

SECTION 06100

ROUGH CARPENTRY

PART I - GENERAL

1.01 GENERAL REQUIREMENTS

- A. RELATED DOCUMENTS: The drawings and the general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification sections apply to work of this section.
- B. Examine all other sections of the Specifications for requirements that affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.

1.02 DESCRIPTION OF WORK:

- A. Work covered by this Section includes the furnishing of all labor, material, equipment and accessories, and the performing of all operations in connection with the wood framing, other carpentry as indicated on the Drawings and/or specified within this Section.
- B. The work covered by this Section includes, but is not necessarily limited to, the following:
 - 1. Furnishing and installing all rough carpentry, including miscellaneous grounds, blocking, sills, plates, shoes, shims, and furring, framing, framing anchors, and fasteners.
 - 2. Furnishing and installing plywood wall back up panels and backer boards for telephone and electrical equipment.
 - 3. Drilling concrete and masonry and drilling and tapping of metal work as required for installation of rough carpentry.
 - 4. Any other items of carpentry necessary to complete work properly.

1.03 RELATED WORK SPECIFIED ELSEWHERE:

- A. Finish Carpentry - Section 06200.
- B. Insulation - Section 07210.

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- C. Flashing and Sheet Metal - Section 07600.
- D. Caulking and Sealants - Section 07900.
- E. Finish Hardware - Section 08700.

1.04 QUALITY ASSURANCE

- A. Codes and Standards:
 - 1. International Building Code IBC/2009
 - 2. AITC Timber Construction Manual - 2004
 - 3. NFPA National Design Specification For Wood Construction - 1991

PART 2 - PRODUCTS

2.01 LUMBER

- A. Lumber shall conform to American Softwood Lumber Standard Voluntary Product Standard PS20-70. Lumber shall bear the grade and trademark of the Association under whose rules it is produced and a mark of mill identification.
- B. Protect all lumber and keep dry, both in transit and at the job site.
- C. All lumber shall be well seasoned and contain not more than 15% moisture content (marked "S-Dry"), or durable materials, see Section
- D. All two inch nominal framing lumber shall have the following minimum base values, unless otherwise noted:
 - 1. Extreme Fiber Stress in Bending, $F_b = 875$ psi.
 - 2. Horizontal Shear, $F_v = 135$ psi.
 - 3. Compression Perpendicular to Grain, $F_{c\perp} = 425$ psi.
 - 4. Compression Parallel to Grain, $F_c = 1100$ psi.
 - 5. Tension Parallel to Grain, $F_t = 450$ psi.
 - 6. Modulus of Elasticity, $E = 1,400,000$ psi.
- E. Engineered Wood Products: Provide engineered wood products manufactured by TrusJoist/MacMillan or approved alternate.

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2.02 PLYWOOD

A. General:

1. Each panel shall be identified with appropriate American Plywood Association grade-trademark, showing panel type, span rating, thickness, veneer grade, species group member, edge detail (where applicable), and exposure grade.
2. Each panel shall meet requirements of U.S. Product Standard PS 1 for Construction and Industrial Plywood, or APA Performance Standards where applicable.
3. Panels shall be square-edged except as noted below for flooring panels.

B. Exposure Classification: All panels shall be APA "Exposure 1" panels, unless noted otherwise on the Drawing Set, or qualified below:

1. In areas of high humidity, or in locations permanently exposed to weather, panels shall be APA "Exterior".
2. "Exposure 2" panels may be used if only moderate construction delays are anticipated.
3. "Interior" grade panels may be used only if the panels will be fully protected from weather, both during and after construction.

C. Finish:

1. Plywood with one face exposed-to-view shall be APA A-D Veneer Grade or better.
2. Plywood that is not exposed to view shall be APA C-D Plugged Grade or better.

Panel Size and Grade

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1. Floor shall be 23/32, 24" o.c. "Advantech Floor Span" T&G by J.M. Huber or equal. Refer to Structural Drawings.
2. Underlayment over deck flooring, except in carpet pad areas, shall be ¼" APA "Underlayment" with sanded face and T&G joints.
3. Wall sheathing shall be 7/16 O.S.B. Refer to Structural Drawings.

