

SECTION 06 10 00 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 REFERENCES

- A. American Plywood Association (APA).
 - 1. "Guide to Plywood Grades."
- B. ASTM International (ASTM):
 - 1. A 307 - "Specification for Carbon Steel Bolts and Studs. 60,000 PSI Tensile Strength."
 - 2. D 3201 - "Test Method for Hygroscopic Properties of Fire-Retardant Wood and Wood-Based Products."
 - 3. E 497 - "Practice for Installing Sound-Isolating Lightweight Partitions."
- C. Federal Specifications (FS).
 - 1. TT-W-571 - "Wood Preservation: Treating Practices."
- D. International Building Code (IBC).
- E. United States Product Standard (PS).
 - 1. PS-1 - "Construction and Industrial Plywood."
- F. West Coast Lumber Inspection Bureau (WCLIB).
 - 1. "Standard Grading Rules for West Coast Lumber No. 16."
- G. Western Wood Products Association (WWPA).
 - 1. "Grading Rules for Lumber."

1.2 QUALITY ASSURANCE

- A. Regulatory Requirements: Conform with applicable requirements of IBC Chapter 23.
- B. Certifications:
 - 1. Each piece of lumber shall bear the grade mark of WCLIB or WWPA, and each mill shipment to the site shall be accompanied by a certificate of inspection by WCLIB or WWPA.
 - 2. Each piece of plywood shall be grade stamped in accordance with APA "Guide to Plywood Grades," in conformance with requirements of PS-1.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Sills and all Wood in Contact with Concrete, Masonry, or Earth: Pressure-treated Hem-fir. Wolmanized, CCA Oxide formulation in conformance with Fed. Spec. TT-W-571 for preservative material and for pressure treating.
- B. Lumber: Species and Grades in accordance with WCLIB, Standard Grading Rules for West Coast Lumber No. 16, and WWPAA, Western Lumber Grading Rules, latest editions as noted on Structural Drawings.
- C. Plywood: U.S. Product Standard PS 1, and as noted on Structural Drawings.
 - 1. Roof Sheathing: APA RATED SHEATHING, Exposure 1, T & G edges or panel clips, 3/4 inch thick.
 - 2. Wall Sheathing: APA RATED SHEATHING, Exposure 1, 1/2 inch thick.
 - 3. Subflooring: APA RATED GP Plytanium STURD-I-FLOOR, Exposure 1, 3/4 inch thick, T & G or 2-by blocking under all edge joints. No added ureaformaldehyde resins.
 - 4. Plywood Siding: APA RATED SIDING, rough sawn, no grooves, 5/8" thickness.
- D. Adhesive: APA Specification AFG-01.
- E. Rough Hardware: Hot-dipped galvanize exterior hardware.
 - 1. Nails: Common wire galvanized, at exposed locations, coated sinkers or galvanized box at concealed locations.
 - 2. Screws: Self-drilling, self-tapping, corrosion resistant, Phillips wafer head.
 - 3. Powder actuated Devices: Tempered steel pins with special corrosion resistant finish. Provide guide washers to accurately control penetration. Accomplish fastening by low-velocity piston-driven powder-actuated tool. Pins and Tool: Hilti Fastening Systems, Impex Tool Corporation.
 - 4. Expansion Bolts: Phillips wedge rod anchors, Wej-It, Kwik-bolt. Reverse cone, self-wedging, expansion type. Tightening of nut or increased tension on bolt shank shall act to force wedges outward to create positive increased resistance to withdrawal.
 - 5. Bolts, Nuts, and Washers: ASTM A 307, galvanized, Hex head. Provide standard cut washers at all bolt heads and nuts bearing on wood or concrete.
 - 6. Metal Timber Framing Connectors: Simpson Company "Strong Tie"; Silver; or approved; types as shown. Fabricate from hot-dipped galvanized steel, 16 gage material minimum, 1/8 inch plate where welded, unless otherwise shown or specified, punched for nailing. Provide full nailing or bolting in accordance with manufacturer's recommendations. Provide a nail for each punched hole.
 - 7. Miscellaneous Hardware: Provide all common screws, bolts, fastenings, washers, and nuts required to complete rough carpentry Work.
- F. Preservative Treatment: Preservative solution shall conform with requirements of FS TT-W-570. Acceptable products include Willard Products Penta-Treat "300".
- G. Fire Retardant Treatment: Conform with requirements of AWPA C-20 and C-27, Type A, when tested in accordance with ASTM D 3201. Acceptable products include Hickson Corporation, DRICON, or approved.

