MAINE TURNPIKE AUTHORITY

ADDENDUM NO. 3

CONTRACT 2019.09

BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS
MILE 46.7

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS
MILE 47.9

The following changes are made to the Proposal, Plans, and Specifications.

PROPOSAL

Proposal Sheets P-12 (Revised 11/1/2018) and P-13 (Revised 11/1/2018) are deleted and replaced with P-12 (Revised 11/6/2018) and P-13 (Revised 11/6/2018) attached hereto.

1. The revisions to these proposal sheets are to revise quantities for the following:
   - Item 609.15 "Sloped Curb Type I" quantity is revised.
   - Item 610.08 "Plain Riprap" quantity is revised.

PLANS

The following revisions to the Plans are incorporated into the Contract Documents:

1. MAINE CENTRAL RAILROAD PART II, Plan Sheet EQ-01, sheet 2 of 116 "Estimated Quantities": This plan sheet is removed in its entirety and replaced with the attached revised sheet 2.

2. MAINE CENTRAL RAILROAD PART II, Plan Sheet S-01, sheet 52 of 116 "General Notes, Index, Quantities": This plan sheet is removed in its entirety and replaced with the attached revised sheet 52.

SPECIFICATIONS

The following revisions to the Special Provisions are incorporated into the Contract Documents:

1. Special Provision Section 105.2.4.2, LEAD PAINT, Page SP-8: The first two paragraphs are removed and replaced the following:

   "The Contractor shall note that the existing bridge structures contain lead based paint. The Contractor shall institute every precaution when working with materials coated with lead based paints."

   A copy of the Lead Determination Report is attached hereto.

2. Special Provision Section 403, HOT MIX ASPHALT PAVEMENT, Pages SP-35 and SP-36: Is removed in its entirety and replaced with the revised special provision included herein. The changes to this special provision incorporate responses to questions received during the bid period.

3. Special Provision Section 526, CONCRETE BARRIER, Pages SP-102 through SP-104: Is removed in its entirety and replaced with the revised special provision included herein.

QUESTIONS

The following are questions submitted to the Maine Turnpike Authority in writing. Answers to the questions are noted. Bidders shall utilize this information in preparing their bid.

Question 1: Please confirm the Anchors are to have Double Corrosion Protection (DCP) plus the bar tendon is to be epoxy coted. The Plan sheet S-42 does not depict this, however this looks to be required by the special provision, SP 501.02 C, #1&5.

Answer: Addendum No. 1 removed the Sheet Pile Wall from the Contract.

Question 2: Are there any borings closer to station 2371+00 for the work included in Bid Item 501.301 – Steel Sheet Piling – MCRR? The nearest borings we can locate are at station 2377+00. Approximately 600 feet away from the sheet pile and tieback work for the Fore River Culvert.

Answer: Addendum No. 1 removed the Sheet Pile Wall from the Contract.

Question 3: There is a discrepancy on the allowed PVC for the unbonded sheath. Which is correct? Plan sheet S-42 lists SCH80 and SP 501.02 E, #6 list SCH 40.?

Answer: Addendum No. 1 removed the Sheet Pile Wall from the Contract.

Question 4: Is anti strip required for all items as stated under note O in the 403 box?

Answer: No, anti strip is only required for the wearing surface. Special Provision section 403 has been updated as part of this addendum to reflect this.

Question 5 If anti strip is required would another supplier be allowed besides Zycotherm?

Answer: Yes, an approved equal would be acceptable. Special Provision section 403 has been updated as part of this addendum to reflect this.

Question 6: Item 403.2081 has note P in the 403 box allowing 20% rap is this correct for surface/wearing coarse?

Answer: Yes, 20% RAP for Item 403.2081 is correct.

Question 7: The construction sequence on page 57 of 116 in the MCRR plan set and page 61 of 121 of the Stroudwater plan set shows 24'-0" for traffic in Phase 1. On page 58 of MCRR plans and 62 of Stroudwater plans, Phase II has 25' for traffic. Would the turnpike be open to discussion on narrowing the Phase II traffic to 24' allowing for 24" braced barrier? Please clarify the need for the 25'.

Answer: The specified roadway widths have been selected to minimize the potential for motorist delay during construction. No reductions in roadway width will be allowed. Where anchored temporary barrier is specified the proposed barrier shall be anchored directly to the bridge deck.

Question 8: The schedule of items on pg 2 of the MCRR plan set shows an estimated quantity of 250 LF for Sloped Curb Type I. This appears to be the quantity for 1 side of the bridge. We calculated approximately 1,100 LF on the MCRR bridge. Please clarify.

Answer: The quantity for Item 609.15 Sloped Curb Type 1 has been updated as part of this addendum.

ATTACHMENTS

- Proposal Sheets (2 pages)
- Lead Test Results (12 pages)
- Plan Sheets (2 Sheets)
- Special Provisions (6 Pages)

Notes: The above items shall be considered as part of the bid submittal.

The total number of pages included with this addendum is Twenty-Five (25).

All bidders are requested to acknowledge the receipt of the Addendum No. 3 by signing below and faxing this sheet to Nathaniel Carll, Purchasing Manager, Maine Turnpike Authority at 207-871-7739. Bidders are also required to acknowledge receipt of this Addendum No. 3 on Page P-18 of the bid package.

