

SP02150 (2015 Specifications: 11-13-1411-05-15) ~~(Use this Section only when lightweight metal connectors are required.)~~

SECTION 02150 - LUMBER AND TIMBER CONNECTORS

(Follow all instructions. If there are no instructions above a subsection, paragraph, sentence, or bullet, then include them in the project. The specifications may be modified to include project specific specifications, but all additions, deletions, or modifications must be sent to the ODOT Technical Resource and Senior Specifications Engineer for review and approval.)

Comply with Section 02150 of the Standard Specifications modified as follows:

02150.00 Scope - Replace this subsection, except for the subsection number and title, with the following:

This Section includes the requirements for connectors, bolts, nuts, washers, nails, and miscellaneous hardware for joining lumber and timber.

02150.10(a) General - Add the following to the end of this subsection:

For all connectors and hardware that contact lumber or timber treated with Alkaline Copper Quaternary (ACQ) or Copper Azole (CA), except those used with fence posts, sign posts, guardrail post, or guardrail blocks, furnish connectors according to one of the following:

- Fabricate connectors and all associated hardware, including fasteners, with Type 304 or Type 316 stainless steel according to ASTM A480.
- Coat all connectors and associated hardware, including fasteners, according to ASTM F2833, Grade 1 or ASTM F1136, Grade 3, or approved equal.

Contact between stainless steel and non-stainless steel will not be allowed.

(Use the following subsection .10(b) when split ring connectors are required.)

02150.10(b) Split Ring Connectors - In the paragraph that begins "Provide 2 5/8 inch and 4 inch...", replace the first sentence with the following sentence:

Provide 2 5/8 inch and 4 inch inside diameter split rings manufactured from steel conforming to ASTM A830, Grade Number 1010 (AISI C1010, SAE 1010).

(Use the following subsections .10(c-1) and .10(c-2) when shear plate connectors are required.)

02150.10(c-1) Pressed Steel Type - Replace the first sentence with the following sentence:

Provide 2 5/8 inch diameter pressed steel shear plates manufactured from steel conforming to ASTM A830, Grade Number 1010 (AISI C1010, SAE 1010).

02150.10(c-2) Malleable Iron Type - Add the following sentence to the end of the paragraph:

Galvanize malleable iron type connectors according to AASHTO M 232 (ASTM A153).

(Use the following subsection .10(d) when bolts, nuts, washers, lag screws, or wood screws are required.)

02150.10(d) Bolts, Nuts, Nails, and Miscellaneous Hardware - Replace this subsection, with the following subsection:

02150.10(d) Bolts, Nuts, Washers, Lag Screws, and Wood Screws - Provide machine bolts and drift bolts according to ASTM A307 or ASTM A36. Washers may be cast ogee or malleable castings, or cut from steel plate.

Galvanize bolts, nuts, washers, lag screws, and wood screws according to ASTM F2329.

Provide bolts, nuts, washers, lag screws, and wood screws in standard type and make, unless otherwise shown.

(Use the following subsection .10(e) when lightweight metal connectors are required. Obtain the capacity requirements from the Bridge Designer.)

02150.10(e) Lightweight Metal Connectors - Add the following to the end of this subsection. Replace this subsection, except for the subsection number and title, with the following:

Lightweight metal connectors are mass produced plate or sheet steel connectors with a maximum thickness of 1/4 inch used to connect wood members to wood, concrete or masonry. Provide lightweight metal connectors as shown with the required minimum capacities as stated in these specifications. Provide copies of the test reports from the International Code Council (ICC-ES) showing that the supplied connectors meet the minimum capacities listed in the Special Provisions. All lightweight metal connectors shall be Type 304/316 stainless steel according to ASTM A480 or galvanized according to ASTM A123 or ASTM A653, coating designation G185.

The minimum capacities of the required lightweight metal connectors are:

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(Use the following lead-in paragraph and subsection .10(f) when rough hardware, drift pins, dowels, clamps, anchors, joist hangers, spikes, or nails are required.)

Add the following subsection:

02150.10(f) Nails and Miscellaneous Hardware - Provide dowels according to ASTM A307 or ASTM A36.

Galvanize rough hardware, drift pins, dowels, clamps, anchors, joist hangers, and nails according to AASHTO M 232 (ASTM A153).

Provide rough hardware, drift pins, dowels, clamps, anchors, joist hangers, and nails in standard type and make, unless otherwise shown.