provide special conditions or a written Individual Permit request to the Corps.

If the applicant is unable to resolve the concerns, the Corps, independently or at the request of the Federal resource agencies, will require an Individual Permit for the project. The applicant will be notified of this in writing, along with information about submitting the necessary application materials.

Minerals Management Service (MMS) Review

Projects with construction of solid fill structures or discharge of fill that may extend beyond the coastline or the baseline from which the territorial sea is measured (i.e., mean low water), must be coordinated with Minerals Management Service (MMS), Outer Continental Shelf (OCS) Survey Group, pursuant to the Submerged Lands Act (43 USC, Section 1301-1315, 33 CFR 320.4(f)). The Corps will forward project information to MMS for their review. The MMS will coordinate their determination with the Department of the Interior (DOI) Solicitor's Office. The DOI will have 15 calendar days from the date MMS is in receipt of project information to determine if the baseline will be affected. No notification to the Corps within 15-day review period will constitute a "no effect" determination. Otherwise, the solicitor's notification to the Corps may be spoken but must be followed with a written confirmation within ten business days from the date of the spoken notification. This procedure will be eliminated if the State of Maine provides a written waiver of interest in any increase in submerged lands caused by a change in the baseline resulting from solid fill structures or fills authorized under this PGP.

Emergency Situations Procedures

Emergency situations are limited to sudden, unexpected occurrences that could potentially 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 an application under standard procedures. If an emergency situation requires action in less than 30 days after the occurrence, it qualifies for the amended notification procedures described below.

Notification Procedures for Emergency Situations:

Any project proponent may request emergency authorization from the Corps, however the Corps will determine if a project qualifies for these emergency situation procedures. The Federal resource agencies, the Maine Historic Preservation Commission and the tribes will each designate an emergency contact and an alternate in the event the regular contact is unavailable. When an application for Category 2 work is received that the Corps determines is an “emergency” as defined above, the Corps will fax a copy of the plans and Determination of Eligibility to the agency representatives and their alternates. The resource agencies would then have 16 business hours to notify the Corps if they have any comments on authorization of the project under the PGP. Objections to the Corps determination of an “emergency” situation will not be accepted. If no response is received within 16 business hours, the Corps will proceed with a decision on the application. If the resource agencies have comments on the proposal, they will have 16 business hours to put their comments in writing. If written comments from the Federal agencies are not received within 16 business hours, the Corps will proceed with a decision on the application.

If a Federal agency requests that an Individual Permit be required for a project or requests modifications to the project based on concerns within their area(s) of expertise, the Corps will notify the applicant within one business day of receipt of that request that the project as proposed does not qualify for authorization under this PGP and the emergency Individual Permit procedures may be followed. In any event, the Corps will notify the applicant within 16 business hours of commencement of the screening process as to whether the project may proceed under this PGP.

IV. CORPS AUTHORIZATION: INDIVIDUAL PERMIT

Work that is defined in the Individual Permit category of Appendix A – Definition of Categories, or that does not meet the terms and conditions of this PGP, will require an application for an Individual Permit from the Corps (see 33 CFR Part 325.1). The screening procedures outlined for Category 2 projects will only serve to delay project review in such cases. The applicant should submit the appropriate application materials (including the Corps application form) at the earliest possible date. General information and application forms can be obtained at our web site or by calling us (see Page 16). Individual water quality certification and coastal zone management consistency concurrence are required when applicable from the State of Maine before Corps permit issuance. The Federal resource agencies’ comments are due within ten working days after the Public Notice’s expiration date, unless the Corps receives and approves a written request for a time extension within ten working days after the notice’s expiration.

V. PROGRAMMATIC GENERAL PERMIT CONDITIONS:

The following conditions apply to activities authorized under this Maine PGP, including all Category 1 (non-reporting) and Category 2 (reporting – requiring screening) activities:

General Requirements

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

2. Federal Jurisdictional Boundaries. Applicability of this PGP 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 328-329. These sections prescribe the policy, practice and procedures to be used in determining the extent of jurisdiction of the Corps concerning “waters of the U.S.” and “navigable waters of the U.S.” Wetland boundaries shall be delineated in accordance with the January 1987 Corps of Engineers Wetlands Delineation Manual, located at <http://www.usace.army.mil/inet/functions/cw/cecwo/reg/wlman87.pdf>. The U.S. FWS publishes the National List of Plant Species that Occur in Wetlands, located at <http://www.nwi.fws.gov>. The Natural Resources Conservation Service (NRCS) develops the hydric soil definition and criteria, and publishes the current hydric soil lists, located at <http://soils.usda.gov/use/hydric/>.

3. Minimal Effects. Projects authorized by this PGP shall have no more than minimal individual and cumulative adverse environmental impacts as determined by the Corps.

4. Discretionary Authority. Notwithstanding compliance with the terms and conditions of this permit, the Corps retains discretionary authority to require Category 2 or Individual Permit review based on concerns for the aquatic environment or for any other factor of the public interest [33 CFR 320.4(a)]. This authority is invoked on a case-by-case basis whenever the Corps determines that the potential consequences of the proposal warrant Individual Permit review based on the concerns stated above. This authority may be invoked for projects with 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 PGP and that warrants greater review. Whenever the Corps notifies an applicant that an Individual Permit may be required, authorization under this PGP is void and no work may be conducted until the individual Corps permit is obtained or until the Corps notifies the applicant that further review has demonstrated that the work may proceed under this PGP.

