

SECTION 12300 - MANUFACTURED CASEWORK

PART 1 - GENERAL

1.1 SYSTEM DESCRIPTION

A. Definitions

1. Exposed: All exterior surfaces including edges, backs of hinged doors, interior of open cabinets and behind glass doors.
2. Concealed: All exterior surfaces subject to view; drawer bodies, cabinet interiors on cabinets with doors and interior shelves.
3. Unexposed: All surfaces and parts permanently kept from view.
4. Visible: All surfaces and parts visible after installation.

1.2 SUBMITTALS

A. Section 01300 - Submittals: Procedures for submittals.

B. Product Data: Submit manufacturer's data and installation instructions for each type of furniture unit.

1. Include independent laboratory certification that applied finish complies with specified chemical and physical resistance requirements. Submit a notarized certificate that any polyester or plastic material furnished on project meets the non-burning provisions of ASTM D 635 test.
2. Submit one full-size sample of finished base cabinet unit complete with hardware, doors and drawers, without finish top, if requested by Architect.
3. Submit one full-size sample of finished wall-mounted cabinet unit complete with hardware, doors, and adjustable shelves, if requested by Architect.
4. Furnish both hinged and sliding door samples if requested by Architect.
5. Submit full-size samples of sink units and accessories if requested by Architect.
6. Submit samples of mechanical and electrical service fixtures if requested by Architect complete with fittings and accessories with specified finish.

- a. Acceptable sample units will be used for comparison inspections at project. Unless otherwise directed, acceptable sample units may be incorporated in work. Notify Architect of their exact locations. If not incorporated in work, retain acceptable sample units in building until completion of work and remove sample units from premises when directed by Architect.

C. Shop Drawings: Submit shop drawings for casework showing plans, elevations, ends, cross-sections, service run spaces, location and type of service fixtures with lines thereto. Show details and location of anchorages and fitting to floors, walls, and base. Include layout of units with relation to surrounding walls, doors, windows, and other building components. Coordinate shop drawings with Laboratory Specialties and other work involved. Field verify all dimensions prior to fabrication.

- D. Guarantee: This Contractor shall guarantee all materials and workmanship of equipment provided on this contract for a period of one (1) year from the date of final acceptance. Any defective materials or faulty workmanship occurring within that time shall be replaced or corrected without charge.

1.3 QUALITY ASSURANCE

- A. Provide all work by a single manufacturer.
- B. Casework Manufacturer: Five (5) years experience in providing installations of similar type and complexity.
- C. Protect casework materials from dampness during and after delivery. Do not expose casework to extreme changes in humidity.
- D. Do not store or install casework until concrete, masonry and other wet work is completely dry.
- E. Store casework in an environment with a minimum ambient temperature of 32-degrees F, with a relative humidity between 25-percent and 85-percent.
- F. Store casework panels face-to-face in a horizontal position. Do not store on damp or wet surfaces.

1.4 WARRANTY

- A. Provide 5-year written warranty on all casework and associated hardware against all defects in material and workmanship.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Manufactured Wood Plywood Panels:
 - 1. Comply with AWI custom grade standards.
- B. Visible Edge Material: 3-mm, solid, high impact, acid resistant polyvinyl chloride (PVC), machine applied with moisture resistant polyurethane glue and automatically trimmed, buffed and corner chamfered edges, and corner radiused for 1-1/8 inch edges.
 - 1. Fixed front panels, drawer fronts, doors, visible edges of sides and shelves: 1-1/8-inch minimum.
 - 2. All edges, including unexposed edges: Minimum 1-1/8 inch PVC.
 - 3. Work surfaces and backsplashes: 3-mm minimum. All exposed and unexposed edges on countertops shall be edge banded.
- C. Unexposed Wall and Base Ends: Plastic surfaced and banded on all visible edges 3-mm minimum.

- D. Plastic Laminate: Melamine complying with NEMA LD3 - 1991 and ALA 1988. Antibacterial and aseptic with the following performance characteristic:
1. Paper Weight: no less than 120-gm.
 2. Wear Resistance: 600 cycles
 3. Scuff Resistance: No effect
 4. Conductive Heat Resistance: No effect
 5. Radiant Heat Resistance: 165 seconds
 6. Boiling Water Resistance: Slight to no effect
 7. High Temperature Resistance: Slight to no effect
 8. Cigarette Burn Resistance: 520 seconds
 9. Stain Resistance: No effect by stains 1-23 and minor effect by stains 24-29.
 10. Color: Selected by Design Criteria Professional from manufacturer's standard color palettes.
- E. Carcass Panels: Provide as follows
1. All Cabinets: Modular in design.
 2. Side and Shelf Panels: 3/4-inch thick.
 3. Mail Slots and Back Panels: 3/4-inch thick.
 4. Front Panels (doors, drawer fronts and face panels): 3/4-inch thick.
- F. Drawers:
1. Sides: Constructed of powder coated 16-gauge steel with u-turned edge to permit attachment to drawer bottom.
 2. Drawer Bottom: 3/4-inch multi-density melamine covered top and bottom, edge banded on all four edges with 1-mm PVC.
- G. Work Surface Tops
1. 1-1/8 inch thick melamine.
 2. Provide cutouts for plumbing fixtures.
 3. Seal all cutouts and exposed edges.
- H. Recessed Support Base: Fully recessed rigid 4-inch high and 3/4-inch thick manufactured wood plywood panel base with four (4) levelers per cabinet providing 2-1/4 inch adjustment from inside the cabinet.
- I. Fasteners and Anchors: Types, sizes, material and finish as required for conditions of use.
1. Wood Screws: FS FF-S-1 11.
 2. Cabinet Attachment Screws: #10 pan head screws, minimum 7/16-inch diameter head and 1-1/2 inch long.
 3. Use of nails will not be permitted.
 4. Anchors: As required for substrate condition and adequate anchorage of the casework.
- J. Hardware

