STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0016

Janet T. Mills
GOVERNOR

Bruce A. Van Note
COMMISSIONER

October 22, 2024
Subject: Ferry Terminal Rehabilitation
Location: Casco Bay
State WIN: 024685.01
Amendment No. 3

Dear Sir/Ms.:

Make the following changes to the bid documents:

In the Bid Book

Remove pages sixty one through sixty three titled SPECIAL PROVISION SECTION 504 STRUCTURAL STEEL (Miscellaneous Fabrication) Dated August 7 2024, and **Replace** with the attached SPECIAL PROVISION SECTION 504 STRUCTURAL STEEL (Miscellaneous Fabrication) dated September 4, 2024

Remove pages seventy two through seventy three titled SPECIAL PROVISION SECTION 504 STRUCTURAL STEEL (Miscellaneous Fabrication – Aluminum Gangway 30') dated August 21, 2024 and **Replace** with the attached SPECIAL PROVISION SECTION 504 STRUCTURAL STEEL (Miscellaneous Fabrication Aluminum Gangway 30') September 4,2024

Remove pages sixty Four through sixty five titled SPECIAL PROVISION SECTION 504 STRUCTURAL STEEL (Rubber Fenders – Conical) (Rubber Fenders – D-Shaped) dated August 7, 2024 and **Replace** with the attached SPECIAL PROVISION SECTION 504 (Rubber Fenders – Conical) (Rubber Fenders – D-Shaped) dated September 4, 2024

Remove pages seventy five through seventy seven titled SPECAIL PROVISION SECTION 910 SPECIAL WORK (Shelter ELECTRICAL WORK – Great Diamond Island) dated August 7, 2024, and **Replace** with the attached SPECIAL PROVISION SECTION 910 SPECIAL WORK (Shelter Electrical Work – Great Diamond Island) dated September 4,2024

The following questions have been received:

Question: Quick RFI for Great Diamond. The written spec (910.301) calls for the meter & service disconnect to be pole mounted with overhead wire to the shelter. The drawing (S6) shows underground wire from a riser to the meter & disconnect on the exterior shelter wall. Which setup should be followed.?

Response: Wiring from the Existing Light Pole #2 to the shelter shall be under the pier. Refer to Special Provision 910.301 Shelter Electrical Work - Great Diamond Island provided in Amendment No. 3 for clarification.

Question: If the UG to the exterior shelter wall is correct, per Dwg. S6, can they confirm they want the meter and disconnect in a locked NEMA 4X enclosure. Typically, the meter and service disconnect needs
to be accessible outside of any enclosure. This is for access for the utility to their meter and emergency response to the disconnect in the event of an emergency. The meter & disconnect enclosures come standard as NEMA 3R.

Response: On Plan Sheet S6 revise note "PROVIDE NEMA 4X LOCKABLE ENCLOSURE WITH METER AND DISCONNECT" to "PROVIDE NEMA 4X ENCLOSURE WITH METER AND DISCONNECT". Make this change in pen and ink.

Consider these changes and information prior to submitting your bid on **October 23, 2024**.

Sincerely,

George M. A. Macdougall P.E.
Contracts & Specifications Engineer

SPECIAL PROVISION
SECTION 504
STRUCTURAL STEEL
(Miscellaneous Fabrication)

Section 504 Structural Steel is revised as follows:

504.01 Description. This work shall consist of furnishing and installing ladders, railings, brackets, and miscellaneous metal fabrications in accordance with the plans and specifications.

504.02 Materials. Products shall conform to the respective reference specifications and standards and to the requirements specified herein.

Steel and Iron. If not specified otherwise, use standard mill finished structural steel shapes or bar iron in compliance with AISC S326 Specifications for Design, Fabrication and Erection of Structural Steel for Buildings.

Structural steel shall conform to ASTM A588

Steel pipe shall conform to ASTM A53, Type E or S, Grade B.

Steel sheet metal shall conform to ASTM A611, Grade B.

Bolts, anchor bolts, nuts and washers shall conform to ASTM A307 and shall be hot-dip galvanized.

