

ARCHITECTURE

SECTION 06100

ROUGH CARPENTRY AND SHEATHING

PART 1 - GENERAL

1.1. SECTION REQUIREMENTS

- A. Rooftop equipment bases, enclosures, and support curbs.
- B. Wood furring, grounds, roof edge nailers, and blocking
- C. Wood preservative treated materials – Strapping.
- D. Exterior grade Plywood Sheathing.

1.2 Related Documents

- A. Drawings, Specifications, Division 1 and Contract.
- B. Section 06200

1.3 Quality Assurance:

- A. Lumber: Lumber Standards: Comply with DOC PS 20, "American Softwood Lumber Standard," and with applicable grading rules of inspection agencies certified by ALSC's Board of Review. Split, wrapped, twisted, or weathered lumber or lumber placed out of alignment with the rest of the framing will not be acceptable
- B. Grade Stamps: Provide lumber with each piece factory marked with grade stamp of inspection agency evidencing compliance with grading rule requirements and identifying grading agency, grade, species, moisture content at time of surfacing, and mill. Identify with grade stamp of an agency certified by NFPA. For exposed lumber, furnish pieces with grade stamps applied to ends or back of each piece, or omit grade stamps and provide grade-compliance certificates issued by inspection agency.
- C. Concealed Boards: Where boards will be concealed by other work, provide lumber with 19 percent maximum moisture content.
- D. **NO REMANUFACTURED OR REGRADED LUMBER WILL BE ALLOWED.**

1.4 Delivery, Storage and Handling:

- A. Store lumber and plywood a minimum of 8" above the ground in a manner to allow for proper drainage, ventilation and protection from the weather. Lumber must be covered properly for protection against the weather while stored on site. Stack lumber flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings
- C. Materials stored improperly will be removed from the site and replaced with new material.

1.5 WOOD-PRESERVATIVE-TREATED MATERIALS:

- A. General: Where lumber or plywood is indicated as preservative treated or is specified to be treated, comply with applicable requirements of AWPA C2 (lumber) and AWPA C9 (plywood). Mark each treated item with the Quality Mark Requirements of an inspection agency approved by ALSC's Board of Review. Do not use chemicals containing chromium or arsenic.
 - 1. Where pressure treated wood or PT is indicated at sill plates or other locations coming in contact with concrete or masonry, or is in direct contact with the ground, or is subject to constant wetting, Pressure treated wood shall be
 - a. ACQ (Alkaline Copper Quaternary) - 'Preserve', Nature Wood' or 'Osmose' or
 - b. CA(Copper Azole) - Wolmanized'.

ARCHITECTURE

2. Where pressure treated wood or PT is indicated at roof edges or other locations coming in contact with galvanized metal decks, Pressure treated wood shall be
 - a. Borate treated (Disodium Octaborate Tetrahydrate (DOT)) ‘Osmose “Advance Guard”’.

3. No wood containing chromium or arsenic (CCA) may be used.

NOTE: Use hot-dip galvanized (G185) or stainless steel brackets, nails, screws, etc in contact with PT wood. Do not combine stainless steel fasteners with galvanized brackets.

For exposed items indicated to receive stained finish, use chemical formulations that do not bleed through, contain colorants, or otherwise adversely affect finishes. Pressure treat aboveground items with waterborne preservatives to a minimum retention of 0.25 lb/cu. ft. After treatment, kiln-dry lumber and plywood to a maximum moisture content of 19 and 15 percent, respectively.

4. Treat indicated items and the following:
 - a. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing
 - b. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete
 - c. Wood floor plates installed over concrete slabs directly in contact with earth Complete fabrication of treated items before treatment, where possible.

- B. FIRE-RETARDANT-TREATED MATERIALS: General: Where fire-retardant-treated wood is indicated, comply with applicable requirements of AWPA C20 (lumber) and AWPA C27 (plywood). Identify fire-retardant-treated wood with appropriate classification marking of UL; U.S. Testing; Timber Products Inspection, Inc.; or another testing and inspecting agency acceptable to authorities having jurisdiction.

