

## **ITEM 10594.12 M - TIMBER HARBORWALK**

### **DESCRIPTION:**

This work shall consist of constructing a timber harborwalk in accordance with the contract plans and specifications, and at locations shown in the contract plans or as directed by the engineer. Work under this item shall include the installation of treated dimension timber girders and framing, hardwood decking, and other miscellaneous dimension timber necessary for blocking between girders, framed lighting pockets and stairs. The timber girder and framing members shall be connected to timber piles installed under a separate item.

The work under this item shall also include furnishing and installing all hardware including, machine bolts, lag screws, nails, spikes and other incidental metals necessary for a completed structure.

The hardwood material, consisting of 2 x 6 and 2 x 8 decking planks and 1 x 10 fascia boards will be provided to the contractor at the work site by the Village of Greenport.

### **MATERIALS:**

#### A. Framing Lumber

All timber used in the Harborwalk framing shall be Douglas Fir, No. 2 and shall be in conformance with the requirements of Subsection 712-14. All framing timber shall be treated with Chromated Copper Arsenate to a retention of no less than 40 kg per cubic meter as specified by the current American Preservers Association Standard No. C18 for "Standard of Pressure Treated Piles and Timbers in Marine Construction".

Required sizes of framing timber shall be as shown on the contract plans.

#### B. Hardwood Decking

Hardwood lumber for the Harborwalk decking planks and fascia boards will be provided to the contractor at the work site by the Village of Greenport.

The engineer reserves the right to inspect all new timbers at the manufacturer's plant before shipment. Upon arrival at the site, the timber will be inspected by the engineer and any timber that does not comply with the specifications will be rejected and shall be removed from the site by the contractor.

The contractor shall furnish certification for all timber, providing information on stress grades and preservative treatment, subject to the approval of the engineer.

Unless otherwise specified, all dimension timber shall be cut square and surfaced on four sides and shall not be smaller in any dimension affected by the surfacing than shown on the contract plans.

#### C. Hardware

Machine bolts, drift pins, dowels, nuts, washers, lag screws, nails and spikes shall be in

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accordance with the requirements of ASTM 307 and shall be galvanized conforming to the requirements of Type II for Subsection 719 -01. The weight of zinc coating per square meter of actual surface shall average not less than 610 grams.

For the Harborwalk decking, screws shall be solid AISI Grade 305 stainless steel, 75 mm length, No. 7, 5.75 mm head diameter, No. 1 square drive, 586 MPa tensile strength.

### **D. Finish Materials**

For the Harborwalk decking, the applied finish shall be Seasonite, Gray manufactured by The Flood Co., P.O. Box 2535, Hudson, Ohio, 44236-0035, (800-321-3444).

Field cuts made to the harborwalk decking shall be treated with Anchor Seal manufactured by UC Coatings, P.O. Box 1066, Buffalo, New York, 14215, (716-833-9366).

The contractor shall submit certifications on all materials to be used in this item.

### **CONSTRUCTION DETAILS:**

#### **A. General**

1. The proposed Harborwalk shall be constructed where shown on the contract plans. The timber framing members shall be connected to timber piles installed under a separate item as shown on the contract plans.
2. The requirements of Subsection 594-3 for treated timber shall apply except as modified herein.
3. Shop drawings shall be submitted for review and approval by the engineer. Shop drawings shall include large scale plans, elevations, sections and details noting dimensions, materials, finishes, anchoring means and methods, rough hardware and other details to clearly describe the work to be provided. Location and spacing of hardwood decking screws shall also be included.
4. Erect timber framing true to line, levels and dimensions required, squared, aligned, plumbed and securely fastened in place. Install to a tolerance of 3 mm in 2400 mm for plumb and level and with a 1.5 mm maximum offset in flush adjoining surfaces and 3 mm maximum offsets in revealed adjoining surfaces. Provide temporary bracing as required to maintain lines and levels until permanent supporting members are in place.
5. Shim as required and approved by the engineer using concealed shims. If shimming is required for installation of hardware, use metal or fiber shims. Cardboard shims will not be permitted.
6. Do all cutting, fitting, drilling and tapping of other work as required to secure in place and to perform the work included herein.
7. Cutting: Avoid extra cutting after fabrication.

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- a. Coat cross cuts with end sealer.
  - b. Where treated members must be cut during erection, apply a heavy brush coat of the same treatment complying with America Wood Preservers Association Standard M4.
7. Handle and temporarily support members to prevent visible surface damage.
  8. Repair damaged surfaces and finishes after completing erection. Replace damaged members, as directed by the engineer, where damage is beyond satisfactory repair.

### **B. Hardwood Decking**

1. Install the decking at right angles to the framing members, parallel to each other, with end joints over joists as shown on the contract plans and with a 3 mm spacing between boards. Offset joints by the spacing of the wood joists below.
2. Pre-drill decking for fasteners close to actual diameter and recess screw heads 4 mm below decking. Use a drill bit designed to extract stock during the drilling. Do not allow cutting surfaces to overheat.
3. Conform to patterns noted on the contract plans.
4. Use carbide tipped cutters and slow feed when machining.
5. After cross-cutting, the exposed ends shall be sealed with a clear paraffin wax based end sealer (Anchor Seal), using a manufacturer recommended foam brush.

### **C. Hardwood Decking Applied Finish**

1. Apply specified stain material and color to no less than 3 square meters of deck surface for acceptance by the engineer before proceeding with the balance of the work. This application, when found acceptable, will establish the quality and workmanship for this work. Refinish areas that are not acceptable, as determined by the engineer, until acceptance is received.
2. Apply to installed and exposed deck surfaces prior to direct sun exposure and soon after each section is installed. Apply using a brush and roller to manufacturer recommended coverage and environmental restrictions, covering approximately 7 square meters per liter. Allow 30 minutes after application and wipe off excess.

### **METHOD OF MEASUREMENT:**

This work will be measured as the number of square meters of timber harborwalk satisfactorily installed in place. The measurement will be taken on the finished hardwood decking area.

### **BASIS OF PAYMENT:**

The unit price bid per square meter of timber harborwalk shall include the cost of furnishing all labor, materials

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and equipment to complete the work described in this specification, in the contract plans or directed by the engineer. The work shall include: installation of treated dimension timber girders and framing, hardwood decking, and other miscellaneous dimension timber for blocking between girders, framed lighting pockets and stairs. The timber girder and framing members shall be connected to timber piles installed under a separate item.

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