MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

CONTRACT DOCUMENTS

CONTRACT 2024.05

CLEANING AND PAINTING STEEL STRUCTURES – SHAKER ROAD UNDERPASS BRIDGE - MILE 64.3, WEYMOUTH ROAD UNDERPASS BRIDGE - MILE 66.2, BENNETT ROAD UNDERPASS BRIDGE – MILE 68.6, AND INTERSTATE 295 SOUTHBOUND UNDERPASS BRIDGE – MILE 102.5

NOTICE TO CONTRACTORS

PROPOSAL

CONTRACT AGREEMENT

CONTRACT BOND

FINAL LIEN AND CLAIM WAIVER AND AFFIDAVIT

SPECIFICATIONS

MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

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

The 2016 Maine Turnpike Supplemental Specifications are additions and alterations to the 2014 Maine Department of Transportation Standard Specifications. See Subsection 100.1.

TABLE OF CONTENTS

MAINE TURNPIKE AUTHORITY

NOTICE TO CONTRACTORS

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

CONTRACT 2024.05

CLEANING AND PAINTING STEEL STRUCTURES -
SHAKER ROAD UNDERPASS BRIDGE - MILE 64.3,
WEYMOUTH ROAD UNDERPASS BRIDGE - MILE 66.2,
BENNETT ROAD UNDERPASS BRIDGE – MILE 68.6, AND
INTERSTATE 295 SOUTHBOUND UNDERPASS BRIDGE – MILE 102.5

at the office of the Maine Turnpike Authority, 2360 Congress Street, Portland, ME, until 1:00 p.m., prevailing time as determined by the Authority on March 14, 2024, at which time and place the Proposals will be publicly opened and read. This Project includes a wage determination developed by the State of Maine Department of Labor.

The following work is included in this Contract:

Shaker Road Underpass Bridge: Cleaning and painting specified areas of structural steel and metal work, and all non-galvanized bearing assemblies, with a three coat NEPCOAT paint system along with all work incidental thereto in accordance with these Specifications.

Weymouth Road Underpass Bridge: Cleaning and painting specified areas of structural steel and metal work, and all non-galvanized bearing assemblies, with a three coat NEPCOAT paint system along with all work incidental thereto in accordance with these Specifications.

Bennett Road Underpass Bridge: Cleaning and painting specified areas of structural steel and metal work, and all non-galvanized bearing assemblies, with a three coat NEPCOAT paint system along with all work incidental thereto in accordance with these Specifications.

Interstate 295 Southbound Underpass Bridge: Cleaning and painting specified areas, limited to the new and disturbed areas of existing structural steel, with a multi-coat NEPCOAT paint system along with all work incidental thereto in accordance with these Specifications.

Contractors and Subcontractors involved with the removal of lead based paint and the field application and touch-up of the coating systems shall be qualified in accordance with SSPC QUALIFICATION PROCEDURE NO. 1, Standard Procedure for Evaluating Painting Contractors (Field Application to Complex Industrial Structures) and SSPC QUALIFICATION PROCEDURE NO. 2, Standard Procedure for the Qualification of Painting Contractors (Field Removal of Hazardous Coatings from Complex Structures) prior to Bid opening and shall remain qualified throughout the duration of the Contract. Copies of current certificates issued by the Qualifying Agency shall be submitted with the Bid package.

The following bridges are included in the Contract:

Bridge Name	Approximate Square Feet of Steel to be Cleaned and Painted	Mile	Town
Shaker Road Underpass Bridge	19,350	64.3	Gray
Weymouth Road Underpass Bridge	7,800	66.2	Gray
Bennett Road Underpass Bridge	8,150	68.6	New Gloucester
I-295 Southbound Underpass Bridge	1,200	102.5	West Gardiner

Plans and Contract Documents may be examined by prospective Bidders weekdays between 8:00 a.m. and 4:30 p.m. at the office of the Maine Turnpike Authority, 2360 Congress Street, Portland, Maine. The Half-Size Plans and Contract Documents may be obtained from the Authority upon payment of fifty ($50.00) dollars for each set of half-size plans, which payment will not be returned. Checks shall be made payable to: Maine Turnpike Authority. The Plans and Contract Documents may also be downloaded from a link on our website at http://www.maineturnpike.com/projects- planning/Construction-Contracts.aspx.

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

All work shall be governed by the Specifications entitled "State of Maine, Department of Transportation, Standard Specifications of 2014"; "Standard Details, Revision of November 2020"; "Best Management Practices for Erosion and Sediment Control", latest issue; and the Maine Turnpike Authority Supplemental Specifications. Copies and recent updates to these publications can be downloaded at: www.maine.gov/mdot/contractors/publications/ and MaineTurnpike.com/Projects/Construction-Related-Documents.aspx.

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

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

A pre-bid conference will be held on February 13, 2024, at 11:00 a.m. at the Maine Turnpike Authority, 2360 Congress Street, Portland, Maine. Prospective Bidders will be allowed to attend the pre-bid meeting remotely via a Microsoft Teams conference call. All prospective Bidders planning to attend the pre-bid conference remotely via Teams conference call are required to register on the Plan Holder List

by February 9, 2024. Those registering will be sent an email providing the Teams conference call sign-in credentials.

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

MAINE TURNPIKE AUTHORITY

Nate Carll Purchasing Manager
Maine Turnpike Authority
Portland, Maine

MAINE TURNPIKE AUTHORITY

PROPOSAL

CONTRACT 2024.05

CLEANING AND PAINTING STEEL STRUCTURES -
SHAKER ROAD UNDERPASS BRIDGE - MILE 64.3,
WEYMOUTH ROAD UNDERPASS BRIDGE - MILE 66.2,
BENNETT ROAD UNDERPASS BRIDGE – MILE 68.6, AND
INTERSTATE 295 SOUTHBOUND UNDERPASS BRIDGE – MILE 102.5

TO MAINE TURNPIKE AUTHORITY:

The work consists of cleaning and painting the structural steel and metal work, and all non-galvanized bearing assemblies, with a three coat NEPCOAT paint system for Shaker Road Underpass Bridge, Weymouth Road Underpass Bridge, Bennett Road Underpass Bridge, and Interstate 295 Southbound Underpass Bridge, and all other work incidental thereto in accordance with the Plans and Specifications.

The Contractor shall be certified to SSPC QP 1 and QP 2. Contractor shall submit company certifications with the Sealed Proposal.

The following bridges are included in the Contract:

Bridge Name	Approximate Square Feet of Steel to be Cleaned and Painted	Mile	Town
Shaker Road Underpass Bridge	19,350	64.3	Gray
Weymouth Road Underpass Bridge	7,800	66.2	Gray
Bennett Road Underpass Bridge	8,150	68.6	New Gloucester
I-295 Southbound Underpass Bridge	1,200	102.5	West Gardiner

This Work will be done under a Contract known as Contract 2024.05 according to the Plans and Specifications which are on file in the office of the Maine Turnpike Authority, 2360 Congress Street, Portland, Maine.

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

The undersigned hereby declares that he/she has carefully examined the Plans, Specifications, and

other Contract Documents, and that he/she will contract to carry out and complete the said Work as specified and delineated at the price per unit of measure for each scheduled item of Work stated in the Schedule of Prices as follows:

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

SCHEDULE OF BID PRICES CONTRACT NO. 2024.05
CLEANING AND PAINTING OF STEEL STRUCTURES – SHAKER ROAD, WEYMOUTH ROAD, BENNETT ROAD, AND INTERSTATE 295 SOUTHBOUND

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
506.141	Field Painting of Existing Structural Steel – Shaker Road Underpass	Lump Sum	1				
506.142	Field Painting of Existing Structural Steel – Weymouth Road Underpass	Lump Sum	1				
506.143	Field Painting of Existing Structural Steel – Bennett Road Underpass	Lump Sum	1				
506.144	Field Painting of Existing Structural Steel – I-295 Southbound Underpass	Lump Sum	1				
506.171	Surface Preparation of Existing Structural Steel – Shaker Road Underpass	Lump Sum	1				
506.172	Surface Preparation of Existing Structural Steel - Weymouth Road Underpass	Lump Sum	1				
506.173	Surface Preparation of Existing Structural Steel - Bennett Road Underpass	Lump Sum	1				
506.174	Surface Preparation of Existing Structural Steel – I-295 Southbound Underpass	Lump Sum	1				
506.181	Containment System and Pollution Control Measures – Shaker Road Underpass	Lump Sum	1				
506.182	Containment System and Pollution Control Measures – Weymouth Road Underpass	Lump Sum	1				
506.183	Containment System and Pollution Control Measures - Bennett Road Underpass	Lump Sum	1				
				CARRIED FORWARD:			

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
BROUGHT FORWARD:							
506.184	Containment System and Pollution Control Measures – I-295 Southbound Underpass	Lump Sum					
506.191	Disposal of Special Waste or Hazardous Waste – Shaker Road Underpass	Lump Sum	1				
506.192	Disposal of Special Waste or Hazardous Waste - Weymouth Road Underpass	Lump Sum	1				
506.193	Disposal of Special Waste or Hazardous Waste - Bennett Road Underpass	Lump Sum	1				
506.194	Disposal of Special Waste or Hazardous Waste – I-295 Southbound Underpass	Lump Sum	1				
526.306	Temporary Concrete Barrier, Type I - Supplied by Authority (600 LF)	Lump Sum	1				
527.341	Work Zone Crash Cushion - TL-2	Unit	2				
619.1202	Temporary Mulch	Lump Sum	1				
629.05	Hand Labor, Straight Time	Hour	40				
631.35	Foreman	Hour	20				
652.3611	Maintenance of Traffic Control Devices – Shaker Road Underpass	Lump Sum	1				
CARRIED FORWARD:							

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
BROUGHT FORWARD:							
652.3612	Maintenance of Traffic Control Devices - Weymouth Road Underpass	Lump Sum	1				
652.3613	Maintenance of Traffic Control Devices - Bennett Road Underpass	Lump Sum	1				
652.3614	Maintenance of Traffic Control Devices – I-295 Southbound Underpass	Lump Sum	1				
659.10	Mobilization	Lump Sum	1				
TOTAL:							

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

_____

_____

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

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

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

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

_____ (SEAL)

_____ (SEAL)

_____ (SEAL)

Affix Corporate Seal
or Power of Attorney
Where Applicable

By: _____

Its: _____

Information below to be typed or printed where applicable:

INDIVIDUAL:

(Name) (Address)

PARTNERSHIP - Name and Address of General Partners:

(Name) (Address)

(Name) (Address)

(Name) (Address)

(Name) (Address)

INCORPORATED COMPANY:

(President) (Address)

(Vice-President) (Address)

(Secretary) (Address)

(Treasurer) (Address)

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

YORK TO AUGUSTA

CONTRACT AGREEMENT

This Agreement made and entered into between the Maine Turnpike Authority, and sometimes termed the "Authority", and _____ herein termed the "Contractor":

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

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

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

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

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

AUTHORITY -

MAINE TURNPIKE AUTHORITY

By: _____
Title: CHAIRMAN

Date of Signature:

ATTEST:

_____
Secretary

CONTRACTOR -

_____
CONTRACTOR

By: _____
Title: _____
Date of Signature: _____

WITNESS:

_____

CONTRACT BOND

KNOW ALL MEN BY THESE PRESENTS that _____ of _____ in the County of _____ and State of _____ as Principal, and _____ a Corporation duly organized under the laws of the State of _____ and having a usual place of business in _____ _____

As Surety, are held and firmly bound unto the Maine Turnpike Authority in the sum of _____ Dollars ($_____._____), to be paid to said Maine Turnpike Authority, or its successors, for which payment, well and truly to be made, we bind ourselves, our heirs, executors, successors and assigns jointly and severally by these presents.

The condition of this obligation is such that the Principal, designated as Contractor in the foregoing Contract No. _____ shall faithfully perform the Contract on his part and satisfy all claims and demands incurred for the same and shall pay all bills for labor, material, equipment and all other items contracted for, or used by him, in connection with the Work contemplated by said Contract, and shall fully reimburse the Obligee for all outlay and expense which the Obligee may incur in making good any default of said Principal, then this Obligation shall be null and void; otherwise it shall remain in full force and effect.

Signed and sealed this _____ day of _____ , A.D., 202_____

Witnesses:	CONTRACTOR
_____	_____ (SEAL)
_____	_____ (SEAL)
_____	_____ (SEAL)
	SURETY
_____	_____ (SEAL)
_____	_____ (SEAL)
_____	_____ (SEAL)

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

FINAL LIEN AND CLAIM WAIVER AND AFFIDAVIT

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

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

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

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

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

_____

(Contractor)

By: _____

Title: _____

State of MAINE

County of _____

I, _____ , hereby certify on behalf of _____

(Company Officer) (Company Name)

its _____, being first duly sworn and stated that the foregoing

(Title)

representations are true and correct upon his own knowledge and that the foregoing is his free act and deed in said capacity and the free act and deed of the above-named.

_____

(Title) (Company Name)

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

(SEAL)

_____

Notary Public
My Commission Expires: _____

STATEMENT OF QUALIFICATION

The undersigned, under the pains and penalty of perjury, offers the following information as evidence of his qualifications to perform the Work as bid upon according to all the requirements of the Plans and Specifications.

1. How long have you been in business under present business name? _____ Years

2. Have you ever failed to complete any work awarded? _____Yes _____No

3. If Yes, provide explanation: _____
   _____
   _____

4. Bank Reference: _____
   _____
   _____

5. History of Contracts: On the following "History of Contracts" sheet, provide full information about all of your Contracts similar to this Contract.

6. Status of Contracts on Hand: On the following "Status of Contracts on Hand" sheet, provide full information about all of your Contracts.

_____(Date)

_____
(Name of Bidder as appearing in submitted Proposal)

HISTORY OF CONTRACTS

PROJECT NAME:

OWNER:

LOCATION:

DESCRIPTION:

CONTRACT AMOUNT:

NAME OF SUBCONTRACTOR(S):

SUBCONTRACTOR'S CONTRACT AMOUNT(S):

CONTRACT COMPLETION DATE:

ACTUAL COMPLETION DATE:

LIST OF OTHER CONTRACTORS WORKING ON A PROJECT FOR THE OWNER AT THE SAME TIME:

STATUS OF CONTRACTS ON HAND

OWNER	CONTACT NAME & TELEPHONE NO.	LOCATION OF WORK	DESCRIPTION OF WORK	GENERAL CONTRACTOR OR SUBCONTRACTOR	CONTRACT AMOUNT	BALANCE TO BE COMPLETED	ESTIMATED DATE OF COMPLETION

MAINE TURNPIKE AUTHORITY

ARRANGEMENT OF SPECIFICATIONS

PART I – SUPPLEMENTAL SPECIFICATIONS

(Rev. November 10, 2016)

Supplemental Specifications available on the Maine Turnpike Authority website
(www.maineturnpike.com/Projects/Construction-Related-Documents.aspx)

MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

PART II – SPECIAL PROVISIONS

PART II - SPECIAL PROVISIONS: TABLE OF CONTENTS

APPENDICES

APPENDIX A RCRA 8 METALS TEST REPORTS

APPENDIX B PERMITTED LANE CLOSURE NOTES

APPENDIX C SHAKER ROAD UNDERPASS BRIDGE

- ELEVATION VIEW
- FRAMING PLAN

WEYMOUTH ROAD UNDERPASS BRIDGE

- ELEVATION VIEW
- FRAMING PLAN
- SECTION VIEW

BENNETT ROAD UNDERPASS BRIDGE

- ELEVATION VIEW
- FRAMING PLAN
- SECTION VIEW

INTERSTATE 295 SOUTHBOUND UNDERPASS BRIDGE

- ELEVATION VIEW
- FRAMING PLAN

EXISTING CONDITION PHOTOGRAPHS

- INTERSTATE 295 SOUTHBOUND UNDERPASS BRIDGE
- WEYMOUTH ROAD UNDERPASS BRIDGE

APPENDIX D TRAFFIC CONTROL DETAILS
SIGN SUMMARIES
CONTRACTOR'S STAGING PLANS

MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

PART II - SPECIAL PROVISIONS

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

General Description of Work

The following work is included in this Contract:

Shaker Road Underpass Bridge: Cleaning and painting specified areas of structural steel and metal work, and all non-galvanized bearing assemblies, with a three coat NEPCOAT paint system along with all work incidental thereto in accordance with these Specifications.

Weymouth Road Underpass Bridge: Cleaning and painting specified areas of structural steel and metal work, and all non-galvanized bearing assemblies, with a three coat NEPCOAT paint system along with all work incidental thereto in accordance with these Specifications.

Bennett Road Underpass Bridge: Cleaning and painting specified areas of structural steel and metal work, and all non-galvanized bearing assemblies, with a three coat NEPCOAT paint system along with all work incidental thereto in accordance with these Specifications.

Interstate 295 Southbound Underpass Bridge: Cleaning and painting specified areas, limited to the new and disturbed areas of existing structural steel, with a multi-coat NEPCOAT paint system along with all work incidental thereto in accordance with these Specifications.

The following bridges are included in the Contract:

Bridge Name	Approximate Square Feet of Steel to be Cleaned and Painted	Mile	Town
Shaker Road Underpass Bridge	19,350	64.3	Gray
Weymouth Road Underpass Bridge	7,800	66.2	Gray
Bennett Road Underpass Bridge	8,150	68.6	New Gloucester
Interstate 295 Southbound Underpass Bridge	1,200	102.5	West Gardiner

Plans

The drawings included in these Contract Documents, and referred to as the Plans, show the general character of the work to be done under this Contract. They bear the general title "Maine Turnpike – Contract 2024.05 – Cleaning and Painting of Steel Structures – Shaker Road Underpass Bridge, Weymouth Road Underpass Bridge, Bennett Road Underpass Bridge, and Interstate 295 Southbound Underpass Bridge; Miles 64.3, 66.2, 68.6, and 102.5". The right is reserved by the Resident to make such minor corrections or alterations in the Plans as he deems necessary without change in the unit prices on the Schedule of Prices of the Proposal.

101.2.0 Definition

Holidays

The following is added after Memorial Day in the General Provisions:

Holiday	Duration
Memorial Day 2024 (5/27/24)	12:00 p.m. Friday 5/24/24 to 6:00 a.m. Tuesday 5/28/24
Juneteenth 2024 (6/19/24)	No traffic restrictions
Independence Day 2024 (Fourth of July)	6:00 p.m. Tuesday 7/2/24 to 6:00 a.m. Monday 7/8/24.
Labor Day 2024 (9/3/24)	12:00 p.m. Friday 8/30/24 to 6:00 a.m. Tuesday 9/3/24
Indigenous Peoples Day 2024 (10/14/24)	12:00 p.m. Friday 10/11/24 to 6:00 a.m. Tuesday 10/15/24

102.11.2 Curable Bid Defects

This Subsection is amended by the addition of the following:

(E) Missing or incomplete "Statement of Qualifications", "History of Contracts", and/or "Status of Contract on Hand" which are contained in the proposal package.

103.4.0 Notice of Award

The following sentence is added:

The Maine Turnpike Authority Board is scheduled to consider the Contract Award on March 28, 2024.

104.3.8 Wage Rates and Labor Laws

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

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

THIS DOCUMENT MUST BE CLEARLY POSTED AT ALL CONSTRUCTION SITES FUNDED IN PART WITH STATE FUNDS

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

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

2024 Fair Minimum Wage Rates -- Heavy & Bridge Cumberland County

Occupational Title	Minimum Wage	Minimum Benefit	Total
Brickmasons And Blockmasons	$35.00	$0.86	$35.86
Bulldozer Operator	$31.50	$7.53	$39.03
Carpenter	$30.65	$4.06	$34.71
Cement Masons And Concrete Finisher	$24.35	$15.65	$40.00
Commercial Divers	$26.50	$2.66	$29.16
Construction And Maintenance Painters	$27.50	$23.07	$50.57
Construction Laborer	$25.00	$4.68	$29.68
Crane And Tower Operators	$34.50	$4.29	$38.79
Crushing Grinding And Polishing Machine Operators	$23.00	$4.94	$27.94
Drywall And Ceiling Tile Installers	$26.20	$10.62	$36.82
Earth Drillers - Except Oil And Gas	$24.16	$2.53	$26.69
Electrical Power - Line Installer And Repairers	$38.93	$9.75	$48.68
Electricians	$33.41	$12.91	$46.32
Elevator Installers And Repairers	$68.38	$45.29	$113.67
Excavating And Loading Machine And Dragline Operators	$31.50	$3.08	$34.58
Excavator Operator	$35.00	$4.94	$39.94
Fence Erectors	$24.00	$2.05	$26.05
Flaggers	$20.00	$0.50	$20.50
Floor Layers - Except Carpet/Wood/Hard Tiles	$27.00	$6.21	$33.21
Glaziers	$37.00	$6.60	$43.60
Grader/Scraper Operator	$23.00	$1.99	$24.99
Hazardous Materials Removal Workers	$21.50	$1.54	$23.04
Heating And Air Conditioning And Refrigeration Mechanics And Installers	$32.00	$5.46	$37.46
Heavy And Tractor - Trailer Truck Drivers	$28.25	$3.63	$31.88
Highway Maintenance Workers	$20.00	$0.00	$20.00
Industrial Machinery Mechanics	$32.00	$0.96	$32.96
Industrial Truck And Tractor Operators	$30.00	$2.90	$32.90
Insulation Worker - Mechanical	$24.05	$3.59	$27.64
Ironworker - Ornamental	$27.75	$4.50	$32.25
Light Truck Or Delivery Services Drivers	$22.84	$1.25	$24.09
Millwrights	$31.00	$7.59	$38.59
Mobile Heavy Equipment Mechanics - Except Engines	$29.38	$3.44	$32.82
Operating Engineers And Other Equipment Operators	$28.00	$2.67	$30.67
Paver Operator	$25.30	$3.73	$29.03
Pile-Driver Operators	$35.00	$1.73	$36.73
Pipelayers	$28.50	$4.89	$33.39
Plumbers Pipe Fitters And Steamfitters	$29.75	$4.33	$34.08
Pump Operators - Except Wellhead Pumpers	$31.49	$32.08	$63.57
Radio Cellular And Tower Equipment Installers	$27.00	$3.86	$30.86
Reclaimer Operator	$27.03	$7.68	$34.71
Reinforcing Iron And Rebar Workers	$30.83	$24.97	$55.80
Riggers	$31.25	$7.68	$38.93
Roofers	$24.00	$3.35	$27.35
Screed/Wheelman	$29.25	$4.94	$34.19
Sheet Metal Workers	$27.38	$6.74	$34.12
Structural Iron And Steel Workers	$29.93	$5.74	$35.67
Tapers	$28.00	$1.71	$29.71
Telecommunications Equipment Installers And Repairers - Except Line Installers	$28.33	$6.08	$34.41
Telecommunications Line Installers And Repairers	$26.00	$2.65	$28.65
Tile And Marble Setters	$27.75	$6.73	$34.48

Welders are classified as the trade to which welding is incidental (e.g. welding structural steel is Structural Iron and Steel Worker)

Apprentices – The minimum wage rates for registered apprentices are the rates recognized in the sponsorship agreement for registered apprentices working in the pertinent classification.

For any other specific trade on this project not listed above, contact the Bureau of Labor Standards for further clarification.

Title 26 §1310 requires that a clearly legible statement of all fair minimum wage and benefits rates to be paid the several classes of laborers, workers and mechanics employed on the construction on the public work must be kept posted in a prominent and easily accessible place at the site by each contractor and subcontractor subject to sections 1304 to 1313.

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

A true copy

Attest: Scott R. Cotnoir

Scott R. Cotnoir
Wage & Hour Director
Bureau of Labor Standards

Expiration Date: 12-31-2024
Revision Date: 1-3-2024

THIS DOCUMENT MUST BE CLEARLY POSTED AT ALL CONSTRUCTION SITES FUNDED IN PART WITH STATE FUNDS

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

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

2024 Fair Minimum Wage Rates -- Heavy & Bridge Kennebec County

Occupational Title	Minimum Wage	Minimum Benefit	Total
Brickmasons And Blockmasons	$35.00	$0.86	$35.86
Bulldozer Operator	$31.50	$7.53	$39.03
Carpenter	$28.00	$6.74	$34.74
Cement Masons And Concrete Finisher	$22.67	$2.21	$24.88
Commercial Divers	$25.00	$1.85	$26.85
Construction And Maintenance Painters	$24.50	$2.67	$27.17
Construction Laborer	$24.51	$20.33	$44.84
Crane And Tower Operators	$32.90	$7.82	$40.72
Crushing Grinding And Polishing Machine Operators	$23.00	$4.94	$27.94
Drywall And Ceiling Tile Installers	$26.20	$10.62	$36.82
Earth Drillers - Except Oil And Gas	$24.16	$2.53	$26.69
Electrical Power - Line Installer And Repairers	$30.34	$4.61	$34.95
Electricians	$35.00	$9.35	$44.35
Elevator Installers And Repairers	$68.38	$45.29	$113.67
Excavating And Loading Machine And Dragline Operators	$27.00	$5.08	$32.08
Excavator Operator	$36.84	$29.51	$66.35
Fence Erectors	$24.00	$2.05	$26.05
Flaggers	$24.51	$20.33	$44.84
Floor Layers - Except Carpet/Wood/Hard Tiles	$27.00	$6.21	$33.21
Glaziers	$37.00	$6.60	$43.60
Grader/Scraper Operator	$23.00	$1.99	$24.99
Hazardous Materials Removal Workers	$21.50	$1.54	$23.04
Heating And Air Conditioning And Refrigeration Mechanics And Installers	$32.00	$5.46	$37.46
Heavy And Tractor - Trailer Truck Drivers	$25.00	$1.99	$26.99
Highway Maintenance Workers	$20.00	$0.00	$20.00
Industrial Machinery Mechanics	$32.00	$0.96	$32.96
Industrial Truck And Tractor Operators	$30.00	$2.90	$32.90
Insulation Worker - Mechanical	$24.05	$3.59	$27.64
Ironworker - Ornamental	$27.75	$4.50	$32.25
Light Truck Or Delivery Services Drivers	$22.84	$1.25	$24.09
Millwrights	$33.75	$8.49	$42.24
Mobile Heavy Equipment Mechanics - Except Engines	$29.56	$7.11	$36.67
Operating Engineers And Other Equipment Operators	$28.00	$2.67	$30.67
Paver Operator	$25.30	$3.73	$29.03
Pile-Driver Operators	$32.75	$1.95	$34.70
Pipelayers	$28.50	$4.89	$33.39
Plumbers Pipe Fitters And Steamfitters	$36.00	$20.11	$56.11
Pump Operators - Except Wellhead Pumpers	$31.49	$32.08	$63.57
Radio Cellular And Tower Equipment Installers	$27.00	$3.90	$30.90
Reclaimer Operator	$27.03	$7.68	$34.71
Reinforcing Iron And Rebar Workers	$22.67	$25.11	$47.78
Riggers	$31.25	$7.68	$38.93
Roofers	$24.00	$3.35	$27.35
Screed/Wheelman	$29.25	$4.94	$34.19
Sheet Metal Workers	$27.38	$6.74	$34.12
Structural Iron And Steel Workers	$29.00	$7.22	$36.22
Tapers	$28.00	$1.71	$29.71
Telecommunications Equipment Installers And Repairers - Except Line Installers	$28.33	$6.08	$34.41
Telecommunications Line Installers And Repairers	$25.50	$5.71	$31.21
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Appeal – Any person affected by the determination of these rates may appeal to the Commissioner of Labor by filing a written notice with the Commissioner stating the specific grounds of the objection within ten (10) days from the filing of these rates.

A true copy

Attest: Scott R. Cotnoir

Scott R. Cotnoir
Wage & Hour Director
Bureau of Labor Standards

Expiration Date: 12-31-2024
Revision Date: 1-3-2024

104.4.2 Preconstruction Conference

The following paragraph is added:

The preconstruction conference will be held after bid award to discuss the procedures to be used for all lead abatement, the coating application, the inspection hold points, the responsibilities and documentation methods of each party involved, all safety methods to be used, contingency plans, and all other areas relating to the adequate completion of the painting of this Contract. Present at this preconstruction conference shall be all parties directly involved in the lead abatement, paint application, and inspection of this Project including the Authority, all Quality Assurance personnel, the Contractor and/or subcontractors, and all Quality Control personnel.

104.4.6 Utility Coordination

This Subsection is amended by the addition of the following:

There are no utility facilities affixed to the subject underpass bridges. Aerial utilities cross the Turnpike adjacent to the underpass bridges. No utility adjustments are anticipated.

General

The Contractor must comply with all OSHA regulations pertaining to work adjacent to utility wires. The Contractor shall plan and conduct his work accordingly.

Utility Schedule:

The following utilities are located within the project limits and have been notified of the project by the engineer. If necessary, the Contractor shall ascertain the location of the existing utilities and any other necessary information by direct inquiry at the office of the following utility owners:

UTILITIES - GRAY
AT&T (Portland Office)
45 Forest Ave
Portland, ME 04101
Kevin Keady, Network Technician Specialist
207-239-2357
kk117w@att.com

Buckeye Partners LP
179 Lincoln St
South Portland, ME 04106
Steven Wing, Operation Manager
207-808-4506
swing@buckeye.com

Central Maine Power Company
57 Old Winthrop Rd
Augusta, ME 04330
Craig Bate, Distribution Construction Manager
207-578-2062
Craig.bate@cmpco.com

Charter Communications, Inc.
118 Johnson Rd
Portland, ME 04102
207-620-3410
dlpormeconstleadership@charter.com

Consolidated Communications of Maine Company
5 Davis Farm Rd
Portland, ME 04103
207-878-0854
Mdot_requests@fairpoint.com

Consolidated Communications of Northern New England Company LLC
5 Davis Farm Rd
Portland, ME 04103
207-878-0854
Mdot_requests@fairpoint.com

GoNetSpeed (South)
56 Campus Dr
New Gloucester, ME 04260
Jim Knight, Outside Plant Supervisor / Engineer
207-688-8284
Jim.knight@gonetspeed.com

Gray Water District
80 Shaker Rd
Gray, ME 04039
Bill Gardner, Superintendent
207-657-3500
w.gardner@graywaterdistrict.org

Town of Gray
24 Main St
Gray, ME 04039
Alec Dodd, Director of Public Works
207-657-3381
adodd@graymaine.org

ISM Solar Gray, LLC
940 Waterman Ave
East Providence, RI 02914
Mike Lucini, Vice President
401-435-7900
mlucini@ismgroup.com

Springfield Terminal Railway
1 Bell Crossing
Selkirk, NY 12158
Mike Sliper, Project Manager II
518-767-6081
Michael_sliper@csx.com

Unitil Corp.
376 Riverside Industrial Parkway
Portland, ME 04103
Derick Giroux, Project Leader
207-536-5663
girouxd@unitil.com

UTILITIES – NEW GLOUCESTER

AT&T (Portland Office)
45 Forest Ave
Portland, ME 04101
Kevin Keady, Network Technician Specialist
207-239-2357
kk117w@att.com

Buckeye Partners LP
179 Lincoln St
South Portland, ME 04106
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Consolidated Communications of Maine Company
5 Davis Farm Rd
Portland, ME 04103
207-878-0854
Mdot_requests@fairpoint.com

GoNetSpeed (South)
56 Campus Dr
New Gloucester, ME 04260
Jim Knight, Outside Plant Supervisor / Engineer
207-688-8284
Jim.knight@gonetspeed.com

Maine DOT Railroad
16 State House Station
Augusta, ME 04333-0016
Greg Gay, RR TOM
207-592-1766
Greg.gay@maine.gov

Maritimes Northeast Pipeline
547 Lincoln St
Richmond, ME 04357
Lara Bailey, Lands & Right of Way Advisor
207-737-8249
Lara.bailey@enbridge.com

New Gloucester Water District
Norman Chamberlain, Chairman
207-926-4126
Chair.ngwd@gmail.com

Town of New Gloucester
385 Intervale Rd
New Gloucester, ME 04260
Ted Shane, Public Works Director
207-926-4126
tshane@newgloucester.com

Springfield Terminal Railway
1 Bell Crossing
Selkirk, NY 12158
Mike Sliper, Project Manager II
518-767-6081
Michael_sliper@csx.com

St. Lawrence & Atlantic Railroad Co.
225 First Flight Drive, Suite 201
Auburn, ME 04210
Jason Birkel, Project Manager
207-753-4229
jbirkel@gwrr.com

Unitil Corp.
376 Riverside Industrial Parkway
Portland, ME 04103
Derick Giroux, Project Leader
207-536-5663
girouxd@unitil.com

Yarmouth Water District
181 Sligo Rd
Yarmouth, ME 04096
Eric Gagnon, Superintendent
207-846-5821
egagnon@yarmouthwaterdistrict.org

104.4.7 Cooperation With Other Contractors

This Subsection is amended by the addition of the following:

Adjacent contracts currently scheduled for the 2024 construction season include:

- 2023.03 – Route 122 bridge rehabilitation MM 74.0
- 2023.04 – High Street Emergency Vehicle Ramps MM 103.6
- 2024.04 – Exit 75 paving
- 2024.07 – Northern bridge repair - St. Lawrence & Atlantic Railroad, MM 74.5
- Gray Water District – Maine Turnpike crossing north of Shaker Road
- 2024.51 – Concrete Haunch Removal – Bennett Road MM 68.6 (Note: haunch removal is expected to be completed before the start of contract 2024.05)

105.242 Lead Paint

The Contractor shall note that the existing bridge structures contain lead-based paint. A copy of

the Lead Determination Report is attached as **Appendix A. The contractor shall implement all necessary programs and controls for handling coatings containing hazardous heavy metals. These programs and controls shall include the proper treatment, storage and disposal of the waste generated on the project unless it can be proved that the total concentration of leachable lead is less than 5mg/L when tested via TCLP.** The Contractor shall institute every precaution when working with materials coated with lead-based paints.