5. Single and Complete Projects. This PGP shall not be used for piecemeal work and shall be applied to single and complete projects. All components of a single project shall be treated together as constituting one single and complete 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) unless the Corps determines that a component has independent utility. (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.) For linear projects, such as power lines or pipelines with multiple

crossings, the “single and complete project” (i.e., single and complete crossing) will apply to each crossing of a separate water of the U.S. (i.e., single waterbody) at that location; except that for linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project, and may be reviewed for Category 1 eligibility. (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.) If any crossing requires a Category 2 activity, then the entire linear project shall be reviewed as one project under Category 2. Also, this PGP shall not be used for any activity that is part of an overall project for which an Individual Permit is required, unless the Corps determines the activity has independent utility.

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

National Concerns

7. St. John/St. Croix Rivers. This covers work within the Saint John and Saint Croix River basins that requires approval of the International Joint Commission. This includes any temporary or permanent use, obstruction or diversion of international boundary waters which could affect the natural flow or levels of waters on the Canadian side of the line, as well as any construction or maintenance of remedial works, protective works, dams, or other obstructions in waters downstream from boundary waters when the activity could raise the natural level of water on the Canadian side of the boundary.

8. Historic Properties. Any activity authorized by this PGP shall comply with Section 106 of the National Historic Preservation Act. Information on the location and existence of historic resources can be obtained from the Maine Historic Preservation Commission, the National Register of Historic Places, and the Penobscot, Passamaquoddy, Micmac, and Maliseet Tribal Historic Preservation Officers. See Page 17 for historic properties contacts. If the permittee, either prior to construction or during construction of the work authorized herein, encounters a previously unidentified archaeological or other cultural resource, within the area subject to Department of the Army jurisdiction, that might be eligible for listing in the National Register of Historic Places, he/she shall stop work and immediately notify the District Engineer and the Maine Historic Preservation Commission and/or applicable Tribe(s).

9. National Lands. Activities authorized by this PGP shall not 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.

10. Endangered Species. No activity may be authorized under this PGP which:

- is likely to adversely affect a threatened or endangered species, a proposed species, designated critical habitat, or proposed critical habitat as identified under the Federal ESA,
- would result in a “take” of any threatened or endangered species of fish or wildlife, or
- would result in any other violation of Section 9 of the ESA protecting threatened or endangered species of plants.

Applicants shall notify the Corps if any listed species or critical habitat, or proposed species or critical habitat, is in the vicinity of the project and shall not begin work until notified by the District Engineer (DE) that the requirements of the ESA have been satisfied and that the activity is authorized. Information on the location of threatened and endangered species and their critical habitat can be obtained from the U.S. FWS and NMFS (see Page 16 for addresses).

11. Essential Fish Habitat. As part of the PGP screening process, the Corps will 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.” Applicants may be required to describe and identify potential impacts to EFH. Conservation recommendations made by NMFS will normally be included as a permit requirement by the Corps. For additional information, see the EFH regulations at 50 CFR Part 600 (<http://www.nmfs.noaa.gov>). Additional information on the location of EFH can be obtained from NMFS (see Page 16 for contact information).

Any work in any aquatic habitat 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 PGP and must be screened for potential impacts to EFH.

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

12. Wild and Scenic Rivers. Any activity that occurs in a component of, or within 0.25 mile up or downstream of, the main stem or tributaries of a river segment of the National Wild and Scenic River System, must be reviewed by the Corps under the procedures of Category 2 of this PGP regardless of size of impact. This condition applies to both designated Wild and Scenic Rivers and rivers designated by Congress as study rivers for possible inclusion while such rivers are in an official study status. The Corps will consult with the National Park Service (NPS) with regard to potential impacts of the proposed work on the resource values of the Wild and Scenic River. The culmination of this coordination will be a determination by the NPS and the Corps that the work: (1) may proceed as proposed; (2) may proceed with recommended conditions; or (3) could pose a direct and adverse effect on the resource values of the river and an individual permit is required. If

preapplication consultation between the applicant and the NPS has occurred whereby NPS has made a determination that the proposed project is appropriate for authorization under this PGP (with respect to Wild and Scenic River issues), this determination should be furnished to the Corps with submission of the application. (See NPS address on Page 16.) National Wild and Scenic Rivers System segments for Maine as of September 2005 include: Allagash River beginning at Telos Dam continuing to Allagash checkpoint at Eliza Hole Rapids, approximately 3 miles upstream of the confluence with the St. John River (length = 92 miles).

13. Federal Navigation Project. Any structure or work that extends closer to the horizontal limits of any Corps Federal Navigation Project (See Appendix B) 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.

14. Navigation. (a) There shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein and no attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized herein. (b) The permittee understands and agrees that, if future operations by the United States 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 of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

15. Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following: (a) damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes; (b) damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States (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.

Minimization of Environmental Impacts

16. Minimization. Discharges of dredged or fill material into waters of the United States, including wetlands, shall be avoided and minimized to the maximum extent practicable. Permittees may only fill those jurisdictional wetlands that the Corps authorizes to be filled and impact those wetlands that the Corps authorizes as secondary impacts. For coastal structures such as piers and docks, the height above the marsh at all points should be equal to or exceed the width of the deck. The height shall be measured from the marsh substrate to the bottom of the longitudinal support beam. This will help ensure sunlight reaches the area beneath the structure.

