



SECTION 06135/PRE-ENGINEERED HEAVY TIMBER TRUSSES

Western Wood Structures, Inc. (WWS), incorporated in 1969 as a structural wood products sales company, offers pre-engineered heavy timber trusses to meet a diverse set of specified needs. Heavy timber trusses are naturally beautiful, durable and cost-effective. Clients are given the flexibility to select from a variety of truss types that best suit the product requirements. Stamped design calculations are supplied with all orders. Heavy timber trusses designed and supplied by WWS are pre-fabricated and assembled to the fullest extent possible. WWS also offers installation services to clients with projects in need of field erection.



Top: Beacon Hill Library; Seattle, Washington **Left:** Church entry; Lakewood, WA
Center: R&B Ranch Arena; Sisters, OR **Right:** Red Canoe Credit Union; Oregon, Washington

SECTION 06135

PRE-ENGINEERED HEAVY TIMBER TRUSSES

1.0 GENERAL REQUIREMENTS

1.1 Description: This section includes the design, fabrication and supply of the heavy timber trusses as shown and described on the contract drawings. The trusses are to be of glulam or sawn timber construction and the supplier shall furnish all materials including connecting steel and hardware for a complete installation.

1.2 Design Criteria:

Dead Load: _____ psf

Live Load: _____ psf

Snow Load: _____ psf

Wind and seismic loads per local building code.

1.3 Qualifications: The heavy timber truss manufacturer must be a company specializing in the design and fabrication of timber trusses with a minimum of five (5) years documented experience. Approved manufacturers include:

Western Wood Structures, Inc.
P.O. Box 130
Tualatin, Oregon 97062-0130
(800) 547-5411

1.4 Submittals:

1.4.1 Submit shop drawings and product data under the provisions of section 01300. Shop drawings shall include: general framing plan, truss profiles, loads, and fabrication details for all wood members and steel assemblies. Also indicate dimensions, wood grades, drilled holes, fasteners and cambers. Shop drawings to be stamped by a registered engineer, licensed to practice in the state where the building is being constructed.

1.4.2 Submit design calculations stamped by a registered engineer, licensed to practice in the state where the building is being constructed.

1.4.3 Furnish an AITC or APA-EWS Certificate of Conformance stating that the glulams conform to the specifications.

1.4.4 Furnish a WCLIB or WWPA Certificate of Conformance for all sawn lumber.

1.4.5 Provide a written warranty against defects in material and workmanship for a period of five (5) years.

2.0 PRODUCTS

2.1 Materials:

2.1.1 Glulam shall be Douglas Fir. Stress grades shall be as required by the design. The appearance shall be Industrial/Architectural/Premium per AITC 110 or other (select one). Adhesive shall be 100% waterproof phenolic resin glue. Surfaces of truss members shall be S4S/resawn/other (select one).

2.1 Materials (continued):

2.1.2 Sawn timber shall be Douglas Fir. Stress grade shall be as required by design. Lumber shall be unseasoned/KD (select one), FOHC, square edge, hand selected for appearance. Sawn members shall be S4S/rough/resawn/other (select one).

2.1.3 Manufacturer to supply all necessary steel and hardware required to assemble trusses. Steel to be ASTM A-36 and hardware to be ASTM A-307. Welding by certified welders per AWS specifications D1.1. All steel and hardware shall be prime coated/epoxy powder coated/galvanized (select one).

2.2 Fabrication:

2.2.1 Heavy timber trusses shall be fabricated and assembled in a plant with facilities for performing work specified to the fullest extent possible. Factory drill all holes to the extent possible using steel as templates. For glulam or sawn members of 8" nominal width or greater, drill holes from both sides of member to ensure true hole alignment. Where trusses cannot be shipped fully assembled due to their configuration, fabricate and trial assemble to ensure proper fit. Individually wrap trusses after assembly. Field fabrication of heavy timber trusses is not permitted.

2.2.2 Concealed connector locations shall be fabricated to within 1/8" of true position. Fabricate length of members to be within 1/8" of required length to achieve tight connections. Make end cuts flat and true to ensure consistent load transfer.

3.0 EXECUTION

3.1 Delivery, storage and handling:

3.1.1 The purchaser or installer is responsible for handling and protection of heavy timber trusses after arrival at destination. All trusses shall be unloaded and handled with a forklift or crane using nylon slings.

3.1.2 If the trusses are to be stored at the site, they must be placed on a level surface and stickered to prevent warpage and twisting.

3.1.3 Any damage must be reported immediately to the truss manufacturer's professional engineer.

3.2 Installation:

3.2.1 Install the trusses according to manufacturer's shop details and installation drawings. Do not field cut, drill, or alter structural members without written approval from the timber truss manufacturer's professional engineer. Set trusses in locations and to elevations indicated. Make provisions for erection loads and provide temporary bracing to maintain trusses true and plumb, and in true alignment until completion of erection.

3.2.2 Maintain factory-applied wrapping until roof structure is enclosed. Touch up primed surfaces of steel assemblies with primer coat compatible with shop coat.

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