

SECTION 06100: ROUGH CARPENTRY

PART 1: GENERAL

1.01 DESCRIPTION OF WORK

- A. Work Included in This Section: Provision of rough carpentry items including but not necessarily limited to wood blocking, grounds, backing, stripping, nailers, structural framing, sheathing, rough hardware, and decay prevention.
- B. Related Work Specified Elsewhere: Provisions of temporary construction, header boards, stakes and specific items shown or required under other specification sections.

- 1. FINISH CARPENTRY AND MILLWORK Section

1.02 INCORPORATED DOCUMENTS

The provisions and requirements of the General and Supplementary Conditions and Division-1 Specifications sections of these Bid Documents apply to this section. The Contractor shall be responsible for, and governed by all requirements thereunder.

In addition to the Codes and Standards indicated in Section 01000, the published specifications, standards, tests or recommended methods of the industry, apply to the work of this Section where cited by abbreviations noted below:

- A. American Plywood Association (APA)
- B. Pacific Lumber Inspection Bureau (PLIB)
- C. Redwood Inspection Service (RIS)
- D. United States Product Standard (PS)
- E. West Coast Lumber Inspection Bureau (WCLB)

1.03 QUALITY ASSURANCE

Treated Lumber: Pressure treatment shall not adversely affect application, permanence or appearance of finish paint systems.

1.04 SUBMITTALS

Submittals shall be in accordance with SUBMITTALS Section and shall include manufacturer's literature describing products and samples only when requested by the Architect.

1.05 JOB CONDITIONS

Coordinate details with other work supporting, adjoining or fastened to rough carpentry work.

- A. Environmental Requirements: All wood including forms, casual lumber, shavings and sawdust shall be removed from site area and shall not be buried or left on the site.

PART 2: PRODUCTS

2.01 MATERIALS

- A. Wood and wood products shall be graded per "Standard Grading Rules" (WCLB). All materials shall be new when incorporated into the Work.
- B. Redwood products shall be graded per "Standard Specifications for Grades of California Redwood Lumber" (RIS). All materials shall be new when incorporated into the Work.
 - 1. All 6X framing members shall be of #1 or better, unless noted otherwise.
 - 2. All 2X and 4X framing members shall be DF #2 or better, unless noted otherwise.
 - 3. All 2X wall studs shall be of stud grade or better unless noted otherwise.
 - 4. All redwood timbers and lumber for exposed exterior structures shall be "Construction Heart", unless noted otherwise.
 - 5. Where framing is not exposed to view, contractor may substitute glue-laminated members such as manufactured by Micro-Lam, Parallam, or others, for any 4X and 6X framing members provided I.C.B.O. reports are submitted to the Architect for approval prior to fabrication. Contractor shall make all necessary adjustments in framing for differences in depth and width of glue-laminated members at no additional cost to the Owner.
- C. Hanger Wire: Galvanized steel wire conforming to (FS) QQ-W-46 1f (1), Finish 5, Class 1, soft temper, minimum 9 gauge, single strand.
- D. Rough Hardware as required and suited for the work and acceptable to the Architect including, but not necessarily limited to the following more major items:
 - 1. Nails: Common wire, flat head, diamond point, smooth bright (FS) FF-N-105.
 - 2. Spikes: Round wire, flat countersunk head, diamond point (FS) FF-S-611.

3. Bolts, Nuts, Lag Screws and Washers: Steel, ASTM A307.
 4. Power-Driven Fasteners: Steel, same as noted on Drawings or other as approved.
 5. Inserts, for Items Secured to Concrete: Zinc-treated steel threaded for machine bolts, sizes as noted and required.
 6. Exposed Exterior Nails or Screws: Aluminum or Stainless Steel.
 7. Sheet Metal Connections: Shall have CBC approval, Simpson Strong-Tie connectors, Silver Metal Products, or approved equal. All connectors shall be galvanized or provided with approved corrosion protection paint.
- F. Pressure Treatment: Water borne salt preservative, non-corrosive, paintable, odorless, as listed in (FS) TT-W-571. For all foundation plates or sills and sleepers placed against concrete, which is in direct contact with earth.
- G. Adhesives: Pressure sensitive; same as 3M Co.'s "Contact Bond" or approved equal.