1.7 Submittals:

- A. Submittal and inspection/documentation requirements:
1. Pressure treated wood product data sheets and MSDS reports.
Framer’s pneumatic gun nail specifications S/S or HDG (G185 or ASTM B695 class 40) where coming in contact with ACQ or CA
Documentation required to be submitted shall include delivery receipts, digital images of tags on actual wood in the project, and digital images of labels on fastener boxes.
 2. Hangers, straps, bearing plates, etc. require submittal sheets indicating clearly the materials are stainless steel or hot dip galvanized (G185). Submittal shall also include fasteners including nailing gun fasteners.

PART 2 - PRODUCTS

2.1 Materials:

- A. Lumber: PS 20, new and undamaged, provide lumber with each piece factory-marked with grade stamp in accordance with NFPA Grading Rules. Lumber stresses specified do not include adjustment factors in accordance with National Design Standards. Framing members shall be S4S unless noted otherwise. All wood bearing on concrete or masonry shall be Preservative treated as defined in this section or shall have a minimum 1/4” steel base plate.
1. Dimensional Lumber / Rough framing shall consist of #1/#2 spruce/pine/fir (SPF) with 19 percent maximum moisture content having no less than an allowable bending stress (Fb) of 875 psi, respectively, a Modulus of elasticity of 1,400,000 psi, and an allowable shear stress of 135 psi, unless indicated otherwise.
 2. **NO REMANUFACTURED OR REGRADED LUMBER WILL BE ALLOWED**

ARCHITECTURE

3. 23/32" CDX exterior grade plywood sheathing for use as substrate for exterior panel rain-screen system.

B. Air Infiltration and moisture barrier: Manufacturers system of spray applied coating and peel-n-stick membrane. See Section 07100 for material information.

2.2 Accessories:

A. Nails, Spikes and Staples: Galvanized for exterior locations and high humidity locations. Provide Stainless Steel or hot dip galvanized (G185) at treated wood. Provide plain finish for other interior locations, size and type to suit application, typical nailing shall be with common wire nails. Staples shall be of equivalent strength as the required nails.

B. Bolts, Nuts, Washers, Lags and Screws: Medium carbon steel; size and type to suit application; galvanized for exterior locations, high humidity locations and treated wood, plain finish for other interior locations.

C. Fasteners: Expansion shield lag bolt, type for anchorage to concrete. Bolts or power activated type for anchorage to steel. Stainless Steel Kwik Bolt-II (KB-II) with Stainless Steel threaded rod.

D. Adhesive: Gun grade acrylic compound, such as Liquid Nails by Macco Adhesive.

2.3 Wood Treatment Materials:

A. Wood preservative treated lumber exposed to wetting:

1. Premium grade pressure treated 1x3 and 1x4 strapping for use in exterior panel rain-screen system.

2.4 Shop Treatment of Wood Materials:

A. Shop pressure treat wood materials requiring pressure impregnated preservatives to AWPB LP-2.

B. Re-dry wood after pressure treatment to maximum 19 percent moisture content.

PART 3 - EXECUTION

3.1 Rough Framing:

A. Install sheathing and miscellaneous blocking, furring, nailing strips, etc. members true, plump and level. Install shimming where required to set framing in proper alignment. Secure framing in place. Space miscellaneous framing and furring no more than 24 inches on center. Construct members of continuous pieces of longest possible lengths. Framing member connections shall be nailed with no less than 2 - 16d nails, or with screws as noted. Provide rough hardware as indicated. Follow IBC nailing schedule unless noted otherwise.

B. Install exterior sheathing to metal stud substrate with stainless steel screws of sufficient length to penetrate through all layers and into steel studs a minimum of 1 inch. Maximum fastener spacing along stud is 8" vertically.

C. Install strapping for rain-screen wall system with fasteners that penetrate through the plywood sheathing a minimum of 1/2 inch beyond the rear face.

3.2 Air infiltration and moisture barrier:

A. Refer to Section 07100 for installation instructions.

END OF SECTION