_____
Business Name

_____
Print Name and Title

_____
Signature

_____
Date
November 6, 2018

Very truly yours,

MAINE TURNPIKE AUTHORITY

_____
Nathaniel Carll
Purchasing Manager
Maine Turnpike Authority

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
606.1301	31" W-Beam Guardrail - Mid-Way Splice (7' Steel Post, 8" Offset Blocks, Single Faced)	Linear Foot	4,137.5				
606.1305	31" W-Beam Guardrail - Mid-Way Splice Flared Terminal (31" Height)	Each	3				
606.1351	Terminal End - Anchored End - 31" W-Beam Guardrail	Each	3				
606.1723	Bridge Transition - Type III	Each	8				
606.353	Reflectorized Flexible Guardrail Marker	Each	4				
606.354	Remove and Reset Reflectorized Flexible Guardrail Marker	Each	10				
606.3622	Guardrail Adjust - Double Rail	Linear Foot	530				
607.09	Woven Wire Fence - Metal Posts	Linear Foot	1,500				
607.17	Chain Link Fence - 6 foot	Linear Foot	1,760				
607.32	Bracing Assembly Type I - Metal Posts	Each	2				
607.33	Bracing Assembly Type II - Metal Posts	Each	10				
609.15	Sloped Curb Type I	Linear Foot	2,450				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
610.08	Plain Riprap	Cubic Yard	2,923				
610.18	Stone Ditch Protection	Cubic Yard	327				
610.181	Temporary Stone Check Dam	Cubic Yard	60				
613.319	Erosion Control Blanket	Square Yard	14,700				
615.07	Loam	Cubic Yard	3,850				
618.14	Seeding Method Number 2	Unit	310				
618.143	Special Seeding	Unit	6				
619.1201	Mulch - Plan Quantity	Unit	320				
619.1202	Temporary Mulch - Stroudwater	Lump Sum	1				
619.1202	Temporary Mulch - MCRR	Lump Sum	1				
620.56	Drainage Geotextile	Square Yard	1,350				
620.561	Impervious Liner	Square Yard	670				
			CARRIED FORWARD:				

Katahdin
ANALYTICAL SERVICES

NH ELAP Lab ID 2001 (DW, NPW, SCM)
NYSDOH ELAP Lab ID 11121 (AE - T015)

November 1, 2018

HNTB Corp.
340 County Rd
Suite 6C
Westbrook,ME 04092

RE: Katahdin Lab Number: TL0634
Project ID: MTA Bridges
Project Manager: Mr. Galen Nickerson
Sample Receipt Date(s): October 30, 2018

Dear Mr. Hoak:

Please find enclosed the following information:

* Report of Analysis (Analytical and/or Field)
* Quality Control Data Summary
* Chain of Custody (COC)
* Login Report

A copy of the Chain of Custody is included in the paginated report. If requested, the original COC is attached as an addendum to this report.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact the project manager listed above. The results contained in this report relate only to the submitted samples. This cover letter is an integral part of the ROA.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in an attached technical narrative or in the Report of Analysis.

We appreciate your continued use of our laboratory and look forward to working with you in the future. The following signature indicates technical review and acceptance of the data.

Please go to http://www.katahdinlab.com/cert for copies of Katahdin Analytical Services Inc. current certificates and analyte lists.

Sincerely,
KATAHDIN ANALYTICAL SERVICES

Leslie Dimond

Leslie Dimond - Quality Assurance Officer

11/01/2018

Date

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL "U" LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level (PQL) or LOQ could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

H_ Please note that the regulatory holding time for _____ is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. _____ for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H1 - pH H2 - DO H3 - sulfite H4 - residual chlorine

T1 The client did not provide the full volume of at least one liter for analysis of TSS. Therefore, the PQL of 2.5 mg/L could not be achieved.

T2 The client provided the required volume of at least one liter for analysis of TSS, but the laboratory could not filter the full one liter volume due to the sample matrix. Therefore, the PQL of 2.5 mg/L could not be achieved.

M1 The matrix spike and/or matrix spike duplicate recovery performed on this sample was outside of the laboratory acceptance criteria. Sample matrix is suspected. The laboratory criteria was met for the Laboratory Control Sample (LCS) analyzed concurrently with this sample.

M2 The matrix spike and/or matrix spike duplicate recovery was outside of the laboratory acceptance criteria. The native sample concentration is greater than four times the spike added concentration so the spike added could not be distinguished from the native sample concentration.

R1 The relative percent difference (RPD) between the duplicate analyses performed on this sample was outside of the laboratory acceptance criteria (when both values are greater than ten times the PQL).

MCL	Maximum Contaminant Level	NL	No limit
NFL	No Free Liquid Present	FLP	Free Liquid Present
NOD	No Odor Detected	TON	Threshold Odor Number

D-1 As required by Method 5210B, APHA Standard Methods for the Examination of Water and Wastewater (21st edition), the BOD value reported for this sample is 'qualified' because the check standard run concurrently with the sample analysis did not meet the criteria specified in the method (198 +/- 30.5 mg/L). These results may not be reportable for compliance purposes.

D-2 The measured final dissolved oxygen concentrations of all dilutions were less than the method-specified limit of 1 mg/L. The reported BOD result was calculated assuming a final oxygen concentration equal to 1 mg/L. The reported value should be considered a minimum value.

D-3 The dilution water used to prepare this sample did not meet the method and/or regulatory criteria of less than 0.2 or 0.4 mg/L dissolved oxygen (DO) uptake over the five day period of incubation. These results may not be reportable for compliance purposes.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Clayton Hoak
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: TL0634-001
Report Date: 11/1/2018
PO No.:
Project: MTA Bridges

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MCRR BRIDGES MILE 47.9 SB GRAB	AQ	No(Total)	10/29/2018	10/30/2018

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prep Date	By	QC	Notes
LEAD, TCLP	0.22	mg/L	0.02	1	0.005	SW846 6010	10/31/18	JS	SW846 3010	10/31/18	AMJ	LJ31ICW3	

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Clayton Hoak
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: TL0634-002
Report Date: 11/1/2018
PO No.:
Project: MTA Bridges

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MCRR BRIDGES MILE 47.9 NB GRAB	AQ	No(Total)	10/29/2018	10/30/2018

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prep Date	By	QC	Notes
LEAD, TCLP	5.55	mg/L	0.02	1	0.005	SW846 6010	10/31/18	JS	SW846 3010	10/31/18	AMJ	LJ31ICW3	

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Clayton Hoak
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: TL0634-003
Report Date: 11/1/2018
PO No.:
Project: MTA Bridges

Sample Description	Matrix	Filtered	Date Sampled	Date Received
STROUDWATER RIVER BRIDGES SB	AQ	No(Total)	10/29/2018	10/30/2018

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prep Date	By	QC	Notes
LEAD, TCLP	U 0.02	mg/L	0.02	1	0.005	SW846 6010	10/31/18	JS	SW846 3010	10/31/18	AMJ	LJ31ICW3	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Clayton Hoak
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: TL0634-004
Report Date: 11/1/2018
PO No.:
Project: MTA Bridges

Sample Description	Matrix	Filtered	Date Sampled	Date Received
STROUDWATER RIVER BRIDGES NB	AQ	No(Total)	10/29/2018	10/30/2018