17. Heavy Equipment in Wetlands. Heavy equipment, other than fixed equipment (drill rigs, fixed cranes, etc.), working within wetlands shall not be stored, maintained or repaired in wetlands unless it is less environmentally damaging otherwise, and as much as possible shall not be operated there. Where construction requires heavy equipment operation in wetlands, the equipment shall

either have low ground pressure (<3 psi), or shall not be located directly on wetland soils and vegetation; it shall be placed on swamp or timber mats that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation. (See General Condition 18 below.) Other support structures that are less impacting and are capable of safely supporting equipment may be used with written Corps authorization. Similarly, not using mats during frozen, dry or other conditions may be allowed with written Corps authorization. An adequate supply of spill containment equipment shall be maintained on site.

NOTE: "Swamp mats" is a generic term 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, and they include large timbers bolted or cabled together (timber mats). Corduroy roads, which are not considered to be swamp mats, are cut trees and/or saplings with the crowns and branches removed, and the trunks lined up next to one another.

18. Temporary Fill. Fill placed into waters of the U.S. (including wetlands) totaling greater than or equal to 4,300 SF (15,000 SF if a DEP Tier One Permit is issued) in total area (i.e., the sum of permanent and temporary fill areas) exceeds the Category 1 threshold and may not be discharged without written authorization from the Corps. When temporary fill is used (e.g., access roads, swamp mats, cofferdams), it shall be stabilized and maintained during construction in such a way as to prevent soil eroding into portions of waters of the U.S. where it is not authorized. Swamp or timber mats (see Gen.Cond. 17 above) are considered as temporary fill when they are removed immediately upon work completion. The area must be restored in accordance with Gen.Cond. 19.

- Unconfined temporary fill authorized for discharge into flowing water (rivers and streams) shall consist only of clean washed stone.
- Temporary fill authorized for discharge into wetlands shall be placed on geotextile fabric laid on the pre-construction wetland grade. (Swamp and timber mats are excluded from this requirement.)
- Temporary fill shall be removed as soon as it is no longer needed, and it shall be disposed of at an upland site and suitably contained to prevent subsequent erosion into waters of the U.S.
- Waters of the U.S. where temporary fill was discharged shall be restored (see Gen.Cond. 19).
- No temporary work shall drain a water of the U.S. by providing a conduit for water on or below the surface.

19. Restoration.

- Upon completion of construction, all disturbed wetland areas (the disturbance of these areas must be authorized) shall be stabilized with a wetland seed mix containing only plant species native to New England.
- The introduction or spread of invasive plant species in disturbed areas shall be controlled.
- 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.
- 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.

20. Coastal Bank Stabilization. Projects involving construction or reconstruction/maintenance of bank stabilization structures within Corps jurisdiction should be designed to minimize environmental effects, effects to neighboring properties, scour, etc. to the maximum extent practicable. For example, vertical bulkheads should only be used in situations where reflected wave energy can be tolerated. 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. For more information, see the Corps Coastal Engineering Manual (supersedes the Shore Protection Manual), located at <http://chl.erdc.usace.army.mil>. Select “Products/ Services,” “Publications.” Part 5, Chapter 7-8, a(2)c is particularly relevant.

21. Sedimentation and Erosion Control. Adequate sedimentation and erosion control management measures, practices and devices, such as phased construction, vegetated filter strips, geotextile silt fences, hay bales or other devices, 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. These devices must be removed in a timely manner upon completion of work, but not until the disturbed areas have been stabilized. The sediment collected by these devices shall be removed and placed at an upland location in a manner that will prevent its later erosion into a waterway or wetland. All exposed soil and other fills shall be permanently stabilized at the earliest practicable date.

22. Waterway Crossings.

(a) All temporary and permanent crossings of waterbodies (waterways and wetlands) shall be suitably culverted, bridged, or otherwise designed to withstand and to prevent the restriction of high flows, to maintain existing low flows, and to not obstruct the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction. (NOTE: Areas of fill and/or cofferdams must be included in total waterway/wetlands impacts to determine applicability of this PGP).

(b) Aquatic Life Movements. 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. For new permanent crossings, open bottom arches, bridge spans or embedded culverts are generally preferred over traditional culverts and should be installed when practicable. Coordination with the Corps is recommended for Category 1 projects when site constraints (e.g., placing footings) may render open bottom arches, bridge spans or embedded culverts impractical. In these cases, well-designed culverts may actually perform better. Culverts shall be installed with their inverts embedded below existing streambed grade to avoid “hanging” and associated impediments to fish passage. The “Design of Road Culverts for Fish Passage” provides design guidance and is available at www.nae.usace.army.mil, “Regulatory/Permitting,” “Other.”

(c) Culverts at waterbody crossings shall be installed in such a manner as to preserve hydraulic connectivity, at its present level, between the wetlands on either side of the road. The permittee shall take necessary measures to correct wetland damage due to lack of hydraulic connectivity.

(d) Culverts and bridges shall span the waterway a minimum of 1.2 times the bankfull width in probable fish bearing waterways to qualify as a Category 1 non-reporting activity. See “Design of Road Culverts for Fish Passage,” referenced in (b) above, for information on bankfull width.

(e) Projects using slip lining (retrofitting an existing culvert by inserting a smaller diameter pipe), plastic pipes, and High Density Polyethylene Pipes (HDPP) are not allowed as non-reporting Category 1 activities, either as new work or maintenance activities.

(f) Waterbody crossings shall be culverted to at least municipal or State standards. The Maine DEP's stream crossing standards are at 06-096, Chapter 305: Permit by Rule, Section 10. Stream crossings (bridges, culverts and fords).

(g) Waterway crossings proposed by the Maine Dept. of Transportation should conform to the MDOT Fish Passage Policy and Design Guides.

(h) Construction equipment shall not cross streams without the use of temporary bridges, culverts, or cofferdams.

