



## SECTION 02875 PRE-ENGINEERED SHELTERS

Western Wood Structures, Inc. (WWS), incorporated in 1969 as a structural wood products sales company, offers pre-engineered shelters, which are custom-designed to suit your setting. Three basic designs are offered: rectangular shape with low-pitched beams; hexagonal or octagonal shape for large clear-spans; and gazebos with added curves for smaller areas. Stamped design calculations are included with all orders. WWS also offers installation services to clients with projects in need of field erection.



**Top:** Cemetery Pavilion; Portland, Oregon **Left:** Cedar Sinai; Portland, Oregon  
**Center:** Irene Ingall Public Library; Wrangell, Alaska **Right:** Ibach Park; Tualatin, Oregon

# SECTION 02875

## PRE-ENGINEERED SHELTERS

### 1.0 GENERAL REQUIREMENTS

**1.1 Description:** This section includes the design, fabrication, and supply of the pre-engineered shelter(s) as shown and described on the contract drawings. The shelter framing members 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 shelter supplier must be a company specializing in the design and fabrication of shelters with a minimum of five (5) years documented experience. Approved manufacturers include:

Western Wood Structures, Inc.  
PO 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 or beam profiles, loads, and fabrication details for all wood members and steel assemblies. Also indicate dimensions, wood grades, drilled holes, fasteners and cambers.

1.4.2 Submit design calculations stamped by a registered engineer, licensed to practice in the state where the shelter 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 WWPAA 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 Premium, S3S. Adhesive shall be 100% waterproof phenolic resin glue.

2.1.2 Columns shall be Douglas Fir, S4S, KD, FOHC. Hand select for appearance, square edge. Stress grade shall be as required by design. Pressure treat for ground contact to a minimum net retention of 0.4 PCF. At the owner's option, the columns may be glulam or steel.

#### 2.1 Materials (continued):

2.1.3 Decking shall be 2"x 6" Douglas Fir Select Dex, S2S, KD, EVIS, Paper Wrap.

2.1.4 Fascia to be Western Red Cedar, KD, S4S. Select for appearance.

2.1.5 Steel and Hardware. 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 to be hot-dipped galvanized.

#### 2.2 Fabrication:

2.2.1 The main structural beams and/or trusses are to be fabricated and assembled to the fullest extent possible in a plant with facilities for performing work specified. 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 members to ensure the true hole alignment.

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 shelter framing materials after arrival at destination. All trusses and/or beams shall be unloaded and handled with a forklift or crane using nylon slings.

3.1.2 If the materials 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 shelter according to supplier's shop details and installation instructions. Do not field cut, drill, or alter structural members without written approval from the pre-engineered building supplier. Set framing members in locations and to elevations indicated. Make provisions for erection loads and provide temporary bracing to maintain framing members true and plumb, and in true alignment until completion of erection.

3.2.2 Maintain factory-applied wrapping until roof structure is enclosed.

WESTERN WOOD



STRUCTURES