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prep Date	By	QC	Notes
LEAD, TCLP	48.9	mg/L	0.02	1	0.005	SW846 6010	10/31/18	JS	SW846 3010	10/31/18	AMJ	LJ31ICW3	

Katahdin
ANALYTICAL SERVICES

EXTRACTION FLUID BLANK REPORT

Sample ID: PBT1489A

Element Name	Result	Units	Flag	PQL	File
ALUMINUM	0.074	mg/L	U	1.5	ILJ25B
ANTIMONY	0.0064	mg/L	U	0.04	ILJ25B
ARSENIC	0.0071	mg/L	U	0.04	ILJ25B
BARIUM	0.034	mg/L	H	0.025	ILJ25B
BERYLLIUM	0.00051	mg/L	U	0.0250	ILJ25B
CADMIUM	0.00024	mg/L	U	0.0250	ILJ25B
CALCIUM	0.31	mg/L	J	0.500	ILJ25B
CHROMIUM	0.0018	mg/L	U	0.0500	ILJ25B
COBALT	0.0012	mg/L	U	0.0500	ILJ25B
COPPER	0.005	mg/L	J	0.125	ILJ25B
IRON	0.027	mg/L	U	0.500	ILJ25B
LEAD	0.0054	mg/L	U	0.02	ILJ25B
LITHIUM	0.03	mg/L	J	0.500	ILJ25B
MAGNESIUM	0.04	mg/L	J	0.500	ILJ25B
MANGANESE	0.0053	mg/L	U	0.025	ILJ25B
MERCURY	0.013	ug/L	U	0.20	HLJ25A
NICKEL	0.004	mg/L	J	0.0500	ILJ25B
POTASSIUM	0.4	mg/L	J	5.00	ILJ25B
SELENIUM	0.012	mg/L	U	0.050	ILJ25B
SILVER	0.0013	mg/L	U	0.0500	ILJ25B
THALLIUM	0.0054	mg/L	U	0.075	ILJ25B
TIN	0.0055	mg/L	U	0.500	ILJ25B
VANADIUM	0.0012	mg/L	U	0.0500	ILJ25B
ZINC	0.0650	mg/L	J	0.100	ILJ25B

U The analyte was not detected in the sample at a level greater than the instrument detection limit.

J The analyte was detected in the sample at a concentration greater than the instrument detection limit, but less than the laboratory's Practical Quantitation Level.

H The analyte was detected in the sample at a concentration greater than the laboratory's acceptance limit.

Katahdin
ANALYTICAL SERVICES

PREPARATION BLANK REPORT

Sample ID: PBWLJ31ICW3 **Batch ID:** LJ31ICW3 **Work Order:** TL0634

Element Name	Flag	Result	Units	PQL	MDL	File
LEAD	U	0.005	mg/L	0.005	0.0011	ILJ31B

U The analyte was not detected in the sample at a level greater than the method detection limit.

J The analyte was detected in the sample at a concentration greater than the method detection limit, but less than the laboratory's Practical Quantitation Level.

H The analyte was detected in the sample at a concentration greater than the laboratory's acceptance limit.

LABORATORY CONTROL SAMPLE REPORT

Sample ID: LCSWLJ31ICW3 **Batch ID:** LJ31ICW3 **Work Order:** TL0634

Element Name	True Value	Result	Units	Recovery(%)	Flag	Limits (%)		File
LEAD	0.100	0.097	mg/L	97.0		80	120	ILJ31B

H Laboratory control sample recovery is greater than the laboratory's acceptance limit.

L Laboratory control sample recovery is less than the laboratory's acceptance limit.

Katahdin Analytical Services, LLC. — Sample Receipt Condition Report

Client: HNTB	KAS PM: GN	Sampled By: NA
Project: BRIDGES	KIMS Entry By: SO	Delivered By: NA
KAS Work Order#: TL0634	KIMS Review By: GN	Received By: JCB
SDG #:	Cooler: 1 of 1	Date/Time Rec.: 10/29/18 1735

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				✓	
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.		✓			Temp (°C): 11.9
Samples received at <6 °C w/o freezing?		✓			Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?		✓			The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?				✓	
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles: **Aqueous:** No bubble larger than a pea?				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
Air: Refer to KAS COC for canister/flow controller requirements.	√ if air included				
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

Katahdin ANALYTICAL SERVICES
600 Technology Way
P.O. Box 540
Scarborough, ME 04070
Tel: (207) 874-2400
Fax: (207) 775-4029

Chain of Custody

Client:	Contact:	Phone #:	Fax #:
HNTB	**Kevin Brayley**	(207) 228-0917	( )
Address: 340 County Road, Suite 6C	City: Westbrook	State: Maine	Zip Code: 04092
Purchase Order #:	Proj. Name/No.: MTA Bridges		Katahdin Quote #:
Bill (if different than above):	Address:		
Sampler (Print/Sign): Nick Adams /			Copies To: Kbrayley@hntb.com

LAB USE ONLY

Work Order #: **TL 0634**
Katahdin Project Number

Remarks:

Shipping Info: FEDEX UPS CLIENT
Airbill No:
Temp C Temp Blank Intact Not Intact

	Sample Description	Date/Time Collected	Matrix	No. of Containers	Analysis and Container Type Preservatives: Metals TCLP Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N
	MCRR Bridges Mile 47.9 SB grab	10/29/2018 1630	S	1	1									
	MCRR Bridges Mile 47.9 NB grab	10/29/2018 1645	S	1	1									
	Stroudwater River Bridges Mile 46.7 SB grab	10/29/2018 1700	S	1	1									
	Stroudwater River Bridges Mile 46.7 NB grab	10/29/2018 1715	S	1	1									

COMMENTS: Metals list: Pb

Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:
Nick Adams	10/29/18 1735	JCB			
Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:

Katahdin
ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Oct. 30, 2018
04:28 PM

Login Number: TL0634

Account: HNTBCO001
HNTB Corp.

