

Division 6 – Wood & Plastics

General

The Design Professional will specify what type of lumber to use unless specified herein.

All wood concealed in walls, ceilings or roof construction shall be FM approved fire retardant treated. All materials shall bear identification showing the fire performance rating thereof. Such identifications shall be issued by an approved agency having a service for inspection of materials at the factory. Refer to FM Global Property Loss Prevention Data Sheet 1-61 "Fire-Retardant Treated Wood". Use fire-retardant treated wood that has been kiln dried after treatment to limit the maximum moisture content to 19% for lumber and 15% for plywood.

Use FM Approved materials where available. See www.roofnav.com for FM Approved materials.

Exposed wood for paint or transparent finish shall not be fire retardant treated.

Treat wood, including lumber and plywood, shown or scheduled as "Exterior Treated" or specified herein to be treated, to comply with the applicable requirements of the American Wood Preservers Institute (AWPI), and in accordance with the latest UBC Standard.

Preservative treatment to be by Pressure Process complying with AWPA U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.

Preservative chemicals must be acceptable to authorities having jurisdiction and containing no arsenic or chromium. Do not use inorganic boron (SBX) for sill plates.

1. Kiln-dry lumber after treatment to a maximum moisture content of 19% for lumber and 15% for plywood. Do not use material that is warped or that does not comply with requirements for untreated material.
2. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
3. Treat items indicated on Drawings, 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 framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.

Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.

Comply with AWPA M4 for applying field treatment to cut surfaces of preservative treated lumber.

Materials and fabrication shall conform to Architectural Woodwork Institute ‘Quality’ standards.

Specify to submit for each type of process and factory-fabricated product and indicate component materials and dimensions and include construction and application details.

1. Include data for wood preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
2. Include data for fire retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
3. For fire retardant treatments, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5664.
4. For products receiving a waterborne treatment, include statement that moisture content of treated materials were reduced to levels specified before shipment to Project site.

Factory mark each piece of lumber and plywood with type, grade, mill and grading agency, except omit marking from surfaces to receive transparent finish, and submit mill certificate that materials have been inspected and graded in accordance with grading standards if it cannot be marked on a concealed surface.

Keep materials dry during delivery, storage and handling. Store lumber and plywood in stacks with provision for air circulation. Protect bottom of stacks against contact with damp surfaces. Protect exposed materials from weather with waterproof sheeting. Do not store dressed or treated lumber outdoors.

Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes sufficiently wet that moisture content exceeds that specified, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

Rough Carpentry

Lumber shall comply with DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber with grade stamp of grading agency.
2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture

content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.

3. Provide dressed lumber, S4S, unless otherwise indicated.
4. The maximum moisture content of the lumber is to be 19%.

Roof and Floor Joists shall be No.2 Douglas Fir-Larch, and 19% maximum moisture content.

Studs shall be Stud Grade, Douglas Fir-Larch, and 19% maximum moisture content.

Other Framing Material shall be No.2 Douglas Fir-Larch, and 19% maximum moisture content.

Grounds and Nailer shall be No.2 Douglas Fir-Larch, and 19% maximum moisture content.

Telephone and electrical equipment backing panels are to be fire retardant treated, 3/4 in. thick.

Miscellaneous concealed plywood to be fire retardant treated 1/2 in. thick with 15% maximum moisture.

Where rough carpentry is exposed to weather, in ground contact, pressure preservative treated, or in area of high relative humidity, specify fasteners that are hot-dip galvanized or stainless steel to minimize corrosion potential.

A moisture seal or barrier shall be placed under or around wood members which bear on or are embedded in concrete or masonry. Seal shall be asphalt mastic, or other approved type.

Provide wood grounds and blocking of size and shape required for plaster work, for securing toilet accessories, finish hardware, door stops, and trim for chalkboards, tackboards, etc. Install true to line, level plumb, and well secured in place. Wood blocking or nailers on dry wall metal framing systems shall be bolted or screwed in place.

Sheathing

Use FM Approved fire retardant (FR) treated lumber and plywood for all new wood roof deck construction. FM Approved lumber is minimum 1.5 in. thick (nominal 2 in.) and FM Approved plywood is minimum 23/32 in. thick (nominal 3/4 in).

Plywood within the roof system shall not be less than C-D Exposure 1 or better. It shall have an APA-rated sheathing and not be treated with a preservative. It also shall meet U.S. Products Standards PSI or Performance Standards PRP-108 for Soft Wood Plywood Construction and Industrial, with less than 19 percent moisture content when the roofing is installed.

Ensure plywood fastening is in accordance to FM Global Data Sheet 1-29. Deck panels are staggered in one direction, fastening is based on 2 ft. span with panel ends supported. For nominal 5/8 in. thick deck, minimum 8d nails are used. For thicker decks, minimum 10 d nails are used. Smooth shank nails are acceptable for all fastening except roof corners in Class 1-90, where ring shank nails are needed.

Finish Carpentry

All finished carpentry shall comply with the latest standards established by the Architectural Woodwork Institute (AWI). Fabrication shop shall to be a certified participant in AWI's Quality Certification Program. Installer shall be a certified participant in AWI's Quality Certification Program.

Specify to provide AWI Quality Certification Program labels and certificates indicating that woodwork, including installation, complies with requirements of grades specified.

Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature between 60 and 90 deg F and relative humidity between 17 and 50 percent during the remainder of the construction period.

Do not install finish carpentry materials that are wet, moisture damaged, or mold damaged.

Proceed with installation of exterior finished carpentry only when existing and forecasted weather conditions permit work to be performed and at least one coat of specified finish can be applied without exposure to rain, snow, or dampness.

Architectural Millwork

Architectural woodwork materials, fabrication and installation shall be detailed and specified in compliance with the most recent edition of the AWI "Quality Standards," guidelines. Shop drawings and material product data sheets shall be required. Fabrication shop shall to be a certified participant in AWI's Quality Certification Program.