

SECTION 061000

ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Framing with dimension lumber.
 - 2. Framing with engineered wood products.
 - 3. Rooftop equipment bases and support curbs.
 - 4. Wood blocking and nailers.
 - 5. Wood furring.
 - 6. Wood sleepers.
 - 7. Plywood backing panels.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product.
 - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.
 - 2. Include data for fire retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.

1.4 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.
- B. Evaluation Reports: For the following, from ICC-ES:
 - 1. Wood-preservative-treated wood.

2. Fire-retardant-treated wood.
3. Engineered wood products.
4. Shear panels.
5. Power-driven fasteners.
6. Powder-actuated fasteners.
7. Expansion anchors.
8. Metal framing anchors.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: 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) For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece or omit grade stamp and provide certificates of grade compliance issued by grading agency.
 - 3) Provide dressed lumber, S4S, unless otherwise indicated.
- B. Maximum Moisture Content of Lumber: 19 percent unless otherwise indicated.
- D. Engineered Wood Products: Provide engineered wood products acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project.
 - 1) Allowable Design Stresses: Provide engineered wood products with allowable design stresses, as published by manufacturer, that meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWPA C2, except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPA C31 with inorganic boron SBX.
 - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
 - 2. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not require incising, contain colorants, bleed through, or otherwise adversely affect finishes.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
 - 1. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece or omit marking and provide certificates of treatment compliance issued by inspection agency.
- D. Application: Treat items indicated on Drawings, and the following:
 - 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
 - 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with concrete.
 - 3. Wood framing and furring attached directly to the interior of below-grade exterior concrete walls.
 - 4. Wood framing members that are less than 18 inches above the ground in crawlspaces or unexcavated areas.
 - 5. Wood floor plates that are installed over concrete slabs-on-grade.
 - a. Install sill plate gaskets at all exterior walls by one of the following manufacturers:
 - 1) Owens Corning Foam Seal R
 - 2) Dow Weathermate Sill Seal

6. FIRE-RETARDANT-TREATED MATERIALS

- a. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.

- b. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.
 - 1) Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.
 - 2) Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D 3201 at 92 percent relative humidity. Use where exterior type is not indicated.
- c. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Kiln-dry plywood after treatment to a maximum moisture content of 15 percent.
- d. Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency.
- e. Application: Treat items indicated on Drawings, and the following:
 - 1) Concealed blocking.
 - 2) Roof construction.
 - 3) Plywood backing panels.
 - 4) Where part of Type III Construction

7. DIMENSION LUMBER FRAMING

- a. Non-Load-Bearing Interior Partitions: Construction or No. 2 grade.
 - 1) Application: Interior partitions not indicated as load-bearing.
 - 2) Species:
 - a) Mixed southern pine; SPIB.
 - b) Southern pine; SPIB.
- b. Load-Bearing Interior and Exterior Partitions: No. 2 grade.
 - 1) Application: Interior and Exterior partitions indicated as load-bearing.
 - 2) Species:
 - a) Southern pine; SPIB.
- c. Framing Other Than Non-Load-Bearing Interior Partitions: Any species and grade with a modulus of elasticity of at least 1,500,000 psi and an extreme fiber stress in bending of at least 1000 psi for 2-inch nominal thickness and 12-inch nominal width for single-member use.

8. ENGINEERED WOOD PRODUCTS

- a. Engineered Wood Products, General: Products shall contain no urea formaldehyde.

9. MISCELLANEOUS LUMBER

- a. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
 - 1) Blocking.
 - 2) Nailers.
 - 3) Furring.
 - 4) Grounds.
- b. For items of dimension lumber size, provide Construction or No. 2 grade lumber of any species.
- c. For concealed boards, provide lumber with 19 percent maximum moisture content and the following species and grades:
 - 1) Southern pine; No. 2 grade; SPIB.

10. PLYWOOD BACKING PANELS

- a. Equipment Backing Panels: DOC PS 1, fire-retardant treated, in thickness indicated or, if not indicated, not less than 3/4-inch nominal thickness.

11. FASTENERS

- a. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
 - 1) Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
- b. Power-Driven Fasteners: NES NER-272.
- c. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

12. METAL FRAMING ANCHORS

- a. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

- b. Basis-of-Design Product: Subject to compliance with requirements, provide or comparable product by one of the following:
 - 1) Cleveland Steel Specialty Co.
 - 2) KC Metals Products, Inc.
 - 3) Phoenix Metal Products, Inc.
 - 4) Simpson Strong-Tie Co., Inc.
 - 5) USP Structural Connectors.
- c. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that meet or exceed those of products of manufacturers listed. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.
- d. Hot-Dip, Heavy-Galvanized Steel Sheet: ASTM A 653/A 653M; structural steel (SS), high-strength low-alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B); G185 coating designation; and not less than 0.036 inch thick.
 - 1) Use for wood-preserved-treated lumber and where indicated.

13. MISCELLANEOUS MATERIALS

- a. Sill-Sealer Gaskets: Glass-fiber-resilient insulation, fabricated in strip form, for use as a sill sealer; 1-inch nominal thickness, compressible to 1/32 inch; selected from manufacturer's standard widths to suit width of sill members indicated.
- b. Sill-Sealer Gaskets: Closed-cell neoprene foam, 1/4 inch thick, selected from manufacturer's standard widths to suit width of sill members indicated.
- c. Flexible Flashing: Composite, self-adhesive, flashing product consisting of a pliable, butyl rubber or rubberized-asphalt compound, bonded to a high-density polyethylene film, aluminum foil, or spunbonded polyolefin to produce an overall thickness of not less than 0.025 inch.

PART 3 - EXECUTION

1. INSTALLATION, GENERAL

- a. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- b. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.

- c. Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written instructions.
- d. Install fire-retardant treated plywood backing panels with classification marking of testing agency exposed to view.
- e. Shear Wall Panels: Install shear wall panels to comply with manufacturer's written instructions.
- f. Metal Framing Anchors: Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.
- g. Do not splice structural members between supports unless otherwise indicated.
- h. Comply with AWWA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
- i. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- j. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1) NES NER-272 for power-driven fasteners.
 - 2) Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
 - 3) Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.

2. PROTECTION

- a. 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.
- b. 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.

END OF SECTION 061000