SECTION 06100

ROUGH CARPENTRY

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

A. The work includes furnishing all labor, materials and equipment required to complete the Rough Carpentry work as shown on the Drawings and as specified herein.

B. Quality Assurance

1. Lumber Standard: Comply with IBC Standard 23-1, except as otherwise indicated.

2. Plywood Standard: Comply with IBC Standard 23-2, except as otherwise indicated. Factory-mark each piece of plywood with type, grade, mill and grading agency.

3. Metal Plate Connected Wood Trusses: comply with ANSI/TPI 1, National Design Standard for Metal Plate Connected Wood Truss Construction; and ANSI/TPI 2, Standard for Testing Performance of Metal Plate Connected Trusses.

4. Preservative Treatment: Comply with AWPA Standard Specifications C1, C2, C3, C4, C9, C14, C15, C16, C22, C23, C24, C28, and M4.

C. Product Handling

1. Keep materials dry during delivery and storage. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber and plywood, and provide air circulation within stacks.

1.2 JOB CONDITIONS

A. Installer must examine the supporting structure provided by others and the conditions under which the carpentry work is to be installed, and notify the General Contractor in writing of conditions detrimental to the work. Do not proceed with the installation until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.

B. Coordination: Fit carpentry work to other work; scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking grounds and similar supports to allow proper attachment of other work.

1.3 SUBMITTALS

A. Submit the following in accordance with SECTION 01340.

1. Shop Drawings: Submit shop drawings for pre-fabricated wood roof trusses indicating all critical dimensions for determining fit and placement in the building, design loading, and installation recommendations. Truss drawings shall bear the stamp of a professional Engineer registered in the State of Oregon. All Shop Drawings shall be accepted by the Engineer prior to fabrication.

PART 2 PRODUCTS

2.1 MATERIAL

A. Lumber - General: Nominal sizes are indicated, except as shown by detail dimensions. Provide actual sizes as required by IBC STD 23-1, for the moisture content specified for each use.

1. Provide dressed lumber, S4S, unless otherwise shown or specified.

2. Provide seasoned lumber with 19% maximum moisture content at time of dressing.

3. Framing lumber shall be graded and marked in conformance with WWPA Standard Grade Rules or W.C.L.B. Standard Grading Rules for West Coast Lumber No. 17, latest edition furnish to the following minimum standards unless indicated otherwise on the Drawings:

a. Joists: Douglas-Fir No. 2, minimum basic design stress, f_b = 1,250 psi.

b. Beams and Stringers : Douglas Fir No. 1, minimum design basic stress, f_c = 1,300 psi.

c. Posts and Timbers: Douglas Fir No. 1, minimum design basic stress, f_c = 1,200 psi.

d. Studs, Plates and Misc. Light Framing: Douglas Fir Standard Grade.

B. Roof Sheathing: Unless indicated otherwise on the Drawings shall be APA rated sheathing 24/0, C/D, Structural II, exposure 1, sized for spacing, thicknesses as indicated on the Drawings.

C. Plywood Subfloor: Unless indicated otherwise on the Drawings shall be APA rated plywood 40/20, grade CDX, exterior glue or Structural II, in conformance with IBC Standard 23-2, thicknesses as indicated on the Drawings.

D. Pre-fabricated Wood Roof Trusses

1. Shall be designed by the manufacturer in accordance with the "Design Standards for Metal Plate Connected Wood Truss Construction, ANSI/TPI 1" by the Truss Plate Institute for the spans and conditions shown on the Drawings. Loading shall be as follows unless indicated otherwise on the Drawings:

Top chord live load		40 psf snow
Top chord dead load		10 psf
Bottom chord dead load		8 psf
	Total load	58 psf
Bottom chord live load		10 psf (non-concurrent)

2. Wood trusses shall utilize approved connector plates (gangnail or equal). Furnish shop drawings and design calculations (complete with stress diagrams) for approval prior to fabrication. Submitted documents shall bear the stamp of a registered professional engineer in the State of Oregon. Provide for shapes, bearing points, girder trusses and bracing.

E. Timber Fasteners and Anchorages: Provide size and type as indicated and as recommended by applicable standards, complying with applicable Federal Specifications for nails, staples, screws, bolts, nuts, washers, and anchoring devices.

F. Building Paper: Asphalt saturated felt, non- perforated, ASTM D226.

G. Wood Treatment

1. Preservative Treatment: Where lumber and/or plywood is exposed to weather, or in contact with concrete or masonry, or are specified herein to be treated, they shall comply with the applicable requirements of the American Wood Preservers Association (AWPA). Mark each treated item to comply with the AWPA Quality Mark requirements for the specified requirements. Pressure-treat above ground items with water-borne preservatives. After treatment, kiln- dry to a maximum moisture content of 15%. Treat indicated items and the following:

a. All sawn lumber beams exposed to weather.

b. Wood cants, nailers, blocking, stripping, and similar members in connection with flashing, vapor barriers and waterproofing.

c. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with concrete or masonry.

