

SECTION 061000 – ROUGH CARPENTRY

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Framing with dimensional lumber.
- B. Wood furring, nailers, and blocking.
- C. Stockroom shelving.
- D. Sheathing.
- E. Nail Board.

1.02 RELATED SECTIONS

- A. Section 064020 - Finish Carpentry and Architectural Woodwork: Nonstructural carpentry items exposed to view and not specified in another Section.

1.03 REFERENCES

- A. ALSC (American Lumber Standards Committee) - Softwood Lumber Standards.
- B. ASTM A153-82 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- D. APA (American Plywood Association).
- E. AWWA (American Wood Preservers Association) C1 - All Timber Products - Preservative Treatment by Pressure Process.
- F. AWWA (American Wood Preservers Association) C20 - Structural Lumber Fire Retardant Treatment by Pressure Process.
- G. PS 1 - Construction and Industrial plywood.
- H. SPIB (Southern Pine Inspection Bureau).
- I. WCLIB (West Coast Lumber Inspection Bureau).
- J. WWPA (Western Wood Products Association).

1.04 DEFINITIONS

- A. Rough carpentry includes carpentry work not specified as part of other Sections and generally not exposed, unless otherwise specified.

1.05 SUBMITTALS

- A. General: Submit in accordance with Section 013300.
- B. See Section 013310 for Submittal Schedule.

1.06 QUALITY ASSURANCE

- A. Single-Source Responsibility for Engineered Wood Products: Obtain each type of engineered wood

products from one source from a single manufacturer.

- B. Single-Source Responsibility for Fire Retardant Treated Wood: Obtain each type of fire-retardant-treated wood products from one source for both treatment and fire-retardant formulation.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Storage: Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber as well as plywood and other panels; provide for air circulation within and around stacks and under temporary coverings including polyethylene and similar materials.
 - 1. For lumber and plywood pressure treated with waterborne chemicals, place spacers between each bundle to provide air circulation.

PART 2 - PRODUCTS

2.01 LUMBER, GENERAL

- A. Lumber Standards: Furnish lumber manufactured to comply with PS 20 "American Softwood Lumber Standard" and with applicable grading rules of inspection agencies certified by American Lumber Standards Committee's (ALSC) Board of Review.
- 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.
- C. Nominal sizes are indicated, except as shown by detail dimensions. Provide actual sizes as required by PS 20, for moisture content specified for each use.
 - 1. Provide dressed lumber, S4S, unless otherwise indicated.
 - 2. Provide seasoned lumber with 19 percent maximum moisture content at time of dressing and shipment for sizes 2 inches or less in nominal thickness, unless otherwise indicated.

2.02 DIMENSIONAL LUMBER

- A. For Light Framing (2 to 4 Inches Thick, all widths), Provide the Following Grade and Species: SPF No. 2 grade and better or equivalent grade and species.

2.03 MISCELLANEOUS LUMBER

- A. General: Provide lumber for support or attachment of other construction including, bucks, nailers, blocking, furring, strapping, and similar members.
- B. Fabricate miscellaneous lumber from dimension lumber of sizes indicated and into shapes shown.
- C. Moisture content: 15 percent maximum for lumber items not specified to receive wood preservative treatment.

- D. Grade: "Standard" grade light-framing-size lumber of any species or board-size lumber as required.

2.04 SUBSTRATE PANELS, GENERAL

- A. Panel Standards: Comply with PS 1 "U.S. Product Standard for Construction and Industrial Plywood" for plywood construction panels and, for products not manufactured under PS 1 provisions, with APA PRP-108.
- B. Trademark: Furnish construction panels that are each factory-marked with APA trademark evidencing compliance with grade requirements.

2.05 CONCEALED PERFORMANCE-RATED SUBSTRATE PANELS

- A. General: Where construction panels are indicated for the following concealed types of applications, provide APA Performance-Rated Panels complying with requirements designated under each application for grade designation, span rating, exposure durability classification, edge detail (where applicable), and thickness.
- B. Sheathing: APA Rated Sheathing.
 - 1. CDX fir plywood.
 - 2. Preservative pressure treated at locations in conjunction with single ply roofing and flashings.
- C. Plywood Backing Panels: For mounting electrical or telephone equipment, provide fire-retardant-treated plywood panels with grade designation, APA C-D PLUGGED EXPOSURE 1, in thickness indicated, or, if not otherwise indicated, not less than 15/32 inch.
- D. Nail Board: 3-inch thick Johns Manville nail board; 2-1/2 inch thick rigid polyisocyanurate foam core insulation bonded to 7/16 inch thick waferboard on one side and a fiberglass mat on the other side.
 - 1. Fasteners: Dekfast Senti #12 screws, or approved equal, by Olympic.

2.06 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, or in area of high relative humidity, provide fasteners with a hot-dip zinc coating per ASTM A 153 or of AISI Type 304 stainless steel.
- B. Nails, Wire, Brads, and Staples: FS FF-N-105.
- C. Power Driven Fasteners: National Evaluation Report NER-272.
- D. Wood Screws: ANSI B18.6.1.
- E. Lag Bolts: ANSI B18.2.1.
- F. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and where indicated, flat washers.

- G. Sheathing to Metal Framing: Hilti Kwik-Flex or Elco Dril-Flex; no substitution, 10-24 x 1-1/4" wafer head #3.