Lead Paint Removal

All lead-based paint and paint residue shall be removed, handled, stored and disposed of in conformance with all local, State and Federal laws and regulations governing lead-based paint.

The Contractor shall submit a project specific Health and Safety (OSHA) Plan and a Hazardous Waste Management Plan (EPA/DEP) a minimum of 21 days prior to undertaking the removal of lead-based paint.

Health and Safety Plan

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

Hazardous Waste Management Plan

The Hazardous Waste Management Plan submittal shall describe how the Contractor/licensed lead abatement subcontractor intends to manage the hazardous waste that will be generated, temporarily accumulated, stored, transported off-site and disposed; adhere to ordinances associated with the management of hazardous wastes; and ensure protection of the environment. See also Special Provision 506.11 Waste Management.

The Hazardous Waste Management Plan shall:

- **Sealed by a Certified Industrial Hygienist charged with maintaining the plan.**
- Be signed by the Contractor;
- State whether Contractor or licensed lead abatement subcontractor will be undertaking the work; and,
- State whether abated lead materials will be accumulated and stored on-site, or be transported to an Authority storage facility, if designated.

The Hazardous Waste Management Plan shall include (at a minimum) the following:

- Storage, Accumulation and Labeling Requirements:
    - All hazardous waste shall be managed in US DOT approved waste containers and stored in an approved fully-enclosed locking secured structure which has a firm, impervious floor

surface and secondary containment the capacity of which must exceed 20% of the total capacity of all containers used to store waste or 110% of the capacity of the largest container, whichever is greater.
  - The lockable secured structure shall be labeled "Danger- Unauthorized Personnel Keep Out" and "Hazardous Waste Storage Area".
  - The lockable secured structure shall be locked at all times when not being accessed.
  - All waste containers shall be labeled with the words "Hazardous Waste", the hazard (e.g., toxic, flammable, etc.), waste code(s), accumulation start date, container full date, generator information and site location.
  - Waste containers shall be kept closed unless waste is being added to the container.
  - Waste containers shall be 55 gallons or less.
  - The Contractor shall store and manage all hazardous waste, in conformance with MaineDEP regulations as detailed in Chapters 850 – 857 and EPA regulations as defined in 40 CFR 260 – 268.
  - All hazardous wastes are limited to an on-site storage time as outlined in the Contractor's provisional generator's permit but will not exceed 90 days from accumulation start date.

- Inspections (including frequency and checklist):

  - Inspections shall be performed each day the Contractor works.
  - Inspection checklist shall be similar to MaineDEP format (Refer to Appendix A1 of MaineDEP Handbook for Hazardous Waste Generators – January 2003)
  - A Daily Inspection Log shall be kept at the storage site and include the amount and type of hazardous waste transported, the date the waste was accepted at the storage site, and the project location where the waste was generated.
  - The Contractor shall provide the Authority with (2) keys or combinations for each locking secured structure for inspection purposes.

- Transport and DOT "Pre-Transport Requirements":

  - Specify the licensed hazardous waste transporter to be used.
  - Obtain Generator's EPA ID No. through coordination with the Authority.
  - US DOT – approved containers must be used for shipment.
  - Schedule MTA for signing Hazard Waste Manifest

- Recordkeeping Requirements:

  - Describe where at the jobsite the required records (e.g., inspection logs, training records, Lead Determination report/hazardous waste characterization, etc.) will be maintained.
  - Describe how and when copies of the required documents specified above will be transferred to the MTA Environmental Services Coordinator's office.

The Contractor shall provide documentation to the Authority that the employees who will be removing, handling, managing and/or directly supervising the hazardous waste operations have received required Resource Conservation and Recovery Act (RCRA) hazardous waste management training, and all training is current. **The contractor shall provide a minimum of one individual, holding a current SSPC C-5 competent person refresher training certificate, to act as the competent person for the abatement of all existing coating materials containing hazardous heavy metals.**

The lead based hazardous waste must remain on-site, unless the removal is being performed by a

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

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

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

105.8.2 Permit Requirements

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

At any time during the Contract, if the contractor anticipates disturbing earth, excavation or placing fill material, the Contractor shall submit a Limit Of Disturbance plan (including any additional erosion and sedimentation control measures needed) to the Resident for review and approval prior to any disturbance taking place:

- If the contractor proposes earth disturbance, the Resident shall have a minimum of five (5) working days to approve the LOD plan and then shall submit a Notice of Intent for MaineDEP approval. The approval may take a minimum of 21 working days.

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

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

106.9.1 Warranty by Contractor

NEPCOAT Paint System

The Contractor unconditionally warrants and guarantees that the NEPCOAT paint system Work will be free from warranty defects for two (2) years from the date of Final Acceptance. Final Acceptance

includes receipt of all conforming closeout documentation.

The cost of the Two-Year Coating System Failure Warranty will not be paid separately but shall be incidental to the various contract pay items.

General

The warranties shall include all costs associated with the Remedial work as approved by the Authority including but not limited to traffic control, surface preparation of structural steel,

containment system, disposal of hazardous material, field painting, and other incidentals required for the work.

The warranties apply to the entirety of the structural steel paint system applied by the Contractor. The warranted items will be assessed by visual inspection and destructive inspection as needed at the discretion of the Authority.

The structural steel paint system is considered defective if any of the following conditions are discovered within the specified warranty period:

1. The occurrence of visible rust or rust breakthrough, paint blistering, peeling, scaling or un-removed slivers.
2. Paint applied over dirt, debris, blasting media or rust products not removed during blasting operations.
3. Material deficiencies, application deficiencies, incomplete coatings (holidays), or coating thicknesses outside the thickness limits specified in the manufacturer's product data sheet submittals.
4. Damage to the coating system caused by the Contractor while removing scaffolding, netting, forms, hanger brackets, safety wires, or performing other work.
5. Not following the manufacturer's surface preparation and coating application requirements.

Exclusions to the warranty will be damage to the coating resulting from vehicle damage, fire, or other damage not caused by the Contractor or subcontractor.

If the Authority discovers any warranty defects during the warranty period, the Contractor agrees to promptly perform all remedial work at no additional cost or liability to the Authority.

The painting system will be inspected by an Authority representative the last month of the warranty period. Within (30) days of being notified of warranty defects, the Contractor shall submit to the Authority for approval a Remedial Work Plan including scope of work, conceptual work methods, schedule, construction phasing, and other significant aspects of the work. Unless otherwise provided by the Authority in writing, any work commenced prior to the Authority's approval of the Work Plan will be at the Contractor's sole risk. All warranty work shall be completed within (60) days of the Authority's acceptance of the Contractor's Remedial Work Plan or by June 1 of the following year (if the Remedial Work Plan is accepted after mid- October) for accommodating weather conditions.

Upon final inspection, satisfactory to the Authority, the Authority will issue a written acceptance of the remedial work. The Contractor warranties and guarantees all remedial work to be free from warranty defects for one (1) year after such acceptance.

107.1.0 Contract Time and Contract Completion Date

This Subsection is amended by the addition of the following:

All work shall be completed on or before November 22, 2024. The project shall be substantially complete by October 10, 2024.

107.1.1 Substantial Completion

This Subsection is amended by the addition of the following:

Substantially complete shall be defined by the Authority as the following:

- All bridge painting work, including final touch up, shall be complete and accepted.
- No further lane closures are required. Shoulder closures will be permitted, except during periods of inclement weather.
- Soil samples will have been taken and delivered to the lab for analysis.

All disturbed slopes shall have been loamed, seeded, mulched and erosion control mesh blanketed and/or protected temporary erosion control mix where necessary.

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

107.4.7 Limitations of Operations

The contractor's personnel and equipment shall remain behind drums or barricades at all times. A minimum traffic lane width of 16'-0", excluding the drums, is required during peak traffic periods (3 PM – 7 PM northbound, 7 AM – 9 AM southbound). A setback of 4'-0" between the traffic lane (i.e., the side of the drum nearest to traffic) and any work activities within the work zone must be maintained at all times. See Appendix C for more details. Additional setups to contain and remove paint, and to coat the prepared steel may be required to maintain the minimum traffic lane widths.

The Contractor shall submit a schedule to the Resident at least (2) weeks prior to beginning work when more than (1) crew or multiple crews will be working on the project at more than one bridge location at a time.

110.2.1 Bonds

The following is added to the first paragraph:

Paint system specific warranty requirements are outlined in section 106.9.1. The two-year paint system warranties shall be included in the Performance and Payment Bonds issued for this contract.

SPECIAL PROVISION

SECTION 506
PAINTING OF STRUCTURAL STEEL
(Lead Abatement and NEPCOAT Coating Application)

All requirements in this specification are the responsibility of the Contractor unless noted otherwise. The provisions of the MaineDOT Standard Specification – Section 506 Shop Applied Protective Coating – Steel do not apply to this Special Provision.

506.01 Description

This specification covers the field cleaning of and application of a protective coating system to the specified areas of existing structural steel on the Shaker Road Underpass Bridge – Mile 64.3, Weymouth Road Underpass Bridge – Mile 66.2, Bennett Road Underpass Bridge – Mile 68.6, and Interstate 295 Southbound Underpass Bridge – Mile 102.5.

The work shall consist of furnishing all supervisory personnel, including competent person(s), labor, tools, equipment, containment, scaffolding, protection of public and private property, Quality Control activities, materials, and incidentals necessary for satisfactory completion of the Work. The specific areas to be cleaned and coated are as follows:

Shaker Road Underpass Bridge – Mile 64.3, Gray:

All steel areas, including beams, beam splices, diaphragms, diaphragm connection plates, bearing stiffeners, angle braces, bearing assemblies, downspouts, and lateral bracing, but excluding the galvanized bolsters.

Weymouth Road Underpass Bridge – Mile 66.2, Gray:

All steel areas, including beams, beam splices, diaphragms, diaphragm connection plates, bearing stiffeners, angle braces, bearing assemblies, downspouts, and lateral bracing, but excluding the galvanized bolsters. Galvanized overhead toll plaza sign supports attached to the concrete fascia and exterior fascia girders at Weymouth Road shall be protected at all times during cleaning and painting operations. The sign shall not be obstructed at any time.

Bennett Road Underpass Bridge – Mile 68.6, New Gloucester:

All steel areas, including beams, beam splices, diaphragms, diaphragm connection plates, bearing stiffeners, angle braces, bearing assemblies, downspouts, and lateral bracing, but excluding the galvanized bolsters.

Interstate 295 Southbound Underpass Bridge – Mile 102.5, West Gardiner:

Cleaning and painting specified areas, limited to the new and disturbed areas of existing structural steel, with a multi-coat NEPCOAT paint system along with all work incidental thereto in accordance with these Specifications. Photos of the existing conditions can be found in Appendix C.

The existing coating system on the two new girders installed in 2018 is a Sherwin Williams system as follows: Organic Zinc Rich Primer – Zinc Clad; Epoxy - Macropoxy; High Solids - Polyurethane, as verified on the bridge by the Coating Identification markings i.e. 12/18 SSC (15) – 07 OZ # 14272, and further verified by the NEPCOAT List B. The same epoxy intermediate coat, and polyurethane Topcoat shall be used for coating the surfaces.

The nuts on A325 structural bolts that were used at all new connection points have residual bolt thread lubricant remaining. The bolt thread lubricant shall be removed in entirety prior to coating application. After lubricant removal, the entirety of the newly installed bolts, nuts and washers shall be solvent cleaned to SSPC SP-1 prior to the application of the epoxy intermediate coat.

Surfaces Currently in Primer:

The existing Organic Zinc Rich Epoxy Primer and the one-inch-wide stepped-up Epoxy Midcoat shall be roughened for the development of proper inter-coat adhesion.

After surface preparation, solvent clean the prepared surface to SSPC – SP1 standard to remove all contamination.

Mask the existing Polyurethane Finish Coat adjacent to the repair areas.

Apply (1) Full Coat of Macropoxy Midcoat at 3 to 10 mil range, and (1) Full Coat of High Solids Polyurethane Topcoat at a 3 to 4 mil range. Note, brush and roller application may require multiple coats to achieve specified film thickness and uniformity of appearance.

Surfaces with No Coating (Bare Steel):

Any corroded areas existing adjacent to limits of the repaired areas shall be cleaned to SSPC SP-11 and these areas shall be feathered a minimum of 1 inch into sound, in-tact coating. Feathered areas shall expose the epoxy intermediate coat prior to stepping up to the urethane finish coat to allow for a seamless transition from the repaired area to the intact, coated area.

Solvent clean the prepared surface to SSPC – SP1 standard to remove all contamination generated during surface preparation.

Mask the existing intact Polyurethane Topcoat adjacent to the repair areas.

Apply (2) Full Coats of Macropoxy Midcoat at 3 to 10 mil range, and (1) Full Coat of High Solids Polyurethane Topcoat at a 3 to 4 mil range. Note, brush and roller application may require multiple coats to achieve specified film thickness and uniformity of appearance.

Disturbed Surfaces on Top Flange of Girders G7 and G8:

Disturbed surfaces on the underside of the top flanges are approximately one-inch diameter circles, where the existing Midcoat and Topcoat has delaminated down to intact Organic Zinc Rich Primer.

Power tool clean to SSPC – SP 3 standard to remove corrosion and feathered in to sound adjacent coatings.

Solvent clean the prepared surface to SSPC – SP1 standard to remove all contamination generated during surface preparation.

Mask the existing intact Polyurethane Topcoat adjacent to the repair areas.

Apply (1) Full Coat of Macropoxy Midcoat at 3 to 10 mil range, and (1) Full Coat of High Solids Polyurethane Topcoat at a 3 to 4 mil range. Note, brush and roller application may require multiple coats to achieve specified film thickness and uniformity of appearance.

All repaired areas shall be subject to the same quality processes and procedures contained within this document. This includes inter-coat cleanliness, dry film thickness, ambient conditions during application and cure, etc.

506.02 General

All identified structural steel requires the complete removal of existing rust, mill scale and coatings which may contain lead, **arsenic, cadmium**, and hexavalent chromium, by abrasive blast cleaning.

The Contractor shall bear full responsibility for final identification of any hazardous materials contained within the coating system receiving abatement. The contractor shall also bear the responsibility for implementing the necessary programs and plans required for abating the metals identified in the system(s). The full Report of Analytical Results can be found in Appendix A.

Apply a coating system to all the cleaned surfaces. The coating system shall be selected from the Northeast Protective Coating Committee (NEPCOAT) Qualified Products List B - Organic Primer, Three Coat System. The list may be found through NEPCOAT's web page: http://www.nepcoat.org.

Contractors and Subcontractors involved with the removal of lead based paint and the field application and touch-up of the coating systems shall be qualified in accordance with SSPC QUALIFICATION PROCEDURE NO. 1, Standard Procedure for Evaluating Painting Contractors (Field Application to Complex Industrial Structures) and SSPC QUALIFICATION PROCEDURE NO. 2, Standard Procedure for the Qualification of Painting Contractors (Field Removal of Hazardous Coatings from Complex Structures) prior to Bid opening and shall remain qualified throughout the duration of the Contract. Copies of current certificates issued by the Qualifying Agency shall be submitted with the Bid package.

Perform lead abatement in compliance with all applicable federal, state, and local regulations, including the current version of 29 CFR 1926, OSHA Construction Industry Health and Safety Standards, and in particular, the OSHA Lead in Construction Standard (29 CFR 1926.62).

Assure that the latest copies of the following documents are on site and available at all times. Applicable parts of the documents are enforceable as part of the Contract:

- SSPC Vis 1, Visual Standard for Abrasive Blast Cleaned Steel.
- SSPC Vis 3, Visual Standard for Power and Hand-Tool Cleaned Steel.
- SSPC Guide 6, Guide for Containing Surface Preparation Debris Generated During Paint Removal.
- SSPC PA-17 Procedure for Determining Conformance to Steel Profile/Surface Roughness/Peak Count Requirements.
- SSPC Guide 7, Guide to the Disposal of Lead-Contaminated Surface Preparation Debris.

- 40 CFR 60, Appendix A, Method 22, Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Fires.
- 40 CFR Part 50 Appendix B, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere (High-Volume Method).
- 40 CFR Part 50 Appendix G, Reference Method for the Determination of Lead in Suspended Particulate Matter Collected from Ambient Air.
- SSPC Guide 16, Guide to Specifying and Selecting Dust Collectors.
- SSPC Technical Update TU-7, Conducting Ambient Air, Soil, and Water Sampling During Surface Preparation and Paint Disturbance Activities.
- 29 CFR 1926, OSHA Construction Industry Health Standards.
- SW 846, Test Methods for Evaluating Solid Waste – Physical/Chemical Methods
- Method 1311, Toxicity Characteristic Leaching Procedure (TCLP)
- Department of Environmental Protection's *Handbook for Hazardous Waste Generators.*
- Maine Department of Environmental Protection's *Hazardous Waste Management Rules.*

Supply the Resident with the applicable and current product data sheets and material safety data sheets MSDS) before any coating work is performed. Also, obtain from the manufacturer written procedures for touch-up including acceptable coating materials. If the coating manufacturer recommends a coating material for touch-up that is different from the coating material chosen by the Contractor, it will be supplied at no additional cost to the Authority. Obtain in writing from the coating manufacturer, and provide to the Resident, a chart or table listing minimum and maximum recoat times for the primer and intermediate coat over the expected range of temperatures and relative humidity.

The primer color and the blasted steel shall be contrasting colors, the primer color and stripe coat color shall be contrasting colors as approved by the manufacturer, and the primer color and intermediate coat shall be contrasting colors. The finish topcoat color shall be green and match the following AMS-STD-595 (previously Federal Standard 595C), light green, color number: 14272.

After completion of the coating work, the completion date (month and year), NTPEP System No. (provided on the NEPCOAT Qualified Products List), the type of coating system used (Organic Zinc = OZ), and top coat federal color number shall be stenciled on the inside of the fascia beams, at the locations designated by the Resident, in four inch letters and numbers (for example: October 2018, NEPCOAT SSC 11-03, OZ E U, Fed Color 14272). The paint used for this marking shall be black polyurethane or another paint approved by the Resident. The Contractor shall submit in writing to the Resident the proposed identification layout for approval prior to stenciling.

506.03 Quality Control

The Contractor is responsible for all aspects of the quality of the Work, including labor, equipment, materials, incidentals, processes, construction methods and Quality Control. Quality Control (QC) is the planned and specified actions or operations necessary to produce an end product that Conforms to the requirements of the Contract and includes inspections and testing for process control to the extent determined necessary by the Contractor. All costs associated with QC activities shall be considered incidental to the related Pay Items.

506.31 Submittals

The Schedule of Work shall be in conformance with Standard Specification Section 107.4, Scheduling of Work, unless there is a Special Provision which supersedes the Standard Specification.

All Plans and submittals from the Contractor will be reviewed by the Authority in accordance with Section 105.7, Working Drawings, of the Standard Specifications.

506.32 Quality Control Qualifications

Provide QC personnel trained and certified by: The National Association of Corrosion Engineers (NACE) – International: Coating Inspector Program Level 1 (minimum); SSPC BCI Coatings Inspection Training and Certification for the Bridge Industry (Level I without certification), or Level II. **The contractor shall also employ a Quality Control Supervisor retaining whom retains the ultimate responsibility for executing the quality control processes and procedures for the duration of the project. These individuals shall at a minimum be trained and certified by: NACE International: Coating Inspector Program Level III or SSPC BCI Coating Inspector Program Level II.** If the Resident determines that the Contractor is not performing the QC function properly, the Contractor will be given a written warning. If the Resident finds that the QC function is being improperly performed, for the same reason, the Contractor will be required to retain the services of a third-party NACE/SSPC BCI certified inspector, at no additional cost to the Authority. Discovery by the Authority of a pattern of rework for the same items would be considered improper performance of the QC function.

506.32 Quality Control Plan

Submit a QC Plan to the Authority for review at least 21 days prior to the beginning of any removal of paint. The QC plan shall include: The names of all the Contractor's on-site representatives, including the NACE/SSPC BCI certified inspector, who will be responsible for the inspection and the acceptance of the Contractor's work; the definition of hold points, from pre- surface preparation inspection to final inspection; the format and submittal process for daily work reports and coating/DFT reports; and the process for rework.

Develop a Job Control Record (JCR) to systematically organize all reports, tests, test locations, test results, Non-Conformance Reports, final acceptance, and other documents deemed necessary by the Resident.

Record the following in the JCR as applicable:

- Daily inspection reports including location of the work, personnel, and equipment.
- Surface preparation - cleanliness and anchor profile.
- Environmental conditions – ambient temperature, surface temperature, relative humidity, dew point.
- Condition of the containment
- Coating batch and/or lot number, date of manufacture and shelf life.
- Mixing/thinning
- Dry Film Thickness (DFT) for each coat.
- Cure data-time/temperature/relative humidity.
- Final inspection and acceptance.
- All other job documentation generated by the Contractor.

Submit the format for the JCR and sample forms to the Resident for review prior to beginning application of protective coating.

Violation of the QC Plan may result in a suspension of work. If the Authority orders a suspension,

in writing, work shall not resume until the Contractor provides a plan, which is acceptable to the Authority, describing how compliance will be restored and maintained. A suspension resulting from the Contractor's failure to adhere to the QC Plan shall be considered an Inexcusable Delay.

506.34 Surface Preparation / Coating Plan

Provide written procedures (preparation plan) for the surface preparation, the remediation of soluble salts, and coating application and repair. The plan shall include a description of the equipment that will be used for surface preparation and coating. The plan shall also identify the type and brand name of abrasive proposed for use; provide Safety Data Sheets (SDS) for proposed abrasive. Also, include the surface preparation methods and materials to be used in "sensitive areas", e.g. areas in close proximity to galvanized members, bearings, utility hangers, & utilities, etc. If any of the areas that are determined to be sensitive by the Authority are damaged due to surface preparation practices, the Contractor will be responsible for the repair of all damage at no additional cost to the Authority.

The preparation plan shall identify the methods of protection or work isolation procedures that will be followed to protect surrounding structures, equipment, galvanized bridge deck members, utility cables, etc. and property from exposure to surface preparation and paint debris. The Contractor is responsible for any damage caused by surface preparation.

All grease, oil, chlorides, salts, and any other foreign matter must be removed prior to removal of any existing paint.

506.35 Containment Plan

Provide a containment plan to the Authority for review. Do not begin the erection of containment system(s), or paint disturbance activities until review by the Authority has been completed.

No containment system or part thereof, including equipment, shall extend below the bottom flange over an open roadway when there is no lane closure. All work platforms or scaffolding must be secured by either steel cable or chain, use of rope(s) is prohibited.

Prepare detailed drawings and structural analysis stamped by a Professional Engineer (PE) licensed in the State of Maine. Install the containment in accordance with the drawings stamped by the Contractor's PE. Do not begin surface preparation until the Contractor's PE or approved representative has field verified the proper installation of each and every platform or suspended cable containment system installed within this Contract. Perform all surface preparation and painting in the approved containment system, conforming to the latest SSPC Guide 6, Guide for Containing Surface Preparation Debris Generated During Paint Removal Operations, for the specified level of cleaning, as applicable.

The Contractor is responsible for ensuring the containment meets all OSHA, federal and state regulations. Throughout the entire Project, work shall only be conducted within approved containment enclosures. The proposal shall be sufficiently detailed to show conformance with the requirements of SSPC Guide 6, Class 1A containment specifications. The Containment Plan shall also describe, in detail, the Contractor's methods of protecting galvanized bridge members**, existing galvanized bolters**, existing utilities, **existing sign brackets,** etc. The Contractor shall be responsible for all damage incurred. The Containment Plan shall include the following information and requirements, at a minimum:

A. Detailed drawings and structural analysis, prepared and stamped by a PE licensed in the State of Maine.

B. Detailed design calculations stamped by a PE licensed in the State of Maine for the Contractor's operation including all construction loads applied to the structure. The design shall use the latest editions of the AASHTO LRFD Bridge Design Specifications. **The design load or current capacity of the bridge shall not be exceeded, without additional calculations that show capacity beyond the design load or current capacity.** The applied loads from the proposed paint containment system (enclosures, work platforms, collected waste product, equipment, etc.) shall not exceed the allowable resistance in the **operating condition** of any bridge member.

C. The Contractor shall determine the wind speed above which damage to the existing structure(s) will result from wind loading on the containment system. If actual wind speeds exceed this design wind speed, the Contractor shall immediately make provisions to properly relieve the containment wind loading. The process for relieving the wind loading shall not release any of the lead paint waste. The Contractor may redesign/reconfigure the containment enclosure(s) or suspend operations until the actual wind speeds fall to levels below the design wind speed. Any release of pollutants from the containment enclosure(s), in excess of applicable state or federal limits, to the surrounding environment due to containment failure will result in the immediate suspension of work. Prior to resuming containment failure will result in the immediate suspension of work. Prior to resuming work, the Contractor shall take appropriate actions to abate the discharge and obtain the Authority's concurrence on a plan of action to prevent reoccurrence. The time and costs associated with any delays and clean-up, modifications, and rebuilding of the containment enclosure(s) resulting from wind damage or associated with any actions required to prevent any reoccurrence of release of pollutants caused by wind loads shall be borne by the Contractor. Any delays due to the suspension of work or due to containment failure, as the result of wind loads, shall be considered Inexcusable Delays. The Contractor shall monitor and document actual wind speeds on the existing structure(s), as appropriate, to ensure the safety of the existing structure(s); the cost of all wind monitoring shall be incidental to related Contract Pay Items.

D. A plan for staging, installing, moving, and removing the containment and the methods of attachment that will be used. Attachment points to main framing members only (main girders, floor beams, truss members may be allowed with prior approval from the Resident) will be allowed. **No tapping or drilling into the existing bridge concrete will be allowed.** The plan shall include the methods of access that will be provided to work areas inside containment, locations of safety lines, locations of containment entryways, etc.

E. Detailed plans for lighting the inside of the containment for surface preparation, painting, and inspection. Provide work area illumination as follows:

Work Area Illumination Requirements in Foot Candles		
Description of Work	Minimum	Recommended
General Work Area Illumination	10	20
Surface Preparation and Coating Application	20	50
Inspection	50	200

Provide a light meter that measures illumination in foot candles. Failure to provide at least the minimum illumination will be considered denial of access to the work and may result in rejection of the work by the Resident.

F. Detailed plans for maintaining the environmental conditions required during coating application and curing, including monitoring, measuring, and documenting environmental conditions.

G. Detailed plans for the collection and removal of accidental spills or discharges.

H. Technical data sheets, specification sheets and any other information needed to thoroughly describe the containment plan, materials, and containment and ventilation equipment proposed for use.

506.36 Environmental Protection Plan

Thirty days prior to the initiation of on-site work, submit to the Authority for review and acceptance an Environmental Protection Plan that establishes programs for the monitoring activities that will be undertaken on the Project. This plan shall include written programs to address the following:

A. *Regulated Area Monitoring and Maintenance.* For establishing and maintaining regulated areas around activities which could generate airborne emissions of lead or other toxic metals.

B. *High Volume Ambient Air Monitoring.* The Contractor shall contract with an independent environmental monitoring firm to conduct high volume ambient air monitoring for TSP-lead to assure compliance with this item and any applicable state and local regulations. Have the monitoring begin at least 24 hours prior to any abrasive blasting, for a baseline. **This baseline monitoring shall be performed prior to abrasive blasting on each individual structure.** Procedures for the monitoring which confirm that the monitoring equipment is properly calibrated, sited, and operated; filters are properly handled and transported; the laboratory analysis is performed correctly; and that all monitoring, calculations, documentation, and forms will be provided directly to the Authority by the monitoring firm, with copies to the Contractor. Prior to any sampling, the Contractor shall clearly identify proposed monitor locations, including what corrective action will be implemented immediately, in the event of unacceptable results.

C. *Ground (Soil) Evaluations*. For inspection of the ground and soil prior to commencement and upon completion of the Work to assure that the ground has not been negatively impacted by Project activities. This shall include each bridge site and any areas used to store equipment and waste. Contract with an independent environmental monitoring firm, staffed with a Maine Certified Geologist, to conduct sampling and analysis of the soil to determine whether it has been impacted by Project activities. Environmental data captured from the waste storage areas prior to use will be incorporated into the required hazardous waste closure efforts described in Section 506.11.

The ground (soil) will be considered to have been impacted by project activities based on the analysis as described below:

1. Visible paint chips, spent abrasive, or debris are present on the ground.

2. The ground (soil) is considered to have been impacted by project activities at site specific locations based on 50 percent increases over the pre-job lead concentration. For example, if the pre-job total lead concentration is 200 parts per million (ppm) at a specific sampling location, an impact is considered to have occurred if the post-job lead concentration results in an increase of 100 ppm or more.

3. If the laboratory analysis or visual assessments show the soil to have been impacted by project activities, as directed by and at no additional cost to the Authority, conduct the necessary cleanup or remediation.

   The plan shall clearly identify proposed soil sampling locations and define the corrective action(s) that will be taken in the event of unacceptable results. Further information on the procedures that the Contractor will use to meet the requirements for closure of the hazardous waste storage areas as define by MDEP regulations in Chapter 851, shall also be included. All monitoring calculations, documentation, and forms will be provided directly to the Authority by the monitoring firm.

D. *Remediation of Ground (Soil).* In the event that post-Project inspection, sampling or analysis show unacceptable results, outline what steps will be taken to accomplish the necessary clean- up or remediation of the ground (soil), as appropriate, to satisfy all applicable regulatory agencies. Any clean up measures shall be at no additional cost to the Authority.

E. *Final Cleaning/Clearance Evaluations.* Procedures and methods that will be used to conduct and document final Project clean-up, and final visual cleanliness inspections and evaluations. This process is to assure that the Project area and surrounding equipment, structures, soil, water, and sediment along the riverbanks have not been negatively impacted by Project activities.

F. *Laboratory Qualifications.* Provide the name of the laboratory and/or firm that will be used for analysis of regulated area exposure monitoring, worker exposure monitoring, high volume ambient air monitoring and waste and soil samples, as required. Provide documentation that this firm is American Industrial Hygiene Association (AIHA) accredited for metals analysis and has successfully participated (previous 12 months at a minimum) in the AIHA ELPAT program.

G. *Worker Protection Compliance Program.* A Project-specific compliance program, prepared under the direction of, and signed and sealed by, a Certified Industrial Hygienist (CIH), for the protection of workers from lead, in accordance with 29 CFR 1926.62, and other toxic metals in the paint. Include the name, experience, and qualifications of the competent person who will be making routine inspections of Project activities to ensure compliance with the program. If Subcontractors are operating under a separate program, include the program with the submittals.

506.37 Pre-Production Meeting

Coordinate a pre-production meeting with the Authority's Resident at least two weeks prior to the beginning of the removal of the existing coating. Provide two weeks' notice to the Authority prior to the meeting. The meeting agenda will include procedures to be used for all lead abatement, the coating application, the inspection hold points, the responsibilities and documentation methods of each party involved, all safety methods to be used, contingency plans, and all other areas relating to the adequate completion of the painting of this Contract. Present at this pre-production meeting shall be all parties directly involved in the lead abatement, paint application, and inspection of this Project including the Authority, the Contractor and any Subcontractors, all Quality Control personnel, coating technical representatives, the Authority's hazardous waste representative, a representative from the Contractor's hazardous waste transporter and any additional stakeholders who may have a direct impact on the completion of this Project. The Contractor shall be responsible for ensuring that all applicable personnel working directly, or indirectly, for the Contractor be present at this meeting.

506.04 Quality Assurance

The Authority will perform Quality Assurance (QA). QA may be accomplished by reviewing QC reports provided by the Contractor, by performing random inspections of work previously inspected by the Contractor and/or by randomly accompanying the Contractor's inspector during QC inspections and testing.