2.03 PRESERVATIVE TREATED LUMBER

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- A. The following wood members shall be Southern Yellow Pine or Douglass Fir supplied by Osmose Inc. with “Natural Wood Preservative”, or equal. Wood shall be air dried or kiln-dried to reduce maximum moisture content to 15 percent. Each piece shall bear the AWPA stamp, indicating the plant number, preservative symbol, symbol of standard, date of treatment and moisture content after treatment:
1. Wood sills plates, rough bucks and frames in exterior masonry wall openings.
 2. Wall plates and furring in contact with exterior masonry or concrete.
 3. Nailers that are set into, or are in contact with, concrete or masonry.
 4. Blocking and nailers for roof deck, sub-fascia members, roof cants and saddles.
 5. Lumber in contact with the ground, embedded in or in contact with concrete or masonry and all exterior trim.
- B. Cut Surfaces: Cut surfaces of preservative-treated materials shall be brush coated with at least two coats of the same preservative used in the pressure treatment.
- C. Odors and Compatibility: Treated wood exposed in the final structure shall be free from objectionable odors and shall not be harmful or corrosive to adjacent materials or anchorages.
- D. Plywood Backer Panels:
1. Plywood telephone and electrical backer panels, and any other wood designated as fire-retardant treated on drawings, shall be pressure-treated with fire-retardant 2 chemicals to achieve a UL FR-S rating, designating a surface-burning characteristics rating of 25 or less for flame-spread, fuel contributed, and smoke developed, per ASTM E 84, in compliance with AWPA C 20 (lumber) and AWPA C 27 (plywood). Each piece shall be dried to a 15-to-19 percent moisture content after treatment.
 2. Acceptable products include: Koppers Dricon, Osmose Flame-Proof, and Hoover Pro-Tex.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Wood Framing:
1. General Requirements:

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- a. Wood construction practices shall conform to recommendations of the NFPA "National Design Specification" and the AITC "Timber Construction Manual".
 - b. All members are to be installed as shown on the drawings.
 - c. When individual members have built-in camber, the members shall be placed with camber up.
 - d. No cutting of holes or notches in trusses for pipe, conduit or other reasons will be allowed.
 - e. All bearing surfaces shall be horizontal and even over the entire width of support.
 - f. Accurately and properly fit and brace all work. Secure in proper position and orientation. Framing, studding and blocking shall be as indicated on the Design Drawings, or as required by the work. See structural's drawings for stud spacing.
 - g. Cooperate with all other trades as required.
 - h. Use acoustical sealant along shoe and header of all party walls.
2. Cutting and Patching: Do all cutting, patching, heading and blocking required for work of all trades. Notify Telephone Company to place jacks at rough-in stages.
 3. Blocking and Supports:
 - a. Install 2" nominal blocking in stud partitions for anchoring all cabinets, mirrors, towel bars, grab bars, handrail brackets and other items applied to or in the walls.
 - b. Set all blocking required to erect all exterior and interior woodwork, cabinets, plumbing, electrical and mechanical equipment, rough bucks and blocking for roofing work.
 - c. Backing Boards: Install 3/4" plywood backer boards for electrical and mechanical trades as required.
 - d. Provide pressure-treated blocking at exterior window openings in steel stud walls.
- B. Plywood Installation:
1. Plywood sheathing shall be installed with face-grain perpendicular to supports and be continuous over a minimum of two spans.

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2. End joints of sheets shall be staggered so that joints are not continuous along a support.
 3. When framing members (including walls and roofs) are 24" or more on center, support edges of plywood sheathing perpendicular to and at midpoints between framing with metal "H" clips or solid blocking.
- C. Fastening:
1. Fastening shall be as indicated on the Design Drawings, or in accordance with Table 2304.9.1 of the International Building Code.
 2. Framing supported by concrete or masonry shall be anchored with built-in threaded bolts or lags, as indicated on the design drawings. Powder actuated fasteners shall not be substituted, except in the attachment of wall furring strips.
 3. Fasteners shall be non-corrosive on exposed and exterior locations and when in contact with pressure treated lumber.
- D. Firestops: Firestops of 2" nominal stock, shall be provided in all concealed spaces not otherwise cut off from passage of air from one space to another.

3.02 CLEAN-UP

- A. Keep the premises and working surfaces in a neat, safe, and orderly condition at all times during execution of this portion of the work.
1. At the end of each day, or more often if necessary, remove accumulation of sawdust, cut-ends, and other debris to proper storage areas for disposal.
- B. Upon completion of this portion of the work, thoroughly clean up the area.

END OF SECTION