(i) For projects that otherwise meet the terms of Category 1, in-stream construction work shall be conducted during the low flow period July 15 - October 1 in any year. Projects that are not to be conducted during that time period are ineligible for Category 1 and shall be screened pursuant to Category 2, regardless of the waterway and wetland fill and/or impact area.

23. Discharge of Pollutants. All activities involving any discharge of pollutants into waters of the U.S. authorized under this PGP shall be consistent with applicable water quality standards, effluent limitations, standards of performance, prohibitions, and pretreatment standards and management practices established pursuant to the CWA (33 USC 1251) and applicable State and local laws. If applicable water quality standards, limitations, etc., are revised or modified during the term of this PGP, the authorized work shall be modified to conform with these standards within six months of the effective date of such revision or modification, or within a longer period of time deemed reasonable by the District Engineer in consultation with the Regional Administrator of the EPA. Applicants may presume that State water quality standards are met with the issuance of a LURC or DEP NRPA permit.

24. Spawning Areas. Discharges of dredged or fill material, and/or suspended sediment producing activities in fish and shellfish spawning or nursery areas and amphibian and waterfowl breeding areas during spawning or breeding seasons shall be avoided. During all times of year, impacts to these areas shall be avoided or minimized to the maximum extent practicable.

25. Storage of Seasonal Structures. Coastal structures, such as pier sections and floats, that are removed from the waterway for a portion of the year (often referred to as seasonal structures) shall be stored in an upland location located above mean high water (MHW) and not in tidal wetlands. These seasonal structures may be stored on the fixed, pile-supported portion of the structure that is seaward of MHW. This is intended to prevent structures from being stored on the marsh substrate and the substrate seaward of MHW. Seasonal storage of structures in navigable waters, e.g., in a protected cove on a mooring, requires Corps and local harbormaster approval.

26. Environmental Functions and Values. The permittee shall make every reasonable effort to carry out the construction or operation of the work authorized herein in a manner so as to maintain as much as is practicable, and minimize any adverse impacts on existing fish, wildlife, and natural environmental functions and values.

27. Protection of Vernal Pools. Impacts to uplands in proximity (within 500 feet) to the vernal pools referenced in Appendix A - Definitions of Categories, shall be minimized to the maximum extent possible.

Procedural Conditions

28. Cranberry Development Projects. For cranberry development projects authorized under the PGP, the following conditions apply:

- If a cranberry bog is abandoned for any reason, the area must be allowed to revert to natural wetlands unless an Individual Permit is obtained from the Corps allowing the discharge of fill for an alternate use.
- No stream diversion shall be allowed under this permit.
- No impoundment of perennial streams shall be allowed under this permit.
- The project shall be designed and constructed to not cause flood damage on adjacent properties.

29. Inspections. The permittee shall allow the District Engineer (DE) or his authorized representative(s) to make periodic inspections at any time deemed necessary in order to ensure that the work is being performed in accordance with the terms and conditions of this permit. The DE may also require post-construction engineering drawings for completed work and post-dredging survey drawings for any dredging work.

30. Work Start Notification Form and Compliance Certification. Every permittee who receives a written Category 1 or 2 PGP authorization from the Corps must submit a 1) Work Start Notification Form (WSNF) two weeks before work commencement, and 2) signed Compliance Certification Form within one month following the completion of the authorized work and any required mitigation (but not mitigation monitoring, which requires separate submittals). The Corps will forward the blank WSNF and Compliance Certification Form with the authorization letter. The Compliance Certification Form will include: (a) a statement that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions; (b) a statement that any required mitigation was completed in accordance with the permit conditions; and (c) the signature of the permittee certifying the completion of the work and mitigation.

31. Maintenance. The permittee shall maintain the work or structures authorized herein in good condition and in conformance with the terms and conditions of this permit. This does not include maintenance of dredging projects. Maintenance dredging is subject to the review thresholds in Appendix A and/or any conditions included in a written Corps authorization. Maintenance dredging includes only those areas and depths previously authorized and dredged. Some maintenance activities may not be subject to regulation under Section 404 in accordance with 33 CFR 323.4(a)(2).

32. Property Rights. This permit 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. If property associated with work authorized by the PGP is sold, the PGP authorization is automatically transferred to the new property owner. The new property owner should provide this information to the Corps in writing. No acknowledgement from the Corps is necessary.

33. Modification, Suspension, and Revocation. This permit may be either modified, suspended, or revoked, in whole or in part, pursuant to the policies and procedures of 33 CFR 325.7. Any such action shall not be the basis for any claim for damages against the United States.

34. Restoration. The permittee, upon receipt of a notice of revocation of authorization under this permit, shall restore the wetland or waterway to its former condition without expense to the United States and as directed by the Secretary of the Army or his authorized representative. If the permittee fails to comply with such a directive, the Secretary or his designee may restore the wetland or waterway to its former condition, by contract or otherwise, and recover the cost from the permittee.

35. Special Conditions. The Corps, independently or at the request of the Federal resource agencies, may impose other special conditions on a project authorized pursuant to this general permit that are determined necessary to minimize adverse environmental effects or based on any other factor of the public interest. Failure to comply with all conditions of the authorization, including special conditions, will constitute a permit violation and may subject the permittee to criminal, civil, or administrative penalties or restoration.

36. False or Incomplete Information. If the Corps makes a determination regarding the eligibility of a project under this permit and subsequently discovers that it has relied on false, incomplete, or inaccurate information provided by the permittee, the permit shall not be valid and the government may institute appropriate legal proceedings.