2.2 FABRICATION

- A. Lumber:
 - 1. 2X and 3X: Air- or kiln-dry to maximum 19 percent moisture content at time of surfacing.
 - 2. Furnish surfaced four sides, S4S, unless otherwise specified.
 - 3. Size in accordance with rules of governing standard. Sizes shown are nominal unless otherwise specified.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Coordination:
 - 1. Prior to bidding, contact local regulatory authorities having jurisdiction to identify, and comply with, any special framing, blocking or backing details, or caulking conditions as may be required for structural or fire stopping, or energy code requirements.
 - 2. Coordinate with Work of other Sections to ensure that all fixtures, devices, switches, outlets, ducts, pipes, and similar items can be installed as shown without modifications to framing. Provide all blockouts, raceways and similar framing as required.
- B. General: Fit accurately. Secure rigidly, to lines and levels shown, plumb and square to a tolerance of 1/8 inch in 10 feet. Provide any special framing, even if not specifically shown, as required to properly complete Work.
- C. Blocking:
 - 1. Provide all wood blocking, backing, furring, grounds, nailers, stripping, and similar rough carpentry as detailed and as otherwise required to anchor fixtures and equipment to be installed by other trades. Perform all cutting, boring and similar Work.
 - 2. Provide continuous 16" wide, 16 gauge metal strapping for all wall mounted or wall supported items and accessories. Confirm locations with Owner or Architect prior to application of covering materials.
 - 3. Provide additional studs or blocking as required to assure solid end and edge nailing for all siding and facias.
 - 4. Provide additional blocking as required for edge nailing of all soffit materials at all soffits and overhangs.
 - 5. Provide blocking or bracing as required to make interior walls rigid.
- D. Framing: Provide as specified.
 - 1. At bottom plate to concrete, provide 5/8 inch diameter anchor bolts, minimum embedment 7 inches, at 4 feet on center and within 12 inches of board ends. Provide fiberglass sill sealer under bottom plate of all exterior walls.

2. Remove all wood used in forming and placing concrete if within the ground or between foundation sills and ground. Remove all loose or casual wood in contact with the ground from under the building.
3. Studs, Joists, Beams, and Posts: Install all members true to line. Shims shall be seasoned, dried, and same Grade (minimum) as members connected. Place joists with crown up; maximum 1/4 inch crown permitted.
4. Support all columns and posts located on concrete or masonry floors, plinths exposed to weather or water splash, or in basements, by concrete piers or metal pedestals projecting above floors unless approved pressure preservative treated wood or foundation grade redwood is used. Pedestals shall project a minimum 6 inches above exposed earth and 1 inch above floors. Individual concrete or masonry piers shall project a minimum 8 inches above exposed earth unless the column or post they support are of approved wood specified.
5. Maintain minimum 6 inch clearance between any wood and earth, or provide approved wood as specified.
6. Provide positive connection between post support and post, and between post and beam sufficient to ensure against uplift and lateral displacement.
7. Joists shall bear not less than 1-1/2 inch on wood or metal, and 3 inches on masonry.
8. Support all joists laterally at ends and over supports with 2 inch wide by full joist depth solid blocking, rim joist, joist hanger, or other approved means.
9. Notches at ends of joists shall not exceed 1/4 joist depth. Notches in top or bottom of joists shall not exceed 1/6 joist depth, and are not permitted in middle third of span.
10. Lap joists framing from opposite sides of beams, girders, or partitions 4 inch minimum or tie opposing joists together in an approved manner.
11. Support joists framing into sides of wood girders by framing anchors.
12. Double all trimmers and headers framing openings or provide lumber of equivalent cross section. Support each end with proper sized framing anchors unless adequate bearing is provided through other means. Support tail joists with proper sized framing anchors.
13. Provide double top plate, overlap at corners and intersections with all partitions. Offset end joints 4 feet minimum.
14. All studs shall have full bearing on a plate or sill not less than 2 inches in thickness, and having a width not less than that of stud.
15. Effectively brace all exterior and main cross stud partitions, by an approved method, at each end or as near thereto as possible, and at a maximum 25 feet of length.
16. Provide all openings in bearing walls with minimum 4 x 10 Douglas fir No. 2 header, with minimum bearing of 1-1/2 inches for full width unless noted otherwise on Structural Drawings.
17. Provide fire stopping, of non-combustible material or 2 inch nominal wood members, to cut off concealed openings (both vertical and horizontal), to form an effective barrier between floors, between top story and roof or attic space, and as follows:
 - a. In concealed spaces between stair stringers at top and bottom of run.
 - b. Between studs along and in line with run of stairs.