Provide the Authority with **notification (minimum ½ hour notice)** to perform QA inspections of the Work at the following hold points, as a minimum, **prior to any subsequent operation being performed:**

A. Surface Pre-Cleaning – Documented verification that all visible contaminates, grease, oil, and debris have been removed. Documented verification that all chlorides and other soluble salts have been remediated to below acceptable levels.
B. Protective Coverings – Visual verification that protective coverings have been utilized where appropriate to allow for surfaces and fixtures which are outside of the cleaning and coating scope of work to remain in their original condition.
C. Ambient Conditions – Monitoring and documented verification that air and surface temperatures, relative humidity and dew point are adequate for the work being performed under the specified conditions.
D. Compressed Air Cleanliness – Documented verification that all operations requiring compressed air are being performed without the presence of moisture or oil in the air.
E. Surface Preparation – Documented verification that abrasive utilized meets the requirements of this special provision and that the abrasive contains no oil or water contaminates. Documented verification that the cleaned substrate has received the proper degree of cleaning and has been adequately profiled by the type and size of abrasive chosen.
F. Mixing and Thinning of Coating Materials – Documented verification that the coating materials used are the specified materials, that multiple components have been adequately mixed, agitated and thinned, sweat-in times have been observed and materials have been utilized within their shelf and pot lives.
G. Coating Application – Documented verification that equipment utilized for coatings application is clean and adequate for the performing of the work, application techniques allow for minimal film defects and that wet film thickness is appropriate for adequate cure while allowing for minimal potential rework do to improper application.
H. Dry Film Thickness – Documented verification that each coat has been applied within the specified thickness parameters.
I. Intercoat Cleanliness – Verification that integrity and cleanliness of each coat is sufficient to receive the subsequent coat. Verification that each coat is free of dirt, oil/grease, dryspray, overspray and any other contaminant which could be considered potentially detrimental to the cure of the subsequent coat.
J. Recoat Times – Documented verification that currently applied liquid coating has been allowed to cure for the minimum amount of time required but not allowed to cure for so long that the maximum amount of time has elapsed before application of the subsequent coat. This applies to all liquid coating materials, including the stripe coat.
K. Final Inspection – Documented verification that the entire system has been treated in accordance with this special provision and is also visually compliant.
L. Pre-cleaning/SP-1 Solvent cleaning prior to abrasive blasting – Ambient conditions during abrasive blast cleaning. Surface preparation: surface cleanliness and surface profile, removal of surface imperfections and removal of spent abrasive, dust and debris generated

during cleaning. Ambient conditions prior to coatings application Recording of batch/lot numbers for the individual components of the applied system. Mixing, thinning, sweat-in time, pot life, shelf life, etc. for all coating materials utilized. Ambient conditions during coatings application and cure.

M. Coating application verification – Coating mixing, visual inspection of applied coating, inter-coat cleanliness, dry-film thickness.

N. Recoat Windows.

O. Repeat D-I for each subsequent coat.

P. Final inspection of final coat.

If the Authority discovers Unacceptable Work at any time prior to Final Acceptance, the Contractor shall repair, replace, or otherwise bring the Unacceptable Work into conformance with the Contract, at no additional cost to the Authority. Refer to Standard Specification Section 107.9, Project Closeout, for procedures leading up to Final Acceptance.

Provide all of the inspection and testing equipment needed to verify the quality of the surface preparation and coating process, including, but not limited to **all consumables, batteries, replica tape, salt test kits, respirator cartridges, etc**. This equipment shall be made available for use by the Authority at all times. All equipment shall be properly maintained and kept in working order by the Contractor.

Provide access and railing in compliance with OSHA standards for representatives of the Authority to all work locations where cleaning or coating application may be in progress, for the purpose of QA. The Contractor is also responsible for providing adequate lighting for QA purposes, at no additional cost to the Authority.

506.04 Protective Measures

During surface preparation and field painting of the existing structural steel, provide adequate safety measures for the protection of the public and surrounding area against damage due to paint drippings, paint spatter, over-spray, falling objects, etc. The Contractor is fully responsible for property damage or personal injury which may result from operations incidental to surface preparation of the structural steel and the field application of the coating system. The coating system shall be protected at all times during application and curing to prevent contamination caused by construction or traffic activities. No coating material shall be stored on the bridge structure, or under the bridge structure.

506.05 Surface Preparation

It is expected that chlorides and salts are present on the structures, especially at corrosion sites **and joints.** Before existing coating is removed, the contaminants shall be remediated to a level of 7 µg/cm2 or less. Acceptable methods of removing contaminants from the coating are steam cleaning or High-Pressure Water Cleaning (5000-10,000 psi) **with a submitted and approved detergent.** After cleaning, test for chlorides and soluble salts. If the chlorides and soluble salt level exceeds 7 µg/cm2, continue cleaning until acceptable levels are achieved. Record the results in the JCR. After abrasive blast cleaning and immediately prior to the application of the primer coat, test the bare substrate for chlorides and soluble salts and meet the level specified above. Record the results in the JCR. All costs associated with soluble salt remediation and testing **shall be considered incidental to the related Pay Items.**

Test for soluble salts at a minimum of five locations per bridge span **at observed corrosion sites and/or joints**, or as directed by the Resident. If after the initial testing has been done, it appears that no unacceptable levels of chlorides and soluble salts are present, the Resident may reduce the number of tests **upon written request of the Contractor**. The Resident is not obligated to **reduce the testing frequency.**

The abrasive blast media shall meet the requirements of *SSPC-AB 1, AB 2, or AB 3* **as applicable.** The anchor profile shall be angular and meet the requirements of the coating manufacturer's published data sheet.

Abrasive blast clean the steel in accordance with *SSPC-SP 10, Near-White Blast Cleaning* except that inaccessible areas and sensitive areas as designated **in writing** by the Resident shall be cleaned in accordance with *SSPC-SP 11, Power Tool Cleaning to Bare Metal.* After abrasive blast cleaning visually inspect the substrate for fins, tears, delamination, and other unacceptable discontinuities. Remove unacceptable discontinuities with a grinder or other suitable power tool. **After removal of the defect(s),** blast the affected area(s) to develop an acceptable anchor profile.

Exercise care to avoid any nicking or gouging of the steel during rust removal. Nicks and gouges are cause for a suspension of activities until appropriate adjustments are made to prevent a reoccurrence. Repair damage to steel caused by surface preparation.

Blow down or vacuum residual dust **off** the blasted substrate. Solvent clean any visible contamination that may result from handling, inspection or other activities that may inadvertently leave contaminants on the surface of the **cleaned** steel.

The allowable time between abrasive blast cleaning and primer application shall not exceed the Manufacturer's Product Data Sheet or 12 hours, whichever is less. If **this window is exceeded or any visible** rust-back occurs, re-blast and **allow for QA inspection of the entire prepared substrate** prior to application of primer.

Use SSPC VIS.1 for abrasive blast cleaned substrate and SSPC VIS.3 for hand or power tool cleaned substrate to determine acceptable surface cleanliness. **Should a conflict occur between the pictorial portion of the standard and the written portion of the same standard, the written portion shall prevail.**

Measure the anchor profile in accordance with ASTM D 4417 Method C - (replica tape). If the anchor profile fails to meet the minimum requirements, re-blast the substrate until the minimum required anchor profile is achieved. If the anchor profile exceeds the maximum allowed, **work is to stop, and the Contractor is to** generate a Non-Conformance Report (NCR) describing the condition of the substrate and a proposed solution and submit it to the Resident **for review and approval.**

The required number of measurement locations shall be in accordance with SSPC PA-17 “Procedure for Determining Conformance to Steel Profile/Surface Roughness/Peak Count Requirements” (a minimum of three locations per each work shift or twelve-hour period, whichever is shorter). The Resident may require additional anchor profile testing of the substrate on every plane of each beam or girder. Record the location and results in the JCR. Label the replica tape (location, profile, etc.) and affix the tape to the JCR. Provide copies to the Resident. Any change in the items or personnel listed in Table B1 (as applicable) between acceptance of surface preparations will require additional testing as directed by the Resident.

TABLE B1
PROCESS CONTROL ITEMS
FOR ABRASIVE NOZZLE BLAST CLEANING

1	Worker performing abrasive blast cleaning
2	Blast nozzle type
3	Blast nozzle size
4	Number of nozzles operating from same compressor
5	Abrasive manufacturer
6	Abrasive type, hardness and physical shape (e.g., steel grit, steel shot, or ratio of mix, or type of mineral abrasive, such as garnet, coal slag, etc.)
7	Abrasive size (sieve size)
8	Air pressure at nozzle
9	Blast hose length (as a range)
10	Blast hose diameter
11	Compressor size (CFM)
12	Air pressure at compressor

506.61 Pre-Production Surface Preparation Test Sections

Prepare test sections prior to production surface preparation. Prepare at least one test section for each specified degree of surface preparation. Test sections should be at least 1 square meter in size and include representative surfaces such as riveted and bolted connections. Prepare the test section surface preparation using the same equipment, materials and procedures that will be used for the duration of the Project. Perform the test cleaning in locations approved by the Authority.

SSPC-Vis 1 and SSPC-Vis 3 photographic standards, as applicable, will be used by the Authority to determine the level of cleanliness achieved. Do not proceed with production surface preparation activities until the Authority agrees that the test section conforms to the applicable cleanliness requirements. The agreed upon test areas shall be masked off and left unpainted until the completion of the Project and will be used for calibration of gauges by both Authority and Contractors personnel. A desiccant filled masking paper shall be used, all at no additional cost to the Authority.

506.62 Removal of Existing Debris

Remove and properly dispose of accumulated winter sand/salt, bird droppings, dirt, grease, and **other** debris from all areas to be prepared and painted prior to undertaking any paint removal or surface preparation operations.

506.63 Sharp Edges and Steel Defects

Remove **defects** by grinding all fins, tears, slivers, scabs, laminations, etc., that are present on any steel member, or that become apparent during the abrasive blasting operation. Re-blast areas that have been ground to achieve the specified profile. Immediately report to the Authority any cracks or significant metal loss found in the structural steel.

506.64 Removal of Pack Rust

Remove all rust scale on any surface and loose pack rust that has formed between structural

members. Remove tight pack rust until the highest point is a minimum of 3 mm (1/8 inch) below the surface of the surrounding steel.

Exercise care to avoid any nicking or gouging of the steel during rust removal. Nicks and gouges are cause for a suspension of activities until appropriate adjustments are made to prevent a reoccurrence. Damage to steel by the Contractor shall be repaired by the Contractor as approved by, and at no cost to the Authority, and no additional contract time will be added.

506.65 Compressed Air Cleanliness

Provide compressed air that is free from moisture and oil contamination. Conduct a white blotter test in accordance with ASTM D 4285 "Standard Test Method for Indicating Oil or Water in Compressed Air" to verify the cleanliness of the compressed air. Conduct the test at least once per shift for each compressor system and at any time requested by the QAI. Notify the QAI prior to performing the test so that the QA Inspector can witness the test. Sufficient freedom from oil and moisture is confirmed if soiling or discoloration is not visible on the paper. If air contamination is identified, suspend operations, and adjust as necessary to achieve clean, dry air.

506.07 Mixing

Thoroughly mix the coating materials according to the manufacturer's recommendations. **Inform the Resident prior to mixing and thinning all coating. Record the batch and lot numbers of the coating, the type and amount of thinner used, the time and pot life of the coating in the JCR.**

Mix and add thinner in conformance with the Manufacturer's Product Data Sheet. Measure the thinner with a graduated cup or other measuring device. Mix the coating materials using the methods and equipment recommended by the coating manufacturer. Ensure that coatings requiring "sweat in" time have been allowed to sit for the amount of time required by the coating manufacturer's product data sheet after mixing and prior to use. Coating that is not mixed and thinned in accordance with the Manufacturer's Product Data Sheet will be rejected.

506.08 Conditions for Coating

Apply and cure all coatings in accordance with the manufacturer's recommendations. Provide digital data recorders that measure and record temperature and relative humidity during the curing period for all coatings. Provide a minimum of two data recorders, which shall be placed in the immediate vicinity of the curing operation, and shall also provide the Authority with the software necessary to download the recorded data. The data recorders shall measure and record the temperature and relative humidity during the entire curing cycle. No subsequent coating shall be applied until the Contractor demonstrates that the requirements of the manufacturer's product data sheets minimum recoat curing schedule have been met.

506.09 Paint Application

Caulk all gaps between abutting surfaces and at areas of pack rust that cannot be removed, as between the intermediate and topcoat. Apply caulking between the bearing plates and the concrete piers. Provide the name, generic type, technical data sheets, and application instructions for the material to the Resident. Provide written concurrence from the coating manufacturer that the caulking is compatible for use with the coating.

Measure the environmental conditions in the immediate vicinity of the piece(s) being coated during the coating operation and the entire cure period. **The measured relative humidity shall be no more than what is listed as acceptable of the coating manufacturer's published data sheet the measured Dew Point shall be no less than 5 degrees below the measured steel temperature.**

Apply each coat in a neat and workmanlike manner. Apply the coating inside the approved containment. For limited access areas, apply by brush and roller first, followed by a spray application to the balance as directed by the Resident. Apply the coating smoothly and uniformly without film defects, in conformance with these specifications and applicable provisions of *SSPC- PA 1, Shop, Field and Maintenance Painting of Steel.* Correct skips, thin areas or other deficiencies before each succeeding coat is applied. The surface of the paint receiving additional coating shall be free from dust, grease, oil, or any other contaminant that would prevent bonding.

Measure the DFT of each coat with a Type 2 Electronic Gauge in accordance with *SSPC- PA 2 Level II, Measurement of Dry Coating Thickness with Magnetic Gauges.* Record the following:

- Gauge type/manufacturer/model
- Serial number
- Coat/shim used for calibration (e.g., Primer Coat/5 mil. Shim, etc.)
- Measurements/spot average/location
- Cure time
- Non-conforming areas and determination for correction

Brushes, when used shall be of good quality so as not to leave bristles in the coating and have sufficient body and length of bristle to spread the coating in a uniform flow. Rollers, when used, shall be of a type which will not leave a stippled texture or roller particles on the coated surface.

Stripe coat the **adequately cured primer with intermediate** in accordance with SSPC-PA 1, Section 7 "General Requirements for Application of Coatings". The stripe coat is to be applied to edges, welds, outside corners, bolt heads/threads and crevices as directed by the Resident. The stripe coat shall be brush and/or roller applied. **Apply the stripe coat prior to application of the full intermediate coat. Notify the Resident to allow for proper visual inspection of the stripe coat prior to the application of the full intermediate coat.** Failure to notify the Resident will render the work Non-Conforming Work.

Measure and record the DFT readings in the JCR. Document that minimum cure time has been achieved in the JCR. Include the data logger printout. Maintain environmental conditions to assure acceptable cure time between coats and after the topcoat is applied. Coating that has been improperly cured will be rejected, removed and re-coated. The Resident will determine that the coating has been properly cured based on QC tests, measurements, and documentation.

Identify areas on Non-Conformance and generate a Non-Conformance Report (NCR). Present the NCR **and proposed repair procedure** to the Resident **for approval**. Examples of Non-Conformance are, but not limited to:

- Overspray
- Sags, drips, runs
- Thin coating
- Excessive film build
- Orange peel, mud cracking
- Blisters

- Surface contamination
- Discontinuities that may be reasonably expected to cause premature coating failure.

Repair damaged coating according to an approved repair procedure for defectively applied coating (runs, sags, skips, misses, etc.). If all coating layers are damaged or defective, remove all coating layers to the specified degree of cleanliness. Feather the edges of the remaining coating to create a smooth transition from the repaired area to the remaining coating. Reapply all affected coating layers.

506.10 Samples for Testing

The Authority may require random coating material samples from the Contractor. If necessary, the samples will be sent to an independent certified laboratory to obtain infrared spectra to check the formulation compared to that on the approved coatings list. Sampling and testing shall be at no additional cost to the Authority. If the material fails the independent lab analysis, the Contractor shall remove and replace the coating to the Contract specified conditions, at no additional cost to the Authority.

506.11 Waste Management

The Contractor shall collect, store, and dispose of all hazardous, special, or solid waste in compliance with relevant Federal, State and local laws and requirements. The procedures used for management and disposal of lead paint and related waste shall conform to the latest requirements of Steel Structures Painting Council Guide 7, "Guide for the Disposal of Lead-Contaminated Surface Preparation Debris". The Contractor shall have a copy of this guide available on site at all times. The Contractor shall also have a copy of the Maine Department of Environmental Protection's (DEP's) Handbook for Hazardous Waste Generators and a copy of the State of Maine Hazardous Waste Management Rules, 06-096 CMR Chapters 850-857, on site at all times. Thirty days prior to generating any waste, the Contractor shall submit their Waste Management Plan which shall include the Spill Prevention Control and Countermeasure Plan (SPCCP), to the Authority for review and comment. Work shall not proceed until the Authority has reviewed and commented on this plan. See Supplemental Specification 656 Temporary Soil Erosion and Water Pollution Control for more information.

The Contractor shall perform all work on behalf of the Authority and comply with all Federal, State, and local regulations. All hazardous waste activities associated with this Contract shall be managed according to the latest edition of the MaineDEP Handbook for Hazardous Waste Generators (http://www.maine.gov/dep/waste/hazardouswaste/documents/hwhandbook.pdf). The Contractor shall set up secure storage facilities for hazardous waste at the following designated Authority locations:

- The hazardous waste storage area for the Shaker Road Underpass Bridge shall be located at the Gray Maintenance Facility. (No on-site storage of hazardous waste is permitted at the underpass bridge site.) Hazardous waste shall be stored in properly labeled containers. No mixing of hazardous waste from separate site locations will be permitted.

- The hazardous waste storage areas for the Weymouth Road Underpass Bridge and the Bennett Road Underpass Bridge shall be located within the Turnpike right of way in the southwest quadrant of each of the bridge crossings and adjacent to the Emergency Access Ramps (see Appendix D, Contractor's Staging Plans). Hazardous waste from each site location shall be kept separated and stored in properly labeled containers. No mixing of hazardous waste from separate site locations will be permitted.

- The hazardous waste storage area for the Interstate 295 Southbound Underpass Bridge shall be located at the West Gardiner Maintenance Facility. (No on-site storage of hazardous waste is permitted at the underpass bridge site.)

For secure storage facilities for hazardous waste located at the bridge site, the Contractor shall obtain temporary provisional generator status from the MaineDEP **per location** prior to removing any lead-based paints. The Contractor shall submit copies of the temporary provisional generator status paperwork, along with all requirements imposed by the MaineDEP, to the Resident for the Authority's records. All hazardous waste storage at these facilities is limited to an on-site storage time of 90 days from accumulation start date.

For secure storage facilities for hazardous waste located at an approved Authority location, the Contractor shall obtain temporary provisional generator status from the MaineDEP prior to removing any lead-based paints. The Contractor shall submit copies of the temporary provisional generator status paperwork, along with all requirements imposed by the MaineDEP, to the Resident for the Authority's records. All hazardous waste storage is limited to an on-site storage time of 90 days from accumulation start date.

The Contractor must obtain approval of the Uniform Hazardous Waste Manifest from the Authority's Environmental Services Coordinator prior to any hazardous waste leaving the secure storage facility for disposal.

All hazardous waste shall be managed in US DOT approved containers and stored in an approved fully enclosed locking secured structure which has a firm, impervious, floor surface and secondary containment that is either 110% of the largest container or 20% of all containers, whichever is larger. All waste containers must be labeled with the words "Hazardous Waste", the hazard (e.g., Toxic, flammable, etc.), accumulation start date, container full date, generator information and site location. The lockable secured structure must be labeled "Danger- Unauthorized Personnel Keep Out" and "Hazardous Waste Storage Area". The secured structure shall be locked at all times when not being accessed. The Contractor shall provide the Authority with (2) keys or combinations for each locking secured structure for inspection purposes. Waste containers in the waste storage security area must be inspected each operating day and a Daily Inspection Log shall be kept at the storage site and include the amount and type of hazardous waste transported, the date the waste was accepted at the storage site, and the project location where the waste was generated. Provide the log to the Authority at the end of the Project. The Contractor shall store and manage all hazardous waste, in conformance with MaineDEP regulations as detailed in Chapters 850 – 857 and EPA regulations as defined in 40 CFR 260 – 268. All hazardous wastes are limited to an on-site storage time as outlined in the Contractor's provisional generator's permit.

The Contractor shall test paint debris **at each location** (including waste paint, personal protective equipment, gray water and spent solvents) to determine the appropriate disposal options. A minimum of one composite sample representative of each waste type must be collected and tested for Toxicity Characteristic Leaching Process (TCLP), constituents in accordance with the procedures outlined in EPA SW846 Method 1311. The Authority must be notified at least one week in advance of the date of sampling activities and provided with the proposed protocol for sample collection. The Authority shall witness the sampling. Chain-of-custody must be adhered to for sample removal. Certified TCLP test results shall be provided to the Authority upon receipt by the Contractor.

The Contractor shall inform the Authority at least one (1) week in advance of planned date(s) for removal of hazardous waste from the jobsite. The Authority shall obtain an Environmental Protection

Agency Identification Number prior to shipping any hazardous waste for disposal. This number must be used by the Contractor to ship hazardous waste off site. Secure an Authority approved transporter (i.e., Enpro Services, Inc., or Environmental Projects, Inc. (EPI)) licensed by DEP for transportation of hazardous waste. Preparation of all necessary transportation forms is the responsibility of the Contractor. The Hazardous Waste Manifest must be approved and signed by the Authority. A six-part, prenumbered Uniform Hazardous Waste Manifest (EPA Form 8700-22) shall be prepared when shipping hazardous waste. The appropriate original sheets of the multi-part hazardous waste manifest must be provided to the Authority and must be sent to the John Branscom, Environmental Coordinator, Maine Turnpike Authority, 2360 Congress Street, Portland, Maine 04102.

The Contractor shall select a Treatment, Storage or Disposal (TSD) facility as soon as the waste has been tested and the results are known. The Contractor will submit the selected TSD for Maine Turnpike Authority approval. Following approval by the Maine Turnpike Authority, the Contractor shall obtain approval for acceptance of the waste from the selected facility prior to transport.

Hazardous/special paint debris and other waste shall not be placed or accumulated on unprotected ground or released to waters of the State. Work areas shall be adequately shielded at all times to prevent dispersion of debris by wind or rain. All of the Contractor's equipment and storage areas used for the handling and storage of hazardous waste and hazardous materials shall have impervious tarps placed under them. Any evidence of improper storage and handling shall be cause for immediate suspension of work in progress, and work will not be allowed until corrective actions are taken. Emergency procedures to be taken in the event of a release of hazardous/special waste or hazardous matter to the environment shall be part of the Contractor's Spill Prevention, Control and Countermeasures Plan that is required as part of the Contractor's Waste Management Plan and by the Authority's Supplemental Specifications and Supplemental Standard Details for Construction, Section 656.3.4, f. Spill Prevention.

When the project no longer generates wastes, the Contractor shall ensure all waste and residuals are removed from the individual hazardous waste storage areas and transported to a licensed and approved TSD facility. The Contractor shall then move forward with closure of the hazardous waste storage areas as defined in Chapter 851 of MDEP's regulations. The Contractor shall ensure a Maine professional engineer oversees and approves of the closure process and submits a certification to the Authority and MDEP when the closure is complete.

Failure of the Contractor to comply with this section shall result in the following:

- First finding of non-conformity shall be a written warning which will include deadline for compliance.
- Second finding of non-conformity shall be documented in writing, and all operations by the Contractor, except those needed to restore compliance, will be immediately suspended, until full compliance has been restored.
- Third and subsequent findings of non-conformity will be documented in writing and all operations shall be immediately suspended, except those needed to restore compliance, until full compliance has been fully restored, and the Contractor assessed a penalty of
- $10,000.00 per incident. If the Contractor fails to restore the Project into compliance, additional fines shall be assessed.

All penalties assessed shall be in addition to any fines assessed by DEP/EPA for failing to comply with the Federal, State, or local regulations. The Contractor shall not be granted additional time for

suspensions of work due to noncompliance.

506.111 Visible Emission Observations

A. Visible Emission Assessments

1. Conduct visible emissions assessments as defined in this Section and in accordance with 40 CFR 60, Appendix A, Method 22 “Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares”. This assessment is based on total visible emissions regardless of the opacity of the emission. SSPC Technical Update No. 7 provides guidance on conducting visible emission assessments.
2. Conduct the visible emissions assessments to account for all locations where emissions of lead dust might be generated, including but not limited to, the containment or work area, dust collection and waste recovery equipment as applicable, and waste containerizing areas.
3. In addition to assessing airborne emissions, conduct visual inspections for releases or spills of dust and debris that have become deposited on surrounding property, structures, equipment, or vehicles.
4. State and local regulations regarding visible emissions:
5. Note that State of Maine regulations regarding visible emissions, as well as any local requirements, are in addition to, but not in lieu of, the requirements of this Section.

B. Acceptance Criteria for Visible Emissions Assessments

1. For surface preparation activities, visible emissions in excess of SSPC Guide 6, Level 1 (1% of the workday) are unacceptable. This amounts to a maximum duration of 4 minutes and 48 seconds in an 8-hour workday, or 36 seconds per hour. This criterion applies to scattered, random emissions of short duration. Sustained emissions (e.g., 1 minute or longer) from a given location, regardless of the total length of emissions for the workday, are unacceptable. Immediately shut down the emission-producing operation, change work practices, extend the ground coverings, modify the containment, or take other appropriate corrective action to prevent similar releases from occurring in the future.
2. Visible emissions in excess of the above criteria are cause for immediate shutdown. Immediately stop the applicable operations if these criteria are violated. Correct and repair the deficiencies causing the emission and undertake clean up with HEPA vacuums.
3. Violations of any high-volume ambient air monitoring acceptance criteria is cause for immediate project shut down and the initiation of corrective action, even if the visible emissions results are acceptable.

C. Frequency and Location of Emissions Assessments

1. Conduct the specialized assessments as described in this Section at least four times (for a minimum of fifteen minutes each) during each shift in which paint disturbance operations are underway. Document all observations even if visible emissions are not observed.
2. Perform casual observations of emissions on an ongoing basis.

D. Assessment and Correction of Spills or Releases

1. Conduct all activities so that spills or releases of paint chips or spent abrasive do not occur.

2. On a daily basis, visually inspect the site for releases of dust, paint chips, and spent abrasive outside of the work area that have become deposited on surrounding property, structures, equipment, or vehicles and on the unprotected ground or in areas where rainwater could carry the debris outside of the work area.
3. Clean up all visible paint chips and debris on a daily basis at the end of each shift, or more frequently if directed by the Authority. Conduct the cleaning by manually removing paint chips or by HEPA vacuuming.
4. When releases are observed, in addition to cleaning the debris, immediately shut down the emission-producing operations, change work practices, extend the ground coverings, modify the containment, or take other appropriate corrective action to prevent similar releases from occurring in the future. Do not resume operations until the corrective measures have been inspected and approved by the Authority.

E. Reporting of Visible Emissions and Releases

1. Document all visible emission observations and all cases where work has been halted due to unacceptable visible emissions or releases, the cleanup activities invoked, and the corrective action taken to avoid reoccurrence. Provide a report to the Authority within 48 hours of the occurrence.
2. Maintain the results of the assessments in a log at the site. Identify the frequency of observations made, the methods of observation utilized, the name of the observer(s), and documentation completed. Include and summarize the documentation prepared for work stoppages due to unacceptable visible emissions or releases. Make the log available to the Authority for review upon request.

506.112 High Volume Ambient Air Monitoring

All ambient air monitoring shall be performed by the Contractor according to EPA regulations 40 CFR Part 50 Appendix B, “Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere (High-Volume Method)”, and 40 CFR Part 50 Appendix G, “Reference Method for the Determination of Lead in Suspended Particulate Matter Collected from Ambient Air”.

A. Conduct daily high-volume ambient air monitoring for TSP-Lead during any dust producing operations (i.e., abrasive blast cleaning, containment movement, and/or vacuuming spent abrasive) to confirm that emissions do not impact the public.
B. Conduct ambient air monitoring at a minimum of three locations per jobsite or as directed by the Resident. The Contractor shall provide the monitors, and all necessary calibration and support equipment, power to operate the units, security (or arrangements to remove and replace the monitors daily), filters, and flow chart recorders. Provide operational high volume ambient air monitors for the duration of the project to account for each of the monitoring locations. Dust producing activities will not be permitted to begin if monitoring locations are not supported by the required number of monitors. Therefore, several back up monitors are recommended.
C. High volume ambient air sample results will be compared to the acceptance criteria of 1.5 micrograms per cubic meter over a 90-day period. Utilize the formulae of SSPC Guide 6 to extrapolate the acceptance criteria to an adjusted daily allowable concentration.
D. In the event that the TSP-Lead air monitoring results exceed the acceptance criteria on any one day of blasting, the Contractor shall suspend dust producing operations (e.g., paint removal and/or clean-up) and implement appropriate corrective action to control emissions.

E. Document all cases when work has been suspended due to emissions exceeding the ambient air monitoring criteria.
F. Background samples shall be collected for two days prior to the start of work while no dust producing operations are underway. The background monitoring shall be conducted on one weekday and one weekend day. The background monitoring shall coincide with the anticipated working hours for the paint removal operations but shall last for a minimum of 8 hours each day.
G. Calibrate the monitors according to the manufacturer's written instructions upon mobilization to the site, following any repairs or maintenance to the units, and quarterly.
H. Filters shall be placed in monitors prior to start of dust-producing operations and the filters removed upon completion of dust producing activities for that day. Advise the Authority in advance when the filters will be removed and replaced. The monitor operator shall record the following information, at a minimum, on field data and laboratory chain-of custody forms (or equivalent):
    a. Monitor location and serial number.
    b. Flow rate, supported by flow charts.
    c. Start, stop times and duration of monitoring.
    d. Work activities and location of work during the monitoring period.
    e. Wind direction/speed.

I. Ambient Air Monitoring Results. The laboratory shall provide the results directly to the Authority with a copy to the Contractor within 3 days of the sampling. The results shall include:

    1. Monitor identification and location.
    2. Work location and activities performed during monitoring period.
    3. Monitor flow rate, duration, and volume of air sampled.
    4. Laboratory methods used for filter digestion / analysis.
    5. Sample results for the actual duration of monitoring.
    6. Sample results expressed in micrograms per cubic meter of air.
    7. Comparison of the results with the adjusted daily allowable concentration indicating whether the emissions are compliant.
    8. Field data and chain-of-custody records used to derive results.

506.113 Regulated Areas

Physically demarcated regulated area(s) shall be established around exposure producing operations at the OSHA Action Level for the toxic metal(s) present in the coating. The Contractor shall provide all required protective clothing and equipment for personnel entering into a regulated area. Unprotected street clothing is not permitted within the regulated areas. Conduct air sampling at the boundaries of the regulated area for lead and any other toxic metals that may be present in the coating being removed. Use a minimum of two low flow pumps located at points on the perimeter of the regulated area, one upwind and one downwind from the work area. Until monitoring results are available, establish the regulated area a minimum of 15 feet from any equipment or operations that might generate airborne emissions of toxic metals. If the monitoring confirms that emissions at the boundary do not exceed the OSHA Action Level as an 8-hour Time Weighted Average, discontinue monitoring. If the monitoring results exceed the OSHA Action Level, modify work practices and the containment to provide better controls over the emissions and repeat the monitoring until results are below the OSHA Action Level. Additional monitoring is not required unless directed by the Authority, or if visible emissions occur or if there are changes to the work practices or equipment being used in the regulated area. Verify that cassettes are analyzed by an American Industrial Hygiene Association (AIHA) laboratory accredited for metals analysis. Have the laboratory provide results within 72 hours of the field sampling.

506.12 Method of Measurement

Surface Preparation of Existing Structural Steel shall be measured for payment as one lump sum, complete and accepted.

Field Painting of Existing and New Structural Steel shall be measured for payment as one lump sum, complete and accepted.

Containment and Pollution Control Measures shall be measured for payment as one lump sum, complete and accepted.

Disposal of Special Waste or Hazardous Waste materials shall be measured for payment as one lump sum.

506.13 Basis of Payment

The accepted quantity of Surface Preparation of Existing Structural Steel will be paid at the respective Contract lump sum price, which shall be full compensation for furnishing all materials, labor, tools, equipment, scaffolding, QC activities, and any other incidentals necessary for the satisfactory performance of the work.

The accepted quantity of Field Painting of Existing and New Structural Steel will be paid at the Contract lump sum price, which shall be full compensation for furnishing all material, labor, equipment, scaffolding, QC activities, and incidentals necessary for the satisfactory performance of the work.

Containment and pollution control will be paid for at the Contract lump sum price, which shall be full compensation for furnishing all materials, labor, equipment, and incidentals necessary for the satisfactory performance of the work.

Disposal of Special Waste or Hazardous Waste materials will be paid at the Contract lump sum price, which shall be full compensation for all permits, tests, transportation, tipping fees and incidentals necessary for the satisfactory performance of the work.