37. Abandonment. If the permittee decides to abandon the activity authorized under this general permit, unless such abandonment is merely the transfer of property to a third party, he/she must restore the area to the satisfaction of the District Engineer.

Duration of Authorization/Grandfathering:

38. Duration of Authorization. This PGP expires five years from the effective date listed at the top of Page 1. Activities authorized under Category 1 of this PGP that have commenced (i.e., are under construction) or are under contract to commence in reliance upon this PGP's authorization will remain authorized provided the activity is completed within 12 months of the PGP's expiration date. Activities authorized under Category 2 of this PGP will remain authorized in accordance with the project-specific date that the Corps provides to the permittee in the PGP authorization letter, unless:

- (a) The PGP is either modified or revoked, or
- (b) Discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 325.2 (e)(2).

39. Previously Authorized Activities.

- (a) Activities completed under the authorizations of past PGPs that were in effect at the time the activity was completed will continue to be authorized by those PGPs.
- (b) Completed projects that have received written verification or approval from the Corps, based on applications made to the Corps prior to issuance of this PGP or the previous nationwide permits, regional general permits, or letters of permission shall remain authorized as specified in each authorization.
- (c) Activities authorized pursuant to 33 CFR Part 330.3 ("Activities occurring before certain dates") are not affected by this PGP.

VI. CONTACTS FOR MAINE PROGRAMMATIC GENERAL PERMIT:

1. FEDERAL

U.S. Army Corps of Engineers

Maine Project Office
675 Western Avenue #3
Manchester, Maine 04351
(207) 623-8367
(207) 623-8206 (fax)

Federal Endangered Species

U.S. Fish and Wildlife Service
Maine Field Office
1168 Main Street
Old Town, Maine 04468
(207) 827-5938
207-827-6099 (fax)

Wild and Scenic Rivers

National Park Service
North Atlantic Region
15 State Street
Boston, Massachusetts 02109
(617) 223-5203

Federal Endangered Species & Essential Fish Habitat

National Marine Fisheries Service
One Blackburn Drive
Gloucester, Massachusetts 01939
(978) 281-9102
(978) 281-9301 (fax)

Bridge Permits

Commander (obr)
First Coast Guard District
One South Street - Battery Bldg
New York, New York 10004
(212) 668-7021

2. STATE OF MAINE

Maine Department of Environmental Protection (For State Permits & Water Quality Certifications)

Division of Land Resource Regulation
Bureau of Land and Water Quality
17 State House Station
Augusta, Maine 04333
(207) 287-2111

Southern Maine Regional Office
312 Canco Road
Portland, Maine 04103
(201) 822-6300

Eastern Maine Regional Office
106 Hogan Road
Bangor, Maine 04401
(207) 941-4570

Northern Maine Regional Office
1235 Central Drive - Skyway Park
Presque Isle, Maine 04769
(207) 764-0477

Maine Land Use Regulation Commission (LURC) [call (800) 452-8711 for appropriate LURC office]

22 State House Station
Augusta, ME 04333-0022
(207) 287-2631
(207) 287-7439 (fax)

45 Radar Road
Ashland, ME 04732-3600
(207) 435-7963
(207) 435-7184 (fax)

Lakeview Drive
P.O. Box 1107
Greenville, ME 04441
(207) 695-2466
(207) 695-2380 (fax)

(For CZM Determinations)

State Planning Office
Coastal Program
184 State Street
State House Station 38
Augusta, Maine 04333
(207) 287-1009

(For Submerged Lands Leases)

Maine Department of Conservation
Bureau of Parks and Lands
22 State House Station
Augusta, Maine 04333
(207) 287-3061

3. HISTORIC PROPERTIES

Maine Historic Preservation Commission

State House Station 65
Augusta, Maine 04333-0065
(207) 287-2132
(207) 287-2335 (fax)

Aroostook Band of Micmacs

Attn: Mr. Williams Phillips, Chief
7 Northern Road
Presque Isle, Maine 04769
(207) 764-1972
(207) 764-7667 (fax)

Houlton Band of Maliseet Indians

Attn: Tribal Chief
88 Bell Road
Littleton, Maine 04730
(207) 532-4273, x215
(207) 532-2660 (fax)

191 Main Street
East Millinocket, ME 04430
(207) 746-2244
(207) 746-2243

(For Aquaculture Leases)

Maine Department of Marine Resources
P.O. Box 8
West Boothbay Harbor, Maine 04575
(207) 633-9500

Passamaquoddy Tribe of Indians

Pleasant Point Reservation
Attn: Tribal Council
P.O. Box 343
Perry, Maine 04667
(207) 853-2600
(207) 853-6039 (fax)

Passamaquoddy Tribe of Indians

Indian Township Reservation
Attn: Donald Soctomah, THPO
P.O. Box 301
Princeton, Maine 04668
(207) 796-2301
(207) 796-5256 (fax)

Penobscot Indian Nation

Indian Island Reservation
Attn: Ms. Bonnie Newsom, THPO
12 Wabanaki Way
Indian Island, Maine 04468
(207) 817-7471
(207) 817-7450 (fax)