Screws shall conform to FS FF-S-92 and shall be stainless steel.

504.021 Dissimilar Material. Where dissimilar metals as defined by MIL-STD-889 are in contact with wood, or absorptive materials subject to wetting, protect the surfaces with a coat of bituminous paint, a coat of varnish conforming to Federal Specification TT-V-51, or a coat of zinc chromate primer conforming to Federal Specification TT-P-645 or Federal Specification TT-P-664 to prevent galvanic or corrosive action.

504.031 Drawings. Shop drawings and/or catalog cuts shall be submitted for review and approval and shall indicate all materials, thicknesses and show connection and welding details, as applicable.

504.04 Construction Requirements. Fabrication shall be performed by mechanics skilled in the trade and in accordance with the manufacturer's directions. Metalwork shall be well formed to shape and size, with sharp lines, angles, and true curves. All work shall be fabricated to allow for expansion and contraction of materials. Provide welding and bracing of adequate strength and durability, with tight, flush joints, dressed smooth and clean.

Measurements shall be performed before fabrication, provide necessary field measurements and verify all measurements.

Metal surfaces shall be clean and free from mill scale, flake rust and rust pitting; well formed and finished to shape and size, with sharp lines, angles, and smooth surfaces. Shearing and punching shall

leave clean true lines and surfaces. Unless otherwise indicated, weld connections. Welds shall be used and finished flush and smooth on surfaces that will be exposed after installation. Do not use screws or bolts where they can be avoided; when used, heads shall be countersunk, screwed up tight and threads nicked to prevent loosening.

Fastening: Provide the necessary rabbets, lugs, and brackets so that the work can be assembled in a neat and substantial manner. Holes for bolts and screws shall be drilled. Joints exposed to the weather shall be formed to exclude water. Conceal fastenings where possible.

Shop Fabrication: Fabrication and assembly shall be done in the shop to the greatest extent possible.

Miscellaneous Items:

1. Brackets – Cliff Island (pile blocking and fender) and Chebeague Island (for corner work)

   Brackets shall be hot-dip galvanized steel plates secured as indicated.

2. Ladders – Cliff Island

   Fabricate ladders with steel channels or bars for stringers and steel rods for rungs. Rungs shall be plug welded or shouldered and headed into stringers. Ladders shall be hot-dip galvanized after fabrication. Install ladders so that the distance from the rungs to the pier face will not be less than 7 inches. Unless otherwise indicated on the plans, secure ladders to the adjacent construction with clip angles bolted to the pier.

3. Rail – Great Diamond Island

Anchorage, Fastenings, and Connections:

1. Anchorage

   Provide anchorage for fastening work strictly in place. Sizes, kinds, and spacing of anchors not indicated or specified shall be as necessary for the purpose, as approved. Anchorage not otherwise specified or indicated includes through bolts, lag bolts, and screws for wood. Except where specified otherwise, anchors and anchor bolts shall be hot dip galvanized.

2. Threaded Connections

   Make threaded connections up tight so that threads are entirely concealed. Make bolted work up tight and nick the threads or bush the stem to prevent loosening. Abutting bars shall be shouldered and headed, dowelled and pinned. Pass small bars through larger bars and pin. Rivet, bolt, and screw heads shall be flat and countersunk in exposed work and elsewhere as required.

3. Anchors and Connecting Members

Cut, fit, and drill as necessary so all materials are properly set in place and to permit engaging work to be properly installed.

4. Design Connections

Where not shown or indicated, connection details shall be in accordance with AISC M011 and connections shall be provided using common steel bolts. Provide necessary holds for securing work to structure. Use lock washers under nuts.

Welding: Perform welding, welding inspection, and corrective welding in accordance with AWS D1.1. Weld in a manner to prevent permanent distortion of the connected parts. Weld continuously along the entire area of contract except where tack welding is permitted. Do not tack weld exposed connections. Grind smooth visible welds in the finished installation.

Finishes.

1. Galvanizing

Hot-dip galvanize items specified to be zinc-coated after fabrication, where practicable. Galvanizing: ASTM A123, ASTM A153 and ASTM A525, as applicable.

a. Galvanize

Anchor bolts, washers, and parts or devices necessary for proper installation unless indicated otherwise.