2.02 FABRICATION

Lumber shall be air or kiln dry to maximum 19% moisture content when delivered to job site, furnished S4S, nominal sizes noted and conforming to governing rules and standards unless otherwise noted.

2.03 SOURCE QUALITY CONTROL

Lumber shall bear grade-trademark of appropriate grading agency and plywood shall bear grade and trademark of APA.

PART 3: EXECUTION

3.01 INSPECTION

Examine areas to receive rough carpentry and verify that building components, surfaces, spacing, direction and details of supports are correct to accommodate installation of blocking, grounds, stripping, backing, framing, sheathing, etc. Do not begin work before unsatisfactory conditions have been corrected.

3.02 INSTALLATION

Carpentry work shall be performed in accordance with the best standards of practice relating to the trade and under the constant supervision of a competent foreman who shall carefully plan and lay out the work to carry out the intent of the Drawings and properly accommodate the work of other trades. All framing fastenings shall comply to the applicable sections of all Codes under which this Work is performed.

- A. Sill Plates: Plates shall be accurately aligned, set in grout where indicated on the Drawings and secured with anchor bolts in accordance with structural details.
 - 1. Sill Plates: Plates shall be accurately aligned, set in grout where indicated on the Drawings and secured with anchor bolts in accordance with structural details. Washers shall be placed between plate and nut, securely tightened and again re-tightened immediately prior to becoming inaccessible.
 - 2. No power driven fasteners shall be installed in perimeter bearing walls.
- B. Framing: Framing members shall be accurately cut and fit into required locations, true to lines and levels as indicated and required and permanently secured in position with fastenings and/or fittings as detailed, or required by Code provisions.
 - 1. Except as otherwise noted, studs and furring strips shall be spaced at 16" o.c.
 - 2. Stud partitions, walls or other framing containing plumbing, heating, conduit, etc shall be framed to provide proper clearance for these items.
 - 3. Pipes exceeding 1/3 of plate width shall not be placed in partitions used as bearing or shear walls except in accordance with structural details.
 - 4. Stud walls shall present a plane surface with a tolerance not exceeding 1/8" in 10 feet, vertically.
- C. Cutting and Framing: Concealment and accommodations for mechanical and electrical work shall be provided under this Section.
- D. Boltings: Holes for bolts shall be drilled true to line and layout, 1/16" maximum larger than bolt diameter, provide washers with all nuts. Bolts shall be turned up tight at time of installation and again immediately prior to becoming inaccessible.
- E. Screws: Lag screws and wood screws shall be turned into place, fitted with washers. Bore hole same diameter as unthreaded shank of screw to a depth just short of root of the head. Driving of screws by hammering shall not be permitted.
- F. Nailing Blocks: Form to shape and dimensions noted and required and secure in place in firm manner.
- G. Blocking, Bridging, Ledgers, and Grounds: Stud walls shall be blocked with 2" material same width as studs, spaced as shown and noted on drawings. Joists shall be blocked with 2" materials of size shown and at spacing noted. Fire blocking shall be at each story height or 10 feet maximum o.c.

- H. Backing: Provide at all fixtures, accessories, etc. applied to walls, ceilings and floors adequate for imposed loads. Material size shall be as required.

3.03 NAILING

A. General:

1. Use only common wire nails or spikes of the dimension shown on the Nailing Schedule, except where otherwise specifically noted in the Drawings. When nailing guns are employed magazine type nails shall be of equivalent gauge of the required common nail.
2. For conditions not covered in the Nailing Schedule, provide penetration into the piece receiving the point of not less than 1/2 the length of the nail or spike. 16d nails may be used to connect two pieces of 2" (nominal) thickness.
3. Do all nailing without splitting wood, pre-boring as required. Replace all split members.