4. ORGANIZATIONAL WEBSITES:

Army Corps of Engineers	www.nae.usace.army.mil (click "Regulatory/Permitting")
Corps of Engineers Headquarters	www.usace.army.mil (click "Services for the Public")
Environmental Protection Agency	www.epa.gov/owow/wetlands/
National Marine Fisheries Service	www.nmfs.noaa.gov
U.S. Fish and Wildlife Service	www.fws.gov
National Park Service	www.nps.gov/rivers/index.html
State of Maine	www.maine.gov
State of Maine -Aquaculture Guidelines	www.maine.gov/dmr/aquaculture/index.htm

for Christine J. Gray 10-11-05
District Engineer Date

APPENDIX A: DEFINITION OF CATEGORIES

<p>A. INLAND WATERS AND WETLANDS</p>	<p>Inland Waters and Wetlands: Waters that are regulated under Section 404 of the Clean Water Act, including rivers, streams, lakes, ponds and wetlands, and excluding Section 10 Navigable Waters of the U.S. The jurisdictional limits are the ordinary high water (OHW) mark in the absence of adjacent wetlands, beyond the OHW mark to the limit of adjacent wetlands when adjacent wetlands are present, and the wetland limit when only wetlands are present. For the purposes of this PGP, fill placed in the area between the mean high water (MHW) and the high tide line (HTL), and in the bordering and contiguous wetlands¹ to tidal waters are reviewed in the Navigable Waters section. (See II. Navigable Waters on the next page.)</p>		
<p>(a) NEW FILL/ EXCAVATION DISCHARGES</p>	<p>CATEGORY 1</p> <p><4,300 SF inland waterway and/or wetland fill and associated secondary impacts (e.g., areas drained, flooded, cleared or excavated). Fill area includes all temporary and permanent fill, and excavation discharges (except for incidental fallback). Swamp mats are considered as fill. [See General Condition (GC) 18.]</p> <p><u>Provided:</u></p> <ul style="list-style-type: none"> • In-stream (e.g., rivers, streams, brooks, etc.) work limited to Jul 15 - Oct 1 • In-stream work of up to 4,300 SF of fill below OHW in waterways not designated as EFH for Atlantic salmon (see GC 11, Page 9) and performed in accordance with Maine Permit By Rule standards or a LURC permit. • Waterway crossings shall comply with GC 22. • Projects covered by a DEP Tier One permit with no cumulative impacts > 15,000 SF in inland wetlands from previous permits, unauthorized work, and/or other state permits. • Subdivision fill complies with GC 5, Single and Complete Projects (see Page 7). <p><u>This category excludes:</u></p> <ul style="list-style-type: none"> • Dams, dikes or activities involving water diversions.² • Non-State approved sediment releases/slucices from dams. • Open trench excavation in flowing waters (see GC 22, Page 12). 	<p>CATEGORY 2</p> <p>4,300 SF to <3 acres inland waterway and/or wetland fill and associated secondary impacts (e.g., areas drained, flooded, cleared or excavated). Fill area includes all temporary and permanent fill, and excavation discharges (except for incidental fallback). Swamp mats filling any area ≥4,300 SF are reviewed in Category 2. (See GC 18, Page 11.)</p> <p><u>Includes:</u> In-stream work, including crossings (other than spanned crossing as described in Category 1) with any discharge of fill below ordinary high water in perennial waterways designated as EFH for Atlantic salmon. Time of year restrictions determined case-by-case.</p> <p>Projects with proactive restoration as a primary purpose with impacts of any area ≥4,300 SF. The Corps, in consultation with State & Federal agencies, must determine that net adverse effects are not more than minimal.</p> <p>Specific activities with impacts of any area ≥4,300 SF required to affect the containment, stabilization, or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority. Wetlands must be restored in place.</p>	<p>INDIVIDUAL PERMIT</p> <p>≥3 acres inland waterway and/or wetland fill and secondary impacts (e.g., areas drained, flooded, cleared or excavated). Fill area includes all temporary and permanent fill, and excavation discharges (except for incidental fallback).⁵</p> <p>EIS required by the Corps.</p> <p>In-stream work exceeding Category 2 limits.</p>
<p>Maine PGP</p>	<p align="center">1</p>	<p align="center">1</p>	<p align="right">October 11, 2005</p>

	CATEGORY 1	CATEGORY 2	INDIVIDUAL PERMIT
	<ul style="list-style-type: none"> • Work in waters designated as EFH for Atlantic salmon (see GC 11, Page 9), unless the waterway is crossed with a span and footprints of the span abutments are outside ordinary high water with no more than 4,300 SF of associated wetland impact. • Work in Special Inland Waters or Wetlands³ (vernal pools). • Work in special aquatic sites (SAS)⁴ other than wetlands. • Work within ¼ mile of a Wild and Scenic River (see GC 12, Page 9). • Work on National Lands (see GC 9, Pg. 9). • Work affecting threatened or endangered species (see GC 10, Page 9) or EFH salmon migration (see GC 11, Page 9). 		
(b) BANK STABILIZATION PROJECTS	<p>Inland bank stabilization <100 FT long and <1 CY of fill per linear foot below OHW.</p> <p><u>Provided:</u></p> <ul style="list-style-type: none"> • In-stream work limited to Jul 15 - Oct 1. • No work in special inland waters & wetlands³ and SAS⁴. • No open trench excavation in flowing waters (see GC 22, Page 12). • No structures angled steeper than 3H:1V allowed. Only rough-faced stone or fiber roll revetments allowed. • No work affects threatened or endangered species (see GC 10, Page 9) or EFH (see GC 11, Page 9). 	<p>Inland bank stabilization ≥100 FT long and/or ≥1 CY of fill per linear foot, or any amount with fill in wetlands.</p>	
(c) REPAIR AND MAINTENANCE OF AUTHORIZED FILLS	<p>Repair or maintenance of existing, currently serviceable, authorized fills with no substantial expansion or change in use.</p> <p>*Conditions of the original authorization apply, however minor deviations in fill design allowed.⁶</p>	<p>Replacement of non-serviceable fills, or repair/maintenance of serviceable fill, with expansion <3 acres, or with a change in use.</p>	<p>Replacement of non-serviceable fill, or repair/maintenance of serviceable fill, with expansion ≥1 acre.</p>

