

SECTION 12 35 30 - RESIDENTIAL CASEWORK and COUNTERTOPS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes but is not limited to:
 - 1. Kitchen and vanity cabinets.
 - 2. Plastic laminate countertop and backsplashes.
- B. Related Requirements:
 - 1. Section 11 31 00 "Residential Appliances"

1.3 DEFINITIONS

- A. MDF: Medium-density fiberboard.
- B. Exposed Surfaces of Cabinets: Surfaces visible when doors and drawers are closed, including visible surfaces in open cabinets or behind glass doors.
- C. Semiexposed Surfaces of Cabinets: Surfaces behind opaque doors or drawer fronts, including interior faces of doors, interiors and sides of drawers, and bottoms of wall cabinets.
- D. Concealed Surfaces of Cabinets: Surfaces not usually visible after installation, including sleepers, web frames, dust panels, bottoms of drawers, ends of cabinets installed directly against and completely concealed by walls or other cabinets, and tops of wall cabinets and utility cabinets.

1.4 SUBMITTALS

- A. Product Data: For the following:
 - 1. Cabinets.
 - 2. Cabinet hardware.
 - 3. Plastic-laminate countertops.
- B. Shop Drawings:

1. Cabinets: Include plans, elevations, details, and attachments to other work. Show materials, finishes, filler panels, and hardware.
 2. Countertops: Show locations and sizes of cutouts and holes for plumbing fixtures faucets and other items installed in plastic-laminate countertops.
- C. Samples for Verification: 8-by-10-inch (200-by-250-mm) Samples for each type of finish and the following:
1. Exposed hardware and hinges, for each type of item.
 2. One full-size, 16 inches (406 mm) wide, finished base cabinet complete with hardware, doors, and drawers but without countertop. Sample will be returned to Contractor for use on Project.
 3. Plastic laminate for countertops. 8 by 10 inches.
- D. Qualification Data: For manufacturer.
- E. Product Certificates: For casework.

1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom fabricate products similar to those required for this Project and whose products have a record of successful in-service performance. Shop is a certified participant in KCMA's Quality Certification Program.

1.6 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install casework until building is enclosed, wet work is complete and dry, and temporary HVAC system is operating and maintaining temperature and humidity conditions at occupancy levels during the remainder of the construction period.
- B. Established Dimensions: Where casework is indicated to fit to other construction, establish dimensions for areas where casework is to fit. Coordinate construction to ensure that actual dimensions correspond to established dimensions. Provide fillers and scribes to allow for trimming and fitting.
- C. Field Measurements: Where casework is indicated to fit to existing construction, verify dimensions of existing construction by field measurements before fabrication and indicate measurements on Shop Drawings. Provide fillers and scribes to allow for trimming and fitting.
- D. Clearances:
1. Field measure existing conditions and verify cabinet dimensions will allow drawers and doors to operate correctly without interference from adjacent cabinet and appliances. Adjust cabinet dimensions as required to achieve correct fit.
 2. Verify that installed cabinets and countertops will allow required maneuvering clearances as required by Fair Housing Act, UFAS and ADA requirements.

1.7 COORDINATION

- A. Coordinate layout and installation of blocking and reinforcement in partitions for support of casework.
- B. Coordinate locations of utilities that will penetrate countertops or backsplashes.

1.8 WARRANTY

- A. Counter Top Warranty Period: One (1) year limited installation warranty commencing on the date of substantial completion. Ten (10) year warranty on countertop material.
- B. Cabinet Warranty Period: One (1) year limited warranty commencing on the date of substantial completion.

PART 2 - PRODUCTS

2.1 CABINETS

- A. Products: Subject to compliance with requirements.
 - 1. Lanz, Eugene; Whitehall
 - 2. Smart Cabinets
 - 3. Borror Cabinets, Klamath Falls.
 - 4. Approved Substitution
- B. Quality Standards provide cabinets that comply with:
 - 1. ANSI/KCMA A161.2.
 - 2. AWI/AMAC/WI Architectural Woodwork Standards, Section 11-Countertops.
 - 3. GREENGUARD Indoor Air Quality Certified
 - 4. CARB Phase II.
- C. KCMA Certification: Provide cabinets with KCMA's "Certified Cabinet" seal affixed in a semiexposed location of each unit and showing compliance with the above standard.
- D. Face Style: Reveal overlay; door and drawer faces partially cover cabinet fronts.
- E. Cabinet Style: Face frame.
- F. Door and Drawer Fronts: Solid-wood stiles and rails, 3/4 inch (19 mm) thick, with 1/4-inch-(6.4-mm-) thick, veneer-faced plywood center panels.
- G. Drawer Sides: 1/2" thick, veneer-faced plywood.
- H. Drawer Bottom, 1/4" thick, veneer faced plywood, kerfed into drawer sides.
- I. Face Frames: 3/4-by-1-5/8-inch (19-by-41-mm) solid wood.
- J. Exposed Cabinet End Finish: Wood veneer.