B. Nailing Schedule: As indicated on Structural Drawings.

3.04 CLEAN UP

Clean up shall be performed in accordance with Section 01000, Special Conditions.

End Of Section 06100

SECTION 06200: FINISH CARPENTRY AND MILLWORK

PART 1: GENERAL

1.01 DESCRIPTION OF WORK

- A. Work Included in This Section: Provisions of all finish carpentry, wood trim, millwork and other items not specifically described as being furnished and installed under other Section of these Specifications.
- B. Related Work Specified Elsewhere:
 - 1. ARCHITECTURAL WOODWORK Section
 - 2. METAL DOORS AND FRAMES Section
 - 3. PLASTIC LAMINATE FACED DOORS Section
 - 4. FINISH HARDWARE Section

1.02 INCORPORATED DOCUMENTS

The provisions and requirements of the General and Supplementary Conditions and Division-1 Specifications sections of these Bid Documents apply to this section. The Contractor shall be responsible for, and governed by all requirements thereunder.

In addition to the Codes and Standards listed in Section 01000, the published specifications, standards and methods of the trade cited below shall apply to work of this Section.

- A. American Plywood Association (APA).
- B. Woodwork Institute of California, "Manual of Millwork" (WIC).

1.03 SUBMITTALS

Submittal shall be in accordance with SUBMITTALS Section and shall include the following:

- A. Shop Drawings: Submit shop drawings indicating layout and details of all items to be furnished, when requested by the Architect.
- B. Samples: Submit samples of each wood species specified when requested by the Architect.

PART 2: PRODUCTS

2.01 MATERIALS

All materials shall be new materials as indicated on the Drawings. New wood and wood products shall be graded per latest editions of referenced standards.

- A. General interior trims (millwork): Birch "custom grade" per W.I.C. to receive transparent or semi-transparent finish. Any closed grain hardwood "custom grade" per W.I.C. to receive opaque finish.

PART 3: EXECUTION

3.01 WORKMANSHIP

All finish carpentry shall produce joints true, tight, and well nailed with all members assembled in accordance with the Drawings.

- A. Jointing: Make all joints to conceal shrinkage; miter all exterior corners; cope all interior corners, miter or scarf all end-to-end joints. Install all trim in pieces as long as possible, jointing only where solid support is obtained and scribe to abutting surfaces.
- B. Fastening:
 - 1. Install all items straight, true, level, plumb, and firmly anchored in place; where blocking or backing is required, coordinate as necessary with other trades to ensure placement of all required backing and blocking in a timely manner.
 - 2. Nail trim with finish nails of proper dimension to hold the member firmly in place without splitting the wood.
 - 3. On exposed finish work, set all nails for putty.
 - 4. Screw, do not drive, all wood screws except that screws may be started by driving and then screwed home.

3.02 INSTALLATION

- A. Install miscellaneous items in strict accordance with the Drawings and the published recommendations of the manufacturer of the item, anchoring firmly in place at the prescribed location, straight, plumb, level, and anchored for long life under hard use.
- B. Install all hardware in accordance with the provisions of Section 08710, Finish Hardware.

3.03 FINISHING

Sandpaper all finished wood surfaces thoroughly as required to produce a uniformly smooth surface, always sanding in the direction of the grain, except do not sand wood which is designed to be left rough; no coarse grained sandpaper mark, hammer mark, or other imperfection will be accepted.

3.04 ADJUST AND CLEAN

Keep the premises in a neat, safe, and orderly condition at all times during execution of this portion of the work, in accordance with Section 01000, Special Conditions.

- A. After the work has been otherwise completed, examine hardware in place for complete and proper installation. Lubricate bearing surfaces of moving parts and adjust latching and holding devices for proper function; test keys for proper conformance with keying system.
- B. Completely remove protective materials and devices and thoroughly clean exposed surfaces of hardware; check for surface damage prior to final cleaning for the Owner's acceptance of project.