II. NAVIGABLE WATERS		Navigable Waters of the United States: Waters that are subject to the ebb and flow of the tide and Federally designated navigable rivers (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 PGP, fill placed in the area between the mean high water (MHW) and the high tide line (HTL), and in the bordering and contiguous wetlands ¹ to tidal waters are also reviewed in this Navigable Waters section.	
	CATEGORY 1	CATEGORY 2	INDIVIDUAL PERMIT
(a) FILL	Discharges of dredged or fill material incidental to the construction of bridges across navigable waters of the United States, 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. Causeways and approach fills are not included in this category and require Category 2 or Individual Permit authorization.	<1 acre fill and/or secondary waterway impacts (e.g., areas drained, flooded or cleared). Fill includes temporary and permanent waterway fill. Temporary fill or excavation <1 acre in SAS ⁴ . Permanent fill or excavation <1,000 SF in SAS ⁴ . Permanent fill and/or excavation ≥1,000 SF in SAS ³ when associated with a project with proactive restoration as a primary purpose. The Corps, in consultation with Federal & state agencies, must determine that net adverse effects are not more than minimal. Specific activities with impacts of any area required to affect the containment, stabilization, or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority. Wetlands must be restored in place.	≥1 acre waterway fill and/or secondary waterways or wetland impacts (e.g., areas drained, flooded or cleared). Fill includes temporary and permanent waterway fill. Temporary fill or excavation ≥1 acre in SAS ⁴ . Permanent fill or excavation ≥1,000 SF in SAS ⁴ other than as specified in Cat. 2 EIS required by the Corps.
(b) REPAIR AND MAINTENANCE WORK	Repair or maintenance of existing, currently serviceable, authorized structure or fill with no substantial expansion or change in use. *Conditions of the original authorization apply. Must be rebuilt in same footprint, however minor deviations in structure design allowed ⁶	Replacement of non-serviceable structures and fills or repair/maintenance of serviceable structures or fills, with fill, replacement or expansion <1 acre, or with a change in use.	Replacement of non-serviceable structures and fills or repair/maintenance of serviceable structures or fill, with replacement or expansion ≥1 acre.

	CATEGORY 1	CATEGORY 2	INDIVIDUAL PERMIT
(c) DREDGING AND ASSOCIATED DISPOSAL	<p>Maintenance dredging for navigational purposes <1,000 cy with upland disposal. Includes return water from upland contained disposal area.</p> <p><u>Provided:</u></p> <ul style="list-style-type: none"> • Proper siltation controls are used. • Dredging & disposal operation limited to November 1 - January 15. • No impact to special aquatic sites⁴. • No dredging in intertidal areas. • No work affects threatened or endangered species (see GC 10, Page 9) or EFH salmon migration (see GC 11, Page 9). 	<p>Maintenance dredging $\geq 1,000$ CY, new dredging <25,000 CY, or projects not meeting Category 1. Includes return water from upland contained disposal areas.</p> <p><u>Provided:</u></p> <ul style="list-style-type: none"> • Disposal includes 1) upland, 2) beach nourishment (above MHW) of any area provided dredging's primary purpose is navigation or sand is from an upland source and Corps, in consultation w/Federal and State agencies, determines the net adverse effects are not more than minimal; and 3) open water & confined aquatic disposal, if Corps, in consultation with Federal and State agencies, finds the material suitable. 	<p>Maintenance dredging and/or disposal (any amount) in or affecting a SAS⁴. See II(a) above for dredge disposal in wetlands or waters.</p> <p>New dredging $\geq 25,000$ CY, or any amount in or affecting SAS⁴.</p> <p>Beach nourishment associated with dredging when the primary purpose is not navigation (i.e., aggregate/sand mining) or the material is from an upland source.</p>
(d) MOORINGS	<p>Private, non-commercial, non-rental, single-boat moorings authorized by the local harbormaster.</p> <p><u>Provided:</u></p> <ul style="list-style-type: none"> • Not associated with any boating facility⁷ • Not located in a Federal Navigation Project other than a Federal Anchorage. Moorings in Federal Anchorage not associated with a boating facility⁷. • No interference with navigation • Not located in vegetated shallows⁸ • Within 1/4 mile of the owner's residence or a public access point.⁹ <p>Minor relocation of previously authorized moorings and moored floats consistent with Harbormaster recommendations, provided it is also consistent with local regulations, is not located in vegetated shallows, and does not interfere with navigation.</p>	<p>Moorings associated with a boating facility⁷.</p> <p>Moorings that don't meet the terms in Category 1 and don't require an Individual Permit.</p> <p>Moorings located such that they, and/or vessels docked or moored at them, are within the buffer zone of the horizontal limits¹⁰ of a Corps Federal Channel. (See Appendix B.) The buffer zone is equal to three times the authorized depth of that channel.</p>	<p>Moorings within the horizontal limits¹⁰, or with moored vessels that extend, into the horizontal limits of a Federal Navigation Project (See App. B), except those in Federal Anchorages under Category 1.</p> <p>Note: Federal Navigation Projects include both Federal Channels and Federal Anchorages.</p>