- K. Cabinet End Construction: 1/2-inch- (12.7-mm-) thick plywood.
- L. Cabinet Tops and Bottoms: 1/2-inch- (12.7-mm-) thick plywood, fully supported by and secured in rabbets in end panels, front frame, and back rail.
- M. Sink and Lavatory Sides and Bases: Waterproof plywood.
- N. Back, Top, and Bottom Rails: 3/4-by-2-1/2-inch (19-by-63-mm) solid wood, interlocking with end panels and rabbeted to receive top and bottom panels. Back rails secured under pressure with glue and with mechanical fasteners.
- O. Wall-Hung-Unit Back Panels: 3/16-inch- (4.8-mm-) thick plywood fastened to rear edge of end panels and to top and bottom rails.
- P. Base-Unit Back Panels: 1/8-inch- (3.2-mm-) thick hardboard fastened to rear edge of end panels and to top and bottom rails.
- Q. Front Frame Drawer Rails: 3/4-by-1-1/4-inch (19-by-32-mm) solid wood mortised and fastened into face frame.
- R. Drawers: Fabricate with exposed fronts fastened to subfront with mounting screws from interior of body.
- S. Shelves: 3/4-inch- (19-mm-) thick particleboard or plywood with solid wood edgebanding.
- T. Joinery: Rabbet backs flush into end panels and secure with concealed mechanical fasteners. Connect tops and bottoms of wall cabinets and bottoms and stretchers of base cabinets to ends and dividers with mechanical fasteners. Rabbet tops, bottoms, and backs into end panels.
- U. Factory Finishing: Finish cabinets at factory. Defer only final touchup until after installation.

2.2 CABINET MATERIALS

- A. General:
 - 1. Adhesives and Composite Wood and Agrifiber Products: Do not use products that contain urea formaldehyde.
 - 2. Adhesives shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
 - 3. Composite Wood and Agrifiber Products: Products shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
 - 4. Hardwood Lumber: Kiln dried to 7 percent moisture content.
 - 5. Softwood Lumber: Kiln dried to 10 percent moisture content.
 - 6. Hardwood Plywood: HPVA HP-1; made with adhesive containing no urea formaldehyde.

7. Particleboard: ANSI A208.1, Grade M-2; made with binder containing no urea formaldehyde. Recycled Content: Preconsumer or postconsumer recycled content not less than 100 percent. "SkyBlend" (roseburg.com)
8. MDF: ANSI A208.2, Grade MD; made with binder containing no urea formaldehyde. Recycled Content: Preconsumer or postconsumer recycled content not less than 100 percent.
9. Hardboard: ANSI A135.4, Class 1 Tempered. Recycled Content: Preconsumer or postconsumer recycled content not less than 100 percent.

B. Exposed Materials:

1. Exposed Wood Species: Alder
 - a. Select materials for compatible color and grain. Do not use two adjacent exposed surfaces that are noticeably dissimilar in color, grain, figure, or natural character markings.
 - b. Staining and Finish: As selected by Architect from manufacturer's full range.
2. Solid Wood: Clear hardwood lumber of species indicated, free of defects.
3. Plywood: Hardwood plywood with face veneer of species indicated, with Grade A faces and Grade C backs of same species as faces.
 - a. Edge band exposed edges with a minimum of 1/8-inch- (3-mm-) thick, solid-wood edging of same species as face veneer.

C. Semiexposed Materials: Unless otherwise indicated, provide the following:

1. Thermoset Decorative Panels: Particleboard or MDF finished with thermally fused, melamine-impregnated decorative paper.
 - a. Provide material finished on both sides for shelves, dividers, drawer bodies, and other components with two semiexposed surfaces.
 - b. Provide waterproof materials at areas subject to moisture intrusion, (Sink and lavatory bases)
 - c. Provide PVC or polyester edgebanding on components with semiexposed edges.
 - d. Colors: As selected by Architect from cabinet manufacturer's full range.

D. Concealed Materials: Solid wood or plywood, of any hardwood or softwood species, with no defects affecting strength or utility; particleboard; MDF; or hardboard.

2.3 CABINET HARDWARE

- A. General: Manufacturer's standard units complying with BHMA A156.9, Grade 1 of type, size, style, material, and finish as selected by Architect from manufacturer's full range.
- B. Pulls: Wire pulls, 3 1/2" metal, finish as selected from manufacturer's standard range.
- C. Hinges:
 1. Hinges: Semi- Concealed European-style, self-closing hinges. Institutional hinge, 270 deg, conforming to ANSI/BHMA Grade 1.

a. Hafele; Aximat.

- D. Drawer Guides: Epoxy-coated-metal, self-closing drawer guides; designed to prevent rebound when drawers are closed; with nylon-tired, ball-bearing rollers; and complying with BHMA A156.9, Type B05011 or Type B05091.