2. Repair of Zinc-Coated Surfaces

Repair surfaces damaged by welding or other means with galvanizing repair paint conforming to DOD-P-21035 or by the application of stick or thick paste material specifically designed for repair of galvanizing, as approved. Clean areas to be repaired and remove the slag from welds. Surfaces to which stick or paste material is applied, shall be heated with a torch to a temperature sufficient to melt the metallics in stick or paste; spread the molten material uniformly over surfaces to be coated and wipe the excess material off.

504.65 Method of Measurement: Metal fabrications will be measured by the lump sum and shall include all labor, materials and equipment necessary for the satisfactory completion of the work.

504.66 Basis of Payment: Miscellaneous Fabrication will be paid for at the contract lump sum price for the respective contract items.

Payment will be made under:

Pay Item		Pay Unit
504.510	Misc. Fabrication – Ladder – Cliff Island	Lump Sum
504.510	Misc. Fabrication – Pile Attachment Hardware – Great Diamond Island	Lump Sum

504.510	Misc. Fabrication – Pile Attachment Hardware – Chebeague	Lump Sum

SPECIAL PROVISION
SECTION 504
STRUCTURAL STEEL
(Rubber Fenders - Conical)
(Rubber Fenders - D-Shaped)

504.01 Description. This work shall consist of furnishing and installing rubber fender units at the location shown on the Plans and in accordance with the specifications. Fender units shall include the brackets and rubber fenders including mounting hardware, chain and attachments, unless noted otherwise

504.02 Materials. This subsection covers the material requirements for the fender units.

(a) The conical fenders shall be of the size indicated on the Plans and as manufactured by Trelleborg Marine Systems, Shibata Fender Team or approved equal. Fender units shall be resistant to ozone, sunlight, temperature extremes, marine growth, wear and abrasion.

Rated energy and reaction for the conical fenders shall be as indicated.

(b) The D-Shaped fenders shall be of the size indicated on the Plans and as manufactured by Trelleborg Marine Systems, Shibata Fender Team, Fender Tec or approved equal. Fender units shall be resistant to ozone, sunlight, temperature extremes, marine growth, wear and abrasion.

(c) Attachment Hardware: Mounting bolts, Nuts and Washers. Bolts, nuts and washers shall conform to ASTM A 307 unless otherwise required by fender manufacturer and shall be hot-dip galvanized. Fenders shall be provided with steel plate washer bars and templates for setting anchor bolts.

(d) Steel for brackets and miscellaneous steel items shall be of structural steel conforming to ASTM Standard A 36 or stronger and shall be of the shape, size and details indicated or suitable for the purposes. Steel shall be hot-dip galvanized in accordance with ASTM A-123.

504.021 Fender Unit Warranty The Contractor and the manufacturer of the fender unit shall warranty that the rubber energy absorption units and all connection hardware, meets or exceeds the material and performance criteria specified and against defects in construction and/or materials for a period of two years.

Should any breach in warranty be found within this period, the contractor shall be required to repair any and all defects at no additional cost to the Owner.

504.03 Drawings: (a) Fender unit attachment drawings, including anchoring.

504.031 Submittals

Design Data:

(a) Reaction - energy percent compression curves.
(b) Dimensions
(c) Material Specifications

Manufacturers Catalog Data

(a) Fenders units, performance curves and hardware
(b) Method of Manufacture
(c) Hardware including steel plate and anchor bolts.

Manufacturer's Instructions

(a) Handling, Assembly and Installation Instructions

Factory Test Reports for Conical Fenders

Warranty Certification

504.05 Construction Requirements: Care shall be taken to secure all fender units with required hardware without sagging or distortion. Installation shall include all necessary connecting and tightening hardware.

504.65 Method of Measurement: Rubber Units will be measured by the lump sum and shall include all labor, materials and equipment necessary for the satisfactory completion of the work.