	CATEGORY I	CATEGORY 2	INDIVIDUAL PERMIT
(e) STRUCTURES AND FLOATS	<p>Reconfiguration of existing authorized structures or floats.</p> <p><u>Provided:</u></p> <ul style="list-style-type: none"> Structures not positioned over vegetated shallows⁸ or salt marsh. Floats supported off substrate at low tide. No dredging, additional slips or expansion. No work affects threatened or endangered species (see GC 10, Page 9) or EFH salmon migration (see GC 11, Page 9).. 	<p>Private structures or floats, including floatways/skidways, built to access waterway (seasonal and permanent)</p> <p>Expansions to existing boating facilities⁷.</p> <p>Compliance with the following is recommended, but not required:</p> <ul style="list-style-type: none"> Pile-supported structures <400 SF, with attached floats totaling ≤200 SF. Bottom anchored floats ≤200 SF. Structures are ≤4' wide and have at least a 1:1 height:width ratio¹¹. Floats supported above the substrate during all tides. Structures & floats not located within 25' of any vegetated shallows⁸. Moored vessels not positioned over SAS⁴. No structure located within 25' of the riparian property boundary. No structure extends across >25% of the waterway width at mean low water. Not located within the buffer zone of the horizontal limits¹⁰ of a Corps Federal Navigation Project (FNP) (See App. B). The buffer zone is equal to three times the authorized depth of that FNP. 	<p>Structures or floats, including floatways/skidways, located such that they and/or vessels docked or moored at them are within the horizontal limits of a Corps Federal Navigation Project (see App. B).</p> <p>Structures and floats associated with a new or previously unauthorized boating facility⁷.</p> <p>Note: Federal Navigation Projects include both Federal Channels and Federal Anchorages.</p>
(f) MISCELLANEOUS	<p>Temporary buoys, markers, floats, etc. for recreational use during specific events, provided they are removed within 30 days after use is discontinued.</p> <p>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 part 66, Chapter I, subchapter C)."</p>	<p>Structures or work in or affecting tidal or navigable waters, that are not defined under any of the previous headings listed above. Includes, but is not limited to, utility lines, aerial transmission lines, pipelines, outfalls, boat ramps, floatways/skidways, bridges, tunnels and horizontal directional drilling activities seaward of the MHW line.</p>	<p>EIS required by the Corps.</p> <p>Shellfish/finfish (other than Atlantic salmon), or other aquaculture facilities with more than minimal individual and cumulative impacts to environmental resources or navigation. A 25' eelgrass set back is recommended.</p>

	<p>Oil spill clean-up temporary structures or fill. Fish/wildlife harvesting structures/fill (as defined by 33 CFR 330, App. A-4)</p> <p>Scientific measurement devices and survey activities such as exploratory drilling, surveying and sampling activities. Does not include oil and gas exploration and fill for roads or construction pads.</p> <p>Shellfish seeding (brushing the flats¹²) projects.</p> <p>Provided:</p> <ul style="list-style-type: none"> • No work in National Wildlife Refuges. • No work affects threatened or endangered species (see GC 10, Page 9) or EFH salmon migration (see GC 11, Page 9). 	<p>Shellfish/finfish (other than Atlantic salmon), or other aquaculture facilities with no more than minimal individual and cumulative impacts to environmental resources or navigation. A 25' eelgrass set back is recommended. Aquaculture guidelines are provided at: www.maine.gov/dmr/aquaculture/index.htm.</p>	<p>Aquaculture guidelines are provided at: www.maine.gov/dmr/aquaculture/index.htm.</p>
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¹ **Bordering and Contiguous Wetlands:** A bordering wetland is immediately next to its adjacent waterbody and may lie at, or below, the ordinary highwater mark (MHW in navigable waters) of that waterbody and is directly influenced by its hydrologic regime. Contiguous wetlands extend landward from their adjacent waterbody to a point where a natural or manmade discontinuity exists. Contiguous wetlands include bordering wetlands as well as wetlands that are situated immediately above the ordinary highwater mark and above the normal hydrologic influence of their adjacent waterbody. Note, with respect to the Federally designated navigable rivers, the wetlands bordering and contiguous to the tidally influenced portions of those rivers are reviewed under "II. Navigable Waters."

² **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.

³ **Special Inland Waters and Wetlands:** Vernal Pools - Temporary to permanent bodies of water occurring in shallow depressions that fill during the spring and fall and may dry during the summer. Vernal pools have no permanent or viable populations of predatory fish. Vernal pools provide the primary breeding habitat for wood frogs, spotted salamanders, blue-spotted salamanders, and fairy shrimp, and provide habitat for other wildlife including several endangered and threatened species.

⁴ **Special Aquatic Sites:** Includes wetlands and saltmarsh, mudflats, riffles and pools, and vegetated shallows.

⁵ **IP Required:** The greater the impacts, the more likely an Individual Permit will be required. The Corps will determine the need for compensatory mitigation on a case-by-case basis.

⁶ **Maintenance:** 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, 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. No seaward expansion for bulkheads or any other fill activity is considered Category I maintenance. Currently serviceable means useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

⁷ **Boating Facilities:** Facilities that provide, rent, or sell mooring space, such as marinas, yacht clubs, boat yards, town facilities, dockominiums, etc.

⁸ **Vegetated Shallows:** Subtidal areas that support rooted aquatic vegetation such as eelgrass

⁹ **Mooring Location:** Cannot be at a remote location to create a convenient transient anchorage.

¹⁰ **Horizontal Limits:** The outer edge of a Federal Navigation Project (FNP). Contact the Corps of Engineers for information on FNP's.

¹¹ **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.

¹² **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*).

Federal Navigation Projects in Maine