Payment will be made under:

Pay Item		Pay Unit
506.141	Field Painting of Existing Structural Steel – Shaker Road Underpass Bridge	Lump Sum
506.142	Field Painting of Existing Structural Steel - Weymouth Road Underpass Bridge	Lump Sum
506.143	Field Painting of Existing Structural Steel - Bennett Road Underpass Bridge	Lump Sum
506.144	Field Painting of Existing Structural Steel – I-295 Southbound Underpass Bridge	Lump Sum

506.171	Surface Preparation of Existing Structural Steel – Shaker Road Underpass Bridge	Lump Sum
506.172	Surface Preparation of Existing Structural Steel - Weymouth Road Underpass Bridge	Lump Sum
506.173	Surface Preparation of Existing Structural Steel - Bennett Road Underpass Bridge	Lump Sum
506.174	Surface Preparation of Existing Structural Steel – I-295 Southbound Underpass Bridge	Lump Sum
506.181	Containment and Pollution Control Measures – Shaker Road Underpass Bridge	Lump Sum
506.182	Containment and Pollution Control Measures - Weymouth Road Underpass Bridge	Lump Sum
506.183	Containment and Pollution Control Measures - Bennett Road Underpass Bridge	Lump Sum
506.184	Containment and Pollution Control Measures - I-295 Southbound Underpass Bridge	Lump Sum
506.191	Disposal of Special Waste or Hazardous Waste – Shaker Road Underpass Bridge	Lump Sum
506.192	Disposal of Special Waste or Hazardous Waste - Weymouth Road Underpass Bridge	Lump Sum
506.193	Disposal of Special Waste or Hazardous Waste - Bennett Road Underpass Bridge	Lump Sum
506.194	Disposal of Special Waste or Hazardous Waste – I-295 Southbound Underpass Bridge	Lump Sum

SPECIAL PROVISION

SECTION 526
CONCRETE BARRIER
(Temporary Concrete Barrier, Type I - Supplied by Authority)

526.01 Description

The following paragraphs are added:

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

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

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

Maintenance Area		Linear Feet of Barrier
Crosby Maintenance Facility	**Mile 45.8, Southbound**	**600**

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

526.02 Materials

The following paragraph is added:

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

526.021 Acceptance

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

526.03 Construction Requirements

The following paragraphs are added:

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

The Contractor shall move and place barrier-utilizing methods that will not damage the barrier.

Barrier that is damaged by the Contractor by failing to use proper methods shall be replaced by the Contractor at no additional cost to the Maine Turnpike Authority.

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

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

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

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

Retro-Reflective Delineators shall be mounted as follows:

1. One on top of each barrier.
2. One on the traffic side of every barrier used in a taper.
3. One on the traffic side of every other barrier at regularly spaced intervals and locations.
4. Delineators shall be installed on both sides of the barrier if barrier is used to separate opposing traffic.
5. Delineators shall be physically adhered so as to withstand the force of throw from a snowplow.
6. 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.
7. Contractor is required to submit the installation method for review and approval to the Resident.

526.04 Method of Measurement

The following paragraphs are added:

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

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

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

526.05 Basis of Payment

The fifth paragraph is deleted and not replaced. The following paragraphs are added:

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

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

Payment will be made under:

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

SPECIAL PROVISION

SECTION 526
CONCRETE BARRIER
(Temporary Barrier Markers)

526.1 Description

The following paragraphs are added:

This work shall consist of furnishing, installing and maintaining temporary barrier markers on all temporary barrier supplied by the Contractor and the Authority.

526.2 Materials

The following paragraphs are added:

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.

526.3 Construction Requirements

The following paragraphs are added:

1. Temporary barrier markers shall be mounted as follows:

2. One on every fourth barrier in tangents and one on every two barriers in tapers, including all barrier furnished by the Contractor.

3. Delineators shall be physically adhered so as to withstand the force of throw from a snowplow.

4. 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.

5. Contractor is required to submit the installation method for review and approval to the Resident.

526.4 Method of Measurement

The following paragraphs are added:

Temporary barrier markers shall not be measured for payment separately but shall be incidental to the temporary barrier item.

526.5 Basis of Payment

The following paragraphs are added:

Temporary barrier markers shall not be paid for separately but shall be incidental to the temporary barrier item.

SPECIAL PROVISION

SECTION 527
ENERGY ABSORBING UNIT
(Work Zone Crash Cushion)
(Resetting Existing Work Zone Crash Cushions)

527.01 Description

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

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

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

527.02 Materials

The following paragraph is added:

Work zone crash cushions fabricated prior to December 31, 2019 in serviceable condition shall meet the requirements of NCHRP 350 TL-3 crash test requirements and work zone crash cushions fabricated after December 31, 2019 shall meet the MASH TL-3 crash test requirements for use on the turnpike and local roadways with posted speeds of 45 MPH or greater. Work zone crash cushions fabricated prior to December 31, 2019 shall meet in serviceable condition shall meet the requirements of NCHRP 350 TL-2 crash test requirements and work zone crash cushions fabricated after December 31, 2019 shall meet the MASH TL-2 crash test requirements for use on local roadways with posted speeds of 40 MPH or less. The Contractor shall provide the Resident with documentation of the proposed work zone crash cushion's MASH Crash Test Results prior to installation at the jobsite.

527.03 Construction Requirements

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

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

527.04 Method of Measurement

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

Replacement barrels, after collisions, will be paid for as a percentage of the individual barrels damaged to the total barrels in the complete system. The removal of impacted barrels and debris will be

considered incidental to the replacement barrels. Barrels on hand, but unused will not be paid for directly.

Resetting Existing Work Zone Crash Cushion will be measured by the Unit, complete in place and accepted.

527.05 Basis of Payment

Resetting Existing Work Zone Crash Cushion will be measured by the Unit, complete in place and accepted.

Payment will be made under:

Pay Item		Pay Unit
527.341	Work Zone Crash Cushions – TL-3	Unit
527.342	Work Zone Crash Cushions – TL-2	Unit
527.343	Resetting Existing Work Zone Crash Cushion	Unit

SPECIAL PROVISION

SECTION 619
MULCH
(Temporary Mulch)

619.01 Description

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

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

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

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

619.03 General

The first paragraph is deleted and replaced with the following:

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

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

619.06 Method of Measurement

The following sentence is added:
Temporary Mulch will be paid for by the lump sum.

619.10 Basis of Payment

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

Payment will be made under:

Pay Item		Pay Unit
619.1202	Temporary Mulch	Lump Sum

SPECIAL PROVISION

SECTION 643

TRAFFIC SIGNALS

(Temporary Traffic Signals)

643.01 Description

The following paragraph is added:

The Contractor shall install, operate, maintain, and remove temporary traffic signals for the time period when Weymouth Road and/or Bennett Road are restricted to a one lane alternating two-way operation using temporary concrete barrier.

643.02 General

The following paragraph is added:

Temporary traffic signals may consist of interconnected portable traffic signal trailers or an interconnected temporary traffic signal system consisting of temporary poles with span wire mounted traffic signals, at the Contractor's discretion. Whichever temporary signalization means is selected, the Contractor shall submit a temporary traffic signal plan with supporting catalog cuts and equipment submittals for approval.

643.19 Basis of Payment

Delete the third paragraph and replace with the following:

Payment for Temporary Traffic Signals will be paid for at the contract lump sum price, which payment will be full compensation for furnishing, installing, and removing all materials for a fully functional traffic signal in accordance with the Temporary Traffic Signal submittals, reviewed and approved. If the Contractor's approved Temporary Traffic Signal system includes the use of, or rental for, portable traffic signal trailers, the rental costs, operations cost, maintenance, transportation, set-up and removal shall be incidental to the lump sum price for Temporary Traffic Signal.

Payment will be made under:

Pay Item		Pay Unit
643.72	Temporary Traffic Signals	Lump Sum

SPECIAL PROVISION

SECTION 652
MAINTENANCE OF TRAFFIC

MaineDOT Standard Specification 2014 Edition Section 652 – Maintenance of Traffic and the Maine Turnpike Authority 2016 Supplemental Specification Section 652 – Maintenance of Traffic are deleted in their entirety and replaced with the following:

652.1 Description

This work shall consist of furnishing, installing, maintaining, and removing traffic control devices necessary to provide reasonable protection for motorists, pedestrians, and construction workers in accordance with these Specifications, the applicable provisions of Section 105.4.5 - Special Detours, and the plans.

Traffic control devices include signs, signals, lighting devices, markings, barricades, channelizing, and hand signaling devices, portable light towers, truck mounted impact attenuators, portable rumble strips, portable speed trailers, sequential warning lights, traffic officers, and flaggers.

652.2 Materials

All maintenance of traffic control devices shall conform to the requirements of the latest edition of the MUTCD, NCHRP 350 guidelines and all Traffic control devices shall meet Manual for Assessing Safety Hardware (MASH) 16 guidelines if date of manufacture was after December 31, 2019.

All signs shall be fabricated with high intensity fluorescent retroreflective sheeting conforming to ASTM D 4956 - Type VIII, or Type IX (prismatic). All barricades, drums, and vertical panel markers shall be fabricated with high intensity orange and white fluorescent retroreflective sheeting conforming ASTM D 4956 - Type VII, Type VIII, or Type IX (prismatic).

Construction signs shall be fabricated from materials that are flat, free from defects, retro-reflectorized, and of sufficient strength to withstand deflections using a wind speed of 80 miles/hr.

652.2.2 Signs

Only signs with symbol messages conforming to the design of the Manual of Uniform Traffic Control Devices (MUTCD) shall be used unless the Resident approves the substitution of word messages.

Any proposed use of temporary plaques to cover text or to change text shall be approved by the resident. All signs or proposed plaques shall have a uniform face and be constructed from similar sheeting.

All signs shall be new, or in like new condition and maintained in like new condition throughout the project duration. Signs shall be cleaned just prior to installation and throughout the project utilizing a method that will not damage the reflective sign sheeting.

652.2.3 Flashing Arrow Board

Flashing Arrow Boards 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 Boards.

Flashing Arrow Boards 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. Flashing Arrow Boards 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 a Flashing Arrow Board 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.

Flashing Arrow Board 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. Flashing Arrow Board shall be at least 96 inches x 48 inches and finished in non-reflective black. The Flashing Arrow Board shall be interpretable for a distance not less than 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 Flashing Arrow Board 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 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

Vertical panel markers shall be orange and white striped, 8 inches wide by 24 inches high. On the Interstate System, vertical panel markers shall be orange and white striped, 12 inches wide by 36 inches high.

Cones shall be orange in color, a minimum of 28 inches high, and retro-reflectorized. Retro-reflection shall be provided by white bands of retro-reflective sheeting conforming to the MUTCD. All

cones utilized on the project shall be new or in like new condition and shall have a consistent design/appearance.

Drums shall be of plastic or other yielding material and shall be a minimum of 36 inches high and a minimum of 18 inches in diameter. There shall be at least two retro-reflectorized orange and at least two retro-reflectorized white stripes a minimum of 4 inches wide on each drum. All drums utilized on the project shall be new or in like new condition and shall have a consistent design/appearance.

Flaggers shall use a STOP / SLOW handheld paddle as the primary and preferred hand signaling device. Flags shall only be limited to emergencies. STOP / SLOW paddles shall have high intensity prismatic retro reflective sheeting, have an octagonal shape on a rigid handle and shall be at least 18 inches wide with letters at least 6 inches high and shall be constructed from light semi-rigid material. The STOP (R1-1) face shall have white letters and a white border on a red background. The SLOW (W20-8) face shall have black letters and a black border on an orange background.

STOP / SLOW paddles shall also incorporate either white or red flashing lights on the STOP face and white or yellow flashing lights on the SLOW face of the paddle and always be in use.

Paddles must conform to one of the following patterns:

A. Two white or red lights (colors shall be all white or all red), one centered vertically above and one centered vertically below the STOP legend; and/or two white or yellow lights (colors shall be all white or all yellow), one centered vertically above and one centered vertically below the SLOW legend.

B. Two white or red lights (colors shall be all white or all red), one centered horizontally on each side of the STOP legend; and/or two white or yellow lights (colors shall be all white or all yellow), one centered horizontally on each side of the SLOW legend.

C. One white or red light centered below the STOP legend; and/or one white or yellow light centered below the SLOW legend.

D. A series of eight or more small all white or all red lights no larger than 1/4 inch in diameter along the outer edge of the paddle, arranged in an octagonal pattern at the eight corners of the border of the STOP face; and/or a series of eight or more small all white or all yellow lights no larger than 1/4 inch in diameter along the outer edge of the paddle, arranged in a diamond pattern along the border of the SLOW face; or

E. A series of white lights forming the shapes of the letters in the legend. Flashing light patterns shall be compliant with Section 6E.03 Hand Signaling Devices in the most current version of the Manual on Uniform Traffic Control Devices.

All flashing light patterns on the STOP / SLOW paddle shall be visible from a minimum distance of 1000 feet.

Type I barricades shall be 2 feet minimum, 8 feet maximum in length with an 8 inch wide rail mounted 3 feet minimum above the ground. Type II barricades shall be 2 feet in length with two 8 inch wide rails, and the top rail shall be mounted 3 feet minimum above the roadway. Type III barricades shall be 8 feet in length with three 8 inch wide rails, and the top rail shall be mounted 5 feet minimum above the roadway. The cross members of all barricades shall be of ½ or ⅝ inch thick plywood or other

lightweight rigid material such as plastic, fiberglass or fiber wood as approved by the Resident. The predominant color for supports and other barricade components shall be white, except that unpainted galvanized metal or aluminum components may be used.

652.2.5 Portable Changeable Message Sign

Portable Changeable Message Signs (PCMS) will be furnished by the Contractor and shall be Ver-Mac PCMS-1210 or an approved equal. The face of the PCMS 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. PCMS shall be located and relocated to locations approved by the Resident within the Project limits for the duration of the Project.

Features to the Ver-Mac PCMS shall include:

- An all-LED display.
- Be legible from a distance of 1,000 feet.
- Have three (3) lines available for messages.
- Be NTCIP compliant (NTCIP 1203 & 1204).
- Be capable of being programmed by a remote computer via a data (IP over Cell) cellular modem connection.
- Have GPS location capability by adding on a GPS device capable of providing GPS location remotely to the MTA Communications' Center.
- Be programmable by Vanguard Software by Daktronics.

The Contractor shall complete and/or provide the following:

- Submit a catalog cut shop drawing to the Resident of all proposed equipment for review and approval.
- Establish and pay for a data cellular account so that PCMS may be remotely programmed and operated from the MTA Communications' Center.
- Provide to the Authority technical support from the PCMS manufacturer that may be necessary to integrate the PCMS into the MTA software platform (Vanguard Software by Daktronics).
- Provide the manufacturer's software necessary to change the PCMS messages remotely from the MTA Communications' Center and the Resident's computer if necessary or requested.
- Provide training on the operation of the PCMS to the Resident and the MTA Communications' Center representative.
- Make all PCMS on the Project work site available to the MTA for any/all emergency situations as defined by the MTA. This shall include the preemption of any messages running at the time of need as approved by the MTA and the Resident.

The Contractor shall also:

- Furnish, operate, relocate, and maintain the PCMS as approved or requested by the Resident.

- Be responsible for the day-to-day programming and operation of the PCMS for Project purposes.

The PCMS shall be on-site, with data cellular account established, GPS location capable, and all training required complete within one month after mobilization or seven days prior to implementing traffic shifts, detours or stoppages, whichever is sooner. Implementation of traffic shifts, detours, or stoppages of traffic will not be allowed without PCMS boards on-site with the specified MTA Communications' Center Software Platform integration and training.

652.2.5 Truck Mounted Attenuator

The truck mounted attenuator system shall conform to the following requirements:

- Truck and attached attenuator shall conform to the NCHRP Report 350, Test Level 3 criteria or MASH if manufactured after 2019.
- Amber, Green, white or any variation of those colors strobe lights with 360-degree visibility.
- An arrow light bar fixed to the vehicle.
- The attenuator shall be mounted to a vehicle with a minimum weight of 24,000 lbs. unless otherwise specified.

Installation: **The TMA shall be located in the closed lane adjacent to active traffic; for double lane closures, only the outer closed lane requires the TMA.** If a buffer zone is required, the TMA shall not be located in the buffer zone. The shadow vehicle shall have its front wheels turned away from the work area and from traffic, have parking brake set, and be put in park if an automatic transmission; or if a manual transmission it shall have its front wheels turned away from the work area and from traffic, have parking brake set and should be placed in gear and shut off if possible while still maintaining warning lights. If length of time or weather are a concern for the battery since the warning lights must be maintained the engine should be started and run periodically for battery recharging. No other vehicles or equipment shall park in front of the shadow vehicle or within the buffer space behind the shadow vehicle. For placement details, reference the Manual on Uniform Traffic Control Devices (MUTCD).

A Truck Mounted Attenuator **shall** be utilized in all lane closures, and shoulder closures, where workers are not protected by other positive means (i.e., closures that do not include temporary concrete barrier). If work is being completed behind guardrail a TMA shall be required for all work that is being completed within the deflection zone of the guardrail (minimum of four feet behind the guardrail post).

The placement and positioning of the vehicle shall be in accordance with the Manual on Uniform Traffic Control Devices and the manufacturer's recommendation. TMAs used on the Turnpike mainline shall have a minimum weight of 24,000 lbs and shall provide a 200 foot shadow distance from vehicles or the work zone. **For lane and shoulder closures in excess of 3,000 feet containing multiple work zones a TMA shall be used at each work zone.**

If a Truck Mounted Attenuator is not used as described above, then it will be considered a Traffic Control Plan violation and result in a reduction of payment as outlined in Section 652.

652.2.6 Sequential Flashing Warning Lights

When included in contracts as a bid item Sequential Flashing Warning Lights on drums used for merging tapers and shifting tapers during nighttime operation for project use. The purpose of these lights is to assist the motorist in determining which direction to merge or shift and to reduce the number of late merges resulting in devices being struck and having to be reset to maintain positive guidance at the merge point. The successive flashing of the lights shall occur from the upstream end of the taper to the downstream end of the taper in order to identify the desired vehicle path.

The Sequential Flashing Warning Lights shall meet all of the requirements for warning lights within the current edition of the MUTCD. Each light unit shall be capable of operating fully and continuously for a minimum of 500 hours when equipped with a standard battery set. Each light in sequence shall be flashed at a rate of not less than 55 times per minutes and not more than 75 times per minute. The flash rate and flash duration shall be consistent throughout the sequence.

Sequential Flashing Warning Lights shall be "Pi-Lit" Sequential Barricade Warning Lamps or an approved equal.

Sequential Flashing Warning lights are to be used for merging and shifting tapers that are in place during the nighttime hours (12-hours when ambient light is dimmed). These lights shall flash sequentially beginning with the first light and continuing until the final light at the beginning of a tangent section.

The Sequential Flashing Warning Lights shall automatically flash in sequence when placed on the drums that form the merging or shifting tapers.

The number of lights used in the drum taper shall equal one half the number of drums used in the taper.

Drums are the only channelizing device permitted for mounting the Sequential Flashing Warning Lights.

The Sequential Flashing Warning Lights shall be weather independent and visual obstruction shall not interfere with the operation of the lights.

The Sequential Flashing Warning Lights shall automatically sequence when placed in line in an open area with a distance between lights of 25 to 150 feet. A 10-foot stagger in the line of lights shall have no adverse effect on the operation of the lights.

If one light fails, the flashing sequence shall continue. Non-sequential flashing is prohibited.

652.2.7 Automated Trailer Mounted Radar Speed Limit Sign

The Contractor will furnish, operate, and maintain Automated Trailer Mounted Speed Limit Sign(s) for project use. The automated speed sign shall be required when there is a Work Zone Speed Limit in place. The Contractor shall furnish, operate, and maintain the Automated Trailer Mounted Radar Speed Limit Signs during the project operations.

Trailer mounted speed limit signs shall be self-contained units including sign assembly, flashing lights, directional radar to measure speed limits, a regulatory speed limit sign, and power supply specifically constructed to operate as a trailer-mounted sign. The preferred color of the unit shall be

"construction orange".

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

Sign text shall consist of the letters, digits and symbols either applied by stick-on or silk screen, to conform to the dimensions and designs indicated in the Contract, MUTCD and/or FHWA Standard Highway Signs. The materials and methods shall be in accordance with standard commercial processes. "Work Zone" construction signs shall be mounted on the trailer unit above the regulatory speed limit sign. (see attached graphic details).

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

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

Each unit shall be equipped with two mono-directional flashing lights, placed in accordance with the MUTCD, with amber lenses and reflectors, which are visible through a range of 120 degrees when viewed facing the sign. The lights shall be a minimum of 8-inch diameter, either LED, halogen, or incandescent lamps, and shall be visible for a minimum distance of one mile under daylight conditions and shall have a minimum flash rate of 40 flashes per minute. An "On" indicator light shall be mounted on the back of the signs, which is visible for at least 500 feet to provide confirmation that the flashing lights are operating.

The directional radar shall monitor approaching traffic only. The radar shall be capable of measuring speeds from 5 to 70 MPH at a distance of up to 1500 feet and shall have a high speed cut off thresh hold. Speed data shall be recorded and stored on the sign and must be made available to the Authority as requested.

All existing speed limit signs, which conflict with the construction zone trailer mounted speed limit signs shall be covered completely when the work zone speed limit is in place.

Automated Trailer Mounted Speed Limit Signs shall only be used when a work zone speed limit is in place **and shall be required when the work zone speed limit is active**. The Contractor shall manage the utilization and operation of the Automated Trailer Mounted Speed Limit Signs and if at least one is not used when work zone speed limits are in place then it will be considered a Traffic Control Plan violation and result in a reduction of payment as outlined in Section 652.

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

The Automated Trailer Mounted Radar Speed Limit Sign may be placed as shown on the plans, or may replace the posted regulatory speed limit signs, or may be placed at a location within the closed lane that has a reduced speed limit.

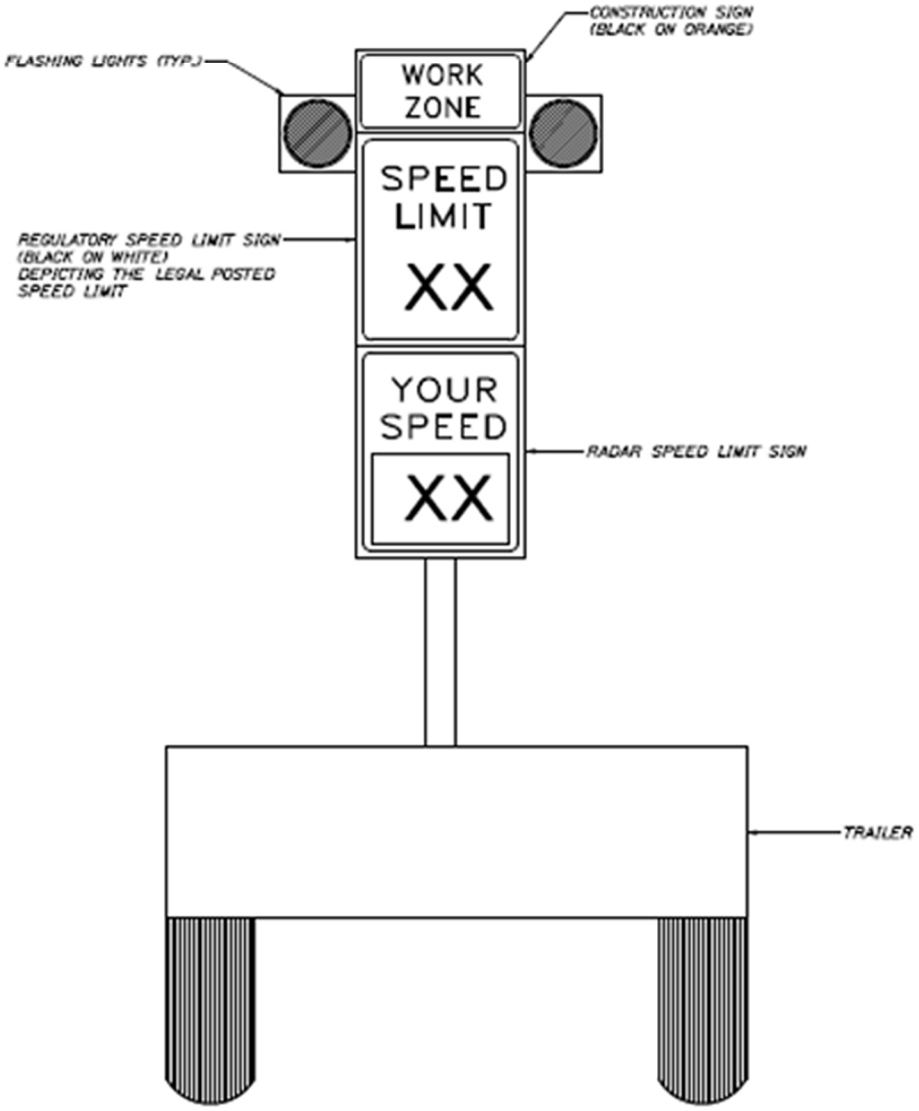
Automated Trailer Mounted Speed Limit Signs shall be delineated with retro-reflective temporary traffic control devices while in use and shall also be delineated by affixing a retro- reflective material

directly on the trailer.

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

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

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



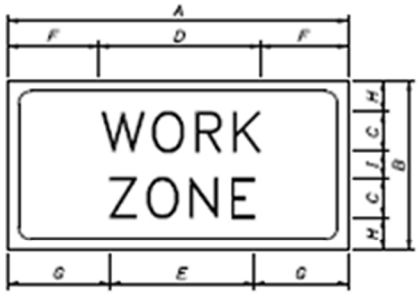
MAINE TURNPIKE

HNTB

FEBRUARY 2018

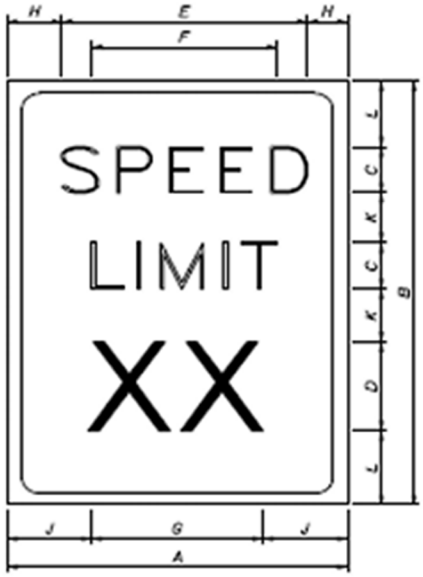
AUTOMATED TRAILER MOUNTED
SPEED LIMIT SIGN

1OF 2



SIGN #1

1.25" BORDER, 0.75" INDENT.
BLACK ON ORANGE, BB GRADE PLYWOOD SIGN



SIGN #2

1.25" BORDER, 0.75" INDENT.
BLACK ON WHITE, BB GRADE PLYWOOD SIGN

	DIMENSIONS (INCHES) / LETTER FONTS											
	A	B	C	D	E	F	G	H	I	J	K	L
#1	48	20	50	18 1/8	16 7/8	14 1/8	15 7/8	4	2	N/A	N/A	N/A
#2	48	60	8E	16E	30 1/4	29 1/4	29 1/2	4 1/8	9 3/8	9 1/4	8	6

MAINE TURNPIKE

HNTB

FEBRUARY 2018

TRAILER MOUNTED CONSTRUCTION ZONE
SPEED LIMIT SIGN

2 OF 2

652.2.8 Temporary Portable Rumble Strips

If a pay item is included in the contract or the Contract desires to utilize Temporary Portable Rumble Strips this work consists of furnishing and placing temporary portable rumble strips RoadQuake 2F TPRS or an approved equal. Furnishing a temporary portable rumble strip system includes a method to transport and move these to on-site locations where they will be used. The Contractor shall submit for approval, literature and all necessary certifications to the Maine Turnpike prior to procurement of the product.

If used, Temporary Portable Rumble Strips may not be practicable in areas where the roadway has more than two travel lanes, where volume windows do not allow for breaks in traffic to set up and monitor and adjust, or during nighttime lane closures.

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

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

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

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

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

Maintain rumble strips as follows:

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

Repair or replace damaged rumble strips immediately.

652.3.1 Responsibility of the Authority

The Authority will provide Project specific traffic control requirements and traffic control plans for use by the Contractor. The specific traffic control requirements for the Project are identified in Special Provision Section 652, Maintenance of Traffic (Specific Project Maintenance of Traffic Requirements). No revisions to these requirements or Plans will be permitted unless the Contractor can thoroughly demonstrate an overall benefit to the public and a Contract Modification is approved.

The Maine Turnpike Authority may erect lane closures on the mainline within the Project area to collect survey, provide layout, and for any other reasons deemed necessary by the Authority.

652.3.2 Responsibility of the Contractor

The Contractor shall provide continuous and effective traffic control and management for the Project that is appropriate to the construction means, methods, and sequencing allowed by the Contract and selected by the Contractor:

The Contractor shall ensure all jobsite personnel shall wear a safety vest labeled as ANSI 107-2004 standard performance for Class 3 risk exposures at all times. This requirement also applies to truck drivers and equipment operators when out of an enclosed cab.

652.3.3 Submittal of Traffic Control Plan

The Contractor shall provide continuous and effective traffic control and management for the Project that is appropriate to the means, methods, and sequencing allowed by the Contract, and consistent with the Traffic Control Plans and Maintenance of Traffic Specifications. The Contractor is responsible for ensuring a safe environment for the Contract workforce, local road users, and turnpike users; and maintaining the safe efficient flow of traffic through the construction zone at all times during the Contract. The protocols and requirements outlined in the Contract shall be strictly enforced. The Contractor shall submit, at or before the Preconstruction Meeting, a Traffic Control Plan (TCP) that provides the following information to the Authority:

a. The name, telephone number, and other contact numbers (cellular phone, pager, if any) of the Contractor's Traffic Control Supervisor (TCS). The TCS is the person with overall responsibility for ensuring the contractor follows the TCP, and who has received Work Zone Traffic Control Training commensurate with the level of responsibility shown in the requirements of the Contract, and who is empowered to immediately resolve any work zone traffic control deficiencies or issues. Provide documentation that the Traffic Control Supervisor has completed a Work Zone Traffic Control Training Course (AGC, ATSSA, or other industry- recognized training), and a Supervisory refresher training every 5 years thereafter. Submit training certificates or attendance roster that includes the course name, training entity, and date of training. **State how the traffic control devices will be maintained including a frequency of inspection for both temporary and permanent traffic control devices.**

   Traffic Control Training Course curriculum must be based on the standards and guidelines of the MUTCD and must include, at a minimum, the following:

   1. Parts of Temporary Traffic Control Zone.
   2. Appropriate use and spacing of signs.
   3. Use and spacing of channelizing devices.
   4. Flagging basics.
   5. Typical examples and applications.

   The Traffic Control Supervisor, or designee directly overseeing physical installation, adjustment, and dismantling of work zone traffic control, will ensure all personnel performing those activities are trained to execute the work in a safe and proper manner, in accordance with their level of

decision-making and responsibility. The emergency contact list shall contain a listing of individuals who may be contacted during non-work hours and shall adequately respond to the request.

b. Proposed revisions to the construction phasing or sequencing that reasonably minimizes traffic impacts.

c. A written narrative and/or plan explaining how traffic and pedestrians will be moved through the Project Limits, including transitions during the change from one phase of construction to the next, as applicable.

d. Temporary traffic control treatments at all intersections with roads, rail crossings, businesses, parking lots, pedestrian ways, bike paths, trails, residences, garages, farms, and other access points, as applicable.

e. A list of all Contractor or Subcontractor certified flaggers to be used on the Project, together with the number of flaggers which will be used for each type of operation that flagging is needed. If the Contractor is using a flagging Subcontractor, then the name and address of the Subcontractor may be provided instead of a list of flaggers.

f. A procedure for notifying the Resident of the need to change the traffic control plan or the need to remove a lane restriction.

g. A description of any special detours including provisions for constructing, maintaining, signing, and removing the detour or detours, including all temporary bridges and accessory features and complete restoration of the impacted land.

h. The maximum length of requested contiguous lane closure. The Contractor shall not close excessive lengths of traffic lane to avoid moving traffic control devices.

i. The proposed temporary roadway surface conditions and treatments. The Contractor shall provide an adequate roadway surface at all times taking into account traffic speed, volume, and duration.

j. The coordination of appropriate temporary items (drainage, concrete barriers, barrier end treatments, impact attenuators, and traffic signals) with the TCP.

k. The plan for unexpected nighttime work, the contractor shall provide a list of emergency nighttime lighting equipment and safety personnel available on-site or have the ability to have them on site within an hour of the time of need.

l. The plan for meeting any project specific requirements contained in special provision 105 and/or 107, and/or Section 656

m. The lighting plan if night work is anticipated.

The Authority will review the TCP for completeness and conformity with Contract provisions, the current edition of the MUTCD, and Authority policy and procedures. The Authority will review and provide comments to the Contractor within 14 days of receipt of the TCP. No review or comment by the Authority, or any failure to review or comment, shall operate to absolve the contractor of its responsibility to design and implement the plan in accordance with the Contract, or to shift any responsibility to the

Authority. If the TCP is determined by the Authority to be operationally ineffective, the Contractor shall submit modifications of the TCP to the Authority for review and shall implement these changes at no additional cost to the Contract. Nothing in this Section shall negate the Contractor's obligations set forth in Section 110 - Indemnification, Bonding, and Insurance. The creation and modification of the TCP will be considered incidental to the related 652 items.

652.3.4 General

Prior to starting any work on any part of the project adjacent to or being used by the traveling public, the Contractor shall install the appropriate traffic control devices in accordance with the plans, specifications and the latest edition of Manual of Uniform Traffic Control Devices, Part VI. The Contractor shall continuously maintain the traffic control devices in their proper position, and they shall be kept clean, legible and in good repair throughout the duration of the work. If notified that the traffic control devices are not in place or not properly maintained, the Contractor may be ordered to immediately suspend work until all deficiencies are corrected.