504.66 Basis of Payment: Payment for all work pertaining to this section shall be paid for as a lump sum.

Payment will be made under:

Pay Item	Pay Unit
504.601 Rubber Fenders (D Fenders) – Cliff Island	Lump Sum
504.6011 Rubber Fenders (Conical Fenders) – Great Diamond Island	Lump Sum

SPECIAL PROVISION
SECTION 504
STRUCTURAL STEEL
(Miscellaneous Fabrication - Aluminum Gangway 30')

531.01 Description

This work shall consist of furnishing all labor, materials, equipment, transportation and incidentals required to assemble and install aluminum gangway, complete, as shown on the Contract Plans to include anchor bolts, nuts, washers, transition plates, shims, and any and all other hardware required to construct gangways in accordance with these Specifications and shown on the Contract drawings.

531.02 General Requirements

A. Submit four copies of manufacturer's product data and shop drawings for review.

531.03 Design Requirements

A. The aluminum lightweight gangway shall be designed to meet the following criteria:

1. Live Load - The gangway shall be capable of sustaining a uniformly disturbed live load of 100 pounds per square foot.

2. Handrail Horizontal Load - Handrails shall be capable of withstanding a 200-pound concentrated horizontal load applied at the top of the railing.

3. Handrail Vertical Load - Handrails shall be capable of withstanding a 50-pound per-foot vertical loading applied at the top of the railing.

B. All work and materials shall conform to the Contract Drawings and the provisions of the State of Maine Department of Transportation Standard Specifications, March 2020, SECTION 716 STRUCTURAL ALUMINUM AND RELATED MATERIAL.

531.04 Materials

A. Ramps shall be fabricated of 6000-series aluminum compatible with a marine environment. Fasteners shall be stainless steel or other material compatible with aluminum in a marine environment.

B. The walkway surface shall be ribbed with integral non-skid properties; without, affixed cross-cleats or other mechanical devices to achieve non-skid capacity.

C. Handrail height to be 42 inches, with a horizontal safety rail installed at mid-height.

D. Transition plates shall be installed at the ends of the gangway using piano-style hinges.

E. All bolts, nuts, and washers shall be as indicated on the shop drawings, or if not so indicated, shall be of sizes, shapes and lengths sufficient for their intended uses and shall be stainless steel.

531.05 Method of Measurement

Aluminum Gangways will be measured by the Lump Sum, and shall include all labor, materials, incidentals, and equipment necessary to satisfactorily complete the work in accordance with the Plans and Specifications. Measurement shall include furnishing the gangways including transport to/from the terminals. Installation/moving of the gangways required to complete the project shall be paid for under the heavy timber construction pay item for the site.

531.06 Basis of Payment

Aluminum Gangways will be paid for at the Contract Lump Sum price for the respective Contract items which shall be full compensation for all labor, materials, incidentals, and equipment necessary to satisfactorily complete the work in accordance with the Plans and Specifications.

Payment will be made under:

Pay Item	Description	Unit
531.9601	Aluminum Gangway (30’)	Lump Sum

SPECIAL PROVISION
SECTION 910
SPECIAL WORK
(Shelter Electrical Work - Great Diamond Island)

Description: This item shall consist of all shelter electrical work shown in the Plans and described in this special provision. This special provision is limited to the electrical work for the ferry terminal shelter on Great Diamond Island.

The electrical work shall consist of furnishing and installing all materials and labor for the installation of interior lighting and receptacle with electrical service at the ferry terminal shelter including luminaires, receptacle, weatherproof in-use cover, photocell, panelboard, meter and disconnect on shelter building, conduit, couplings, expansion joints, supports, connections, wiring, riser and feeder from existing Light Pole #2 to shelter meter and panel board, attachments with all of their components and incidentals related to these items necessary to complete the work. Contractor shall meet all requirements of Section 634 – Highway Lighting.

Materials: Utility construction work performed as part this federal-aid Project is subject to the requirements of Buy America in accordance with Federal Regulation 23 CFR 635.410 Section 1518. Specific requirements are presented in MaineDOT Standard Specification Section 100, Appendix A, Section 3.A., Buy America.

The Contractor shall be responsible for the furnishing and installation of all material and associated hardware as shown in the Plans and described in this specification. The materials furnished by the Contractor shall be new. All materials shall conform to NEMA or UL standards as applicable.