2. Complete fabrication of treated items prior to treatment, wherever possible. If cut after treatment, coat cut surfaces with heavy brush coat of same chemical used for treatment. Inspect each piece of lumber or plywood after drying and discard damaged or defective pieces.

H. Framing Accessories: Notation on drawings relating to framing clips, joists hangers, post bases, Ornamental Tie Straps and other connecting devices refer to connectors manufactured by the Simpson Strong Tie Company, San Leandro, California. Equivalent devices by other manufacturers may be substituted, provided they have ICC approval for equal loading capacities.

I. Vented Blocking: Shall be full depth 2" nominal wood blocking with screened holes for blocking for roof framing as indicated on the Drawings.

J. Exterior Wood Siding:

1. Provide vertical board and batten cedar siding as indicated on Drawings.
   a. Boards: Nominal 1" x 12" clear or tight-knot cedar, rough sawn.
   b. Battens: Nominal 1" x 4" clear or tight-knot cedar, S2S.

K. Wood Stoplogs:

1. All stoplogs shall be WCLIB Douglas-Fir-Larch No. 1 and Better with a minimum Fb of 1800 psi.
   a. Stoplogs are nominal 2x6 single tongue and groove, surfaced (4) sides.
2. Contractor shall provide stoplogs at all guide locations from invert of guides to top of structure wall. Units above working waterline shall serve as spares.
3. Stoplogs shall be full wedged tight against sealing guide surface using cedar wedges, 3” from top and bottom (each side) and at 12” on center in-between.
4. Each stoplog shall be fitted with (2) 5/8” diameter type 304 round pins driven through ½” diameter drilled holes in stoplog face at ¼ point from each end. Pins shall be 4.1/2” long and extend 1.1/2” from each face.
5. Contractor shall provide (6) fabricated stainless steel stoplog removal tools. Tools shall be fabricated from 5/8” diameter type 304 stainless steel round bar with two hooks to fit over top of stoplog and hook under stoplog pins

protruding from each face of all stoplogs. Tools shall be furnished with lengths of 6 feet, 8 feet and 10 feet. Provide (2) tools of each length.

6. Stoplogs shall be cut to provide a maximum total clearance of ½" when installed in all guide locations.

PART 3 EXECUTION

3.1 GENERAL

A. Miscellaneous

1. Discard units of material with defects which might impair the quality of the work, and units which are too small to fabricate the work with minimum joints or the optimum joint arrangement. Set carpentry work accurately to required levels and lines, with members plumb and true and accurately cut and fitted.

2. Securely attach carpentry work to substrates by anchoring and fastening as shown and as required by recognized standards. Use common wire nails, except as 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.

B. Wood Grounds, Nailers, Blocking, Backing, Furring and Sleepers

1. Provide wherever shown or where required for attachment of other work. 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.

2. Attach to substrates as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise shown. Where possible, anchor to formwork before concrete placement.

3.2 WOOD FRAMING

A. Wood Framing, General

1. Provide framing members of sizes and on spacings shown and frame openings as shown, or, if not shown, comply with the recommendations of the "Conventional Light-Frame Construction (IBC Section 2308)" of the National Forest Products Association. Do not splice structural members between supports.

2. Anchor and nail as shown, and to comply with the Recommended Nailing Schedule - Table 2304.9.1 of the IBC and other recommendations of the NFPA.

3. Firestop concealed spaces with wood blocking not less than 2" thick, if not blocked by other framing members. Provide blocking at each end of joist spans.

4. Wood Framing details not shown otherwise shall be constructed to the minimum standards of the International Building Code (IBC Section 2320). Minimum nailing, unless otherwise noted, shall conform to Table 2304.9.1 of the International Building Code.

B. Stud Framing

1. General: Provide stud framing where shown. Use 2 x 4 or 2 x 6 studs as indicated, spaced 16" o.c. with wide face perpendicular to direction of wall or partition. Provide single bottom plate and double top plates 2" thick by width of studs, except single top plate may be used for non-load-bearing partitions. Nail or anchor plates to supporting construction.

2. Construct corners and intersections with not less than three studs. Provide miscellaneous backing and framing as required for support of facing materials, fixtures, specialty items and trim.

3. Provide continuous horizontal blocking row at mid-height of partitions over 8' high, using 2" thick members of same width as wall or partitions.

4. Provide two 2 x 12 headers over and double studs each side of all openings in stud bearing walls unless noted otherwise. Frame openings with multiple studs and headers. Provide nailed header members of thickness equal to width of studs. Set headers on edge and support on jamb studs.