2.07 PRESERVATIVE WOOD TREATMENT BY PRESSURE PROCESS

- A. General: Where lumber or plywood is indicated as preservative-treated wood or is specified herein to be treated, comply with applicable requirements of AWWA Standards C2 (Lumber) and C9 (Plywood). Mark each treated item with the AWPB or SPIB Quality Mark Requirements.
- B. Pressure-treat above-ground items with water-borne preservatives to a minimum retention of 0.25 pcf. For interior uses, after treatment, kiln-dry lumber and plywood to a maximum moisture content, respectively, of 19 percent and 15 percent. Treat indicated items and the following:
 - 1. Wood sills, sleepers, blocking, furring, strapping, and similar concealed members in contact with masonry or concrete.
 - 2. Wood blocking and plywood in conjunction with single ply membrane roofing, and roof flashing work.
- C. Pressure-treat wood members in contact with the ground or fresh water with water-borne preservatives to a minimum retention of 0.40 pcf.

2.08 FIRE-RETARDANT TREATMENT BY PRESSURE PROCESS

- A. General: Where fire-retardant-treated wood is indicated, pressure impregnate lumber and plywood with fire-retardant chemicals to comply with AWWA C20 and C27, respectively, for treatment type indicated; identify "fire-retardant- treated wood" with appropriate classification marking of Underwriters Laboratories, Inc., U.S. Testing, Timber Products Inspection, Inc. or other testing and inspecting agency acceptable to authorities having jurisdiction.
 - 1. Current Evaluation/Research Reports: Provide fire-retardant-treated wood for which a current model code evaluation/research report exists that is acceptable to authorities having jurisdiction and that evidences compliance of fire-retardant-treated wood for application indicated.
- B. Interior Type A: For interior locations use fire-retardant chemical formulation that produces treated lumber and plywood with the following properties under conditions present after installation:
 - 1. Interior Type A Fire-Retardant-Treated Wood:
 - a. "Dricon," Hickson Corporation.
 - b. "Pyro-Guard," Hoover Treated Wood Products.
 - c. "Flameproof LHC-HTT," Osmose Wood Preserving Co, Inc.
- C. Exterior Type: Use for exterior locations and where indicated.
 - 1. Exterior Type Fire-Retardant-Treated Wood: "Exterior Fire-X," Hoover Treated Wood Products.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL

- A. Discard units of material with defects that impair quality of rough carpentry construction and that are too small to use in fabricating rough carpentry with minimum joints or optimum joint arrangement.
- B. Set rough carpentry to required levels and lines, with members plumb and true to line and cut and fitted.
- C. Fit rough carpentry to other construction; scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds, and similar supports to allow attachment of other construction.
- D. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, and according to applicable codes and recognized standards.
- E. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting of wood; predrill as required.

3.02 WOOD NAILERS, BLOCKING, AND SLEEPERS

- A. Install wood nailers, blocking, and sleepers where shown and where required for attachment of other work. Install wood blocking, nailers, sleepers to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, casework, furnishings, or similar construction. Provide 3/4 inch thick plywood covering a minimum of 32 inches by 32 inches for toilet accessories. Provide 1-1/2 inch thick blocking minimum, for grab bars and handrail supports. Form to shapes as shown and cut as required for true line and level of work to be attached. Coordinate location with other work involved.
- B. Attach to substrates as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise indicated. Build into masonry during installation of masonry work. Where possible, anchor to formwork before concrete placement.
- C. Roof Nailers: Install wood nailers of same total thickness as insulation. Anchor perimeter nailers to substrate in a manner to resist a force of 75 pounds per linear foot in any direction. Top nailer shall be fastened through the lower layers and into the metal deck or supporting structure as applicable.

3.03 WOOD FURRING

- A. Install plumb and level with closure strips at edges and openings. Shim with wood as required for tolerance of finished work.
 - 1. Firestop furred spaces on walls at each floor level and at ceiling line of top story, with wood blocking or noncombustible materials, accurately fitted to close furred spaces.
- B. Furring to Receive Plywood Paneling: Install 1-inch by 3-inch furring at 2 feet o.c., horizontally and vertically. Select furring for freedom from knots capable of producing bent-over nails and resulting damage to paneling.
- C. Furring to Receive Gypsum Drywall: Install 1-inch by 3-inch furring at 16 inches o.c., vertically.

3.04 WOOD FRAMING, GENERAL

- A. Framing Standard: Comply with N.F.P.A. "Manual for Wood Frame Construction," unless otherwise indicated.
- B. Install framing members of size and spacing indicated.
- C. Anchor and nail as shown, and to comply with the following:
 - 1. National Evaluation Report No. NER-272 for pneumatic or mechanical driven staples, P-Nails, and allied fasteners.
 - 2. Published requirements of manufacturer of metal framing anchors.
 - 3. "Table No. II - Recommended Nailing Schedule" of the Uniform Building Code.
- D. Do not splice structural members between supports.
- E. Firestop concealed spaces of wood framed walls and partitions at each floor level, at the ceiling line of the top story, and where indicated. Where firestops are not automatically provided by the framing system used, use closely fitted wood blocks of nominal 2-inch-thick lumber of the same width as framing members.

3.05 INSTALLATION OF SUBSTRATE PANELS

- A. General: Comply with applicable recommendations contained in Form No. E30, "APA Design/Construction Guide - Residential & Commercial," for types of construction panels and applications indicated.
- B. Fastening Methods: Fasten panels as indicated below:
 - 1. Sheathing: Nail to framing, screw to metal framing.
 - 2. Plywood Backing Panels: Nail to supports.
- C. Anchor nail board insulated roof sheathing to the deck using approved self-tapping roof insulation screws (without plates) at 12" maximum and of sufficient length to penetrate decking by 1.0" minimum. Install 25 screws per 8' x 4' panel. Do not allow screws to penetrate through deck to be exposed below bottom. Stagger panel joints one half of the panel width.

END OF SECTION 06 10 00