No equipment or vehicles of the Contractor, their subcontractors, 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, except as required by ongoing work operations. Contractor equipment or vehicles shall never be used to stop, block, or channelize traffic.

Vehicles parked on the shoulder shall be located so all portions of the vehicle(s) are a minimum of one foot from the traveled way. No operation shall be conducted on or near the traveled lanes or shoulders without first setting up the proper lane closure and traffic control devices. These precautions shall be maintained at all times while this Work is being performed. The Contractor shall keep all paved areas of the highway as clear as possible at all times. No materials shall be stored on any paved area of the highway or within 30 feet of the traveled way (unless protected by concrete barriers and specifically approved by the Resident). Private vehicles owned by Contractor's employees shall be parked close together in a group no closer than 30 feet from the traveled way in pre-approved areas.

Channelization devices including Vertical Panel Markers, Barricades, Cones, and Drums shall be in accordance with the MUTCD. These devices shall be installed and maintained at the spacing determined by the MUTCD through the work area.

The Contractor shall maintain existing guardrails and/or barriers until removal is necessary for construction. The Contractor shall use a temporary barrier or appropriate channelizing devices, as approved by the Resident, while the guardrails and/or barriers are absent. Permanent guardrails and barriers shall be installed as soon as possible to minimize risk to the public.

When Contractor operations or shoulder grading leave a continuous 3 inch or less exposed vertical face at the edge of the traveled way, including the shoulder, or when traffic is shifted into the shoulder adjacent to the edge of pavement where an existing 3 inch or less exposed vertical face creates a safety hazard, channelization devices should be placed 2 feet outside the edge of the pavement at intervals not exceeding 600 feet and, depending on type and location of the exposed vertical face, a 48 inch by 48 inch W8-9 Low Shoulder, or W8-11 Uneven Lane, and/or a W8-17P Shoulder Drop-Off sign should be placed at a maximum spacing of ½ mile. When Contractor operations or shoulder grading leave greater than a 3-inch exposed continuous vertical face at the edge of the traveled way, including the shoulder, or when an existing condition of an exposed vertical face of 3 inches or more is adjacent to active traffic shifted into shoulder, the Contractor shall place shoulder material at a slope not exceeding 3 horizontal to 1 vertical

to meet the pavement grade, before the lane is opened to traffic.

Special Detours and temporary structures, if used, shall meet applicable AASHTO standards, including curve radii and grade.

Maine Turnpike Traffic Control Requirements

This Section outlines the minimum requirements that shall be maintained for working on, over, or adjacent to the Maine Turnpike roadway.

General

Two travel lanes in each direction (each direction being 24 feet wide (excluding shoulder) in the two lane portion of the turnpike, and three travel lanes in each direction (each direction being 36 feet wide including shoulder) in the three lane portion of the turnpike (Mile 0.0 to mile 44.3) shall be maintained at all times except while performing work in a designated lane, directly over or adjacent to traffic, and during the placement and removal of traffic control devices.

Unless otherwise specified in the contract documents the minimum main line width for a single travel lane shall be 14 ft and minimum ramp widths of 16 ft which must be maintained at all times, from ½ hour before sunrise and ½ hour after sunset as indicated on the Sunrise/Sunset Table at: http://www.sunrisesunset.com/usa/Maine.asp . If the Project town is not listed, the closest town on the list will be used as agreed at the Preconstruction Meeting.

Shoulder closures, lane closures, and lane shifts meeting the MUTCD guidelines, other than those shown in the plans, must be submitted for approval from the MTA prior to use in the construction operations.

No lane closures will be allowed during non-working hours, weekends and/or holiday periods unless included in the Contract as long-term traffic control requirement as outlined in Section 652 – Specific Project Maintenance of Traffic Requirements **unless written permission is obtained from the Authority.**

Any special signs, barricades or other devices deemed necessary by the Resident shall be furnished and maintained by the Contractor. Extra care shall be taken so that the traffic flow will not be disturbed. The use of construction signs and warning devices not shown on the Plans or in the MUTCD is prohibited unless approved by the Resident.

The Contractor's personnel and equipment shall avoid crossing traffic whenever possible. No Contractor's vehicle may slow down or stop in a traffic lane unless said lane has previously been made safe with signs and barricades as required by the Resident.

No vehicle will move onto the traveled way at such a time or in such a manner so as to cause undue concern or danger to traffic approaching from either direction. The Contractor or his employees are not empowered to stop traffic.

The Contractor shall take necessary care at all times, in all operations and use of his equipment, to protect and facilitate traffic. During periods of idleness, the equipment shall not be left in a way to obstruct the traffic artery or to interfere with traffic.

The Contractor shall furnish approved signs reading “Construction Vehicle - Keep Back” to be used on trucks hauling to the Project. The signs shall be a minimum of 30-inch by 60-inch, Black and Orange, and meet construction sign retro reflectivity requirements.

All vehicles used on the Project shall be equipped with amber flashing lights, by means of a single or multiple, flashing LED or strobe lights mounted so as to be visible 360 degrees. **In addition, vehicles operating under direction of the Maine Turnpike Authority may be equipped with auxiliary lights that are green, white, or amber or any combination of green, white, or amber.** Auxiliary lighting shall have sufficient intensity to be visible at 500 feet in normal daylight and a flash rate between 1Hz and 4Hz. The vehicle flashing system shall be in continuous operation while the vehicle is on any part of the project and positioned or mounted in such a way to not be obstructed by vehicle mounted or other equipment. Dump trucks, **concrete trucks**, and utility trucks **at a minimum** shall have a strobe light mounted on each side of the vehicle. **The use of motorcycles is not permitted within a construction site or as a means to arrive at or leave a work zone.**

Where space is available pavement striping for all tapers shall create a minimum buffer of 250 feet to the point where the temporary concrete barrier taper ends and becomes parallel to the travel way. Temporary concrete barrier shall be tapered at a minimum 8:1 unless space is available and then it should be tapered at 15:1 or 100 feet whichever is longer.

Milling and paving of interchange ramps shall be done between 9:00 p.m. and 5:00 AM, unless otherwise shown on the Maintenance of Traffic Phasing Plans or as directed by the MTA. Only a single ramp at an interchange may be closed at once. Ramp closures will not be permitted the day before or after holidays, on holidays, or on Saturdays or Sundays. The Contractor shall request approval from the Resident/Authority two weeks prior for all ramp closures. Portable changeable message signs shall be used to provide advance notice and warning of the ramp closure. PCMS’s shall be operational a minimum of 1 week prior to ramp closure to notify Patrons. The contractor shall coordinate PCMS locations with the Resident and the MTA.

Access to, and egress from, the construction area shall be with the direction of travel without crossing traffic. Construction vehicles are prohibited from merging with mainline traffic during the AM and PM peak traffic hours unless approved in writing from the MTA. The contractor shall develop work zone access/egress with acceleration and deacceleration areas and should utilize interchange ramp areas whenever feasible.

Temporary Mainline Lane Closures

A lane closure may be required whenever personnel will be actively working within four feet of a travel lane.

Loading/unloading trucks shall not be closer than six feet from an open travel lane. Temporary lane closures will only be allowed at the times outlined in Special Provision, Section 652, Specific Project Maintenance of Traffic Requirements. These hours may be adjusted based on the traffic volume each day by the Resident.

A lane closure is required when a danger to the traveling public may exist. The following is a partial list of activities requiring lane closures. Lane closures may be required for other activities as well:

- Milling and Paving Operations
- Bridge work
- Drainage Installation and/or Adjustment
- Clear Zone Improvements
- Pavement Markings Layout and Placement
- **Work directly over traffic within six feet of a travel lane as measured from the painted pavement marking line or traffic control device will require a lane closure. This work includes but is not limited to the following:**

    1. **Unbolting structural steel**
    2. **Removing structural steel**
    3. **Erecting structural steel**
    4. **Erecting or moving sign panels on bridges or sign structures**
    5. **Bolting structural steel**
    6. **Loading and unloading trucks**
    7. **Light pole removal or installation**
    8. **Snow fence installation**

Lane closures shall be removed if work requiring the lane closure is not ongoing unless included in the Contract as a long-term traffic control requirement or approved by the Resident.

During adverse weather conditions when the speed limit on the Maine Turnpike has been reduced to 45 MPH, or during fog, or when there is less than ½ mile of visibility, shoulder/lane closures cannot be set up and any currently in place shall be removed. Only work on the turnpike mainline that is behind temporary concrete barrier will be allowed when speed is reduced to 45 MPH or fog/visibility conditions exist.

Daytime lane closures shall be a maximum of three (3) miles. Only one daytime lane closure will be permitted per direction. Nighttime lane closures may extend through the entire length of the Project.

Temporary single lane closures are allowed upon approval of the Resident. Lane and/or ramp closure setup may not begin until the beginning time specified. Closures that are setup early or that remain in place outside of the approved time period shall be subject to a lane rental fee of$1,000 per five minutes for every five minutes outside of the approved time. The installation of the construction signs will be considered setting up the lane closure. Removal of the last construction sign will be considered removal of the closure. Construction signs shall be installed immediately prior to the start of the closure and shall be promptly removed when no longer required. The installation and removal of a closure, including signs, channelizing devices, and arrow boards shall be a continuous operation. The Authority reserves the right to order the removal of an approved closure.

The Authority desires to minimize the number of daytime lane closures and the number of times that a complete stoppage of traffic is required. The Contractor is encouraged to schedule work so that the interference with the flow of traffic will be minimized. Lane closures will not be allowed until traffic associated with complete stoppages of traffic has cleared. Complete stoppages of traffic or lane closures may not be allowed on a particular day if another complete stoppage of traffic has been previously approved for another project.

The Resident is required to receive approval from the Maine Turnpike Authority for all lane closures. **The Resident is required to submit a request for lane closures by noon on Thursday for**

any lane closures needed for the following week. The Contractor shall plan the work accordingly.

Temporary Mainline Shoulder Closures

Shoulder closures are anticipated at locations where Contractor access to the mainline is required.

Shoulder closures with plastic drums shall be removed at the end of the workday. Temporary shoulder closures with plastic drums will not be allowed during periods of inclement weather as determined by the Authority.

The location (limits) of shoulder closures with concrete barrier are shown on the Plans. The barrier must be placed prior to the start of the work requiring concrete barrier and shall remain in place until the work activity is complete.

Equipment Moves

The complete stoppage of traffic for an equipment move (including delivery of materials to the median) will be considered for approval if the action cannot reasonably be completed with the erection of a lane closure. Contractor shall be responsible for the installation of Signs CS-3, "Expect Stopped Traffic" and Signs W3-4 "Be Prepared to Stop", in accordance with the Single Lane Closure Detail immediately prior to the equipment move. **Signs will be required on any adjacent ramps within proximity to the stoppage.** These signs shall be covered when not applicable.

State Police will be used to stop traffic. Cost for State Police will be the responsibility of the Authority. The times requested for trooper assisted equipment moves by on-duty troopers cannot be guaranteed. The MTA will not be held responsible for any delays or costs associated with the delay, postponement or cancellation of an on-duty trooper assisted equipment move.

The maximum time for which traffic may be stopped and held for an equipment move across mainline or ramp at any single time shall be five (5) minutes. The duration shall be measured as the time between the time the last car passes the Resident until the time the Resident determines that all travel lanes are clear. The traffic shall only be stopped for the minimum period of time required to complete the approved activity. The Contractor shall reimburse the Authority at a rate of $500 per minute for each minute in excess of the five-minute allowance.

Unapproved movement of equipment or materials across the travel lanes shall be considered a violation of the Maintenance of Traffic Requirements and is subject to a minimum fine of $500 per occurrence with an additional $500 per minute thereafter.

Request for Complete Stoppage of Traffic

A request for a complete stoppage of traffic must be submitted to the Resident for approval. The Resident is required to receive approval from the Maine Turnpike Authority for all stoppages. The request shall be submitted to the Authority by the Resident at least five (5) working days prior to the day of the requested stoppage of traffic and two (2) days for a stoppage less than five minutes. All requests must be received by 12:00 p.m. noon to be considered as received on that day. Requests received after 12:00 p.m. shall be considered as received the following day. The Contractor shall plan the work accordingly.

During the erection or removal of overhead structures or signs traffic shall be stopped and may be

held for periods of up to 25 minutes during these operations. Before the roadway is reopened, all materials shall be secured so they will not endanger traffic passing underneath. The Contractor will reimburse the Authority at the rate of $2,500.00 per five-minute period for each roadway not reopened (northbound and southbound), in excess of the 25-minute limit. Total penalty shall be deducted from the next pay estimate.

Blasting of Ledge, The maximum time for which traffic may be stopped at any single time shall be six (6) minutes. This duration shall be measured as the time between the time that the last car passes the Resident, until the time the Resident determines that all travel lanes are cleared of blast debris. The Contractor shall reduce the size of the blast, change the design and method of the blast, use more mats, or otherwise alter the blasting so that the traffic is not stopped for more than six minutes. If, due to the throw of rock onto the highway or other blasting related activities, traffic is stopped for more than six minutes, the Contractor shall pay a penalty of $1,000.00 per minute for every minute traffic is stopped in excess of the six-minute limit. The penalty shall be measured separately on the northbound and southbound roadway (or eastbound and westbound roadway). Total penalties will be deducted from the next pay estimate. Whenever the volume of traffic is excessive such that a six-minute interruption would cause objectionable congestion, in the opinion of the Authority, the hours during which blasting may occur may be further restricted. A detailed blasting plan shall be submitted as required in Supplemental Specific or Special Provision Sections 105 or 107.

652.3.5 Installation of Traffic Control Devices

All traffic control devices shall be in conformance with NCHRP 350 requirements (and MASH 16 requirements if manufactured after December 31, 2019) and installed as per manufacturer's recommendations.

Portable signs shall be erected on temporary sign supports approved crashworthy devices so that the bottom of the sign is either 1) 12 inches or 2) greater than 5 feet above the traveled way. The bottom of all regulatory signs and ramp exit signs shall be a minimum of 5 feet above the traveled way. The contractor is responsible for maintaining the temporary sign structures so that the sign face remains in a vertical position. Temporary sign supports shall not be used for signs that will remain in place at a single location for more than one month.

No signs on easels shall be placed on 4 foot shoulders with guardrail, signs required at these location shall be placed on taller easels on the median side of the guardrail.

Post-mounted signs shall be erected so the bottom of the sign is no less than 5 feet above the traveled way, and 7 feet above the traveled way in business, commercial, and residential areas. Post-mounted signs must be erected so that the sign face is in a true vertical position. All signs shall be placed so that they are not obstructed in any manner and immediately modified to ensure proper visibility if obstructed.

The bottom of mainline and ramp traffic control signs intending to remain longer than 3 days, except as provided in 2009 MUTCD Section 6F.03 paragraph 12, shall be mounted 5 feet or greater above the edge of pavement on posts or portable sign supports.

The Resident will verify the exact locations of the construction signs in the field. Construction signs behind guardrail shall be mounted high enough to be visible to traffic. Vertical panel markers shall be mounted with the top at least 4 feet above the traveled way.

Drums placed along the Turnpike mainline shall have a minimum of one drum weight. Drums that will remain in the same location for more than three days shall have double drum weights (i.e. a minimum of 40 lbs of drum tire rings). Drums shall not be weighted on the top. Drain holes shall be provided to prevent water from accumulating in the drums During winter periods, drums shall be placed on the grass shoulder or removed from the roadway so winter maintenance operations will not be impacted. This requires the placement of drums behind the median guardrail. Drums shall not be placed on snowbanks.

The Contractor shall operate and maintain the flashing arrow board unit and for dependable service during the life of the contract. The units shall remain in continuous night and day service at locations designated until the Resident designates a new location or discontinuance of service.

The Contractor shall maintain the devices in proper position and clean them as necessary. Maintenance shall include the covering and uncovering of all signs when no longer applicable (even if for a very short duration). The sign shall be considered adequately covered when no part of the sign face is visible either around or through the covering.

The Contractor shall replace damaged traffic control devices with devices of acceptable quality, as directed by the Resident.

The Contractor is required to cover all existing signs, including regulatory and warning signs, within the Work zone which may conflict with the proposed construction signs. The Contractor is also required to cover all permanent construction signs when they conflict with a daily traffic control setup. The method of covering existing signs must be approved by the Resident. The use of adhesives on the sign face is prohibited.

Work Zone Speed Limits

Work Zone Speed (Fines Doubled) is a regulatory speed limit that indicates the maximum legal speed through a work zone which is lower than the normal posted speed. The speed limit shall be displayed by black on white speed limit signs in conjunction with a black on orange “Work Zone” plate. Speed limit signs shall be installed at each mile within the work zone. Any existing regulatory speed limit signs within the reduced speed zone shall be covered once the reduced speed signs have been erected.

Two orange fluorescent flags shall be attached to all speed limit signs that are uncovered for a period of time exceeding one week. This work shall be incidental. Signs that are covered and uncovered on a regular basis are not required to have the supplemental flags.

The reduced speed limit signs shall be used when workers are adjacent to traffic, when travel lane(s) are closed, when indicated on Maintenance of Traffic Control Plans provided or other times as approved by the Resident:

The signs shall be covered or removed when not applicable. The covering and uncovering of signs shall be included for payment under Maintenance of Traffic. Signs relating to reduced speed shall be installed in accordance with the details. The Contractor shall note that all signs including those behind concrete barrier or guardrail are required to be clearly visible to all drivers at all times.

Lane Closure Installation and Removal Procedure

The Contractor will follow the following procedures when closing any travel lanes on the turnpike roadways:

1. The sign package shall be erected starting with the first sign and proceeding to the start of the taper. The sign crew shall erect signs with the vehicle within the outside shoulder.

2. Position the arrow board with the proper arrow at the beginning of the taper; and,

3. When arrow board is in place, continue with the drums/cones to secure the work area.

To dismantle the lane closure, start with last drums/cone placed and work in reverse order until all the drums are removed. The arrow board which was installed first shall be the final traffic control device removed, excluding the sign package. The remaining sign package shall be picked-up starting with the first sign placed and continuing in the direction of traffic and with the vehicle in the outside shoulder.

Trucking Plan

The Contractor shall submit a trucking plan to the Resident within 10 working days of the award of the Contract. The trucking plan shall consist of at least the following:

- Date of anticipated start of work per each location.
- Haul routes from plant/pit to work area and return.
- Haul routes from work area to disposal area and return.
- Entering / exiting the work area.
- Vehicle safety equipment and Vehicle inspection.
- Personal safety equipment.
- Communications equipment and plan.
- The trucking plan will not be paid for separately but shall be incidental to the Contract.

652.3.6 Traffic Control

The existing travel way width shall be maintained to the maximum extent practical.

Vertical panel markers, drums, cones, or striping shall be used to clearly delineate the roadway through the construction area. Two-way traffic operation shall be provided at all times that the Contractor is not working on the project. One- way traffic shall be controlled through work areas by flaggers, utilizing radios, field telephones, or other means of direct communication.

The traffic control devices shall be moved or removed as the work progresses to assure compatibility between the uses of the traffic control devices and the traffic flow.

Pavement markings shall be altered as required to conform to the existing traffic flow pattern. Repainting of pavement marking lines, if required to maintain the effectiveness of the line, shall be considered **incidental to the** maintenance of traffic control devices, no separate payment will be made. Inappropriate pavement markings shall be removed whenever traffic is rerouted, and temporary construction pavement markings shall be placed. Removal of non-applicable markings and **initial** placement of temporary construction pavement markings will be paid for under the appropriate Contract items. Traffic changes shall not be made unless there is sufficient time, equipment, materials, and personnel available to complete the change properly before the end of the workday. This provision will not be required when traffic is rerouted for brief periods and the route can be clearly defined by channelizing devices, or flaggers, or both.

All vehicles used during the installation and removal of traffic control devices, including lane closures, shall be equipped with a vehicle-mounted lighted arrow board **or high intensity LED full width light bar** acceptable to the Resident. The arrow board or full width light bar shall be capable of displaying a left arrow, right arrow, double arrow, and light bar **patterns.**

652.4 Flaggers

The Contractor shall furnish flaggers as required by contract documents or as otherwise specified by the Resident. **Flaggers shall not stop traffic on Turnpike mainline or interchange ramps. Only State Police are allowed to stop traffic on mainline or interchange ramps.**

All flaggers must have successfully completed a flagger test approved by the Maine Department of Transportation and administered by a Maine Department of Transportation approved Flagger-Certifier. All flaggers must carry an official certification card with them at all times while flagging.

For daytime conditions, flaggers shall wear a top (vest, shirt or jacket) that is orange, yellow, yellow-green, or fluorescent versions of these colors meeting ANSI 107-2004, Class 3, along with a hat with 360˚ retro-reflectivity.

For nighttime conditions, flaggers shall wear all Class 3 apparel, meeting ANSI 107-2004, including a Class 3 top (vest, shirt or jacket) and a Class E bottom (pants or coveralls), shall be worn along with a hardhat with 360˚ retro-reflectivity and shall be visible at a minimum distance of 1000 ft. Flagger stations must be illuminated in nighttime conditions to assure visibility and will be specifically addressed in detail in the Contractor's TCP.

Flagger stations shall be located far enough in advance of the workspace so that approaching road users will have sufficient distance to stop at the intended stopping point. While flagging, the flagger should stand either on the shoulder adjacent to the traffic being controlled, or in the closed lane. At a spot obstruction with adequate sight distance, the flagger may stand on the shoulder opposite the closed sections to operate effectively. Under no circumstances shall the flagger stand in the lane being used by moving traffic or have their back to oncoming traffic. The flagger should be clearly visible to approaching traffic at all times and should have a clear escape route.

When conditions do not allow for proper approach sight distance of a flagger or storage space for waiting vehicles, additional flaggers shall be used at the rear of the backlogged traffic or at a point where approaching vehicles have adequate stopping sight distance to the rear of the backlogged traffic. All flagger stations shall be signed, even when in close proximity. The signs shall be removed or covered

when flagger operations are not in place, even if it is for a very short duration.

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 workstation. 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. If the flaggers are receiving the appropriate breaks, breaker flagger(s) shall be paid starting 2 hours after the work begins and ending 2 hours before the work ends. A maximum of 1 breaker per 6 flaggers will be paid. (1 breaker flagger for 2 to 6 flaggers, 2 breaker flaggers for 7 to 12 flaggers, etc.). If a flagger station

is manned for 10 hours or more, then ½ hour for lunch will be deducted from billable breaker flagger hours.

652.41 Traffic Officers

Local road traffic officers, if required, shall be uniformed police officers. State Police officers and vehicles shall be used to warn and stop traffic on the Maine Turnpike. All State Police shall be scheduled through the Maine Turnpike Authority. The Authority will make payment for the State Police officers and vehicles directly to the State Police.

The Contractor will not be entitled to additional compensation if scheduled Work is not completed due to the unavailability of State Police.

652.5.1 Rumble Strip Crossing

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

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

652.6.1 Daylight Work Times

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

652.6.2 Night Work

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

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

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

The Contractor shall submit a lighting plan prior to any night work for review showing the type and location of lights to be used for night work. The Resident may require modifications be made to the lighting set up in actual field conditions.

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

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

Night Work lighting requirements:

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

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

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

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

The Contractor shall apply 2- inch wide retro-reflective tape, with alternating red and white segments, to outline the front back and sides of construction vehicles and equipment, to define their shape and size to the extent practicable. Pickup trucks and personal vehicles are exempt from this requirement.

The Resident or any other representative of the Authority reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Authority shall not be held responsible for any delay in the work due to any suspension under this item.

Failure to follow the approved Lighting Plan will result in a Traffic Control violation.

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

652.6.3 Traffic Coordinator and Personnel

The Contractor shall submit to the Resident for approval a list of traffic control personnel assigned to the Project including qualifications, certifications, and experience.

The Traffic Coordinator duties shall include, but are not necessarily limited to:

a. Developing, in conjunction with the Resident and Project superintendent, a traffic control program for the days' work activities which will facilitate traffic in a safe and efficient manner.

b. Ensure that all traffic control implements (signs, arrow boards, barrels, etc.) are on-site so the traffic program can be implemented effectively.

c. Ensure a safe and effective setup or take-down of all signing implements to least impact the traveling motorist; and,

d. Working knowledge of construction signing/traffic control requirements in conformance with the latest issued Manual on Uniform Traffic Control Devices.

e. The Contractor shall supplement the traffic control plan with a daily plan, which includes schedules for utilizing traffic coordinators and flaggers. This plan shall be submitted daily and agreed upon cooperatively with the Resident.

652.6.7 Method of Measurement

Signs, signs supplied by the Authority, and panel markers will be measured by the square foot for all signs authorized and installed. Flashing arrow boards, portable-changeable message signs, and flashing and steady burn lights, will be measured by each unit authorized and installed on the project. Barricades and cones will be measured by each unit authorized. Drums will be measured by each or as a lump sum authorized and installed, as indicated on the plans and specifications. No additional payment will be made for devices that require replacement due to poor condition or inadequate retroreflectivity.

Flaggers or traffic officers used during the Contract, for the convenience of the Contractor, will not be measured separately for payment, but shall be incidental to the various pay items. **This includes use of Flaggers for the delivery of materials and equipment to the project or other Flagger use that is for the Contractor's convenience, as determined by the Resident Engineer. If flaggers are required to maintain traffic and there is not a pay item in the contractor for flaggers, then flaggers shall be incidental to the other Section 652 contract items and no separate payment shall be made.**

The accepted quantity of traffic officer and flagger time will be the number of hours the designated station is occupied. The number of hours authorized for payment, if any, will be measured to the nearest ¼ hour.

The Authority will make payment for the State Police officers and vehicles directly to the State Police when utilized for mainline traffic control activities. State Police escorts, if required to move oversize material or equipment loads to the jobsite, will not be paid separately, but shall be incidental to the various pay items.

Maintenance of traffic control devices, including truck mounted impact attenuators and automated trailer mounted speed limit signs required for the project will be measured by the calendar day or as one

lump sum, as indicated in the plans and specifications, for all authorized and installed traffic control devices. Traffic control devices will only be measured for payment the first time used. Subsequent uses shall be incidental to Item 652.36 or 652.361.

The vehicle mounted arrow board, mounted on trucks used for installation and removal of lane closures, will not be measured separately for payment, but shall be incidental to Item 652.36 or 652.361.

The traffic coordinator(s) will not be measured separately for payment but shall be incidental to Item 652.36 or 652.361.

Portable light towers, lighting on equipment and lighting plan will not be measured separately for payment but shall be incidental to the related Contract items.

Sequential Flashing Warning Lights shall be measured for payment by the maximum number of sequential flashing warning lights satisfactorily installed and properly functioning at any one time during the life of the project. Payment shall include all materials and labor to install, maintain and remove all Sequential Flashing Warning Lights.

Automated Trailer Mounted Speed Limit Sign shall be incidental to the Maintenance of Traffic Control device item. Payment shall include the Trailer, Radar Speed Limit Sign, flashing beacon amber lights, regulatory speed limit sign, fuel, necessary maintenance, and all checking of Radar Speed Limit Signs by manufacturer and all project moves including the transporting and delivery of the unit.

The accepted quantity of temporary portable rumble strips shall be measured by the unit complete in place, per lane closure application. A unit shall consist of 1 group of 3 full-lane width of rumble strips. As shown in the plans, a maximum of 3 units may be used at each lane closure. A unit shall be measured for each group of rumble strips, each time they are used for a lane closure.

652.6.8 Basis of Payment

The accepted quantity of signs, signs supplied by the Authority, and panel markers will be paid for at the contract unit price per square foot. Such payment will be full compensation for furnishing (or retrieving from the Authority) and installing all signs, sign supports, and all incidentals necessary to complete the installation of the signs.

The accepted quantity of flashing arrow boards, barricades, battery operated flashing and steady burn lights, and cones will be paid for at the contract unit price each for the actual number of devices authorized, furnished, and installed. Such payment shall be full compensation for all incidentals necessary to install and maintain the respective devices.

The Sequential Flashing Warning Lights will be paid for at the Contract unit price per each. This price shall include all costs associated with furnishing, installing, operating, maintaining, relocating, and removing the Sequential Flashing Warning Lights.

The Truck Mounted Attenuator(s) will be incidental to the Maintenance of Traffic Control device item. This price shall include all costs associated with the use of the vehicle. Payment shall include operator, fuel, truck, maintenance, flashing lights, arrow board and all other incidentals necessary to operate the vehicle.

Failure by the contractor to reinstall cones, barrels, signs, covered/uncovered signs, and similar traffic control devices within an hour of them being displaced, moved, knocked over, uncovered, etc. will result in a $150 fine per traffic control device if the issues is not resolved within 1 hour of notification by the resident. An additional $150 will be assessed for each additional hour that the device has not been corrected. If the traffic control device is critical to the maintenance of traffic creating an actual or potential safety issue with traffic and is not corrected immediately then it will result in a violation letter as described below.

Failure by the contractor to follow the Contracts 652 Supplemental Specifications, Special Provisions and Standard Specification and/or the Manual on Uniform Traffic Control Devices (MUTCD) and/or the Contractors own Traffic Control Plan, or failure to correct a violation, will result in a violation letter and result in a reduction in payment as shown in the schedule below. The Resident or any other representative of the Authority reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Authority 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.

Amount of Penalty Damages per Violation		
1st	2nd	3rd & Subsequent
$500	$1,000	$2,500

652.8.1 Maintenance of Traffic Control Devices

Maintenance of Traffic Control Devices will be paid at the contract unit price per calendar day or lump sum price, as indicated in the plans and specifications. Such payment will be full compensation for all days that the Contractor maintains traffic as specified herein, and for moving devices as many times as necessary; for replacing devices damaged, lost, or stolen; and for cleaning, maintaining, and removing all devices used for traffic control, including replacing temporary pavement marking lines.

The contract price for Maintenance of Traffic Control Devices shall be full compensation for all days for such maintenance, encompassing all areas of the contract, regardless of whether the work areas or projects are geographically separated.

652.8.2 Other Items

The accepted quantities of flagger hours will be paid for at the contract unit price per hour for each flagging station occupied excluding lunch breaks, and for each approved breaker flagger. Overtime hours, as reported on the certified payrolls, will be paid an additional 30% of the bid price for 652.38. The computation and additional payment for overtime hours will occur during the project close-out process and will be paid as additional hours of 652.38 to the nearest ¼ hour. The contract unit price shall be full compensation for hiring, transporting, equipping, supervising, and the payment of flaggers and all overhead and incidentals necessary to complete the work.

There will be no payment made under any 652 pay items after the expiration of the adjusted total contract time.

The accepted quantities of traffic officer hours will be paid for at the contract unit price per ¼ hour for each station occupied, with no additional payment for overtime. This price shall be full compensation for supplying uniformed officers with police cruisers, and all incidentals necessary to

complete the work, including transportation, equipment, and supervision.

Payment for temporary pavement marking lines and pavement marking removal will be made under the respective pay item in Section 627 - Pavement Markings.

Payment for temporary traffic signals will be made under Section 643 - Traffic Signals. The accepted quantity of Portable Changeable Message Signs will be paid for at the Contract unit price each. This price shall be full compensation for furnishing, relocating, maintaining, and removing the PCMS. The price also includes all costs associated with setting-up and paying for a data cellular account, technical support, and training, and any costs associated with the GPS location device.

Progress payment of each PCMS shall be pro-rated over the duration of the Contract. Contract duration shall be from the specified Contract start date to substantial completion or Contract completion, whichever is sooner.

For a PCMS that fails to operate when required, the Contractor will be given 24 hours to repair or replace the PCMS. For periods longer than 24 hours, payment will be reduced based on the pro-rated time that the PCMS is out of service.

Drums will be paid for at the contract unit price each, or at the Contract lump sum price, as designated in the Plans and specifications. Such payment shall be full compensation for all drums as shown on the Plans or required to complete the work.

The accepted quantity of temporary portable rumble strips will be paid for at the contract unit price per unit which shall include the transport device. Payment is full compensation for providing, relocating, maintaining, or replacing, and removing temporary portable rumble strips. If the pay item is not included in the contract quantities, then the Authority does not anticipate the use of this item on the contract. If contractor wishes to utilize temporary portable rumble strips and the item is not in the contract, then the contractor may propose use of them to the Authority for consideration.

Payment will be made under:

Pay Item		Pay Unit
652.30	Flashing Arrow Board	Each
652.31	Type I Barricade	Each
652.311	Type II Barricade	Each
652.312	Type III Barricades	Each
652.32	Battery Operated Light	Each
652.33	Drum	Each
652.331	Drum	Lump Sum
652.34	Cone	Each
652.35	Construction Signs	Square Foot
652.351	Construction Signs-Supplied by Authority	Square Foot
652.36	Maintenance of Traffic Control Devices	Calendar Day
652.361	Maintenance of Traffic Control Devices	Lump Sum
652.38	Flaggers	Hour
652.381	Traffic Officers	Hour

652.41	Portable-Changeable Message Sign	Each
652.46	Temporary Portable Rumble Strips	Unit
652.47	Sequential Flashing Warning Lights	Each

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC
(Specific Project Maintenance of Traffic Requirements)

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

The following minimum traffic requirements shall be maintained. These requirements may be adjusted based on the traffic volume when authorized by the Authority.