5. For non-bearing partitions, provide double jamb studs and headers not less than 4" deep for openings 3' and less in width, and not less than 6" deep for wider openings.

C. Joist Framing

1. General: Provide framing of sizes and on spacings shown. Install with crown edge up and support ends of each member with not less than 1-1/2" of bearing on wood or metal. Attach to wood bearing members by metal connectors; frame to wood supporting members with wood ledgers as shown, or if not shown, with metal connectors. Frame openings with headers and trimmers supported by metal joist hangers; double headers and trimmers where span of header exceeds 4' -0". Do not notch in middle third

of joists; limit notches to 1/6-depth of joist, 1/3 at ends. Do not bore holes larger than 1/3-depth of joist or locate closer than 2" from top or bottom. Provide solid blocking (2" thick by depth of joist) at ends of joists unless nailed to header or band member.

2. Lap members framing from opposite sides of beams, girders or partitions not less than 4" or securely tie opposing members together. Provide solid blocking (2" thick by depth of joist) over supports.

3. Provide bridging between joists where nominal depth-to-thickness ratio exceeds 4, at intervals of 8'. Use bevel cut 1" x 4" or 2" x 3" wood bracing, double crossed and nailed, both ends to joists, or use solid wood bridging 2" thick by depth of joist, end nailed to joist.

4. Install full depth vented blocking at all bearing points of joists.

D. Ceiling Joists: Provide member size and spacing shown, and as previously specified for joist framing. Face nail to ends of parallel rafters. Where principle ceiling joists are at right angles to rafters, frame as indicated with additional short joists from wall plate to first joist; nail to ends of rafters and to top plate and nail to long joists or anchor with framing anchors or metal straps.

3.3 TRUSSES/ RAFTERS

A. General: Provide trussed rafters where shown. Comply with the applicable requirements of the NLMA's "National Design Specifications for Stress Graded Lumber and Its Fastenings" and the Truss Plate Institute's "Design Standards for Metal Plate Connected Wood Truss Construction".

B. Fabricate trusses as shown. Use wood materials of the sizes shown and of the species and grade specified, or if minimum stress values and "E" value are specified; provide lumber of any species and grade #2 or better complying with the specified values as published in official grading rules conforming to IBC Standard 23-1.

C. Install full depth vented blocking at all bearing points of trusses.

3.4 GLUED LAMINATED BEAMS – NOT USED

3.5 SHEATHING

A. General: Contractor shall repair or replace any material that, in the opinion of the Engineer, has been damaged by exposure to weather.

B. Floor Subfloor and Roof Sheathing:

1. Floor Subfloor and Roof Sheathing, unless otherwise noted on the Drawings, shall be laid up with face grain perpendicular to supports and nailed as indicated on the nailing schedules.

2. Allow 1/16" open space between end joints and 1/8" open space between edge joints for expansion and contraction of panels.

3.6 EXTERIOR WOOD SIDING

A. End joints to be beveled and sloped to drain. Stagger end joints between adjacent boards and align with wood furring strips to provide positive attachment. Do not locate end joints between furring strips.

3.7 PROTECTION

A. Protection: Advise the General Contractor of requirements for the protection of wood frame construction during the remainder of the construction period. Advise installers of other work of the required limitations on notching and boring holes through wood frame members.

END OF SECTION

SECTION 06200

FINISH CARPENTRY

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

A. The work includes furnishing all labor, materials and equipment required to complete the Finish Carpentry work as shown on the Drawings and as specified herein.

B. Work Included: The work of this Section shall include, but is not limited to the following:

Standing and running trim
Counter tops

1.2 RELATED WORK

A. SECTION 06240, Plastic Laminate

B. SECTION 12390, Pre-Manufactured Cabinets

C. SECTION 09900, Painting

1.3 QUALITY ASSURANCE

A. Quality Standards: Except as otherwise shown or specified, comply with specified provisions of the following:

Architectural Woodwork Institute (AWI) "Architectural Woodwork Quality Standards", 6th Edition, Version 1.0, 1993.

1.4 JOB CONDITIONS

A. The Installer must examine the substrates and conditions under which the work is to be installed; and notify the General Contractor of unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.

B. Product Delivery, Storage, and Handling: Protect woodwork during storage and handling to prevent damage, soiling and deterioration. Do not take delivery of woodwork, until painting, wet work, grinding, and similar operations which could damage, soil, or deteriorate woodwork have been completed in installation areas.

If items must be stored in other than installation areas, due to unforeseen circumstances, store in areas meeting requirements specified for installation areas.

