

END OF SECTION 0500

SECTION 06100 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 1. Wood blocking.
 2. Wood nailers.
 3. Wood sheathing.
 4. Plywood backing panels.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
 1. Factory mark each piece of lumber with grade stamp of grading agency.
 2. For exposed lumber indicated to receive stained or natural finish, mark grade stamp on end or back of each piece.
 3. Provide dressed lumber, S4S, unless otherwise indicated.
 4. Provide dry lumber with 15 percent maximum moisture content at time of dressing for 2-inch nominal thickness or less, unless otherwise indicated.

B. Wood Structural Panels:

- 1. Plywood: DOC PS 1.
- 2. Oriented Strand Board: DOC PS 2.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWPAC C2 (lumber) and AWPAC C9 (plywood), except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPAC C31 with inorganic boron (SBX).
 1. Use treatment for which chemical manufacturer publishes physical properties of treated wood after exposure to elevated temperatures, when tested by a qualified independent testing agency according to ASTM D 5664, for lumber and ASTM D 5516, for plywood.
 2. Use treatment that does not promote corrosion of metal fasteners.
 3. Use Exterior type for exterior locations and where indicated.
 4. Use Interior Type A High Temperature (HT), unless otherwise indicated.

2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated materials are indicated, provide materials that comply with performance requirements in AWPAC C20 (lumber) and AWPAC C27 (plywood). Identify fire-retardant-treated wood with appropriate classification marking of U.L. U.S. Testing, Timber Products Institute, or another testing and inspecting agency acceptable to authorities having jurisdiction.
 1. Use treatment for which chemical manufacturer publishes physical properties of treated wood after exposure to elevated temperatures, when tested by a qualified independent testing agency according to ASTM D 5664, for lumber and ASTM D 5516, for plywood.
 2. Use treatment that does not promote corrosion of metal fasteners.
 3. Use Exterior type for exterior locations and where indicated.
 4. Use Interior Type A High Temperature (HT), unless otherwise indicated.

2.4 DIMENSION LUMBER

- A. General: Of grades indicated according to the American Lumber Standards Committee National Grading Rule provisions of the grading agency indicated.
 1. Mixed southern pine; SPB.
 2. Eastern softwoods; NELMA.
- B. Non-Load-Bearing Interior Partitions: Construction, Stud, or No. 2 grade and any of the following species:
 1. Mixed southern pine; SPB.
 2. Eastern softwoods; NELMA.
- C. Exposed Framing: Hand select material for uniformity of appearance and freedom from characteristics that would impair finish appearance.
 1. Species and Grade: As indicated above for load-bearing construction of same type.
 2. Species and Grade: Hem-fir or Hem-fir (north), Select Structural grade, NLOA, WCLB, or WWPA.
 3. Species and Grade: Southern pine, Select Structural No. 1 grade, SPB.
 4. Species and Grade: Spruce-pine-fir or Spruce-pine-fir (south), Select Structural No. 1 grade; NELMA, NLOA, WCLB, or WWPA.

2.5 SHEATHING

- A. Plywood Wall Sheathing: Exterior, Structural Sheathing.
 1. Manufacturers:
 - a. American Gypsum Co.
 - b. G-P Gypsum Corporation.
 - c. National Gypsum Company.
 - d. United States Gypsum Co.
 2. Type and Thickness: Regular, 1/2 inch and Type X, 5/8 inch thick as indicated on drawings.
- B. Paper-Surfaced Gypsum Wall Sheathing: ASTM C 79/C 79M, with water-resistant material incorporated into core and with water-repellent paper bonded to core's face, back, and long edges.
 1. Manufacturers:
 - a. American Gypsum Co.
 - b. G-P Gypsum Corporation.
 - c. National Gypsum Company.
 - d. United States Gypsum Co.
 2. Type and Thickness: Regular, 1/2 inch and Type X, 5/8 inch thick as indicated on drawings.
- C. Glass-Mat Gypsum Wall Sheathing: ASTM C 1177/C 1177M.
 1. Product: Subject to compliance with requirements, provide "Dens-Glass Gold" by G-P Gypsum Corp.
 2. Type and Thickness: Regular, 1/2 inch and Type X, 5/8 inch thick as indicated on drawings.
- D. Extruded-Polystyrene-Foam Wall Sheathing: ASTM C 578, Type IV, in manufacturer's standard lengths and widths with tongue-and-groove or shiplap long edges as standard with flanges of manufacturer.
 1. Manufacturers:
 - a. DiversiFoam Products.
 - b. Dow Chemical Company (The).
 - c. Owens Corning.
 - d. Tenesco Building Products.
- E. Plywood Roof Sheathing: Exterior Sheathing.
- F. Oriented-Strand-Board Roof Sheathing: Exterior Sheathing.