Maine Turnpike Traffic Control Requirements

This section outlines the minimum requirements that shall be maintained for work on, over, or adjacent to the Maine Turnpike roadway. Operations are allowed as outlined below:

Bridge work directly over traffic or within six feet of a travel lane as measured from the painted pavement marking line or traffic control device will require a lane closure. This work includes but is not limited to the following:

1. Installing and removing shielding
2. Superstructure demolition
3. Unbolting structural steel
4. Removing structural steel
5. Erecting structural steel or concrete beams
6. Installing and removing deck and diaphragm forms
7. Erecting or moving sign panels on bridges
8. Bolting structural steel
9. Painting structural steel

When approved by the Resident, Items 3, 6, and 8 may be performed over traffic if a temporary floor is provided between the bottom flanges of the beams.

If the work involves a worker working higher than eight feet above grade, a truck mounted attenuator (TMA) shall be included in the work zone layout.

Long term right shoulder closures in accordance with the Maintenance of Traffic details shown on the Plans may be used to create staging areas to complete work not over travel lanes (excluding over the median). The Contractor shall install signs, drums, work zone crash cushions, and temporary concrete barrier to create staging areas. All maintenance of traffic control devices including concrete barrier and work zone crash cushions shall immediately be removed from the shoulder once work ins complete as determined by the Resident.

The existing Turnpike **Emergency Vehicle Ramps** at the Gray and New Gloucester underpass bridges shall be maintained during Contract operations and access shall not be impeded at any time by Contractor activities. No equipment or material storage will be allowed on the Turnpike Emergency Vehicle Ramps.

Access to all roadways and driveways intersecting Shaker Road, Weymouth Road, and Bennett Road shall be maintained at all times and shall not be impeded by Contractor activities. Private roadways and driveways shall not be used for turning construction vehicles.

The temporary closure of one lane in accordance with the Maintenance of Traffic details shown in **Appendix C,** and in accordance with allowable closure tables in **Appendix B**, will be permitted on the Maine Turnpike under the four subject underpass bridges. All temporary lane closures shall be made utilizing drums.

The Contractor shall submit traffic control plans for each site to the Authority for review and approval prior to implementation and shall provide a two-week notice to the Authority of the commencement of maintenance of traffic measures.

See Subsection 1.4.4.7 Cooperation with Other Contractors for more information on other projects that may be in the area.

Maine Turnpike under the **Shaker Road** Underpass Bridge Traffic Control Requirements

Two lanes of traffic in each direction shall be maintained on the Maine Turnpike under the Shaker Road underpass bridge except when temporary lane closure(s) are required to undertake project work. Single lane closures shall be in accordance with the Maintenance of Traffic details shown on the Plans in Appendix D. The lane closures shall incorporate advance signing and maintenance of traffic control devices as needed. See Appendix B for permitted Maine Turnpike Single Lane Closure hours under the Shaker Road underpass bridge.

No inside left shoulder closures will be allowed at any time.

Temporary right shoulder closures in accordance with the Maintenance of Traffic details shown on the Plans, and in accordance with allowable closure tables in Appendix B, will be permitted on the Maine Turnpike under the subject underpass bridge.

The Shaker Road emergency vehicle ramp will not be available for use until the conclusion of the adjacent water line construction project by Gray Water District. (See section 104.4.7)

Shaker Road Underpass Bridge Traffic Control Requirements

Temporary lane closures are permitted on the Shaker Road underpass bridge in accordance with the Maintenance of Traffic details to allow for the installation and removal of the proposed suspended platforms and associated containment system. However, no lane closures are permitted from 7 – 9 AM or 3 – 5 PM (see Appendix B). The Contractor shall provide a minimum roadway width of 22 feet for two-way traffic and 11 feet for one-way traffic, and one lane alternating traffic shall be controlled by flaggers. For all local road one-way alternating traffic setups, flaggers shall be incidental to the Maintenance of Traffic item.

Maine Turnpike under the **Weymouth Road** Underpass Bridge Traffic Control Requirements

Two lanes of traffic in each direction shall be maintained on the Maine Turnpike under the Weymouth Road underpass bridge except when **temporary** lane closure(s) are required to undertake project work. Single lane closures shall be in accordance with the Maintenance of Traffic details shown

on the Plans in **Appendix D.** The lane closures shall incorporate advance signing and maintenance of traffic devices as needed. No inside left shoulder closures will be allowed at any time.

Temporary right shoulder closures in accordance with the Maintenance of Traffic details shown on the Plans, and in accordance with the permitted lane closure notes in **Appendix B**, will be permitted on the Maine Turnpike under the Weymouth Road underpass bridge.

See Appendix B for permitted Maine Turnpike Single Lane Closure hours under the subject underpass bridges.

Weymouth Road Underpass Bridge Traffic Control Requirements

Temporary lane closures are permitted on the Weymouth Road underpass bridge in accordance with the Maintenance of Traffic details to allow for the installation and removal of the proposed suspended platforms and associated containment system. The Contractor shall provide a minimum roadway width of 22 feet for two-way traffic and 11 feet for one-way traffic. **A long-term lane closure for the staging of bridge coatings support equipment upon the underpass bridge is permissible. The equipment shall be shielded by portable concrete barrier and one-way alternating traffic shall operate under the control of temporary traffic signals.** For all local road one-way alternating traffic setups, temporary traffic signals, flaggers, Portable Changeable Message Signs, signs, pavement markings, and portable concrete barrier shall be incidental to the Maintenance of Traffic Control Devices item. The Contractor shall use Portable Changeable Message signs on Weymouth Road to provide advance notice of the lane closure and signal control at least two weeks prior to its start.

Maine Turnpike under the **Bennett Road** Underpass Bridge Traffic Control Requirements

Note: The work on the Bennett Road Underpass Bridge may not proceed until the on-going bridge haunch removal (by others) is complete. The estimated completion date of the work is May 14, 2024.

Two lanes of traffic in each direction shall be maintained on the Maine Turnpike under the Bennett Road underpass bridge except when **temporary** lane closure(s) are required to undertake project work. Single lane closures shall be in accordance with the Maintenance of Traffic details shown on the Plans in **Appendix D.** The lane closures shall incorporate advance signing and maintenance of traffic devices as needed.

No inside left shoulder closures will be allowed at any time.

Temporary right shoulder closures in accordance with the Maintenance of Traffic details shown on the Plans, and in accordance with the permitted lane closure notes in **Appendix B**, will be permitted on the Maine Turnpike under the subject underpass bridge.

See Appendix B for permitted Maine Turnpike Single Lane Closure hours under the Bennett Road underpass bridge.

Bennett Road Underpass Bridge Traffic Control Requirements

Temporary lane closures are permitted on the Bennett Road underpass bridge in accordance with the Maintenance of Traffic details to allow for the installation and removal of the proposed suspended

platforms and associated containment system. The Contractor shall provide a minimum roadway width of 22 feet for two-way traffic and 11 feet for one-way traffic. **A long-term lane closure for the staging of bridge coatings support equipment upon the underpass bridge is permissible. The equipment shall be shielded by portable concrete barrier and one-way alternating traffic shall operate under the control of temporary traffic signals.** For all local road one-way alternating traffic setups, temporary traffic signals, flaggers**,** Portable Changeable Message Signs, signs, pavement markings, and portable concrete barrier shall be incidental to the Maintenance of Traffic Control Devices item. The Contractor shall use Portable Changeable Message signs on Bennett Road to provide advance notice of the lane closure and signal control at least two weeks prior to its start.

Maine Turnpike under the **Interstate 295 Southbound** Underpass Bridge Traffic Control Requirements

Two lanes of traffic in each direction shall be maintained on the Maine Turnpike under the Interstate 295 Southbound underpass bridge except when **temporary** lane closure(s) are required to undertake project work. Single lane closures shall be in accordance with the Maintenance of Traffic details shown on the Plans in **Appendix D.** The lane closures shall incorporate advance signing and maintenance of traffic devices as needed. Lane and shoulder closures are permissible under the Interstate 295 Southbound underpass bridge at all times. See Appendix B, Permitted Lane Closure Notes.

No inside left shoulder closures will be allowed at any time.

Temporary right shoulder closures in accordance with the Maintenance of Traffic details shown on the Plans, and in accordance with the permitted lane closure notes in Appendix B, will be permitted on the Maine Turnpike under the subject underpass bridge.

Interstate 295 Southbound Underpass Bridge Traffic Control Requirements

Three lanes of traffic shall be maintained on the Interstate 295 Southbound underpass bridge except when **temporary** lane and/or shoulder closure(s) are required to undertake project work. Temporary lane closures are permitted on the Interstate 295 Southbound underpass bridge in accordance with the Maintenance of Traffic details to allow for the installation and removal of the proposed suspended platforms and associated containment system. Single lane and/or shoulder closures are permissible at all times and shall be in accordance with the Maintenance of Traffic details shown on the Plans in **Appendix D.** The lane closures shall incorporate advance signing and maintenance of traffic devices as needed.

APPENDICES

APPENDIX A

RCRA 8 METALS TEST REPORTS

ANALYTICAL LABORATORY REPORT

Wednesday, July 12, 2023

CUSTOMER: Greenman-Pedersen, Inc.
181 Ballardvale, Suite 202
Wilmington, MA 01887

DATE RECEIVED: Thursday, July 6, 2023
PO/PROJECT #: NEX-2019122.06
SUBMITTAL #: 2023-07-06-001

LAB NUMBER: AD30204

Sampled By: Andrew N Jeffrey Iii
Date Sampled: 06/27/2023
Job Location: Portland, ME
Sample Description: Paint Chips
Sample Identification: 1 : Bridge Number 0291, Shaker Road/Route 26 over I-95, Gray, ME

Preparation Method: EPA 3050B-P-M (Acid Digestion for Paints)
Analysis Method: EPA 6010D-M (ICP-AES Method for Determination of Metals)
Date Analyzed: Monday, July 10, 2023

ELEMENT	RESULT (by dry	REPORTING LIMIT (RL)
Arsenic	**< RL**	0.0050 %
Cadmium	**< RL**	0.00038 %
Chromium	**0.23 %**	0.00065 %
Lead	**6.4 %**	0.0013 %

LAB NUMBER: AD30205

Sampled By: Andrew N Jeffrey Iii
Date Sampled: 06/27/2023
Job Location: Portland, ME
Sample Description: Paint Chips
Sample Identification: 2 : Bridge Number 0292, Weymouth Road over I-95, Gray, ME

Preparation Method: EPA 3050B-P-M (Acid Digestion for Paints)
Analysis Method: EPA 6010D-M (ICP-AES Method for Determination of Metals)
Date Analyzed: Monday, July 10, 2023

ELEMENT	RESULT (by dry	REPORTING LIMIT (RL)
Arsenic	**< RL**	0.0050 %
Cadmium	**< RL**	0.00038 %
Chromium	**0.0036 %**	0.00065 %
Lead	**0.25 %**	0.0013 %

LAB NUMBER: AD30206

Sampled By: Andrew N Jeffrey Iii
Date Sampled: 06/27/2023
Job Location: Portland, ME
Sample Description: Paint Chips
Sample Identification: 3 : Bridger Number 0294, Bennett Road over I-95, New Gloucester, ME

Preparation Method: EPA 3050B-P-M (Acid Digestion for Paints)
Analysis Method: EPA 6010D-M (ICP-AES Method for Determination of Metals)
Date Analyzed: Monday, July 10, 2023

ELEMENT	RESULT (by dry	REPORTING LIMIT (RL)
Arsenic	**< RL**	0.0050 %
Cadmium	**< RL**	0.00038 %
Chromium	**0.69 %**	0.00065 %
Lead	**13 %**	0.0013 %

APPENDIX B

PERMITTED LANE CLOSURE NOTES

Permitted Lane Closure Notes

1. No permanent lane closures are permitted on the Maine Turnpike at the Shaker Road, Weymouth Road, and Bennett Road Underpass Bridges.

2. Temporary lane closures are permitted on the Maine Turnpike at the Shaker Road, Weymouth Road, and Bennett Road Underpass Bridges except as follows:

- Northbound - no lane closures 3-7 PM Monday-Friday (in July and August)
  > Minimum lane width: 16' from 3-7 PM, 14' at all other times (without wide load restriction)
- Southbound - no lane closures 11 AM - 5 PM on Sundays (in July and August)
  > Minimum lane width: 16' from 7-9 AM, 14' at all other times (without wide load restriction)

3. Lane closures are permitted on the Maine Turnpike at the I-295 Southbound Underpass Bridge at all times.

4. Single lane and shoulder closures are permitted on the I-295 Southbound Underpass Bridge at all times.

5. Right shoulder closures are permitted on the Maine Turnpike at all times.

6. Shaker Road Underpass Bridge - no Shaker Road lane closures are permitted from 7-9 AM or 3-5 PM.

APPENDIX C

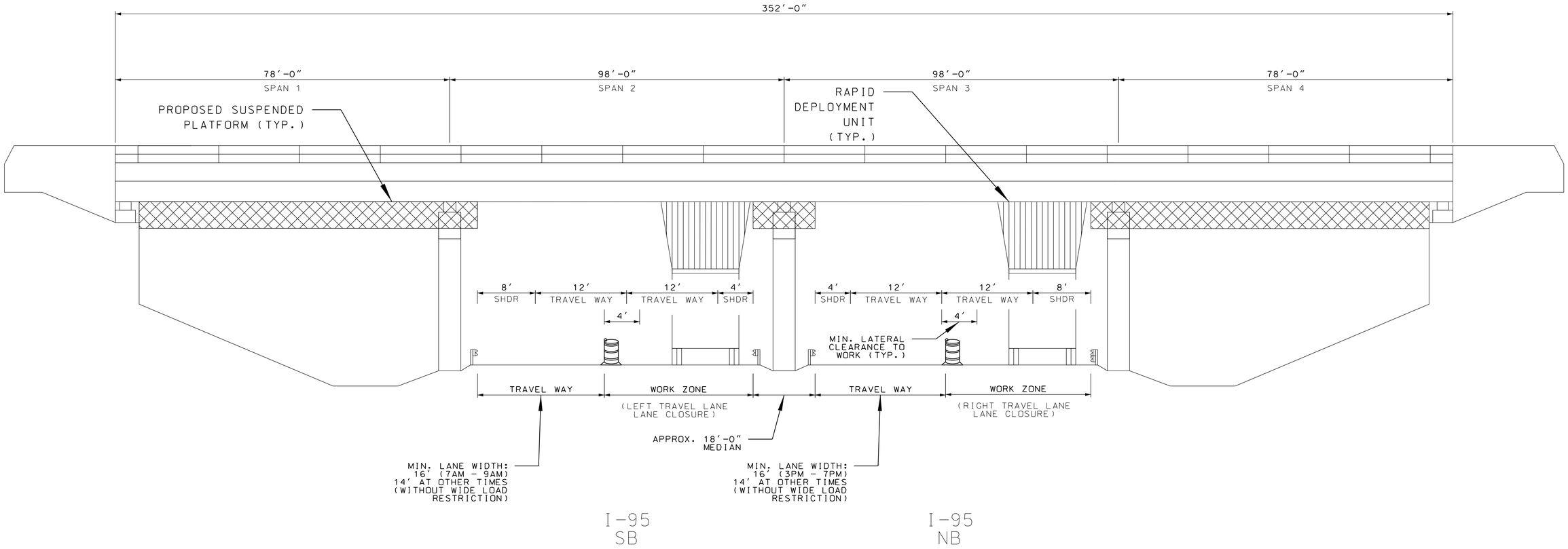
SHAKER ROAD UNDERPASS BRIDGE
- ELEVATION VIEW
- FRAMING PLAN

WEYMOUTH ROAD UNDERPASS BRIDGE
- ELEVATION VIEW
- FRAMING PLAN
- CROSS SECTION

BENNETT ROAD UNDERPASS BRIDGE
- ELEVATION VIEW
- FRAMING PLAN
- CROSS SECTION

INTERSTATE 295 SOUTHBOUND UNDERPASS BRIDGE
- ELEVATION VIEW
- FRAMING PLAN

EXISTING CONDITION PHOTOGRAPHS
- I-295 SOUTHBOUND UNDERPASS BRIDGE
- WEYMOUTH ROAD UNDERPASS BRIDGE



ELEVATION VIEW
SHAKER ROAD OVER I-95
LOOKING NORTH
NOT TO SCALE

NOTES:

1. THE VISUAL WORK LAYOUTS ARE INTENDED TO PROVIDE AN EXAMPLE TYPICAL SECTION FOR LEFT AND RIGHT LANE CLOSURES AND DOES NOT IMPLY THAT CONCURRENT LANE CLOSURES ARE PROPOSED.

2. WORK TO BE CONDUCTED FROM RAPID DEPLOYMENT UNITS (WITHIN SPANS 2 AND 3) OR SUSPENDED PLATFORMS (WITHIN SPANS 1 AND 4).

3. SUPPORT EQUIPMENT TO BE POSITIONED WITHIN WORK ON I-95.

4. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE AUTHORITY FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION AND SHALL PROVIDE A TWO-WEEK NOTICE TO THE AUTHORITY OF THE COMMENCEMENT OF MAINTENANCE OF TRAFFIC MEASURES.

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by: GPI

CONSULTANT PROJECT MANAGER:

	By	Date		By	Date
Designed			Checked		
Drawn					

Greenman-Pedersen, Inc.
21 Daniel Street
Second Floor
Portsmouth, NH 03801
TEL: (603) 766-8259

MAINE TURNPIKE

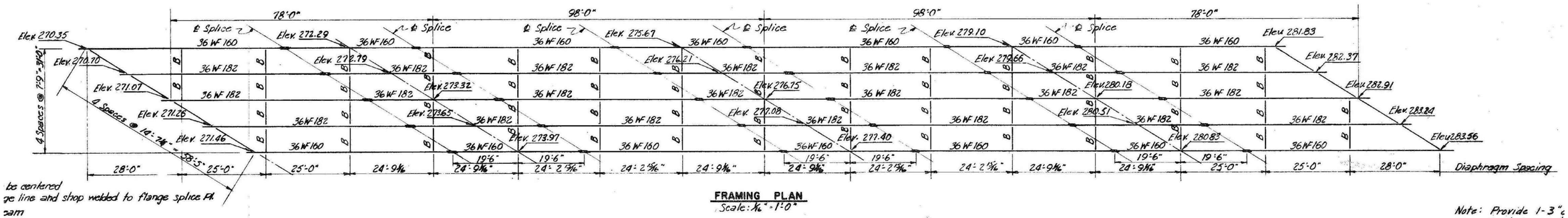
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

I-95 BRIDGE PAINTING
SHAKER RD OVER MAINE TURNPIKE

SHEET NUMBER:

CONTRACT: 2024.05



be centered
ge line and shop welded to flange splice PL
3am

FRAMING PLAN
Scale: ⅛" = 1'-0"

Note: Provide 1-3"ç

Diaphragm Schedule
Type "A": C12x25
Type "B": C15x33.9
Type "C": C15x33.9

FRAMING PLAN
SHAKER ROAD OVER I-95
NOT TO SCALE

Scale:

No.	Revision	By	Date

Designed by: GPI

CONSULTANT PROJECT MANAGER:

	By	Date		By	Date
Designed			Checked		
Drawn					

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21 Daniel Street
Second Floor
Portsmouth, NH 03801
TEL: (603) 766-8259

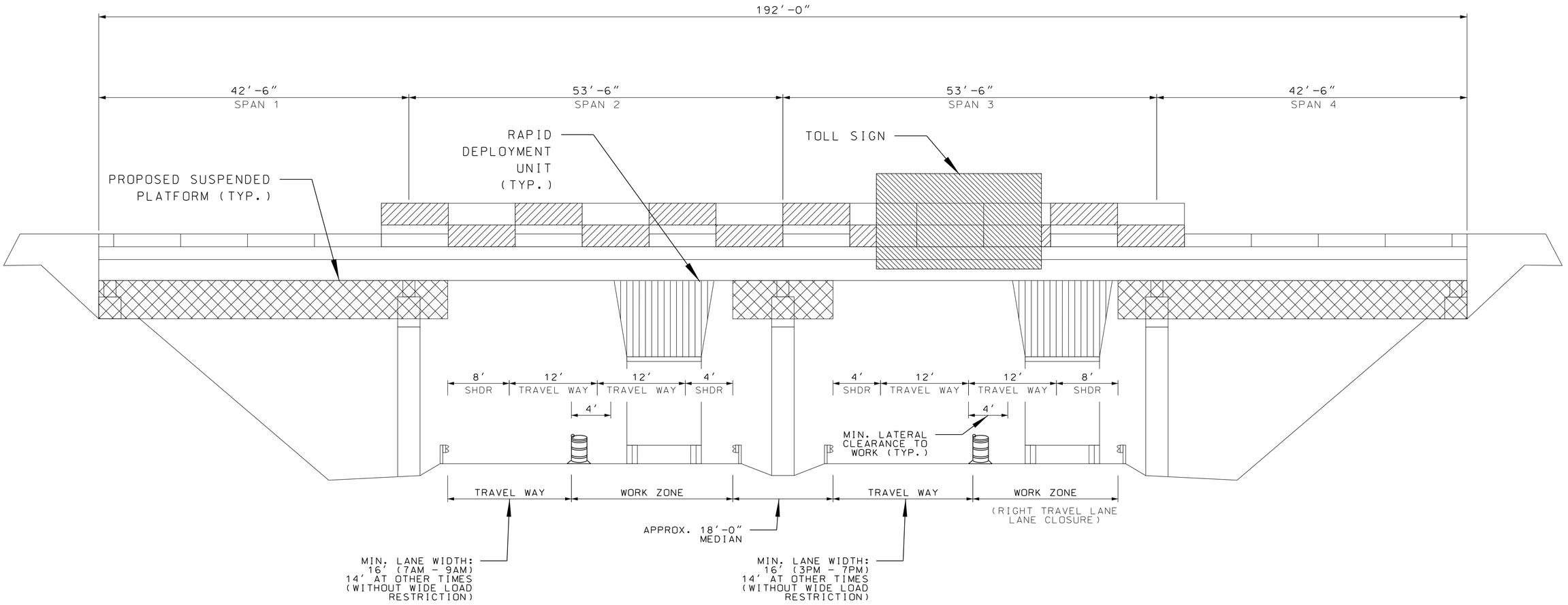
MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

I-95 BRIDGE PAINTING
SHAKER RD OVER MAINE TURNPIKE

SHEET NUMBER:
CONTRACT: 2024.05 2 OF 10



ELEVATION VIEW
WEYMOUTH ROAD OVER I-95
LOOKING NORTH
NOT TO SCALE

NOTES:

1. THE VISUAL WORK LAYOUTS ARE INTENDED TO PROVIDE AN EXAMPLE TYPICAL SECTION FOR LEFT AND RIGHT LANE CLOSURES AND DOES NOT IMPLY THAT CONCURRENT LANE CLOSURES ARE PROPOSED.

2. WORK TO BE CONDUCTED FROM RAPID DEPLOYMENT UNITS (WITHIN SPANS 2 AND 3) OR SUSPENDED PLATFORMS (WITHIN SPANS 1 AND 4).

3. SUPPORT EQUIPMENT TO BE POSITIONED WITHIN WORK ON I-95 OR WITHIN LANE CLOSURE ON UNDERPASS BRIDGE. SEE SPECIAL PROVISION SECTION 652.

4. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE AUTHORITY FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION AND SHALL PROVIDE A TWO-WEEK NOTICE TO THE AUTHORITY OF THE COMMENCEMENT OF MAINTENANCE OF TRAFFIC MEASURES.

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by: GPI

CONSULTANT PROJECT MANAGER:

	By	Date		By	Date
Designed			Checked		
Drawn					

Greenman-Pedersen, Inc.
21 Daniel Street
Second Floor
Portsmouth, NH 03801
TEL: (603) 766-8259

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

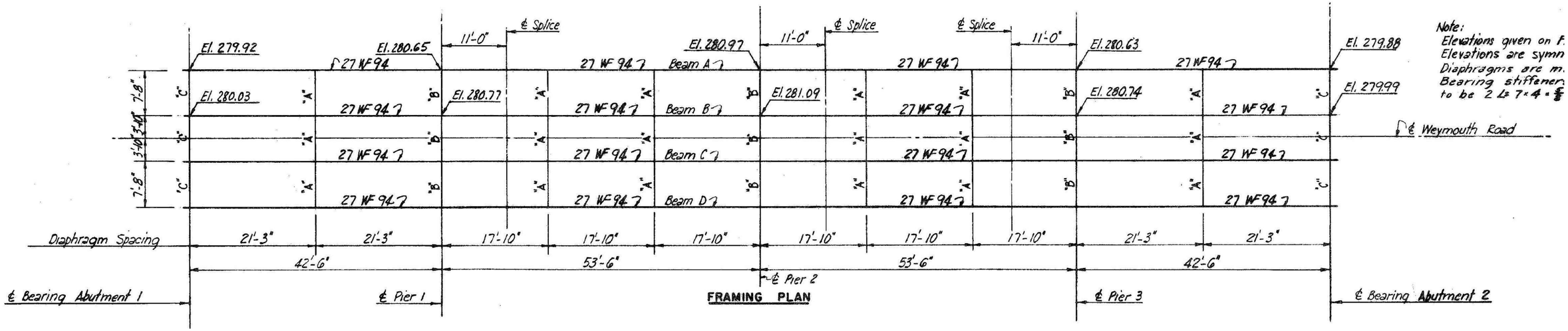
MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

I-95 BRIDGE PAINTING
WEYMOUTH ROAD OVER MAINE TURNPIKE

SHEET NUMBER: 3 OF 10

CONTRACT: 2024.05

Filename$file$



Diaphragm Schedule
Type "A": C12x25
Type "B": C15x33.9
Type "C": C15x33.9

FRAMING PLAN
WEYMOUTH ROAD OVER I-95
NOT TO SCALE

Scale:			
No.	Revision	By	Date

Designed by: GPI

CONSULTANT PROJECT MANAGER:					
	By	Date		By	Date
Designed			Checked		
Drawn					

Greenman-Pedersen, Inc.
21 Daniel Street
Second Floor
Portsmouth, NH 03801
TEL: (603) 766-8259

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

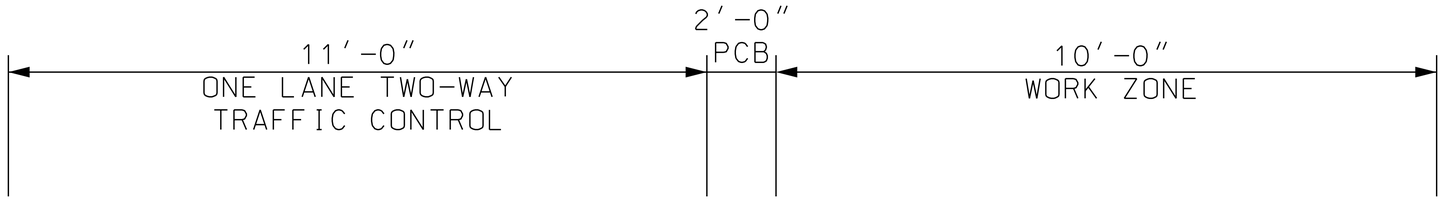
MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

I-95 BRIDGE PAINTING
WEYMOUTH ROAD OVER MAINE TURNPIKE

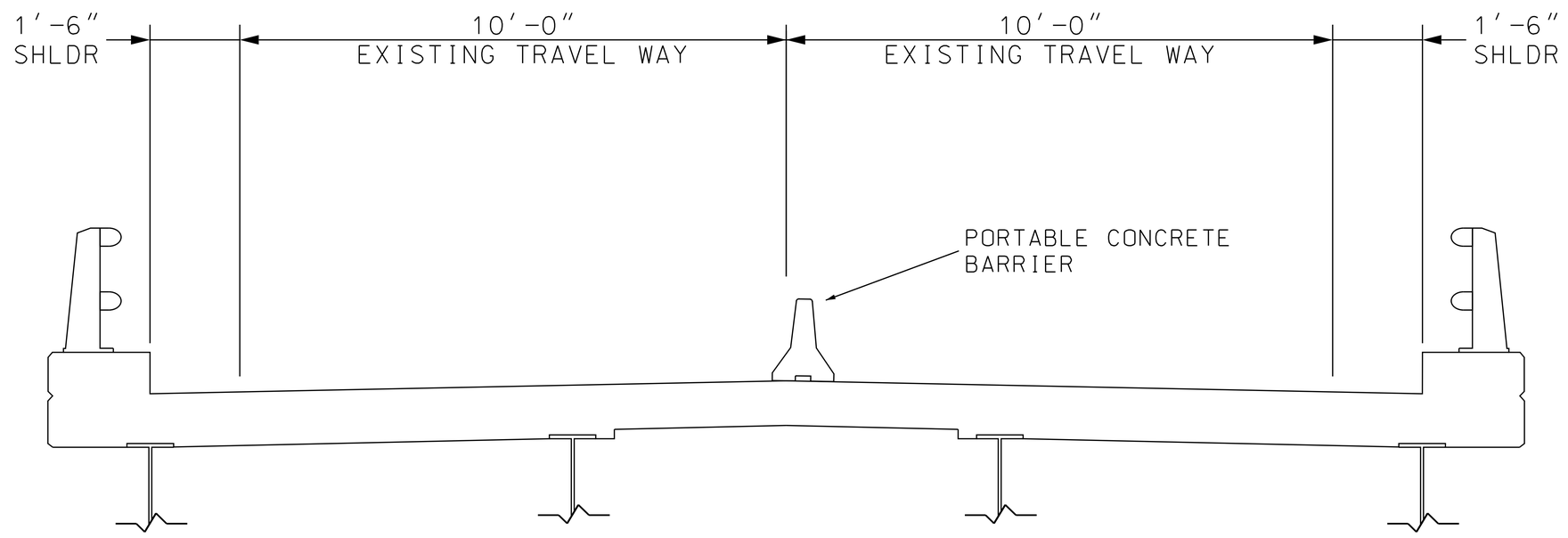
SHEET NUMBER:

CONTRACT: 2024.05

TTCP LANE CONFIGURATION



EXISTING LANE CONFIGURATION



BRIDGE CROSS SECTION
WEYMOUTH ROAD OVER I-95
NOT TO SCALE

NOTES:

1. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE AUTHORITY REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION AND SHALL PROVIDE A TWO-WEEK NOTICE TO THE AUTHORITY OF THE COMMENCEMENT OF MAINTENANCE OF TRAFFIC MEASURES.

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by: GPI

CONSULTANT PROJECT MANAGER:

	By	Date		By	Date
Designed			Checked		
Drawn					

Greenman-Pedersen, Inc.
21 Daniel Street
Second Floor
Portsmouth, NH 03801
TEL: (603) 766-8259

MAINE TURNPIKE

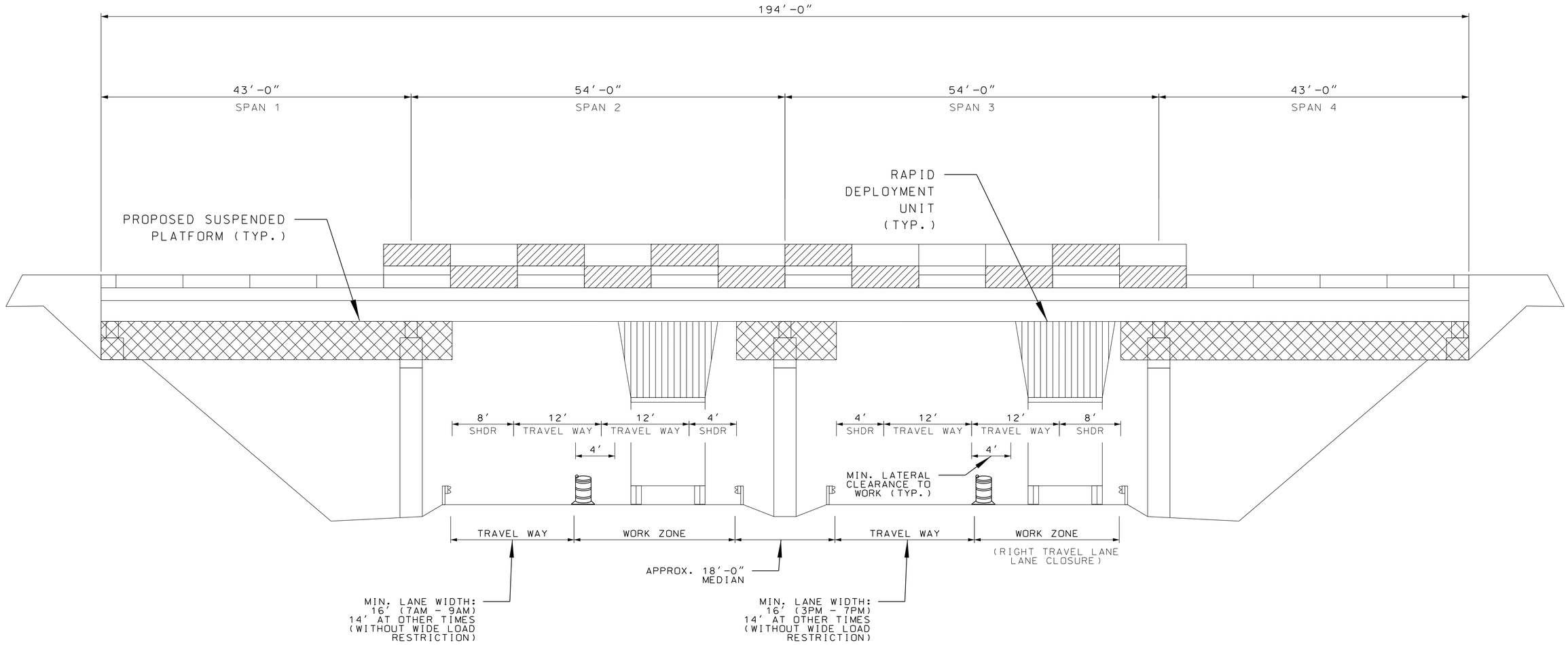
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

I-95 BRIDGE PAINTING
WEYMOUTH ROAD OVER MAINE TURNPIKE

SHEET NUMBER:

CONTRACT: 2024.05



ELEVATION VIEW
BENNETT ROAD OVER I-95
LOOKING NORTH
NOT TO SCALE

NOTES:

1. THE VISUAL WORK LAYOUTS ARE INTENDED TO PROVIDE AN EXAMPLE TYPICAL SECTION FOR LEFT AND RIGHT LANE CLOSURES AND DOES NOT IMPLY THAT CONCURRENT LANE CLOSURES ARE PROPOSED.