Project:

NoWeb

Quote/Incoming:

Primary Report Address:
Clayton Hoak
HNTB Corp.
340 County Rd
Suite 6C
Westbrook,ME 04092
CHOAK@HNTB.com

Primary Invoice Address:
Accounts Payable
HNTB Corp.
340 County Rd
Suite 6-C
Westbrook,ME 04092

Report CC Addresses:

Invoice CC Addresses:

Login Information:

ANALYSIS INSTRUCTIONS	:	
CHECK NO.	:	
CLIENT PO#	:	
CLIENT PROJECT MANAGE	:	
CONTRACT	:	
COOLER TEMPERATURE	:	11.9
DELIVERY SERVICES	:	KAS
EDD FORMAT	:	
LOGIN INITIALS	:	SO
PM	:	GN
PROJECT NAME	:	MTA Bridges
QC LEVEL	:	II
REPORT INSTRUCTIONS	:	Email PDF and invoice to Kevin Brayley kbrayley@hntb.com, no HC.
SDG ID	:	
SDG STATUS	:	
VERBAL TAT	:	

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
TL0634-1	MCRR BRIDGES MILE 47.9 SB GRAB	29-OCT-18 16:30	30-OCT-18		**01-NOV-18**	11-NOV-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SAMPLING				
Solid	P	TCLP-METALS		8oz Glass		
SW1311-EXT		SW3010-PREP		TCLP-LEAD		

TL0634-2	MCRR BRIDGES MILE 47.9 NB GRAB	29-OCT-18 16:45	30-OCT-18		**01-NOV-18**	11-NOV-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	P	TCLP-METALS		8oz Glass		
SW1311-EXT		SW3010-PREP		TCLP-LEAD		

TL0634-3	STROUDWATER RIVER BRIDGES SB	29-OCT-18 17:00	30-OCT-18		**01-NOV-18**	11-NOV-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	P	TCLP-METALS		8oz Glass		
SW1311-EXT		SW3010-PREP		TCLP-LEAD		

TL0634-4	STROUDWATER RIVER BRIDGES NB	29-OCT-18 17:15	30-OCT-18		**01-NOV-18**	11-NOV-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	P	TCLP-METALS		8oz Glass		
SW1311-EXT		SW3010-PREP		TCLP-LEAD		

Total Samples: *4* ***Total Analyses:*** *5*

ITEM NO.	ITEM DESCRIPTION	REFERENCE QUANTITY	UNIT	CIVIL QUANTITY	BRIDGE QUANTITY	TOTAL QUANTITY
202.10	Removing Existing Superstructure Property of Contractor - MCRR	550 CY	LS		1	1
202.12	Removing Existing Structural Concrete		CY		135	135
202.13	Removing Existing Railings Retained by Authority		LF		968	968
202.202	Removing Pavement Surface		SY	3150		3150
202.206	Removing Rumble Strips		LF	600		600
203.20	Common Excavation		CY	7450		7450
203.21	Rock Excavation		CY	50		50
203.24	Common Borrow		CY	17600		17600
203.25	Granular Borrow		CY	4450		4450
203.33	Special Fill		CY	46		46
203.45	Clay Borrow		CY	95		95
206.082	Structural Earth Excavation - Major Structures, Plan Quantity		CY		680	680
206.10	Structural Earth Excavation - Piers		CY		240	240
206.07	Structural Rock Excavation - Drainage & Minor Structures		CY	20		20
304.10	Aggregate Subbase Course - Gravel		CY	2050		2050
304.14	Aggregate Base Course - Type A		CY	1600		1600
403.207	Hot Mix Asphalt, 19.0 mm Nominal Maximum Size		Ton	3900		3900
403.2081	Hot Mix Asphalt, 12.5 mm (Polymer Modified) - RAP		Ton	1100	230	1330
403.212	Hot Mix Asphalt, 4.75 mm Nominal Maximum Size		Ton	160		160
403.213	Hot Mix Asphalt, 12.5 mm (base and intermediate course)		Ton	1000	460	1460
409.15	Bituminous Tack Coat, Applied		GAL	2000	180	2180
419.30	Sawing Bituminous Pavement		LF	3200		3200
470.08	Berm Dropoff Correction - Grindings		Ton	87		87
470.081	Berm Correction		LF	100		100
501.231	Dynamic Loading Test		EA		8	8
501.42	Steel H-beam Piles 57 lb/ft, delivered		LF		1744	1744
501.421	Steel H-beam Piles 57 lb/ft, in place		LF		1744	1744
501.44	Steel H-beam Piles 63 lb/ft, delivered		LF		1168	1168
501.441	Steel H-beam Piles 63 lb/ft, in place		LF		1168	1168
501.90	Pile Tips		EA		64	64
501.91	Pile Splices		EA		5	5
501.92	Pile Driving Equipment Mobilization - MCRR		LS		1	1
502.219	Structural Concrete, Abutments and Retaining Walls - MCRR	253 CY	LS		1	1
502.239	Structural Concrete Piers - MCRR	227 CY	LS		1	1
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges - MCRR	700 CY	LS		1	1
502.264	Structural Concrete Parapets - MCRR	110 CY	LS		1	1
503.14	Epoxy-Coated Reinforcing Steel, Fabricated and Delivered		LB		336000	336000
503.15	Epoxy-Coated Reinforcing Steel, Placing		LB		336000	336000
503.17	Mechanical/Welded Splice		EA		2040	2040
504.702	Structural steel, fabricated and delivered, welded - MCRR	334000 LB	LS		1	1
504.71	Structural steel erection - MCRR	334000 LB	LS		1	1
504.7111	Peening Cover Plate Welds		EA		64	64
505.08	Shear Connectors - MCRR	15036 EA	LS		1	1
506.9102	Zinc Rich Coating System (Shop Applied) - MCRR	285000 LB	LS		1	1
506.9105	Field Touch-Up of Existing Steel - MCRR	56528 LB	LS		1	1
507.091	Aluminum Bridge Railing, 1 Bar - MCRR	968 LF	LS		1	1
508.14	High Performance Waterproofing Membrane - MCRR	2960 SY	LS		1	1
511.075	Cofferdam Fore River Culvert - West End		LS			1
511.076	Cofferdam Fore River Culvert - East End		LS			1
511.091	Temporary Earth Support Systems - MCRR		LS		1	1
514.06	Curing Box for Concrete Cylinders		EA		1	1
515.202	Clear Protective Coating for Concrete Surfaces		SY		1130	1,130
515.23	Anti-Graffiti Coating		SY		1180	1,180
518.30	Abutment Seat Refacing		CY		7	7
518.40	Epoxy Injection Crack Repair		LF		44	44
518.51	Repair of Upward Facing Surfaces - below Reinforcing Steel < 8 inches		SF		66	66
518.60	Repair of Vertical Surfaces < 8 inches		SF		114	114
520.221	Expansion Device - Locking Compression Seal with Steel Edge Beams		EA		2	2
520.23	Asphaltic Plug Joint		LF		116	116
523.52	Bearing Installation		EA		16	16
523.5303	Steel Bearings, Fixed, Rocker		EA		4	4
523.5304	Steel Bearings, Expansion, Rocker		EA		12	12
523.56	Clean and Paint Bearing		EA		38	38
523.561	Clean, Paint, and Reset Bearing		EA		10	10
524.301	Temporary Structural Support - Jacking		LS		1	1
524.303	Temporary Structural Support - Braces		LS		1	1
524.40	Protective Shielding - Steel Girders		SY		3140	3140
526.301	Temporary Concrete Barrier, Type I - MCRR	4034 LF	LS	1		1
526.3011	Temporary Concrete Barrier, Type I: To Remain - MCRR	380 LF	LS	1		1
526.304	Temporary Concrete Barrier, Anchored - MCRR	484 LF	LS		1	1