2.4 PLASTIC LAMINATE COUNTERTOPS

- A. Quality Standard: Unless otherwise indicated, comply with KCMA A161.2.
- B. Grade: Premium.
- C. High-Pressure Decorative Laminate:
1. Conformance: ANSI/NEMA LD 3, Grade HGP, High Wear.
 2. Type: Postforming
- D. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
1. As selected by Architect from manufacturer's full range in the following categories:
- E. Edge Treatment: Same as laminate cladding on horizontal surfaces or as indicated.
- F. Core Material: Particleboard made with exterior glue or Medium-density fiberboard made with exterior glue.
1. M/R particleboard.
- G. Core Thickness: 3/4 inch (19 mm).
1. Countertop thickness 1-1/4 inches (38 mm) at front, back, and ends. Build up with additional layers of core material laminated to top.
- H. Fabricate countertops with integral backsplash and rolled self-edge.
1. Backsplash 3 1/2" inches.
- I. Balance backing: Provide backing balance sheet on underside of countertop substrate. Backing to completely cover underside of countertop substrate including underside of exposed edge.

2.5 COUNTERTOP FABRICATION

- A. Fabricate countertops to dimensions, profiles, and details indicated. Provide front and end overhang of a nominal 1 inch (25 mm) over base cabinets. Ease edges to radius indicated for the following:
1. Solid-Wood (Lumber) Members: 1/16 inch (1.5 mm) unless otherwise indicated.
- B. Complete fabrication, including assembly, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

1. Notify Architect seven days in advance of the dates and times woodwork fabrication will be complete.
 2. Trial fit assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements before disassembling for shipment.
- C. Shop cut openings to maximum extent possible to receive appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.
1. Seal edges of openings in countertops with a coat of shellac.

PART 3 - EXECUTION

3.1 CABINET EXAMINATION

- A. Examine areas, with Installer present, for compliance with requirements for installation tolerances, location of framing and reinforcements, and other conditions affecting performance of casework.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 CABINET INSTALLATION

- A. Install cabinets with no variations in flushness of adjoining surfaces; use concealed shims. Where cabinets abut other finished work, scribe and cut for accurate fit. Provide filler strips, scribe strips, and moldings in finish to match cabinet face.
- B. Install cabinets without distortion so doors and drawers fit the openings, are aligned, and are uniformly spaced. Complete installation of hardware and accessories as indicated.
- C. Install cabinet's level and plumb to a tolerance of 1/8 inch in 8 feet (3 mm in 2.4 m).
- D. Fasten cabinets to adjacent units and to backing.
 1. Fasten wall cabinets through back, near top and bottom, and at ends not more than 16 inches (400 mm) o.c. with No. 10 wafer-head screws sized for not less than 1-1/2-inch (38-mm) penetration into wood framing, blocking, or hanging strips or toggle bolts through the metal backing or metal framing behind the wall finish.
- E. Fasten plastic-laminate countertops by screwing through corner blocks of base units into underside of countertop. Form seams using splines to align adjacent surfaces, and secure with waterproof glue and concealed devices designed for this purpose.
 1. Provide cutouts for sinks and lavatories, including holes for faucets and accessories.
 2. Seal edges of cutouts by saturating with shellac.

3. Provide backing on underside of countertop substrate.

3.3 CABINET ADJUSTING AND CLEANING

- A. Adjust cabinets and hardware so doors and drawers are centered in openings and operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.
- B. Clean casework on exposed and semiexposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas.

3.4 COUNTERTOP PREPARATION

- A. Before installation, condition countertops to average prevailing humidity conditions in installation areas.
- B. Before installing countertops, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.5 COUNTERTOP INSTALLATION

- A. Grade: Install countertops to comply with same grade as item to be installed.
- B. Assemble countertops and complete fabrication at Project site to the extent that it was not completed in the shop.
 1. Provide cutouts for appliances, plumbing fixtures, electrical work, and similar items.
 2. Seal edges of cutouts by saturating with varnish.
- C. Field Jointing: Where possible, make in the same manner as shop jointing, using dowels, splines, adhesives, and fasteners recommended by manufacturer. Prepare edges to be joined in shop so Project-site processing of top and edge surfaces is not required. Locate field joints where shown on Shop Drawings.
 1. Secure field joints in plastic-laminate countertops with concealed clamping devices located within 6 inches (150 mm) of front and back edges and at intervals not exceeding 24 inches (600 mm). Tighten according to manufacturer's written instructions to exert a constant, heavy-clamping pressure at joints.
- D. Install countertops level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm).
- E. Scribe and cut countertops to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- F. Fire-Retardant-Treated Wood: Handle, store, and install fire-retardant-treated wood to comply with chemical treatment manufacturer's written instructions, including those for adhesives used to install woodwork.

- G. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop.
 - 1. Install countertops with no more than 1/8 inch in 96-inch (3 mm in 2400-mm) sag, bow, or other variation from a straight line.
 - 2. Seal junctures of tops, splashes, and walls with mildew-resistant silicone sealant or another permanently elastic sealing compound recommended by countertop material manufacturer.

3.6 COUNTERTOP ADJUSTING AND CLEANING

- A. Repair damaged and defective countertops, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean countertops on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 12 35 30