1.4 SUBMITTALS

A. Shop Drawings: Submit shop drawings on all items of architectural woodwork in accordance with the provisions of SECTION 01340. The woodwork manufacturer is responsible for details and dimensions not controlled by job conditions and shall show on his shop drawings all required field measurements beyond his control. The Installer and the woodwork manufacturer shall cooperate to establish and maintain these field dimensions.

PART 2 PRODUCTS

2.1 MATERIALS

A. Wood

1. Standing and Running Trim: Custom Grade, Opaque Finish, Douglas Fir, in accordance with Architectural Woodwork Quality Standards (AWI).

2. Counter Tops: Core shall be medium density particleboard conforming to C.S. 236-66 (type 1-B-2). See SECTION 06240 for requirements for plastic laminate covering.

2.2 FABRICATION

A. General

1. Design and Construction Features: Comply with the details shown for profile and construction of architectural woodwork; and, where not otherwise shown, comply with applicable Quality Standards, with alternate details at Fabricator's option, subject to acceptance by Engineer.

2. Measurements: Before proceeding with fabrication of woodwork required to be fitted to other construction, obtain measurements and verify dimensions as required for accurate fit.

B. Quality Assurance: For the following types of Architectural woodwork, comply with the indicated standards as applicable.

1. Standing and Running Trim: AWI Section 300, Custom Grade, Opaque Finish. Fabricate wood trim to dimensions, profiles and details shown. Route or groove reverse side (backed out) of trim members to be applied to flat surfaces, except for members with ends exposed in the finished work.

2.3 FINISH FOR ARCHITECTURAL WOODWORK:

A. General: Architectural woodwork shall be stained in the field after installation. See SECTION 09900 for requirements.

PART 3 EXECUTION

3.1 EXECUTION

A. Preparation

1. Condition woodwork to average prevailing humidity conditions in installation areas prior to installing.

2. Prior to installation of Architectural Woodwork, examine shop fabricated work for completion, and complete work as required, including back priming, and removal of packing.

B. Installation

1. Install the work plumb, level, true and straight, with no distortions. Shim as required using concealed shims. Install to a tolerance of 1/8" in 8' - 0" for plumb and level; and, with 1/16" maximum offsets in revealed adjoining surfaces.

2. Scribe and cut work to fit adjoining work.

3. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to the greatest extent possible. Miter splice joints, do not butt joint. Stagger joints in adjacent and related members. Cope at returns, miter (do not butt joint) at corners, and comply with Quality Standards for joinery.

4. Anchor woodwork to anchors or blocking built-in or directly attached to substrates. Secure to grounds, stripping and blocking with countersunk, concealed fasteners, and blind nailing, as required for a complete installation. Attach with adhesive where nailing is not practical. Use fine finishing nail for exposed nailings, countersunk and filled flush with woodwork.

C. Countertops: Anchor securely to base units and other support systems as required to provide level base for plastic laminate (See SECTION 06240). Provide material in as large pieces as possible to minimize joints. Allow joints only over solid support with top surfaces to be flush.

3.2 ADJUSTMENT, CLEANING, FINISHING, AND PROTECTION

A. Repair damaged and defective woodwork wherever possible to eliminate defects functionally and visually; where not possible to repair properly, replace woodwork. Adjust joinery for uniform appearance.

B. Clean woodwork on exposed and semi-exposed surfaces.

C. Protection: Contractor shall provide protection and maintain conditions necessary to ensure that the work will be without damage or deterioration at the time of acceptance.

END OF SECTION

SECTION 06240

PLASTIC LAMINATE

PART 1 GENERAL

1.1 DESCRIPTION OF WORK:

A. The work of this Section shall include all labor, materials and equipment required to complete the Plastic Laminate work as shown on the Drawings and as specified herein.

B. Work Included: The work of this Section shall include, but is not limited to the following:

1. Backsplash;

2. Countertops.

1.2 RELATED WORK:

A. SECTION 12390 - Pre-Manufactured Cabinets

PART 2 PRODUCTS

2.1 MATERIALS

A. Plastic Laminate:

1. Plastic Laminate for Counter Tops: General Purpose Type, Federal Specification L-P 508H, Style D, Type I, Class I.

2. Plastic Laminate Colors and Patterns: As selected by Owner from manufacturer's standard products, satin finish.

3. Adhesive: Shall be neoprene or rubber based in solvent or emulsion type contact cement, compatible with plastic laminate and substrate.

PART 3 EXECUTION

3.1 GENERAL

A. The area in which the work is to be accomplished shall be maintained at not less than 65˚F. with a relative humidity of not less than 35% and not more than 85%. Assembly of components shall be accomplished using approved procedures, materials and equipment and the workmanship shall conform to established industry practices, conditions, procedures and recommendations. Install plastic laminate with minimum number of joints possible, using full-length pieces to the greatest extent possible.

END OF SECTION