ITEM NO.	ITEM DESCRIPTION	REFERENCE QUANTITY	UNIT	CIVIL QUANTITY	BRIDGE QUANTITY	TOTAL QUANTITY
526.307	Concrete Barrier Type I - Stormwater Filter		LF	40		40
527.341	Work Zone Crash Cushion - TL3		UNIT	2		2
603.155	12" Reinforced Concrete Pipe Class III		LF	150		150
603.265	66" Reinforced Concrete Pipe Class III		LF	128		128
603.28	Concrete Collar		EA	1		1
603.281	Fore River Concrete Collar		EA			2
603.55	Concrete Pipe Ties		GP	12		12
604.09	Catch Basin Type B1		EA	3		3
604.40	Secure Catch Basin Grate		EA	3		3
605.016	6 Inch PVC Underdrain		LF	590		590
605.018	8 Inch PVC Underdrain		LF	240		240
605.09	6" Underdrain Type B		LF	820		820
605.10	6" Underdrain Type B Outlet		LF	160		160
606.1301	31" W-Beam Guardrail - Mid-way Splice (7' Steel Posts, 8" Offset Blocks, Single Faced)		LF	2237.5		2237.5
606.1305	31" W-Beam Guardrail - Mid-way Splice Flared Terminal (31" Height)		EA	1		1
606.1351	Terminal End - Anchored End - 31" W-Beam Guardrail		EA	1		1
606.1723	Bridge Transition - Type III		EA		4	4
606.2650	66 Inch Reinforced Concrete Pipe - Class III		LF			168
606.353	Reflectorized Flexible Guardrail Marker		EA	2		2
606.354	Remove and Reset Reflectorized Flexible Guardrail Marker		EA	4		4
606.3622	Guardrail Adjust - Double Rail		LF	340		340
607.09	Woven Wire Fence - Metal Posts		LF	1500		1500
607.17	Chain Link Fence - 6 Foot		LF	1540		1540
607.32	Bracing Assembly Type I - Metal Posts		EA	2		2
607.33	Bracing Assembly Type II - Metal Posts		EA	10		10
609.15	Sloped Curb Type I		LF		1100	1100
610.08	Plain Riprap		CY	200	1350	1550
610.18	Stone Ditch Protection		CY	165	45	210
610.181	Temporary Stone Check Dam		CY	20		20
613.319	Erosion Control Blanket		SY	12550		12550
615.07	Loam		CY	2000		2000
618.14	Seeding Method Number 2		UNIT	160		160
618.143	Special Seeding		UNIT	6		6
619.1201	Mulch - Plan Quantity		UNIT	170		170
619.1202	Temporary Mulch		LS	1		1
620.56	Drainage Geotextile		SY	1350		1350
620.561	Impervious Liner		SY	670		670
620.58	Erosion Control Geotextile		SY	910	143	1053
627.712	White or Yellow Pavement Marking Line		LF	25800		25800
627.73	Temporary 6 Inch Pavement Marking Tape		LF	1500		1500
627.77	Removing Existing Pavement Marking		SF	11500		11500
627.78	Temporary Pavement Marking Line, White or Yellow		LF	29800		29800
629.05	Hand Labor, Straight Time		HR	20		20
631.10	Air Compressor (Including Operator)		HR	20		20
631.11	Air Tool (Including Operator)		HR	20		20
631.12	All Purpose Excavator (Including Operator)		HR	20		20
631.172	Truck - Large (Including Operator)		HR	20		20
631.32	Culvert Cleaner (Including Operator)		HR	20		20
631.36	Foreman		HR	20		20
645.272	Regulatory, Warning And Bridge Number Signs, Type 1 - Supplied By Authority		EA	2		2
645.509	Remove and Reset Mainline Sign No. 9		LS	1		1
645.510	Remove and Reset Mainline Sign No. 10		LS	1		1
645.511	Remove and Reset Mainline Sign No. 11		LS	1		1
645.512	Remove and Reset Mainline Sign No. 12		LS	1		1
645.513	Remove and Reset Mainline Sign No. 13		LS	1		1
645.514	Remove and Reset Mainline Sign No. 14		LS	1		1
645.515	Remove and Reset Mainline Sign No. 15		LS	1		1
652.30	Flashing Arrow		EA	2		2
652.33	Drum		EA	260		260
652.34	Cone		EA	260		260
652.35	Construction Signs		SF	1100		1100
652.361	Maintenance of Traffic Control Devices		LS	0.5	0.5	1
652.41	Portable Changeable Message Sign		EA	2		2
652.45	Truck Mounted Attenuator		CD	65		65
652.451	Automated Trailer Mounted Speed Limit Sign		CD	65		65
656.50	Baled Hay, In Place		EA	20		20
656.60	Temporary Berms		LF	500		500
656.62	Temporary Slope Drains		LF	100		100
656.632	30 Inch Temporary Silt Fence		LF	3950		3950
659.10	Mobilization		LS	0.50	0.50	1
673.01	Stormwater Filter Bed		CY	170		170

Date:11/6/2018

Filename: 002_Quantities.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date
1	Quantity Updates	JKB	10/18
2	Quantity Updates	JKB	10/18

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	BRG	10\18	Checked	KEB	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

ESTIMATED QUANTITIES

SHEET NUMBER: EQ-01

CONTRACT:2019.09

SPECIFICATIONS

DESIGN

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 8TH EDITION.

