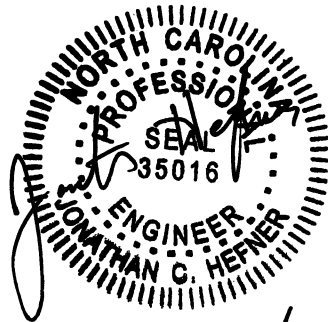


**PROJECT SPECIAL PROVISIONS**  
**MULTI-USE PATH**

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**CONTRACT ID**      **C202580**  
**WBS**                **33822.3.1**  
**COUNTY**            **WAKE**  
**TIP NO.**            **B-4660**

*Prepared By:*



7/21/11



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**July 21, 2011**

## **BOARDWALK**

### **Description**

The Contractor shall furnish and completely install new timber boardwalk to the lines and grades designated on the construction drawings or as directed by the engineer, including fabricating, erecting, treating and coating of the timber elements as specified in the construction drawings and these Specifications.

All boardwalk components must be constructed in conformance with NCDOT specifications except as modified by these specifications.

### **Quality Control**

Quality Control shall be provided in accordance with ANSI/AITC A190.1-latest edition, the American Institute for Timber Construction "Standard for Heavy Timber Construction" AITC 108, American Wood-Preservers' Association Standards, and the American Institute of Timber Construction Inspection Manual AITC-200, as applicable.

Provide timber graded by an industry recognized agency with rules and service complying with the requirements of American Lumber Standards Committee and PS 20.

### **Products and Materials**

Materials shall be in accordance with the relevant paragraphs of the 2006 NCDOT Standard Specifications Section 1082.

Posts and Timbers 4" and larger shall be pressure treated dense structural 65 southern yellow pine grade 1 or better with a minimum Fc of 1200 psi, and shall conform to AASHTO Standard M 168 of Wood Products. Preservatives and Pressure Treatment Process shall be in accordance with AASHTO Standard M 133 and American Wood-Preservers' Association (AWPA) standards. All pressure treated timber components shall be Chromated Copper Arsenate (CCA) with minimum retentions of 0.8 lbs/cf for wood with ground contact. All timber should be select structural material dressed cut S4S (surfaced four sides). All timber shall be partially air dried to a moisture content of 16% to 20%.

Timbers 2"-4" thick shall be pressure treated southern yellow pine grade 1 or better with a minimum Fc of 1200 psi, and shall conform to AASHTO Standard M 168 of Wood Products. Preservatives and Pressure Treatment Process shall be in accordance with AASHTO Standard M 133 and American Wood-Preservers' Association (AWPA) standards. All pressure treated timber components shall be free of arsenic and shall be Alkaline Copper Quaternary Type D, use condition UCB-4B, with minimum retentions of 0.6 lbs/cf for wood with ground contact. All timber should be select structural material dressed cut S4S (surfaced four sides). All timber shall be partially air dried to a moisture content of 16% to 20%.

All structural solid wood components shall comply with the American Institute for Timber Construction "Standard for Heavy Timber Construction" AITC 108 as applicable.

Solid sawn lumber for decking shall be No. 1 Southern Yellow Pine graded in accordance with Southern Pine Inspection Bureau.

All fasteners to be in accordance with AASHTO Standard M 253 and shall be appropriate for selected timber and associated treatment methods.

### **Construction Methods**

Boardwalk construction shall be in accordance with relevant paragraphs of the 2006 NCDOT Standard Specifications Section 1082.

All finished concrete surfaces shall have  $\frac{3}{4}$ " X  $\frac{3}{4}$ " chamfer on all corners. Decking shall be fastened to stringers with galvanized wood screws, with a minimum of 3" length or at least 1  $\frac{1}{2}$ " longer than the thickness of the deck board; 2 screws per board per joist.

Where predrilling is required, the diameter of the drilled hole shall be smaller than the post.

### **Measurement and Payment**

Basis of payment for the "Boardwalk" will be at the price per linear foot for "Boardwalk" and will be full compensation for furnishing all material, labor, tools, and incidentals necessary for installing in place. "Boardwalk Posts 7.5" Minimum Tip Diameter" will be paid for separately. The quantity of "Boardwalk Posts 7.5" Minimum Tip Diameter" to be paid for will be the actual linear feet of timber posts incorporated into the work as boardwalk posts after cutting to final grade and will be full compensation for furnishing all material, labor, tools, and incidentals necessary for installing in place.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Boardwalk	Linear Foot
Boardwalk Posts 7.5" Min. Tip Diameter	Linear Foot

**CONCRETE APPROACH TO BOARDWALK**

The quantity of "Concrete Approach to Boardwalk" to be paid for will be the actual number of approaches installed as shown in the Drawings and incorporated into the Work. Concrete Approaches to Boardwalk are used at the beginning and end of each Boardwalk and are shown on Sheet 2F.

The unit price for "Concrete Approach to Boardwalk" shall include full compensation for all labor, equipment, and materials, including excavation, compaction, ABC stone, forming, placing, finishing and curing of concrete, reinforcing steel, welded wire fabric, ties, finishing and all other required items of work associated with the Concrete Approach.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Concrete Approach To Boardwalk	Each

**BOLLARDS**

The bollards shall be furnished and installed by the Contractor at the locations shown in the plans. Details are shown on Sheet 2B in the plans.

The bollards, concrete footings, and hardware shall be of the sizes and materials shown in the plans.

"Hinged Bollard" and "Wood Bollard" will be measured by counting the number of each type of bollard.

Payment will be made at the contract unit price per each for "Hinged Bollard" or "Wood Bollard", as the case may be. Such prices and payment will be considered full compensation for furnishing all materials, tools, labor, and equipment.

<b>Pay Item</b>	<b>Pay Unit</b>
Hinged Bollard	Each
Wood Bollard	Each

**48" SAFETY RAIL**

The "48" Safety Rail" shall be furnished and installed by the Contractor at the locations shown in the plans. Details are shown on Sheet 2B in the plans.

The safety rail, posts, concrete, and attaching hardware shall be of the sizes and materials shown in the plans.

"48" Safety Rail" will be measured along the top rail of the completed installation.

Payment will be made at the contract unit price per linear foot "48" Safety Rail", which price and payment will be considered full compensation for furnishing all materials, tools, labor, and equipment.

<b>Pay Item</b>	<b>Pay Unit</b>
48" Safety Rail	Linear Foot

**TIMBER STEPS**

"Timber Steps" shall be furnished and installed by the Contractor at the locations shown in the plans. Details are shown on Sheet 2B in the plans.

"Timber Steps" will be paid at the contract lump sum price. Such price and payment will be full compensation for all labor, equipment, and materials, including but not limited to grading, compaction, stone, steel rods, timber, hardware, and all other required items of work necessary to accomplish the work. Bill of material shown in the detail on sheet 2B of the plans is based on an estimate of 15 steps, there will be no additional compensation if more than 15 steps are required in the field.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Timber Steps	Lump Sum