2. WORK TO BE CONDUCTED FROM RAPID DEPLOYMENT UNITS (WITHIN SPANS 2 AND 3) OR SUSPENDED PLATFORMS (WITHIN SPANS 1 AND 4).

3. SUPPORT EQUIPMENT TO BE POSITIONED WITHIN WORK ON I-95 OR WITHIN LANE CLOSURE ON UNDERPASS BRIDGE. SEE SPECIAL PROVISION SECTION 652.

4. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE AUTHORITY FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION AND SHALL PROVIDE A TWO-WEEK NOTICE TO THE AUTHORITY OF THE COMMENCEMENT OF MAINTENANCE OF TRAFFIC MEASURES.

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by: GPI

CONSULTANT PROJECT MANAGER:

	By	Date		By	Date
Designed			Checked		
Drawn					

Greenman-Pedersen, Inc.
21 Daniel Street
Second Floor
Portsmouth, NH 03801
TEL: (603) 766-8259

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

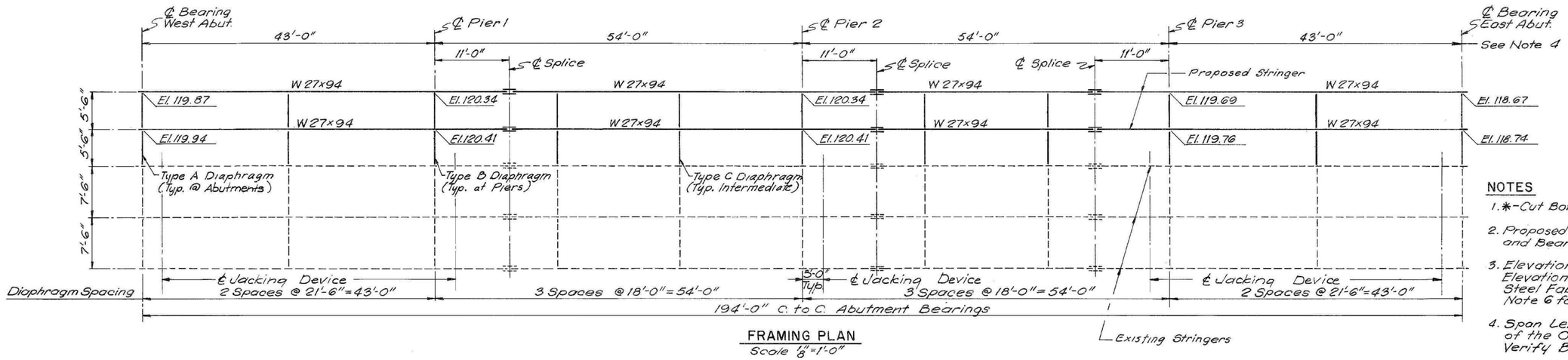
MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

I-95 BRIDGE PAINTING
BENNETT ROAD OVER MAINE TURNPIKE

SHEET NUMBER:

CONTRACT: 2024.05

Filename=$file$



FRAMING PLAN
Scale 1/8"=1'-0"

NOTES

1. *-Cut Bottom Flange of W12 Bolster to 10½".
2. Proposed Bolster to be welded to Stringers and Bearing Shoe as shown.
3. Elevations Shown are Theoretical Elevations at Top of Steel to be Used for Steel Fabrication Only. See Sheet 8 Note 6 for Final Top of Steel Grades.
4. Span Lengths are from the Drawing of the Original Construction - Field Verify Before Fabrication.

Diaphragm Schedule
Type "A": C12x25
Type "B": C15x33.9
Type "C": C15x33.9

FRAMING PLAN
BENNETT ROAD OVER I-95
NOT TO SCALE

Scale:

No.	Revision	By	Date

Designed by: GPI

CONSULTANT PROJECT MANAGER:

	By	Date		By	Date
Designed			Checked		
Drawn					

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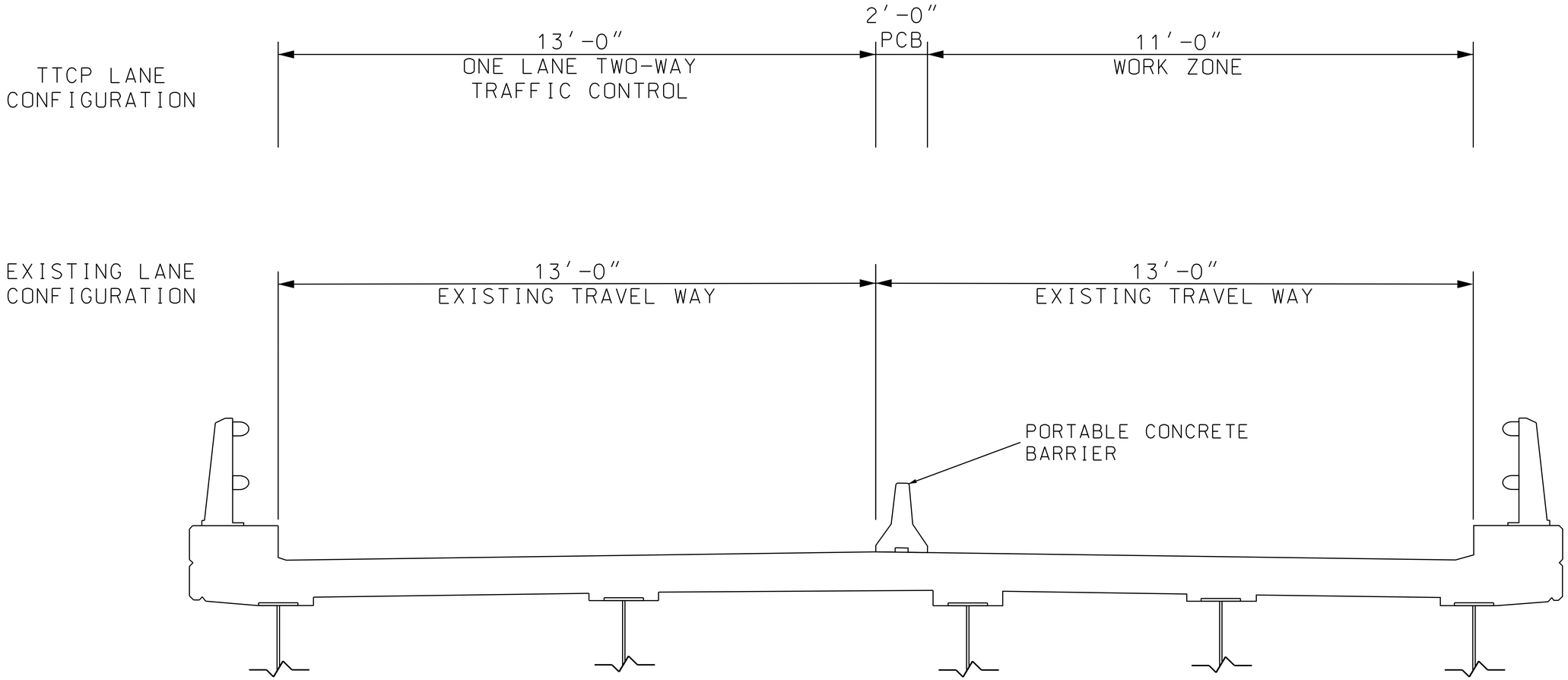
MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

I-95 BRIDGE PAINTING
BENNETT ROAD OVER MAINE TURNPIKE

CONTRACT: 2024.05



BRIDGE CROSS SECTION
BENNETT ROAD OVER I-95
NOT TO SCALE

NOTES:

1. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE AUTHORITY REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION AND SHALL PROVIDE A TWO-WEEK NOTICE TO THE AUTHORITY OF THE COMMENCEMENT OF MAINTENANCE OF TRAFFIC MEASURES.

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by: GPI

CONSULTANT PROJECT MANAGER:

	By	Date		By	Date
Designed			Checked		
Drawn					

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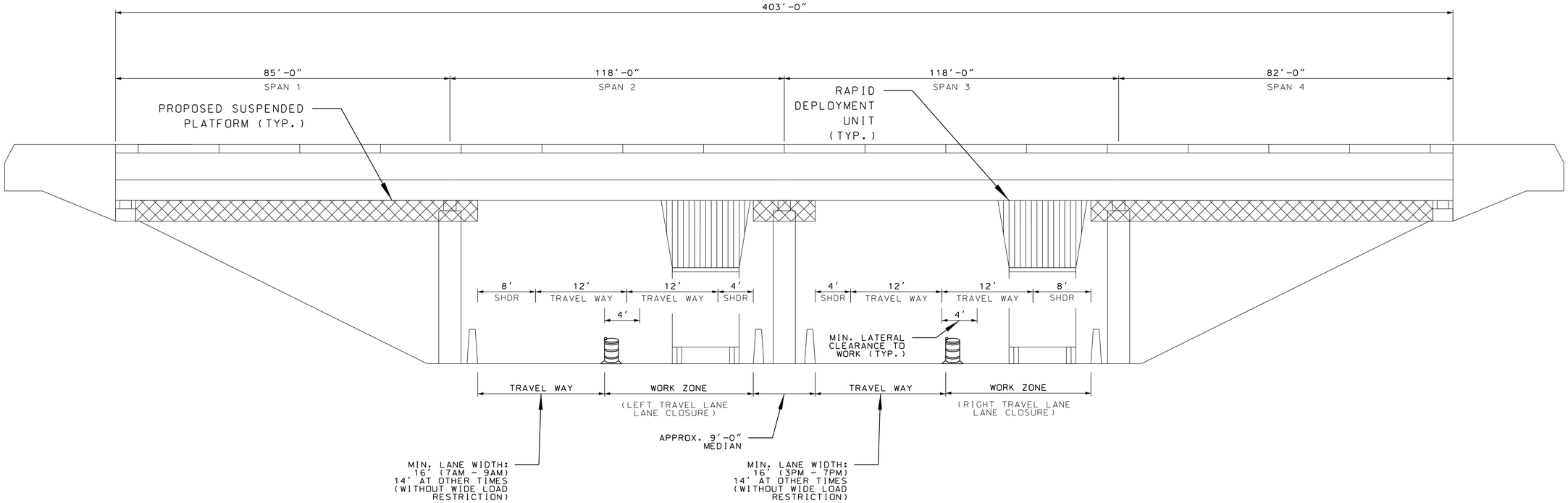
MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

I-95 BRIDGE PAINTING
BENNETT ROAD OVER MAINE TURNPIKE

CONTRACT: 2024.05



ELEVATION VIEW
I-295 SOUTHBOUND OVER I-95
LOOKING NORTH
NOT TO SCALE

NOTES:

1. THE VISUAL WORK LAYOUTS ARE INTENDED TO PROVIDE AN EXAMPLE TYPICAL SECTION FOR LEFT AND RIGHT LANE CLOSURES AND DOES NOT IMPLY THAT CONCURRENT LANE CLOSURES ARE PROPOSED.

2. WORK TO BE CONDUCTED FROM RAPID DEPLOYMENT UNITS (WITHIN SPANS 2 AND 3) OR SUSPENDED PLATFORMS (WITHIN SPANS 1 AND 4).

3. SUPPORT EQUIPMENT TO BE POSITIONED WITHIN WORK ON I-95.

4. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE AUTHORITY FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION AND SHALL PROVIDE A TWO-WEEK NOTICE TO THE AUTHORITY OF THE COMMENCEMENT OF MAINTENANCE OF TRAFFIC MEASURES.

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by: GPI

CONSULTANT PROJECT MANAGER:

	By	Date		By	Date
Designed			Checked		
Drawn					

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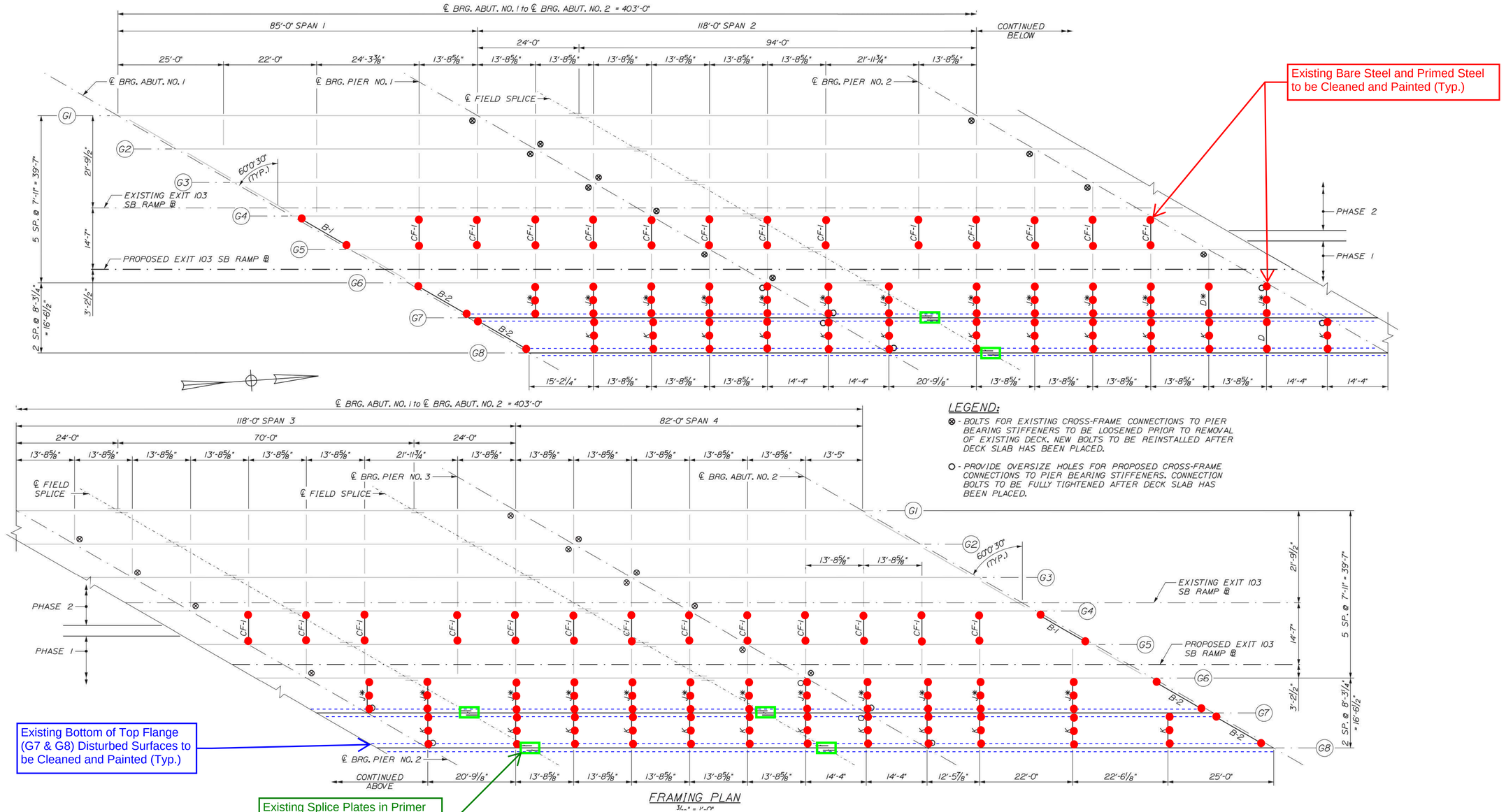
MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

I-95 BRIDGE PAINTING
I-295 SB OVER MAINE TURNPIKE

CONTRACT: 2024.05



FRAMING PLAN
3/32" = 1'-0"

LEGEND:

⊗ - BOLTS FOR EXISTING CROSS-FRAME CONNECTIONS TO PIER BEARING STIFFENERS TO BE LOOSENED PRIOR TO REMOVAL OF EXISTING DECK. NEW BOLTS TO BE REINSTALLED AFTER DECK SLAB HAS BEEN PLACED.

○ - PROVIDE OVERSIZE HOLES FOR PROPOSED CROSS-FRAME CONNECTIONS TO PIER BEARING STIFFENERS. CONNECTION BOLTS TO BE FULLY TIGHTENED AFTER DECK SLAB HAS BEEN PLACED.

Note:
See Special Provision Section 506 for detailed descriptions of the cleaning and painting procedures.

FRAMING PLAN
I-295 SOUTHBOUND OVER I-95
NOT TO SCALE

Scale:			
No.	Revision	By	Date

Designed by: GPI

CONSULTANT PROJECT MANAGER:

	By	Date		By	Date
Designed			Checked		
Drawn					

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

I-95 BRIDGE PAINTING
I-295 SB OVER MAINE TURNPIKE

SHEET NUMBER:
CONTRACT: 2024.05 10 OF 10

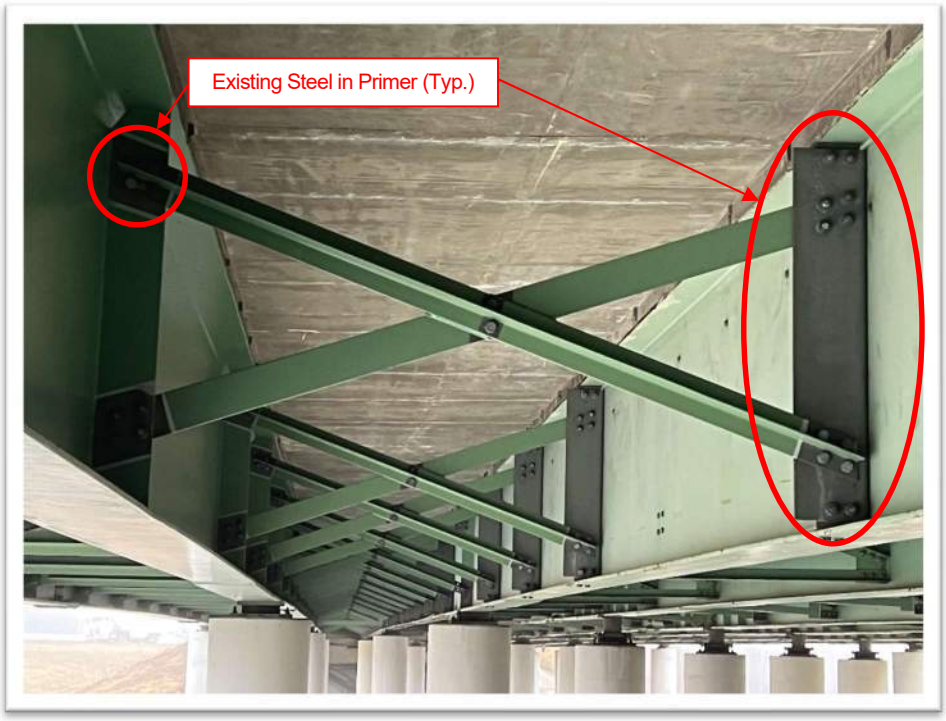
EXISTING CONDITION PHOTOGRAPHS

I-295 Southbound Underpass Bridge – Mile 102.5, West Gardiner:

Existing Splice Plates in Primer to be Cleaned and Painted:

Existing Primed Steel – Diaphragm K – to be Cleaned and Painted:

Existing Primed Steel – Diaphragm J – to be Cleaned and Painted:



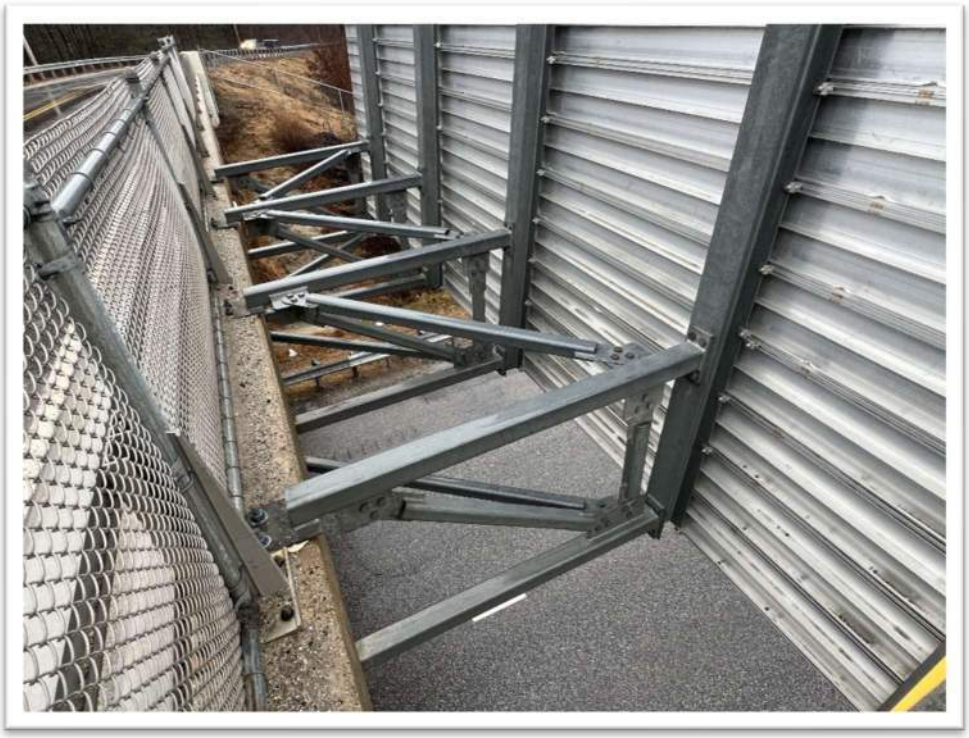
Existing Bare and Primed Steel – Diaphragm CF-1 – to be Cleaned and Painted:

Existing Primed Steel – Diaphragm B-2 – to be Cleaned and Painted:

Existing Bottom of Top Flange (G7 & G8) Disturbed Surfaces to be Cleaned and Painted:

Weymouth Road Underpass Bridge – Mile 66.2, Gray:

Sign Bracket Connections to be Protected:

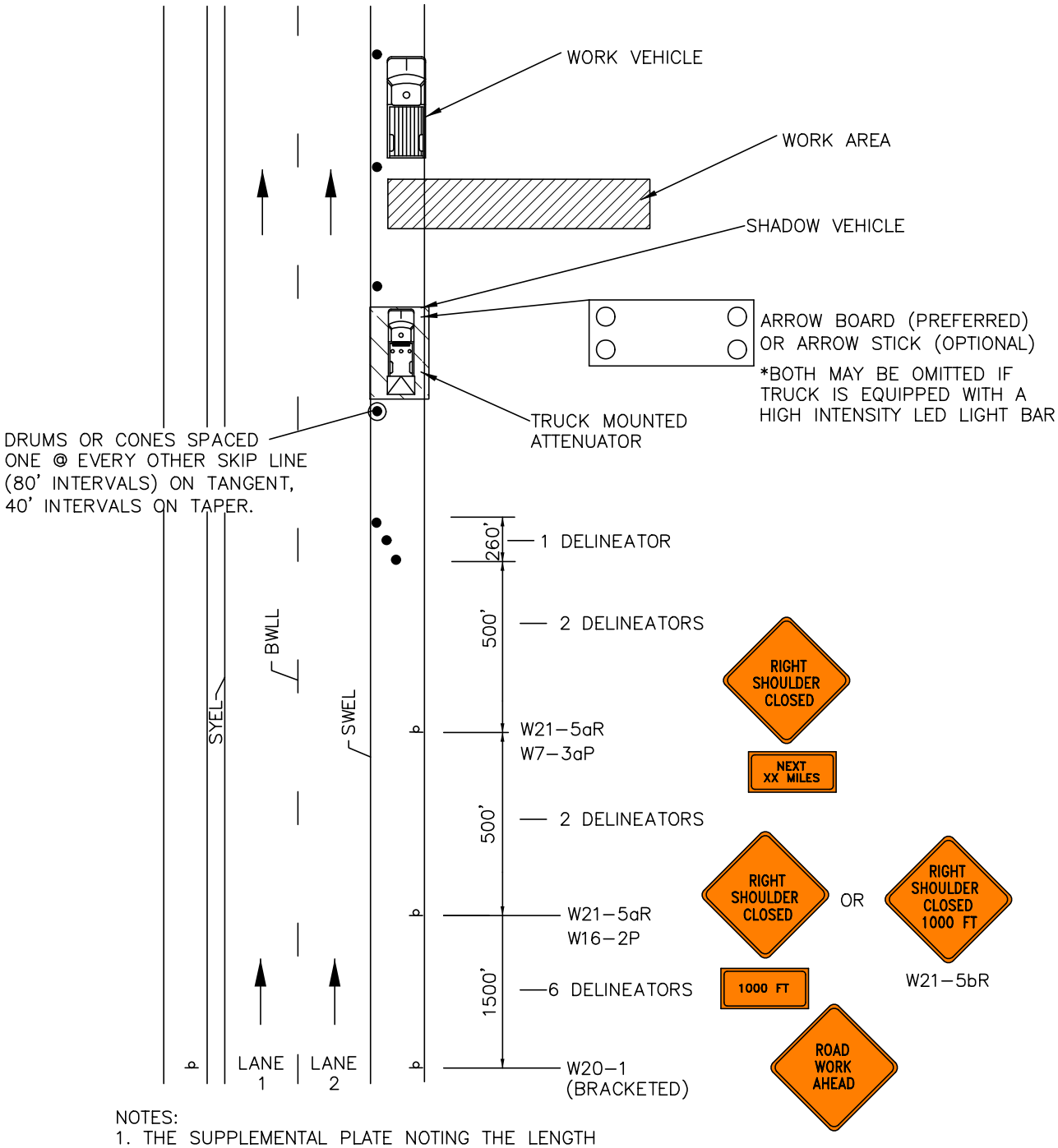


APPENDIX D

TRAFFIC CONTROL DETAILS

SIGN SUMMARIES

CONTRACTOR'S STAGING PLANS



NOTES:
1. THE SUPPLEMENTAL PLATE NOTING THE LENGTH OF SHOULDER CLOSURE MAY BE ELIMINATED IF DRIVERS CAN SEE A PULL OFF AREA BEYOND THE CLOSED SHOULDER.
2. DRUMS SHALL BE USED FOR SHOULDER CLOSURES LEFT IN PLACE OVERNIGHT AND WHEN THE CLOSURE IS NOT ATTENDED.

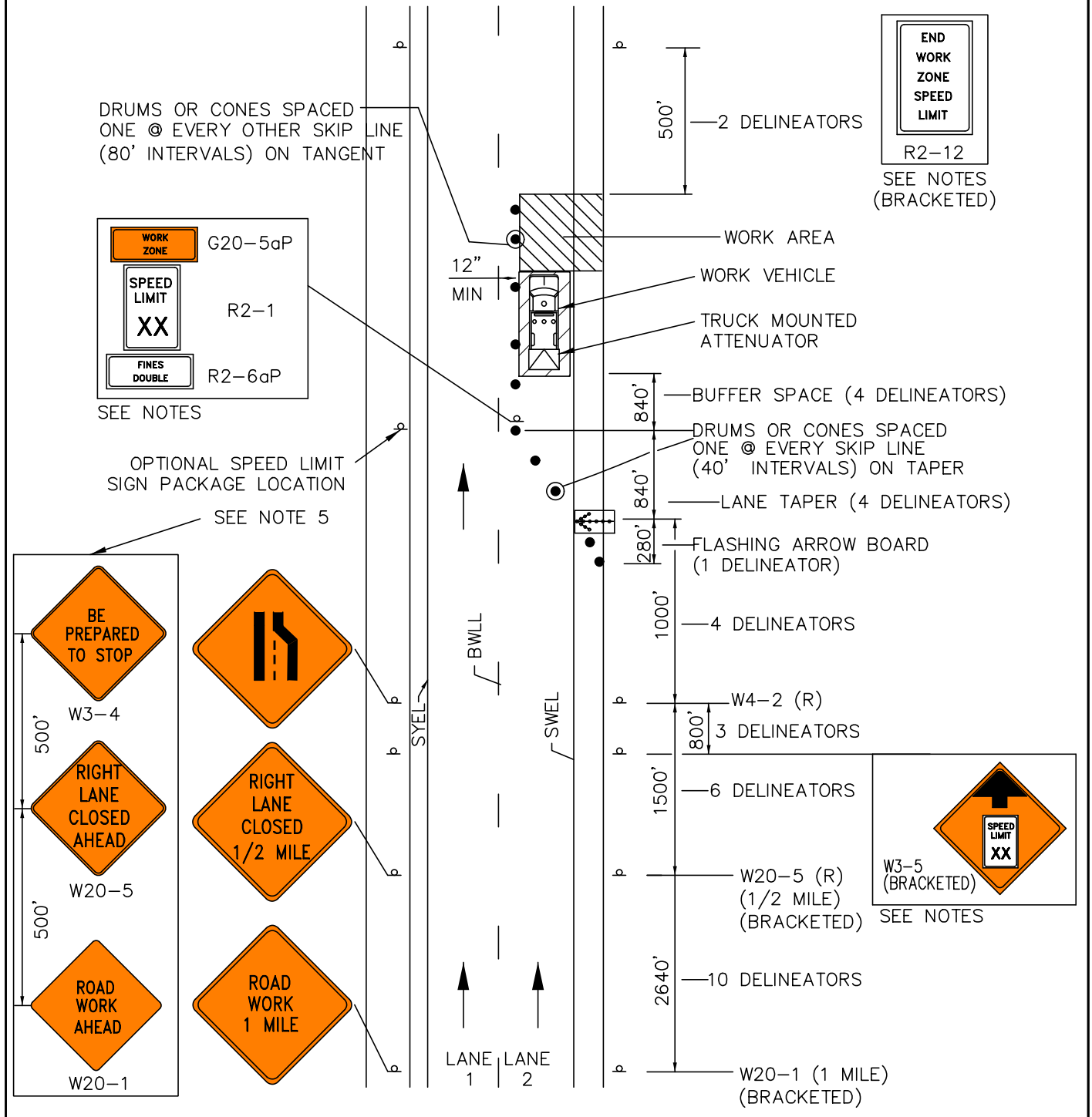
DETAIL 5A NOT TO SCALE

HNTB

DATE: 10-01-2021

MAINE TURNPIKE

MAINE TURNPIKE AUTHORITY
TRAFFIC CONTROL DETAIL
SHOULDER CLOSURE FOR WORK ACTIVITY IN THE SHOULDER



NOTES:
1. USE OF REGULATORY REDUCED SPEEDS SHALL BE USED WHEN WORKERS ARE PRESENT OR SITE CONDITIONS WARRANT. 10MPH SPEED REDUCTION MANDATORY; IF REDUCTION GREATER THEN 10MPH IS WARRANTED THEN REQUEST THROUGH MTA DEPARTMENT DIRECTOR OR ASSIGNED MTA ENGINEER. SPEED LIMIT SIGN IS ONLY NEEDED ON ONE SIDE OR THE OTHER. SPEED LIMIT SIGNS SHALL BE 5' OFF GROUND. SIGN W3-5 NOT NEEDED FOR 10 MPH REDUCTION.
2. OPTIONAL – THE SPEED LIMIT SIGN PACKAGE MAY BE POST MOUNTED ON THE LEFT SHOULDER. POST MOUNTED SIGNS SHALL BE COVERED WHEN NOT IN USE.
3. OPTIONAL – THE WORK ZONE AND FINES DOUBLE SIGN MAY BE MOUNTED ON A SEPARATE EASEL OR POST.
4. OPTIONAL – THE FINES DOUBLE SIGN MAY BE OMITTED.
5. WHEN ON-RAMP EXISTS WITHIN ½ MILE OF LANE CLOSURE, THIS 3-SIGN ARRAY SHALL BE SET UP ON THE LEFT SHOULDER OF THE RAMP. THE LAST SIGN SHALL BE AT THE RAMP GORE.