CONSTRUCTION

STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, HIGHWAYS AND BRIDGES, REVISION OF NOVEMBER 2014.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD DETAILS FOR HIGHWAYS AND BRIDGES, NOVEMBER 2014 WITH LATEST REVISIONS.

AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, 4TH EDITION.

DESIGN LOADING

LIVE LOAD - HL-93

MATERIALS

CONCRETE

DECK CONCRETE - CLASS AAA - DECK
ALL OTHER CONCRETE SHALL BE CLASS AAA.

REINFORCING STEEL

AASHTO M31, GRADE 60 EPOXY COATED

ANCHOR RODS SHALL MEET THE REQUIREMENTS OF ASTM F1554, GRADE 55 AND SHALL BE SWEDGED OR THREADED ON THE EMBEDDED PORTION OF THE ROD.

STRUCTURAL STEEL

GIRDERS: FLANGES, WEBS, SPLICE PLATES, FILLER PLATES, DIAPHRAGMS, CONNECTION PLATES, AND BEARING STIFFENERS SHALL BE AASHTO M270, GRADE 50.

STEEL H-PILES SHALL BE ASTM A572, GRADE 50.

ALL OTHER STRUCTURAL STEEL SHALL BE AASHTO M270, GRADE 36, OR APPROVED EQUAL.

HIGH STRENGTH BOLTS SHALL BE AASHTO M164 (ASTM F3125, GRADE A325, TYPE 1). BOLTS SHALL BE HOT DIPPED GALVANIZED TYPE 1.

PROTECTIVE COATING

ALL NEW STRUCTURAL STEEL EXCEPT DIAPHRAGMS SHALL BE SHOP COATED WITH NEPCOAT QUALIFIED PRODUCT FROM LIST A. PAINT COLOR SHALL BE SELECTED TO MATCH EXISTING GIRDERS.

DIAPHRAGMS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123.

BASIC DESIGN STRESSES

CONCRETE - CLASS AAA, f'c = 4,500 P.S.I.
- CLASS AAA - DECK f'c = 4,500 P.S.I.

REINFORCING STEEL - fy = 60,000 P.S.I.

STRUCTURAL STEEL AASHTO M270 (ASTM A709) GRADE 36, Fy = 36,000 P.S.I.
AASHTO M270 (ASTM A709) GRADE 50, Fy = 50,000 P.S.I.
AASHTO M270 (ASTM A572) GRADE 50, Fy = 50,000 P.S.I.

GENERAL NOTES:

1. THE PROPOSED ELEVATIONS ARE BASED ON THE NAVD 88 DATUM. THE AS-BUILT PLANS ARE BASED ON NGVD 29 DATUM.

2. FOR ADDITIONAL DETAILS REFERENCED OR NOT SHOWN IN THESE DRAWINGS, SEE THE STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD DETAILS, HIGHWAYS AND BRIDGES, NOVEMBER 2014 WITH UPDATES.

3. COPIES OF THE AS-BUILT PLANS ARE ON FILE AT THE MAINE TURNPIKE AUTHORITY AND ACCURACY OF THESE PLANS IS NOT GUARANTEED.

4. REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2", UNLESS OTHERWISE NOTED.

5. CHAMFER ALL EXPOSED CONCRETE EDGES ¾" UNLESS OTHERWISE NOTED.

6. ALL BRIDGE PARAPET, BARRIER, WINGWALL AND ENDPOST CONCRETE, INSIDE FACE AND TOP FACE, SHALL HAVE A RUBBED FINISH PRIOR TO THE APPLICATION OF THE PROTECTIVE COATING FOR CONCRETE SURFACE.

7. THE STEEL PORTIONS OF THE EXISTING BRIDGE ARE COATED WITH A LEAD-BASED PAINT SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR THE CONTAINMENT, PROPER MANAGEMENT, AND DISPOSAL OF ALL LEAD-CONTAMINATED HAZARDOUS WASTE GENERATED BY THE PROCESS OF THE BRIDGE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING APPROPRIATE OSHA MANDATED PERSONAL PROTECTION STANDARDS RELATED TO THIS PROCESS.

8. CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO THE FOLLOWING AREAS:
   - EXPOSED SURFACES OF THE PARAPETS, AND ENDPOSTS;
   - VERTICAL FACES OF THE DECK FASCIA EXTENDING BENEATH THE DECK TO THE GIRDER TOP FLANGE;

9. PIGMENTED PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO EXPOSED SURFACES OF THE ABUTMENTS, WINGWALLS, AND PIERS.

10. WHERE DRILLING AND ANCHORING OF REINFORCING STEEL IS SPECIFIED THE CONTRACTOR SHALL USE A MATERIAL LISTED ON THE MAINEDOT PREQUALIFIED LIST OF CHEMICAL ANCHORING MATERIALS. THE DEPTH OF EMBEDMENT SHALL BE SUFFICIENT TO DEVELOP 125% OF THE YIELD STRENGTH OF THE BAR, BUT SHALL BE NO LESS THAN THE MINIMUM DEPTH OF EMBEDMENT WHEN SPECIFIED.

11. DIMENSIONS WITH RESPECT TO THE EXISTING BRIDGE ARE APPROXIMATE AND PROVIDED FOR REFERENCE. IF FIELD CONDITIONS VARY BY MORE THAN 1" FROM DIMENSIONS SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED.