End Of Section 06200

SECTION 06400 - ARCHITECTURAL WOODWORK

PART 1: GENERAL

1.01 RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification Sections, apply to work of this Section.

1.02 DESCRIPTION OF WORK

- A. Extent of each type of architectural woodwork is indicated on drawings and in schedules.
- B. Types of architectural woodwork include the following:
 - 1. Architectural cabinets including:
 - a. Laminate clad cabinets.
 - b. Laminate countertops.

1.03 QUALITY ASSURANCE

- A. Quality Standard: Comply with applicable requirements of "Architectural Woodwork Standards" published by Woodwork Institute (WI), unless otherwise indicated.
- B. Installer Qualifications: Arrange for installation of architectural woodwork items by same firm that fabricated them.

1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's product data for each product and process specified as work of this section and incorporated into items of architectural woodwork during fabrication, finishing, and installation.
- B. Shop Drawings: Submit shop drawings showing location of each item, dimensioned plans and elevations, large scale details, attachment devices and other components. WI standards.
- C. Samples: Submit the following samples:
 - 1. Plastic laminate - Full collection of samples for selection, followed by 8" x 10" sample for each type, color, pattern and surface finish selected.

2. Exposed cabinet hardware, one unit of each type and finish.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect woodwork during transit, delivery, storage and handling to prevent damage, soiling and deterioration.
- B. Do not deliver woodwork until painting, wet work, grinding and similar operations which could damage, soil or deteriorate woodwork have been completed in installation areas. If, due to unforeseen circumstances, woodwork must be stored in other than installation areas, store only in areas meeting requirements specified for installation areas.

1.07 PROJECT CONDITIONS

- A. Conditioning: Woodwork Manufacturer and Installer shall advise Contractor of temperature and humidity requirements for woodwork installation and storage areas. Do not install woodwork until required temperature and relative humidity have been stabilized and will be maintained in installation areas.
- B. Maintain temperature and humidity in installation area as required to maintain moisture content of installed woodwork within a 1.0 percent tolerance of optimum moisture content, from date of installation through remainder of construction period. Require Woodwork Manufacturer to establish optimum moisture content and required temperature and humidity conditions.

PART 2: PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Plastic Laminate - Subject to compliance with requirements, manufacturers offering high pressure decorative laminates and acid resistant laminates which may be incorporated into the work include, but are not limited to, the following:

Formica Corp.
Ralph Wilson Plastics Co.
or approved equal

2.02 FABRICATION, GENERAL

- A. Wood Moisture Content: Comply with requirements of referenced quality standard for moisture content of lumber at time of installation areas.

- B. Fabricate woodwork to dimensions, profiles, and details indicated with openings and mortises precut, where possible, to receive hardware and other items and work.
 - 1. Ease edges to a 1/16" radius, for corners of cabinets and edges of solid wood (lumber) members less than 1" in nominal thickness, 1/8" radius for edges of rails and similar members over 1" in nominal thickness.
- C. Complete fabrication, assembly, finishing, hardware application, and other work before shipment to project site to maximum extent possible. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
- D. Pre-cut Openings: Fabricate architectural woodwork with pre-cut openings, where possible, to receive hardware, appliances, plumbing fixtures, electrical work and similar items. Locate openings accurately and use templates or roughing-in diagrams for proper size and shape. Smooth edges of cutoffs and, where located in countertops and similar exposures seal edges of cutouts with a water-resistant coating.
- E. Measurements: Before proceeding with fabrication of woodwork required to be fitted to other construction, obtain field measurements and verify dimensions and shop drawing details as required for accurate fit.

2.03 LAMINATE CLAD CASEWORK - GENERAL

- A. Quality Standard: Comply with WI Section 10 "Casework".
- B. Laminate Clad Cabinets: Comply with the following requirements:
 - 1. Grade: Premium
 - 2. Type of Cabinet Construction: Flush Overlay.

