

SECTION 02150 – LUMBER AND TIMBER CONNECTORS

(Follow all instructions and make all edits with “Track Changes” turned on. If there are no instructions [purple text] above a subsection, paragraph, sentence, or bullet, then include it in the Project. Delete all purple text before preparing the final document. All other modifications to this Section will require ODOT Technical Resource and State Specifications Engineer approval.)

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

02150.10(b) Split Ring Connectors - Replace this subsection, except for the subsection number and title, with the following:

Furnish 2 5/8 inch and 4 inch inside diameter split rings manufactured from steel according to ASTM A830, Grade Number 1010 (AISI C1010, SAE 1010). Furnish rings that form a closed true circle with the principal axis of the Cross Section of the ring metal parallel to the geometric axis of the ring. Bevel the metal section from the central portion toward the edges to a thickness less than the mid-section. Cut through the ring in one place in its circumference to form a tongue and slot.

Cut connector grooves in timber concentric with the bolt hole and conforming to the cross-sectional shape of the rings, to provide a snug fit. Cut the inside diameter of the groove larger than nominal ring diameter so that the ring can expand slightly during installation.

02150.10(c) Shear Plate Connectors - Replace this subsection, except for the subsection number and title, with the following:

(1) Pressed Steel Type - Furnish 2 5/8-inch diameter pressed steel shear plates manufactured from steel according to ASTM A830, Grade Number 1010 (AISI C1010, SAE 1010). Furnish plates that are a true circle with a flange around the edge, extending from one face of the plate only and at right angles to the face. Ensure the plate portion has a central bolt hole and two small perforations on opposite sides of the hole and midway between the center and circumference.

(2) Malleable Iron Type - Furnish 4-inch diameter malleable iron shear plates manufactured according to ASTM A47, Grade No. 32510, for malleable iron castings. Furnish each casting consisting of a perforated round plate with a flange around the edge projecting from one face of the plate only and at right angles to the face. Ensure the plate portion has a central bolt hole reamed to size with an integral hub concentric with the bolt hole and extending from the same face as the flange. Galvanize malleable iron type connectors according to AASHTO M 232 (ASTM A153).

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

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

02150.10(e) Lightweight Metal Connectors - 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. Furnish lightweight metal connectors as shown with the required minimum capacities as specified in 00570.15 of the Special Provisions. 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. Furnish lightweight metal connectors that are Type 304 or Type 316 stainless steel according to ASTM A480, or galvanized according to ASTM A23 or ASTM A653, coating designation G185.

02150.10(f) Nails and Miscellaneous Hardware - Replace this subsection, except for the subsection number and title, with the following:

Furnish 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).

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

02150.20 Acceptance - Replace this subsection, except for the subsection number and title, with the following:

Lumber and timber connectors are accepted according to 00165.35 and this Section.