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ITEM NO.	ITEM DESCRIPTION	REFERENCE QUANTITY	UNIT	BRIDGE QUANTITY
202.10	Removing Existing Superstructure Property of Contractor - MCRR	550 CY	LS	1
202.12	Removing Existing Structural Concrete		CY	135
202.13	Removing Existing Railings Retained by Authority		LF	968
206.082	Structural Earth Excavation - Major Structures, Plan Quantity		CY	680
206.10	Structural Earth Excavation - Piers		CY	240
403.2081	Hot Mix Asphalt, 12.5 mm (Polymer Modified) - RAP		Ton	230
403.213	Hot Mix Asphalt, 12.5 mm (base and intermediate course)		Ton	460
409.15	Bituminous Tack Coat, Applied		GAL	180
501.231	Dynamic Loading Test		EA	8
501.42	Steel H-beam Piles 57 lb/ft, delivered		LF	1744
501.421	Steel H-beam Piles 57 lb/ft, in place		LF	1744
501.44	Steel H-beam Piles 63 lb/ft, delivered		LF	1168
501.441	Steel H-beam Piles 63 lb/ft, in place		LF	1168
501.90	Pile Tips		EA	64
501.91	Pile Splices		EA	5
501.92	Pile Driving Equipment Mobilization - MCRR		LS	1
502.219	Structural Concrete, Abutments and Retaining Walls - MCRR	253 CY	LS	1
502.239	Structural Concrete Piers - MCRR	227 CY	LS	1
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges - MCRR	700 CY	LS	1
502.264	Structural Concrete Parapets - MCRR	110 CY	LS	1
503.14	Epoxy-Coated Reinforcing Steel, Fabricated and Delivered		LB	336000
503.15	Epoxy-Coated Reinforcing Steel, Placing		LB	336000
503.17	Mechanical/Welded Splice		EA	2040
504.702	Structural steel, fabricated and delivered, welded - MCRR	334000 LB	LS	1
504.71	Structural steel erection - MCRR	334000 LB	LS	1
504.7111	Peening Cover Plate Welds		EA	64
505.08	Shear Connectors - MCRR - MCRR	15036 EA	LS	1
506.9102	Zinc Rich Coating System (Shop Applied) - MCRR	285000 LB	LS	1
506.9105	Field Touch-Up of Existing Steel - MCRR	56528 LB	LS	1
507.091	Aluminum Bridge Railing, 1 Bar - MCRR	968 LF	LS	1
508.14	High Performance Waterproofing Membrane - MCRR	2960 SY	LS	1
511.075	Cofferdam Fore River Culvert - West End		LS	1
511.076	Cofferdam Fore River Culvert - East End		LS	1
511.091	Temporary Earth Support Systems - MCRR		LS	1
514.06	Curing Box for Concrete Cylinders		EA	1
515.202	Clear Protective Coating for Concrete Surfaces		SY	1130
515.23	Anti-Graffiti Coating		SY	1180
518.30	Abutment Seat Refacing		CY	7
518.40	Epoxy Injection Crack Repair		LF	34
518.51	Repair of Upward Facing Surfaces - below Reinforcing Steel < 8 inches		SF	56
518.60	Repair of Vertical Surfaces < 8 inches		SF	104
520.221	Expansion Device - Locking Compression Seal with Steel Edge Beams		EA	2
520.23	Asphaltic Plug Joint		LF	116
523.52	Bearing Installation		EA	16
523.5303	Steel Bearings, Fixed, Rocker		EA	4
523.5304	Steel Bearings, Expansion, Rocker		EA	12
523.56	Clean and Paint Bearing		EA	38
523.561	Clean, Paint, and Reset Bearing		EA	10
524.301	Temporary Structural Support - Jacking		LS	1
524.303	Temporary Structural Support - Braces		LS	1
524.40	Protective Shielding - Steel Girders		SY	3140
526.304	Temporary Concrete Barrier, Anchored - MCRR	484 LF	LS	1
606.1723	Bridge Transition - Type III		EA	4
609.15	Sloped Curb Type I		LF	1100
610.08	Plain Riprap		CY	1350
610.18	Stone Ditch Protection		CY	45
620.58	Erosion Control Geotextile		SY	143
652.361	Maintenance of Traffic Control Devices		LS	0.5
659.10	Mobilization		LS	0.5

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INDEX OF DRAWINGS

Date:11/6/2018

Filename: 052_Index and Quantities.dgn

Scale: AS NOTED

Designed by: HNTB

No.	Revision	By	Date
/1	Quantity Updates	JKB	10/18
/2	Quantity Updates	JKB	10/18

CONSULTANT PROJECT MANAGER: Timothy R. Cote, P.E.

	By	Date		By	Date
Designed	EMC	10\18	Checked	HCH	10\18
Drawn	PEB	10\18	In Charge of	RAL	10\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS
MAINE CENTRAL RAILROAD OVERPASS

GENERAL NOTES, INDEX, AND QUANTITIES

SHEET NUMBER: S-01

CONTRACT:2019.09

SPECIAL PROVISION

SECTION 403

HOT MIX ASPHALT PAVEMENT

Course	HMA Grading	Item Number	Total Thickness	No. of Layers	Complimentary Notes
Mainline Variable Depth Mill & Overlay					
Wearing	**12.5mm**	**403.2081**	**1.5”**	**1**	**A,F,I,J,K,L,N,O,P**
Intermediate	**12.5mm**	**403.213**	**1.5”**	**1**	**B,F,J,L,N,P**
Base	**19.0mm**	**403.207**	**7”**	**3**	**B,F,J,L,N,P**
Shim	**4.75mm**	**403.212**	**0.5”**	**1**	**B,F,J,L,N,P**
Mainline Full Depth Pavement					
Wearing	**12.5mm**	**403.2081**	**1.5”**	**1**	**A,F,I,J,K,L,N,O,P**
Intermediate	**12.5mm**	**403.213**	**1.5”**	**1**	**B,F,J,L,N,P**
Base	**19.0mm**	**403.207**	**7”**	**3**	**B,F,J,L,N,P**

COMPLEMENTARY NOTES

A. The required PGAB for this mixture shall be **64E-28.**
B. The required PGAB for this mixture shall be **64-28.**
C. A maximum of 15 percent RAP may be used.
D. RAP may not be used.
E. The Maine DOT will conduct the job mix verification. The aggregate qualities shall meet the design traffic level of 3 to <10 million ESALS for mix placed under this contract. The design verification, Quality Control, and Acceptance tests for this mix will be performed at **XX gyrations**. (N design) Minimum and Maximum PGAB content shall not apply.
F. The MTA will conduct the job mix verification. The aggregate qualities shall meet the design traffic level of 10 to <30 million ESALS for mix placed under this contract. The design verification, Quality Control, and Acceptance tests for this mix will be performed at **75 gyrations**. (N design)
G. A material transfer vehicle (MTV) shall be used for the placement of Hot Mix Asphalt wearing surface on all roadways including acceleration and deceleration lanes and all ramps.
H. Joints shall be constructed as the “notched wedge” type in accordance with Subsection 401.17.
I. Joint density will be measured in accordance with Subsection 401.165.
J. Tack coat shall be applied between all layers of pavement at a rate of 0.04 G/SY.
K. PGAB shall conform to the provisions of 403.02 – Polymer Modified PGAB for HMA
L. The contractor shall furnish a quality control technician equipped with an approved densometer to ensure density requirements are met.
M. Hydrated Lime shall be incorporated into the mixture.