2.04 LAMINATE CLAD CASEWORK - MATERIALS

- A. Lumber: In accordance with the WI Grade specified for the product being fabricated. Moisture Content: 6% to 12% for boards up to 2-inch nominal thickness, and shall not exceed 19% for thicker pieces.
- B. Core: MDF meeting the requirements of WI.
- C. Water-resistant core, where required: Particle board meeting the requirements of ANSI A208.1 Grade M3 MR-50 or MDF meeting the requirements of ANSI A 208.2 Grade 155 MR-50.

- D. Veneer core plywood: A non-telegraphing hardwood manufactured with exterior glue.
- E. Plastic laminate: Meeting the requirements of WI for its use.
 - 1. Colors, Pattern and Finishes: As indicated, or, if not otherwise indicated, as selected by Architect from laminate manufacturers' standard products allowing for a minimum of 4 colors and/or patterns.
- F. Cabinet liner: NEMA LD-3 Grade CLS
- G. Edge Band: PVC matching the color and pattern of the exposed laminate.
- H. Adhesives: Type I, fully waterproof

2.05 CABINET HARDWARE AND ACCESSORY MATERIALS

- A. Cabinet Hardware Schedule: Refer to schedule at end of this section for cabinet hardware required for architectural cabinets.
- B. Hardware Standard: Comply with ANSI/BBMA A156.9 "American National Standard for Cabinet Hardware" for items indicated by reference to BBMA numbers or referenced to this standard.
- C. Hardware finishes: Comply with BHMA 1301 for finishes indicated by BHMA Code Numbers or if not otherwise indicated, provide finishes complying with requirements indicated below:
 - 1. 626 Satin Chrome, unless indicated otherwise.
- D. For concealed hardware, provide manufacturer's standard finish which complies with product class requirements of ANSI/BHMA A156.9.

2.06 PLASTIC LAMINATE COUNTERTOPS

- A. Quality Standard: Comply with WI Section 11 "Countertops".
- B. Plastic Laminate Countertops: Comply with the following requirements:
 - 1. Grade: Premium
- C. Laminate:
 - 1. Flat countertops: NEMA LD-3 Grade HGS. 0.048 inch thick.
 - 2. Formed countertops: NEMA LD-3 Grade HGP. 0.039 inch thick.
 - 3. Colors, Pattern and Finishes: As indicated, or, if not otherwise indicated, as selected by Architect from laminate manufacturers'

standard products allowing for a minimum of 4 colors and/or patterns.

- C. Core material: MR-50 Grade MDF
- D. Backing sheet: NEMA LD-3 Grade BKL. 0.020 inch thick.
- E. Splash detail: As indicated on the Drawings.
 - 1. Deck mount construction
- F. Front edge:
 - 1. Bull nose edge at typical conditions.
 - 2. No-drip bull nose edge where sinks are present.
- G. Cutouts: Seal edges of cutouts in sink countertops with a color-toned (for verification) water-resistant sealer before sinks are installed.

2.07 FASTENERS AND ANCHORS

- A. Screws: Select material, type, size and finish required for each use. Comply with FS FF-S0111 for applicable requirements.
 - 1. For metal framing supports, provide screws as recommended by metal framing manufacturer.
- B. Nails: Select material, type, size and finish required for each use. Comply with FS FF-N-105 for applicable requirements.
- C. Anchors: Select material, type, size and finish required by each substrate for secure anchorage. Provide non-ferrous metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion-resistance. Provide toothed steel or lead expansion bolt devices for drilled-in-place anchors. Furnish inserts and anchors, as required, to be set into concrete or masonry work for subsequent woodwork anchorage.

2.08 CASEWORK HARDWARE

Casework Hardware: All casework shall be totally finished in the fabricator's shop including the provision and installation of all required hardware. Hardware shall be as described herein, or equal. The schedule shall be a standard of quality for typical hardware items, some of which may not be required for this project. Shop drawings shall include hardware schedules.