- c. Around vent pipes, ducts, and similar penetrations at ceiling and floor levels which afford a passage for fire.
 - 18. Provide metal nail plates in all locations where plumbing or wiring comes within 1-1/4 inch of the edge of any stud.
 - 19. Frame stud partitions containing plumbing, heating, or other pipes, and space joists underneath to provide proper clearance. Where a partition containing such piping runs parallel to joists double, space, and bridge joists to permit passage of piping. Where such piping is placed in or partly in a partition requiring cutting of soles or plates provide metal ties minimum 1/8 inch thick and 1-1/2 inch wide. Fasten across and to each side of opening with not less than 4 - 16d nails.
 - 20. Studs in exterior or interior partitions may be cut or notched for up to 25 percent of stud width. Studs may have a hole bored up to 40 percent of stud width, provided the hole is no closer than 5/8 inch from edge of stud. Bored holes shall not be located at same section of stud as a cut or notch.
 - 21. Lumber, Plywood, and Particleboard: Comply with applicable standards and grading rules of appropriate Association, and identified by Grade mark of approved inspection agency.
- E. Nailing: Conform to IBC Table 2304.9.1 for all nailing.
- 1. Staples or other power driven fasteners, with equivalent capacity of fasteners shown or specified, may be substituted only with prior written approval of Building Official and Architect.
- F. Plywood Subflooring:
- 1. Provide T & G or 2x blocking under all edge joints. Lay up with face grain perpendicular to supports, with panel continuous over two or more spans, end joints over framing, and end laps staggered.
 - 2. Install with adhesive and ring-shank nails to prevent squeaking. Nail with 8d at 6 inches on center to framed panel edges and at 10 inches on center to intermediate supports.
- G. Plywood Roof Sheathing:
- 1. Lay up with face grain perpendicular to supports, with panel continuous over two or more spans, end joints over framing, and end laps staggered.
 - 2. Provide edge support by use of panel clips, T & G edges or solid blocking. Allow 1/8 inch spacing at panel ends and edges.
 - 3. Nail with 8d at 6 inches on center to panel edges and at 12 inches on center to intermediate supports.
- H. Plywood Wall Sheathing:
- 1. Lay up with face grain perpendicular to supports, with panel continuous over two or more spans, end joints over framing, and end laps staggered.
 - 2. Nail with 8d at 6 inches on center to panel edges and at 12 inches on center to intermediate supports unless noted otherwise on Structural Drawings.

- I. Coat all wood members in contact with concrete with two flowing brush coats of preservative treatment. Extend coating on members a minimum of 2 feet from face of concrete. Coat members prior to installation. Perform all cutting prior to treating.

END OF SECTION

SECTION 06 20 00 – FINISH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Wood Trim
 - 2. Miscellaneous Carpentry
- B. Related Sections
 - 1. Section 01 81 13 Sustainable Design Requirements
 - 2. Section 07 46 46 Mineral-Fiber Cement Siding.
 - 3. Section 12 30 00 Manufactured Casework.

1.2 REFERENCES

- A. American Plywood Association (APA).
- B. Architectural Woodwork Institute (AWI).
- C. United States Product Standard (PS).
 - 1. PS-1 - "Construction and Industrial Plywood."

1.3 SUBMITTALS

- A. Shop Drawings: Show materials, methods of fabrication, and details of installation.
- B. Samples: Furnish required samples with finishes specified.
- C. Product Data showing compliance with ESDS 6.2 Low/No VOC Paints and Primers and ESDS 7.1 Composite Wood Products that emit Low/No Formaldehyde.

1.4 QUALITY ASSURANCE

- A. Qualifications: Provide finish carpentry Work in accordance with AWI "Quality Standards," in the grades specified.
- B. Regulatory Requirements: Conform with ESDS 6.2 Low/No VOC Paints and Primers and ESDS 7.1 Composite Wood Products that emit Low/No Formaldehyde.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Trim:
 - 1. Exterior: See Section 07 46 46.
 - 2. Interior: Medite Division of Sierra Pine Ltd., (800) 676-3339, Medex; or approved; Medium Density Fiberboard (MDF), nominal 1x, for paint finish.
- B. Fasteners:
 - 1. As shown, specified, and as required to securely install materials.
 - 2. Size of fasteners for siding and paneling shall be as recommended by manufacturer.
- C. Felt: 15 pound, non-perforated, organic felt.
- D. Joint Sealant: As specified in Section 07 92 00. Max VOC 250 g/L.
- E. Multipurpose Construction Adhesives: Max VOC 70 g/L.
- F. Composite Wood Products exposed to Interior: Low/No Formaldehyde to Comply with California 93120 Phase2 (CARB Phase 2).

2.2 FABRICATION

- A. Conform with AWI "Quality Standards," Section 300, Custom Grade requirements as applicable. Standard wood moldings shall conform with Western Wood Product Association WP Series, where applicable.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install all millwork in accordance with reviewed Shop Drawings and AWI "Quality Standards."
- B. Cope internal corners and miter external corners at all standing and running trim.
- C. Provide running trim in as long lengths as practical. Make splices with 45 degree butt joints.
- D. Install materials straight and true. Leave 1/8 inch space between ends of exterior trim, seal joint. Tightly butt ends of interior trim.
- E. In exterior Work drive nail heads flush with surface of siding and trim. Maintain nailing pattern in straight horizontal lines.
- F. In interior Work countersink nails and fill nail holes.
- G. Machine sand trim and finish with hand sanding. Leave free from machine or tool marks that will show through finishes specified. Ease all edges of trim.

- H. Install all finish hardware, accurately fit, securely apply, and carefully adjust to provide smooth and proper operation of all hardware.
- I. Miscellaneous Items: Install all items shown and specified, which are not called for to be installed under other Sections, to plumb, true, and level lines and positions. Install in accordance with details, manufacturer's printed instructions and additional requirements specified. Provide connections and miscellaneous items required to make Work of this Section complete. Securely fasten wall and ceiling mounted items to solid backing or blocking.

3.2 CLEANING

- A. Remove dirt and other foreign matter from installed materials.
- B. Upon completion of installation, leave materials clean and ready for finishing.

END OF SECTION