N. No vehicular loads shall be permitted on newly completed pavement until adequate stability has been attained and the material has cooled sufficiently to prevent distortion or loss of fines. The newly paved area may be opened to traffic after the internal temperature of the pavement has cooled to 120° F. The Resident will test the internal temperature of the pavement and shall be the sole judge as to the opening to traffic. The period of time before opening to traffic may be extended at the discretion of the Resident. The lane closure may not be removed until the internal temperature has cooled to 120° F.
O. The warm mix/antistrip additive Zycotherm manufactured by Zydex Industries, or approved equal, shall be incorporated into the PGAB at a rate of 0.1%
P. A maximum of 20 percent RAP may be used.

SPECIAL PROVISION

SECTION 526

CONCRETE BARRIER

(Temporary Concrete Barrier Type I)
(Temporary Concrete Barrier Type I: To Remain)

526.01 Description

The following paragraphs are added:

This work shall consist of furnishing Temporary Concrete Barrier, Type I and Temporary Concrete Barrier, Type I: To Remain. The barrier shall have attachments allowing individual sections to be connected into a continuous barrier.

At the Contractor's option, prefabricated temporary steel barrier systems meeting the requirements of this special provision may be substituted in place of temporary concrete barrier.

Prefabricated temporary steel barrier systems

The temporary traffic barrier shall be one of the barriers included under FHWA's Roadside Hardware Policy and Guidance for crashworthy longitudinal barriers, at the Contractor's discretion, unless otherwise specified. The type of temporary traffic barrier shall be provided to the Engineer prior to use. All temporary traffic barrier and corresponding connections shall meet, unless otherwise specified in the Plans, Test Level 3 (TL-3) criteria as defined in NCHRP Report 350 or the AASHTO Manual for Assessing Safety Hardware (MASH). The appropriate resource shall be determined as described in the MASH publication.

The Contractor shall supply the FHWA approval letter, manufacturer approved shop drawings and connection and anchorage details (if applicable) and catalogue cuts for each barrier type to the resident engineer for approval. The manufacture's shop drawings shall specify the maximum deflection distance the product is approved for. The Contractor's shop drawing submittal shall specify the available distance between the back or non-roadway side of the barrier to the closet fixed object or edge of open excavation being protected for each location of differing available deflection distance.

Each run of temporary barrier units shall be fastened together to form a continuous chain. Temporary impact attenuators with delineation shall be installed at the ends of the barrier within 30 feet of approaching traffic. The Contractor shall not leave a barrier leading edge unprotected. Delineators shall be installed in conformance with the manufacturer's recommendations on the barriers at the termini at 20 foot intervals on tangent sections and 10 foot intervals on curved sections depending on the radius as determined by the Resident Engineer. Delineators mounted on top of the barrier separating opposing traffic shall have two-sided amber reflectors delineating the left edge.

Temporary Barriers shall be removed and reset from existing locations and reset in accordance with the above requirements and manufacture's recommendations, as directed by the Resident Engineer.

Temporary Barrier requiring pinning to the asphalt pavement per manufacturer's recommendations shall not be used on the final pavement wearing surface.

526.02 Materials

The following paragraphs are added:

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

g. Temporary barrier markers shall be "Big Dog" barrier markers manufactured by Custom Products Corporation, or approved equal. Markers shall be bi-directional with a minimum effective reflective area of 96 square inches (48 square inches each side) as approved by the Resident. The reflectors shall meet MUTCD reflectivity requirements and shall be orange in color.

526.021 Acceptance

The Resident shall have the authority to accept or reject all Temporary Concrete Barrier Type I and Temporary Concrete Barrier Type I: To Remain used on the Project that does not meet the requirements of this specification.

526.03 Construction Requirements

The following paragraphs are added:

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

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

1. Barrier is removed from the trailing end and the workmen and equipment involved in the operation are always behind the barrier. No workmen or equipment shall enter the travel lane.
2. Barrier shall be dragged away from the travel lane to at least a 30-degree angle by the use of a cable.

3. Barrier shall be lifted no more than six inches while within 10 feet of the travel lane.

Retro-Reflective Delineators shall be mounted as follows:

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

Temporary barrier markers shall be mounted as follows:

1. One on top of each barrier.
2. Delineators shall be physically adhered so as to withstand the force of throw from a snow plow.
3. If more than 25% of delineators in any 50 foot section of barrier fall off for any reason, the Contractor will be responsible for reinstalling all the delineators in that run at their own cost.
4. Contractor is required to submit the installation method for review and approval to the Resident.

526.04 Method of Measurement

The following paragraphs are added:

Temporary Concrete Barrier, Type I and Temporary Concrete Barrier, Type I: To Remain shall be measured for payment by the lump sum.

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

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

526.05 Basis of Payment

The following paragraphs are added:

Temporary Concrete Barrier, Type I and Temporary Concrete Barrier, Type I: To Remain will be paid for at the Contract lump sum price, complete in place regardless of whether concrete or prefabricated steel barrier systems are used. Such payment shall be full compensation for furnishing, loading, transporting, setting, resetting, temporary storage, removing, transporting and stacking at the area designated, furnishing all materials, including retro-reflective delineators and temporary barrier markers, and all other incidentals necessary to complete the work. Temporary Concrete Barrier, Type I: To Remain and all connecting pins shall remain the property of the Authority.

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

Payment will be made under:

Pay Item		Pay Unit
526.301	Temporary Concrete Barrier, Type I - Stroudwater	Lump Sum
526.301	Temporary Concrete Barrier, Type I - MCRR	Lump Sum
526.3011	Temporary Concrete Barrier, Type I: To Remain - Stroudwater	Lump Sum
526.3011	Temporary Concrete Barrier, Type I: To Remain - MCRR	Lump Sum