- A. Cabinet Hinges
 - Concealed hinge for flush overlay application, 110 degree opening
 - 1. Specified Manufacturer: Blum

2. Acceptable Manufacturers: Grass America, Inc., or equal.

B. Cabinet Door Locks

1. Specified Manufacturer: Corbin
2. Acceptable Manufacturers: Hafele, National Lock, or equal.

C. Drawer Locks

1. Specified Manufacturer: Corbin
2. Acceptable Manufacturers: Hafele, National Lock, or equal.

D. Metal Drawer System:

1. Specified Manufacturer: Blum, "Metabox"
2. Acceptable Manufacturers: Mepla-Alfit "Integra", or equal.

E. Drawer and Door Pulls:

4" wide wire loop pulls providing 1" minimum finger clearance.

1. Specified Manufacturer: Stanley
2. Acceptable Manufacturers: Quality, Hafele, Amerock, or equal.

F. Shelf Supports:

5mm System Holes.

1. Acceptable Manufacturers: K.V., Hafele, Amerock, or equal.

G. Countertop Supports:

1. Support Brackets: Satin stainless steel, Doug Mockett #SWS6A, or equal.
2. Rear Brackets: Satin stainless steel, Doug Mockett #SWS6/BRK-SSS, or equal.

- H. Island Leg:
6" diameter, satin chrome finish: Doug Mockett #TL28P-6, or equal.
- I. Cable Grommet:
3-1/2" diameter, complete with cap, brushed nickel finish: Doug Mockett #BRI-2, or equal.
- J. Rolling Panel Top Track:
5/8" high "T" track: Knape & Vogt #953, or equal.
- K. Rolling Panel Sheave:
1-3/8" diameter wheel, designed to mate with bottom track: Knape & Vogt #430, or equal.
- L. Rolling Panel Bottom Track:
5/16" high "T" track: Knape & Vogt #455, or equal.

PART 3: EXECUTION

3.01 PREPARATION

- A. Condition woodwork to average prevailing humidity conditions in installation areas prior to installing.
- B. Pre-Installation Meeting: Meet at project site prior to delivery of architectural woodwork and review coordination and environmental controls required for proper installation and ambient conditioning in areas to receive work. Include in meeting the Contractor; Architect and other Owner Representatives (if any); Installers of architectural woodwork, wet work such as plastering, other finishes, painting, mechanical work and electrical work; and firms or persons responsible for continued operation (whether temporary or permanent) of HVAC system as required to maintain temperature and humidity conditions. Proceed with woodwork installation only when everyone concerned agrees that required ambient conditions can be maintained.
- C. Deliver concrete inserts and similar anchoring devices to be built into substrates, well in advance of time substrates are to be built.

- D. Prior to installation of architectural woodwork, examine shop fabricated work for completion, and complete work as required, including back priming and removal of packing.

3.02 INSTALLATION

- A. Install woodwork 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 (including tops); and with no variations in flushness of adjoining surfaces.
- B. Scribe and cut woodwork to fit adjoining work, and refinish cut surfaces or repair damaged finish at cuts.
- C. 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.
- D. Cabinets: Install without distortion so that doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete the installation of hardware and accessory items as indicated.
- E. Tops: Anchor securely to base units and other support systems as indicated.

3.03 ADJUSTMENT, CLEANING, FINISHING, AND PROTECTION

- A. Repair damaged and defective woodwork where possible to eliminate defects functionally and visually; where not possible to repair replace woodwork. Adjust joinery for uniform appearance.
- B. Clean, lubricate and adjust hardware.
- C. Clean woodwork on exposed and semi-exposed surfaces. Touch-up shop-applied finishes to restore damaged or soiled areas.
- D. Complete the finishing work specified as work of this section, to whatever extent not completed at shop or prior to installation of woodwork.
- E. Provide final protection and maintain conditions, in a manner acceptable to Fabricator and Installer, which ensures architectural woodwork being without damage or deterioration at time of substantial completion.

End Of Section 06400