DETAIL 33R NOT TO SCALE

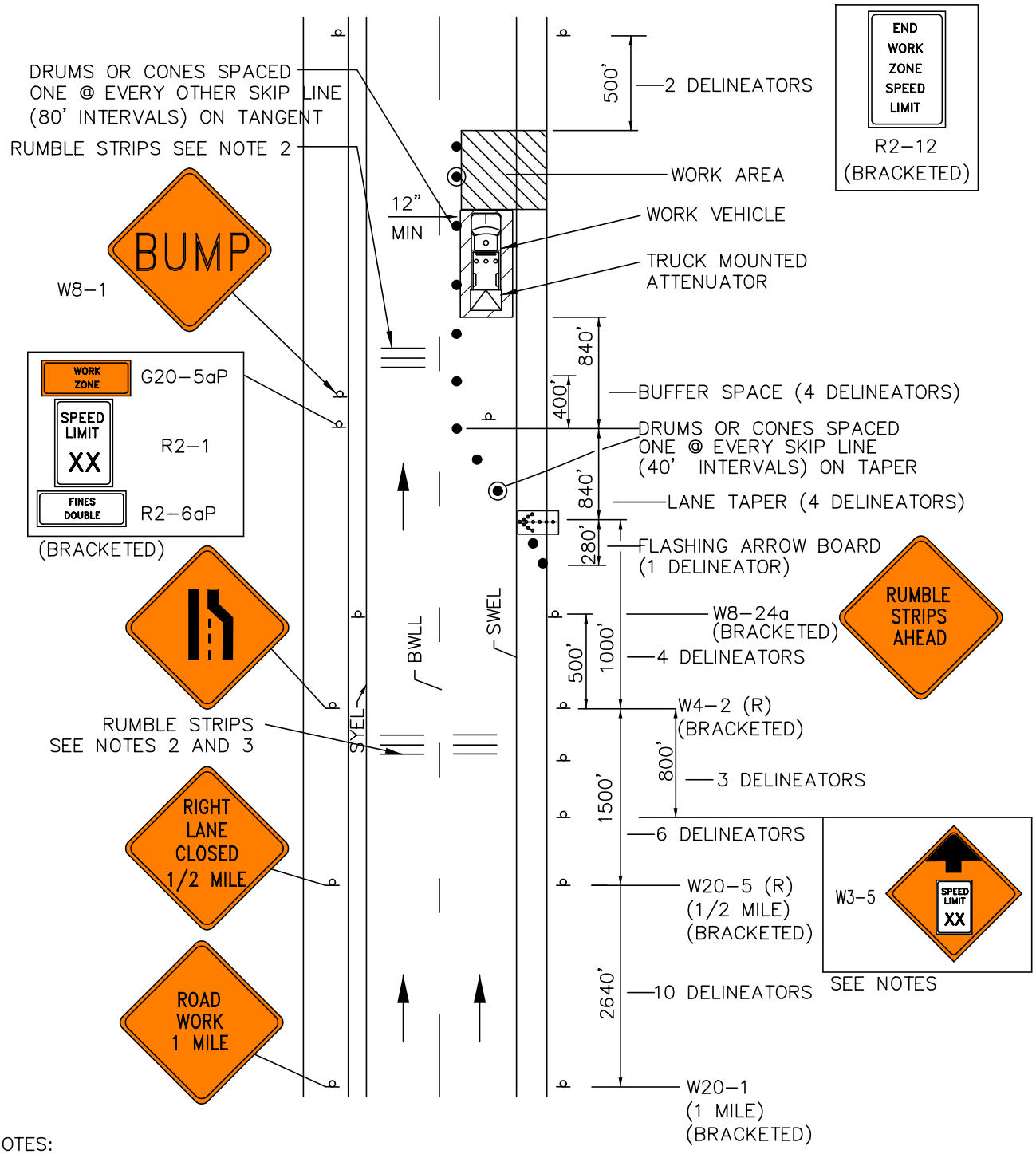
HNTB

DATE: 10-01-2021

MAINE TURNPIKE

MAINE TURNPIKE AUTHORITY
TRAFFIC CONTROL DETAIL

SINGLE MAINLINE LANE CLOSURE - RIGHT



NOTES:

1. FOR LANE CLOSURE NOTES SEE DETAILS 33R AND 33L.
2. IF RUMBLE STRIPS ARE USED THEY SHALL BE PLACED IN ONE OF THE FOLLOWING CONFIGURATIONS:
   * ADJACENT TO THE WORK ZONE (1 UNIT)
   * UPSTREAM FROM THE TAPER FOR THE WORKZONE (2 UNITS)
   * BOTH ADJACENT TO THE WORK ZONE AND PRIOR TO THE TAPER (3 UNITS)

   W8-1 SIGNS SHALL BE PLACED ADJACENT TO THE FIRST RUMBLE STRIP AT ANY LOCATION. ONLY ONE SET OF W8-24a SIGNS ARE REQUIRED FOR ANY OF THE ABOVE CONFIGURATIONS.
3. RUMBLE STRIPS MAY BE PLACED UPSTREAM OF THE TAPER BETWEEN THE W3-5 SIGNS AND THE W4-2 SIGNS. IF RUMBLE STRIPS ARE INSTALLED PRIOR TO TAPER, W8-1 SIGNS SHALL BE PLACED ADJACENT TO THE FIRST STRIP AND THE W8-24a SIGNS SHALL BE MOVED TO 400' AFTER THE W20-5 SIGNS.

DETAIL 33 NOT TO SCALE

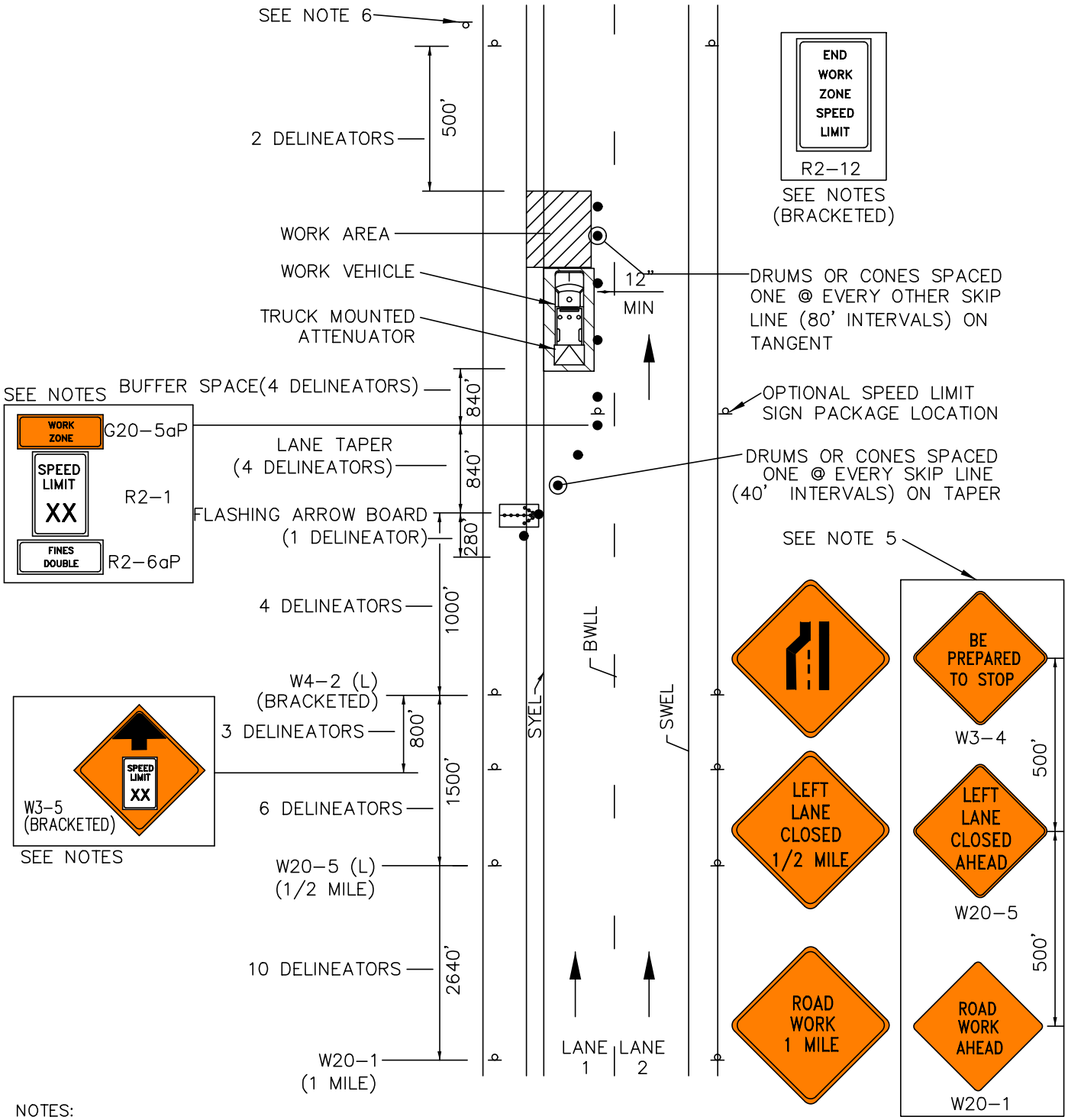
HNTB

DATE: 12-22-2017

MAINE TURNPIKE

MAINE TURNPIKE AUTHORITY
TRAFFIC CONTROL DETAIL

LANE CLOSURE WITH TEMPORARY RUMBLE STRIPS



NOTES:
1. USE OF REGULATORY REDUCED SPEEDS SHALL BE USED WHEN WORKERS ARE PRESENT OR SITE CONDITIONS WARRANT. 10MPH SPEED REDUCTION MANDATORY; IF REDUCTION GREATER THEN 10MPH IS WARRANTED THEN REQUEST THROUGH MTA DEPARTMENT DIRECTOR OR ASSIGNED MTA ENGINEER. SPEED LIMIT SIGN IS ONLY NEEDED ON ONE SIDE OR THE OTHER. SPEED LIMIT SIGNS SHALL BE 5' OFF GROUND. SIGN W3-5 NOT NEEDED FOR 10 MPH REDUCTION.
2. OPTIONAL – SPEED LIMIT SIGN PACKAGE MAY BE POST MOUNTED ON THE RIGHT SHOULDER. POST MOUNTED SIGNS SHALL BE COVERED WHEN NOT IN USE.
3. OPTIONAL – THE WORK ZONE AND FINES DOUBLE SIGN MAY BE MOUNTED ON A SEPARATE EASEL OR POST.
4. OPTIONAL – THE FINES DOUBLE SIGN MAY BE OMITTED.
5. WHEN ON-RAMP EXISTS WITHIN ½ MILE OF LANE CLOSURE, THIS 3-SIGN ARRAY SHALL BE SET UP ON THE RIGHT SHOULDER OF THE RAMP. THE LAST SIGN SHALL BE AT THE RAMP GORE.
6. USE "WORKERS IN MEDIAN" SIGN FOR THE OPPOSITE DIRECTION OF TRAVEL IF WORKERS WILL BE IN THE MEDIAN.

DETAIL 33L NOT TO SCALE

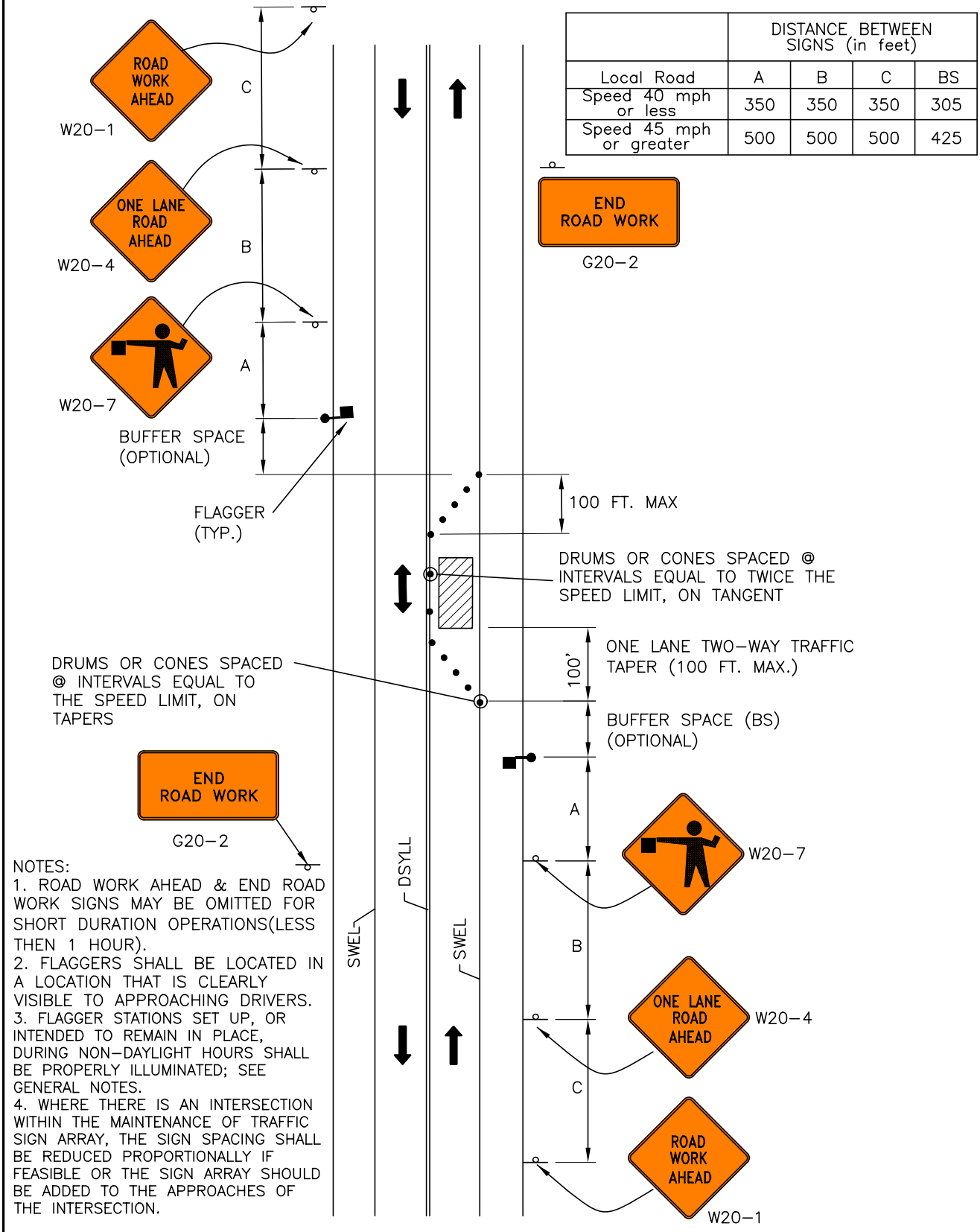
HNTB

DATE: 10-01-2021

MAINE TURNPIKE

MAINE TURNPIKE AUTHORITY
TRAFFIC CONTROL DETAIL

SINGLE MAINLINE LANE CLOSURE - LEFT



	DISTANCE BETWEEN SIGNS (in feet)			
Local Road	A	B	C	BS
Speed 40 mph or less	350	350	350	305
Speed 45 mph or greater	500	500	500	425

NOTES:
1. ROAD WORK AHEAD & END ROAD WORK SIGNS MAY BE OMITTED FOR SHORT DURATION OPERATIONS(LESS THEN 1 HOUR).
2. FLAGGERS SHALL BE LOCATED IN A LOCATION THAT IS CLEARLY VISIBLE TO APPROACHING DRIVERS.
3. FLAGGER STATIONS SET UP, OR INTENDED TO REMAIN IN PLACE, DURING NON-DAYLIGHT HOURS SHALL BE PROPERLY ILLUMINATED; SEE GENERAL NOTES.
4. WHERE THERE IS AN INTERSECTION WITHIN THE MAINTENANCE OF TRAFFIC SIGN ARRAY, THE SIGN SPACING SHALL BE REDUCED PROPORTIONALLY IF FEASIBLE OR THE SIGN ARRAY SHOULD BE ADDED TO THE APPROACHES OF THE INTERSECTION.

DETAIL 10A NOT TO SCALE

HNTB

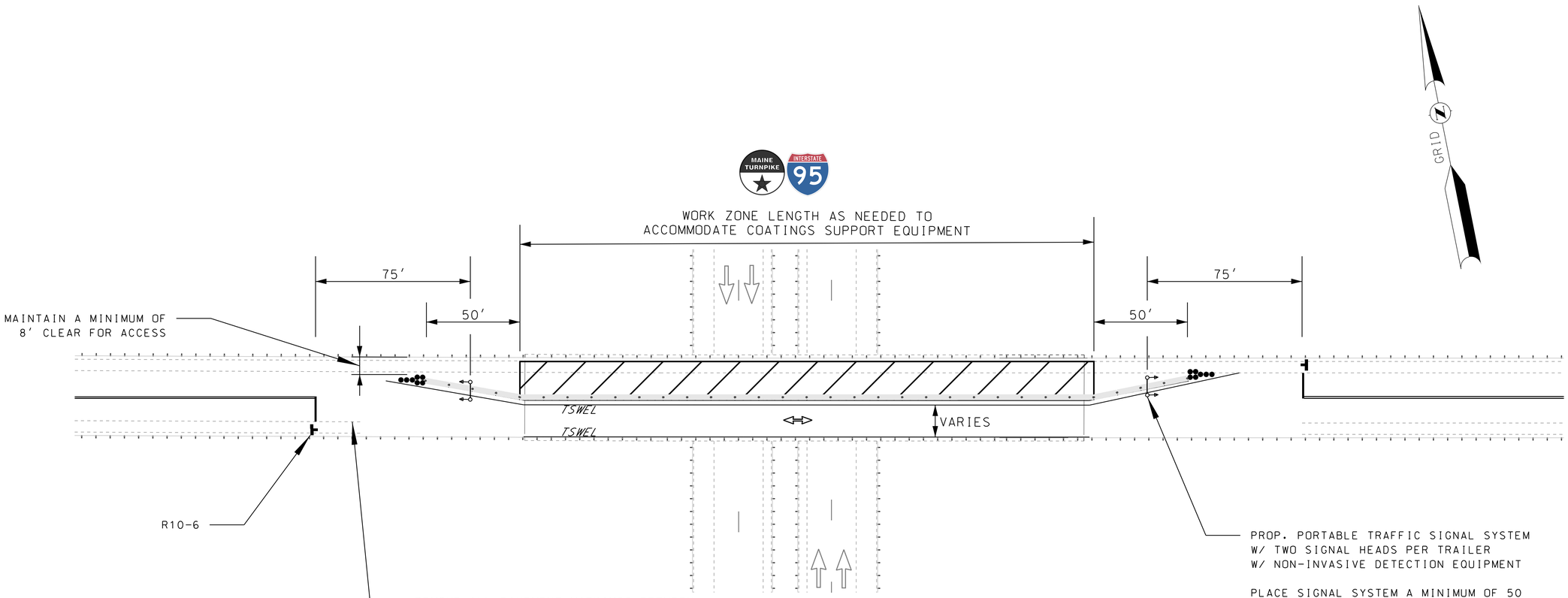
DATE: 10-01-2021

MAINE TURNPIKE

MAINE TURNPIKE AUTHORITY

TRAFFIC CONTROL DETAIL

LANE CLOSURE ON A TWO LANE ROAD USING FLAGGERS



TEMPORARY SIGNAL PLAN

NOTES:

1. THE TEMPORARY TRAILER MOUNTED SIGNAL SYSTEM IS SHOWN AS A FEASIBLE OPTION FOR TRAFFIC CONTROL. THE CONTRACTOR MAY PROPOSE AN ALTERNATIVE METHOD FOR MAINTAINING TRAFFIC DURING BRIDGE REPAIRS. ALL COSTS FOR TEMPORARY TRAFFIC SIGNALS SHALL BE INCIDENTAL TO ITEM 652.361 MAINTENANCE OF TRAFFIC CONTROL DEVICES.

2. DETAIL SHOWN IS APPLICABLE TO BOTH WEYMOUTH ROAD AND BENNETT ROAD UNDERPASS BRIDGES.

3. CONTRACTOR MUST SUBMIT TRAFFIC CONTROL PLAN, INCLUDING PROPOSED SIGNAL TIMING, TO THE RESIDENT FOR APPROVAL.

4. THE CONTRACTOR SHALL USE PORTABLE CHANGEABLE MESSAGE SIGNS TO PROVIDE NOTICE OF THE LANE CLOSURE AND SIGNAL CONTROL AT LEAST TWO WEEKS PRIOR TO ITS START.

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by: GPI

CONSULTANT PROJECT MANAGER:

	By	Date		By	Date
Designed			Checked		
Drawn					

Greenman-Pedersen, Inc.
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

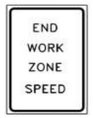
MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

TEMPORARY SIGNAL PLAN

SHEET NUMBER:

CONTRACT: 2024.05

1 OF 1

IDENTIFIC-ATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQ'D SHAKER RD, GRAY	NUMBER OF SIGNS REQ'D WEYMOUTH ROAD, GRAY	NUMBER OF SIGNS REQ'D BENNETT ROAD, NEW GLOUCESTER	NUMBER OF SIGNS REQ'D I-295 SOUTHBOUND, WEST GARDINER	COLOR		BORDER RADIUS	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.					BACK-GROUND	LEGEND BORDER		
G20-2	48"	24"		TEXT DIMENSIONS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			3	3	3	3	COLORS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPLEMENT"			8.00 (96.00)
G20-5aP	48"	24"					1	1	1	1				8.00 (32.00)
R2-1 (50)	48"	60"					1	1	1	1				20.00 (80.00)
R2-6aP	48"	24"		6" 6"	4.5"		1	1	1	1				8.00 (32.00)
R2-12	36"	54"		6" 6" 6" 6"	4.5" 4.5" 4.5"		2	2	2	2				13.50 (108.00)
W3-5 (50)	48"	48"					2	2	2	2				16 (128.00)
W4-2L	48"	48"					2	2	2	2				16.00 (128.00)
W4-2R	48"	48"					2	2	2	2				16.00 (128.00)
W20-1 (1 MILE) (AHEAD)	48"	48"					4	5	5	4				16.00 (288.00)
W20-5L (1/2 MILE) (AHEAD)	48"	48"					4	4	4	4				16.00 (256.00)
W20-5R (1/2 MILE) (AHEAD)	48"	48"					4	4	4	4				16.00 (256.00)

Scale:

No.	Revision	By	Date

Designed by: GPI

CONSULTANT PROJECT MANAGER:

	By	Date		By	Date
Designed			Checked		
Drawn					

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

BRIDGE PAINTING

SIGN SUMMARY

SHEET NUMBER:

CONTRACT: 2024.05

IDENTIFIC-ATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQ'D SHAKER RD, GRAY	NUMBER OF SIGNS REQ'D WEYMOUTH ROAD, GRAY	NUMBER OF SIGNS REQ'D BENNETT ROAD, NEW GLOUCESTER	NUMBER OF SIGNS REQ'D I-295 SOUTHBOUND, WEST GARDINER	COLOR		BORDER RADIUS	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.					BACK-GROUND	LEGEND BORDER		
W21-5aR	48"	48"	RIGHT SHOULDER CLOSED				2	2	2	2				16.00 (128.00)
W21-5bR (1000 FT) (2000 FT)	48"	48"	RIGHT SHOULDER CLOSED 1000 FT				2	2	2	2				16.00 (128.00)
W20-7	48"	48"					2	2	2	2				16.00 (128.00)
W20-4	48"	48"	ONE LANE ROAD AHEAD				2	2	2	2				16.00 (128.00)
W16-4P	30"	24"	NEXT XX FEET				2	2	2	2				5.00 (40.00)
W21-5	48"	48"	SHOULDER WORK				2	2	2	2				16.00 (128.00)
W3-4	48"	48"	BE PREPARED TO STOP				2	2	2	2				16.00 (128.00)
W3-3	36"	36"						2	2					18 (36.00)
W5-3	36"	36"	ONE LANE BRIDGE					2	2					18 (36.00)
R10-6	24"	36"	STOP HERE ON RED					2	2					12 (24.00)

Scale:

No.	Revision	By	Date

Designed by: GPI

CONSULTANT PROJECT MANAGER:

	By	Date		By	Date
Designed			Checked		
Drawn					

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

BRIDGE PAINTING

SIGN SUMMARY

SHEET NUMBER:

CONTRACT: 2024.05

SHAKER ROAD UNDERPASS - MILE 64.3

NOTES:

1. EROSION AND SEDIMENTATION CONTROL DEVICES REQUIRED FOR THE CONTRACTOR'S ACCESS TO LOCATIONS AND STORAGE AREAS WILL NOT BE MEASURED FOR PAYMENT.

2. SEE SPECIFICATIONS FOR THE CONTRACTOR'S SUBMITTAL REQUIREMENTS IF ADDING ADDITIONAL LIMITS OF STAGING OR DISTURBANCE TO THE PROJECT.

3. NO ON-SITE STORAGE OF HAZARDOUS WASTE IS PERMITTED AT THIS BRIDGE SITE. HAZARDOUS WASTE STORAGE SHALL BE AT THE GRAY MAINTENANCE FACILITY.

4. THE SHAKER RD EMERGENCY VEHICLE RAMP WILL NOT BE AVAILABLE FOR USE UNTIL THE CONCLUSION OF THE ADJACENT WATER LINE CONSTRUCTION PROJECT BY GRAY WATER DISTRICT. (REFER TO SECTION 104.4.7 OF SPECIAL PROVISIONS)

Scale: 50 0 50 100

No.	Revision	By	Date

Designed by: GPI

CONSULTANT PROJECT MANAGER:

	By	Date		By	Date
Designed			Checked		
Drawn					

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

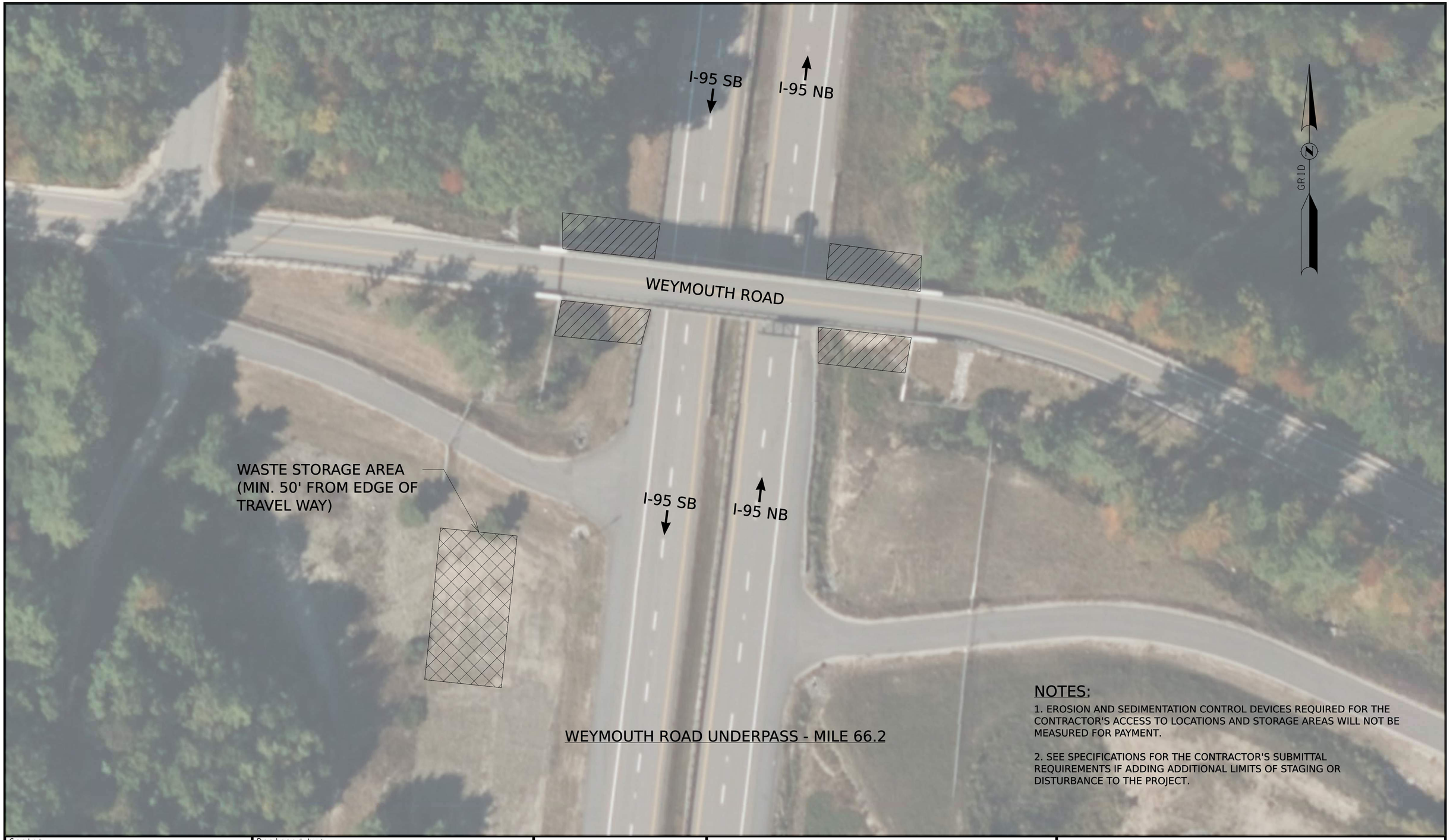
MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

BRIDGE PAINTING

CONTRACTOR'S STAGING PLAN

SHEET NUMBER:

CONTRACT: 2024.05



WEYMOUTH ROAD UNDERPASS - MILE 66.2

NOTES:

1. EROSION AND SEDIMENTATION CONTROL DEVICES REQUIRED FOR THE CONTRACTOR'S ACCESS TO LOCATIONS AND STORAGE AREAS WILL NOT BE MEASURED FOR PAYMENT.

2. SEE SPECIFICATIONS FOR THE CONTRACTOR'S SUBMITTAL REQUIREMENTS IF ADDING ADDITIONAL LIMITS OF STAGING OR DISTURBANCE TO THE PROJECT.

Scale: 25 0 25 50

No.	Revision	By	Date

Designed by: GPI

CONSULTANT PROJECT MANAGER:

	By	Date		By	Date
Designed			Checked		
Drawn					

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

BRIDGE PAINTING

CONTRACTOR'S STAGING PLAN

SHEET NUMBER: 2 OF 4

CONTRACT: 2024.05

BENNETT ROAD UNDERPASS - MILE 68.6

NOTES:

1. EROSION AND SEDIMENTATION CONTROL DEVICES REQUIRED FOR THE CONTRACTOR'S ACCESS TO LOCATIONS AND STORAGE AREAS WILL NOT BE MEASURED FOR PAYMENT.

2. SEE SPECIFICATIONS FOR THE CONTRACTOR'S SUBMITTAL REQUIREMENTS IF ADDING ADDITIONAL LIMITS OF STAGING OR DISTURBANCE TO THE PROJECT.

3. THE WORK ON BENNETT ROAD UNDERPASS BRIDGE MAY NOT PROCEED UNTIL THE ON-GOING BRIDGE HAUNCH REMOVAL IS COMPLETE. THE ESTIMATED COMPLETION DATE OF THE WORK IS MAY 14, 2024.

Scale: 25 0 25 50

No.	Revision	By	Date

Designed by: GPI

CONSULTANT PROJECT MANAGER:

	By	Date		By	Date
Designed			Checked		
Drawn					

Greenman-Pedersen, Inc.
21 Daniel Street
Second Floor
Portsmouth, NH 03801
TEL: (603) 766-8259

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

BRIDGE PAINTING

CONTRACTOR'S STAGING PLAN

SHEET NUMBER:

CONTRACT: 2024.05

I-295 SOUTHBOUND UNDERPASS - MILE 102.5

NOTES:

1. EROSION AND SEDIMENTATION CONTROL DEVICES REQUIRED FOR THE CONTRACTOR'S ACCESS TO LOCATIONS AND STORAGE AREAS WILL NOT BE MEASURED FOR PAYMENT.

2. SEE SPECIFICATIONS FOR THE CONTRACTOR'S SUBMITTAL REQUIREMENTS IF ADDING ADDITIONAL LIMITS OF STAGING OR DISTURBANCE TO THE PROJECT.

3. NO ON-SITE STORAGE OF HAZARDOUS WASTE IS PERMITTED AT THIS BRIDGE SITE. HAZARDOUS WASTE STORAGE SHALL BE AT THE WEST GARDINER MAINTENANCE FACILITY.

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by: GPI

CONSULTANT PROJECT MANAGER:

	By	Date		By	Date
Designed			Checked		
Drawn					

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