2.6 PLYWOOD CHECKING PANELS

- A. Telephone and Electrical Equipment Backing Panels: DOC PS 20, 1/2" moisture I, C-D Plugged, fire-retardant treated, or other equivalent material, if not indicated otherwise. Don't 1/2" inch thick.

2.7 MISCELLANEOUS MATERIALS

- A. Fasteners:
 1. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
 2. Power-Driven Fasteners: CABO NER-272.
 3. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.
- B. Sheathing Framing Anchors: Made from hot-dip zinc-coated steel sheet complying with ASTM A 653/A 653M, 600 coating designation.
- C. Building Paper: Asphalt-saturated organic felt complying with ASTM D 226, Type I (No. 15 asphalt felt), superfaced.

PART 3 - EXECUTION

3.1 INSTALLATION

- 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 framing, nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- B. Apply field treatment complying with AWPAC M4 to cut surfaces of preservative-treated lumber and plywood.
- C. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 1. CABO NER-272 for power-driven fasteners.
 2. Published requirements of metal framing anchor manufacturer.

- D. Apply building paper horizontally with 2-inch overlap and 6-inch end lap; fasten to sheathing with galvanized staples or roofing nails. Cover upstanding flashing with 4-inch overlap.
- E. Apply sheathing tape to joints between sheathing panels and at items penetrating sheathing. Apply at upstanding flashing to overlap both flashing and sheathing.

END OF SECTION 06100

SECTION 07210 - BUILDING INSULATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 1. Concealed building insulation.
 2. Loose-fill building insulation.
 3. Vapor retarders.

1.2 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: Provide insulation and related materials with the fire-test-response characteristics indicated, as determined by testing identical products per ASTM E 84 for surface-burning characteristics, by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.

PART 2 - PRODUCTS

2.1 INSULATING MATERIALS

- A. General: Provide insulating materials that comply with requirements and with referenced standards.
- B. Molded-Polystyrene Insulation: ASTM C 578, Type I, 0.90 lb/cu. ft., with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively. For use in nonrated masonry walls.
- C. Mineral-fiber blanket insulation consisting of fibers manufactured from glass:
 1. Faced Mineral-Fiber Blanket Insulation: ASTM C 665, Type III, Class A, Category 1, faced with foil-scrim-kraft, foil-scrim, or foil-scrim-polyethylene vapor-retarder membrane on one face.
- D. Perlite Loose-Fill Insulation: ASTM C 549, Type II or Type IV, with a thermal resistance for 4.1- to 7.4-lb/cu. ft. insulation of 3.3 to 2.8 deg F · h · sq. ft./in. at 75 deg F for 1-inch thickness. For use in rated masonry walls.
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the Producer Members of Perlite Institute Inc.

2.2 VAPOR RETARDERS

- A. Polyethylene Vapor Retarder: ASTM D 4397, 6 mils thick, with maximum permeance rating of 0.13 perm.
- B. Vapor-Retarder Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.

2.3 AUXILIARY INSULATING MATERIALS

- A. Adhesive for Bonding Insulation: Product with demonstrated capability to bond insulation securely to substrates indicated without damaging insulation and substrates.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Install insulation to comply with insulation manufacturer's written instructions apply products and application indicated. Extend insulation thickness indicated to envelop entire area insulated. Cut and fit tightly around obstructions and penetrations with insulation. Remove projections that interfere with placement.
 1. Seal joints between rigid-cell (nonbreathing) insulation units by applying adhesive, mastic, or sealant to cavities formed by framing members according to the following requirements:
 1. Seal joints between rigid-cell (nonbreathing) insulation units by applying adhesive, mastic, or sealant to cavities formed by framing members according to the following requirements:
 - a. Seal joints between rigid-cell (nonbreathing) insulation units by applying adhesive, mastic, or sealant to cavities formed by framing members according to the following requirements:
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