The interior shelter luminaires shall be wet location vapor tight fixtures suitable for temperatures as low as -40C with marine grade 316 hardware and mounting brackets, NEMA-4X with frosted lens, CRI 3000K, internal occupancy sensor, 10kV surge protection, maximum 7,000 lumens

The meter shall meet CMP standard requirements with disconnect and in NEMA-4X lockable enclosure.

The GFCI receptacle shall be straight blade, non-feed-through type. They shall comply with NEMA WD 1, NEMA WD 6, UL 498, and UL 943, Class A, and include indicator light that is lighted when device is tripped. They shall be Duplex GFCI Convenience Receptacles, 125 V, 20 A and shall be weather-resistance (WR) per NEC 406.9 with Wet-Location, Weatherproof in-use Cover Plates: NEMA 250, complying with type 3R weather-resistant, die-cast aluminum with lockable cover.

The photocell shall be meet requirements of Section 715.10.

The exterior wiring from the riser to the meter shall be rated #1/0 AWG with #6 Ground. Provide grounding per NEC 250. Install 1/2" PVC conduit with ground wire and rod as per code compliance.

The panelboard shall be 120/240 volt, single-phase, three wire, NEMA-4X minimum six circuits panel with a 100 amp, double-pole main breaker and two 20 amp, single-pole breakers.

Wiring type shall be XHHW-2 with minimum wire size shall be #12 AWG.

All conduit and fittings shall be PVC coated rigid metal conduit and shall be in accordance with UL6, NEMA RN-1, ANSI C80.1, IEC IP69, UL Type 4X, and ETL PVC-001. The connections and metallic hardware shall be hot dipped galvanized steel and shall meet or exceed requirements of ASTM A507 with ASTM 153 for galvanizing. Metal components that are custom fabricated shall have hot dipped galvanizing applied in accordance with ASTM A153 with a minimum coating of 2.0 oz./sq. ft. using high grade zinc conforming to ASTM B6-00 with less than .03% lead used in the process.

Testing: Testing shall include:

1. Line Voltage: Acceptable range is 105 to 132 V. 2.
2. Percent Voltage Drop under 15-A Load: A value of 5 percent or higher is not acceptable.
3. Ground Impedance: Values of up to 2 ohms are acceptable.
4. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.
5. Verify that the device and its outlet box are securely mounted.
6. The tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault current path, defective devices, or similar problems. Correct circuit conditions, remove malfunctioning units and replace with new ones, and retest as specified above.

Construction Requirements: The Contractor shall within 60 days following execution of the contract, submit a list of materials which are to be installed. The list shall include the manufacturer, size, and identifying number of each item. The list shall be supplemented by such data as may be required, including detailed scale drawings of proposed minor deviations from the plans. The Contractor shall submit for review, design data and sample articles of the material proposed for use.

Workmanship shall conform to the requirements of: NEC, NESC, ASTM Standards, and the ANSI, the local Utility Company, the State of Maine, and Manufacturer's Specifications, as well as any local ordinances that may apply unless otherwise noted on the Plans or in the Special Provisions.

Conduits shall be of the sizes noted on the Plans, which are indicated as the nominal inside diameter.

The Contractor shall be responsible for and shall repair all damage caused to underground drainage structures, utilities, or conduit, which are encountered during construction.

Method of Measurement: Special Work – Shelter Electrical Work – Great Diamond Island will be measured for payment as one lump sum.

Basis of Payment: Payment for Shelter Electrical Work – Great Diamond Island shall be full compensation for all materials, equipment, labor, and hardware necessary to complete the electrical work for the shelter. Payment for work shall include furnishing and installing luminaires, receptacle, weatherproof in-use cover, photocell, panelboard, meter and disconnect at shelter building, grounding and bonding, conduit, couplings, expansion joints, supports, connections, all wiring from riser pole and in shelter, attachments with all of their components and incidentals required.

Pay Item	Description	Pay Unit
910.301	Shelter Electrical Work - Great Diamond Island	Lump Sum