

## **ITEM 10594.13 M – FISHING PIER SUPERSTRUCTURE**

### **DESCRIPTION**

This work shall consist of furnishing all labor, materials and equipment necessary to construct the fishing pier superstructure and walkways of the type, size, configuration and components at the location shown on the Plans. This work includes all timber pier framing, decking, bracing, railing, curb and hardware necessary to complete the fishing pier superstructure and walkways.

### **MATERIALS**

#### **A. General**

The materials for this work shall meet the requirements of the following subsections of the Standard Specifications:

Wood Preservative – Creosote Oil, Type I	708-30
Wood Preservative – Water Borne	708-31
Wood Preservative – Oil Borne	708-32
Timber and Lumber	712-13
Stress Graded Timber and Lumber	712-14
Structural Steel	715-01
High Strength Bolts, Nuts and Washers	715-14
Galvanized Coatings and Repair Methods	719-01

#### **B. Treated Timber**

The requirements of Section 594 of the Standard Specifications shall apply.

The treated timber shall conform to the requirements of Subsection 712-14, except that it shall be Southern Yellow Pine Dense Structural Grade 65 in accordance with ASTM D245. The timber shall be S4S square edged and grade marked.

All timber, except walkway and railing timber, shall be impregnated with creosote oil by the full cell process, and shall comply with the current American Wood Preservers Association (AWPA) Standard No. C18 for Pressure Treated Piles and Timbers in Marine Construction. The amount of preservative retained shall not be less than 400.5 kg per cubic meter of timber.

Walkway and railing timber shall be Copper Chromium Arsenate (CCA) treated to a retention of 40 kg per cubic meter as specified by AWPA Standard No. C18 for Pressure Treated Piles and Timbers in Marine Construction.

#### **C. Fasteners And Hardware**

Structural steel for tie-rods shall conform to the requirements of ASTM A36 M covering shapes, plates and bars of structural quality. Tie-rods shall be completely galvanized conforming to the requirements of Type I for Subsection 719 - 01. The weight of zinc coating per square meter of actual surface shall average not less than 610 grams.

Machine bolts, drift pins, dowels, nuts, washers, turnbuckles, lag screws, nails and spikes shall be in accordance with the requirements of ASTM 307 and shall be galvanized conforming to the

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requirements of Type II for Subsection 719 -01. The weight of zinc coating per square meter of actual surface shall average not be less than 610 grams.

### **CONSTRUCTION DETAILS**

#### **A. Treated Timber**

Timber shall be handled and stored with sufficient care to avoid breaking through portions penetrated by treatment, and thereby exposing untreated wood. Tools that would burr, blemish, penetrate or permanently deform the contracted members shall not be used. Rope, rubber slings or fabric slings only shall be used.

All timber shall be fabricated and installed as detailed on the drawings or specified by the Engineer.

All field cuts and drill holes shall be liberally brushed with preservative in accordance with AWWA Standard M4. Where timber posts are called for, they shall be set plumb and true. All rough edges, splinters, etc., shall be removed. Any surface breaks resulting from storage and handling which do not warrant rejection shall be treated in accordance with AWWA M4 with the addition that at least three coats of preservative shall be applied.

All cutting, framing and boring of timber and lumber shall be done before treatment whenever practicable. Cutting and boring below high water shall be particularly avoided in material that is to be used in waters infested with marine borers.

All cut surfaces shall be treated in accordance with AWWA M4 with the addition that at least three coats of preservative shall be applied.

The Contractor shall accurately cut and frame all timber in such a manner that the joints will have a close, tight fit over the entire contact surfaces. The Contractor shall secure the timbers in their proper alignment. No shimming will be permitted in making joints nor will open joints be accepted. Only full-length timbers shall be used.

Holes for round drift-bolts and dowels shall be bored with a bit 1.5 mm less in diameter than the bolt or dowel to be used. The diameter of holes for square drift-bolts or dowels shall be equal to the least dimension of the bolt or dowel. Holes for machine bolts shall be bored with a bit of the same diameter as the bolt. Holes for rods shall be bored with a bit 1.5 mm greater in diameter than the rod. Holes for lag screws shall be bored with a bit no larger than the body of the screw at the base of the thread.

All boltholes bored subsequent to treatment shall be treated with preservative by means of an approved pressure bolthole treater. Any unfilled holes, after being treated with preservative shall be plugged with preservative treated plugs.

All cut surfaces and boltholes below the high water line shall, in addition to the AWWA M4 preservative treatment and bolthole pressure treatment, be coated with a thick application of a mixture of 30% creosote and 70% pitch.

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A galvanized steel plate washer shall be used under all bolt heads and nuts that would otherwise come in contact with the wood. The Contractor shall check all bolts by burring the threads after the nuts have been finally tightened. Vertical bolts shall have the nuts on the lower ends.

### **METHOD OF MEASUREMENT**

Payment of Fishing Pier Superstructure Item shall be made on a lump sum basis.

### **BASIS OF PAYMENT**

The lump sum price bid shall include the cost of all labor and materials including timber, hardware, and equipment necessary to complete the work in accordance with the Contract Plans, Specifications and as directed by the Engineer.