1. Panel Assembly Pins
 - a. Nickel coated zinc alloy cam and solid galvanized screw. Pin KD fasteners for connections of tops and floors to side panels and designed to be two times stronger than glue and dowel construction.
 - b. Sleeved Cam and Dowel KD fasteners for connecting fixed shelves to side panels.
 - c. Cam and Tongue KD fasteners for connecting back panel to side panels.
2. Pulls: Solid matte nickel coated steel, 3/8-inch diameter wire pulls projecting 1-1/4-inch to allow full grasp and securely mounted with two screws from backside of panel.
 - a. Drawers and Cabinet Doors: 4 inches
 - b. Tall Cabinet Doors: 8 inches
3. Hinges: Hafele Aximat nickel-coated zinc alloy with lifetime warranty and as follows:
 - a. Exposed self-closing 15-mm overlay nickel-plated finish opening 290-degrees maximum and providing reveal to match standard cabinet reveals.
 - b. Provide two (2) hinges per door minimum on sizes up to 48 inches high and four (4) hinges per door on sizes up to 96 inches high.
 - c. Hinges: Boss/screw fastened to door and to side panels with mounting plate and 1/2-inch screws.
4. Drawer Slides: 100-pound bottom mounted drawer slide system whereby the drawer slide forms the drawer side.
 - a. Dynamic load capacity: 75-pounds
 - b. Static load capacity: 100-pounds
 - c. Baked-on powder coated steel finished white.
 - d. Permanently lubricated nylon rollers.
 - e. Parallel self-closing action.
 - f. 16-gauge steel construction
5. Locks:
 - a. Removable lock plug system, nickel finish.
 - b. Furnish each lock with two keys, keyed to space where casework is located.
6. Adjustable Shelf Supports: Spoon-shaped for 5 mm diameter holes.
7. Wire and Cable Grommets: Manufacturer's standard white plastic; 2.4-inch diameter.
8. Provide miscellaneous hardware in manufacturer's standard color selection. Color: selected by Design Criteria Professional.
9. Wall Unit/Cabinet Mounting Bracket and Attachment Rail
 - a. Concealed galvanized steel wall mounting bracket allowing vertical and front-to-back adjustment.
 - b. Vertical alignment to be 1/2-inch. Front-to-back adjustment to be 3/8-inch.

- c. Load bearing capacity to be 143 pounds per bracket. Minimum two (2) brackets per all cabinet.
 - d. Access to adjustment screws through 1-3/8 inch diameter hole in back panel. Hole to be covered with white plastic 35 mm diameter cover cap.
 - e. Cabinet attachment rail to be zinc plated steel, continuous strip to be 96 inches long.
10. Connecting Screws: Plastic sleeve; plastic head element with nickel coated steel bolt and nut with hex slot 35-41 mm long for joining separate carcass panels.
11. Brackets and Standards
- a. Double-tracked 14-gauge steel uprights, wall mounted type.
 - b. Brackets: Double tracked design formed from a single piece of 16-gauge steel without any upturn at the end of the bracket.
 - c. Dry mist epoxy polyester powder finish.
 - d. Color: Selected by Design Criteria Professional from Manufacturer's standard.
12. Heavy Duty Furniture Leveler
- a. Adjustable leveler with separate die-cast cylinder and free spinning base with load capacity of 200 pounds per leveler.
 - b. Provide a minimum of four (4) levelers per cabinet.
 - c. Leveler adjustment is a full 2-inch using an Allen wrench. Access to levelers is through 3/8-inch diameter hole in the bottom of each cabinet. Provide white plastic caps for each leveler hole.

K. Accessories

- 1. Provide accessory items including, but limited to, individual casework locks and pencil drawers.
- 2. Provide accessories in Manufacturer's standard colors to match casework as selected by Design Criteria Professional.

2.2 FABRICATION

- A. Drawings: Intended to establish guidelines for acceptable composition, quantity and appearance.
- B. Casework Panels: Constructed from a sandwich of melamine resin impregnated materials (minimum 120 gram paper), thermally fused to a dense wood core. then edge banded with 1-1/8-inch PVC on all visible edges, with the following physical properties when tested in accordance with ASTM D1037:
 - 1. Internal Bond: 90 psi
 - 2. Dimensional Change: 0.4 percent lengthwise and 0.5 percent crosswise.
 - 3. Flexural Strength: 2,400 psi lengthwise and crosswise.
 - 4. Modulus of Elasticity: 500,000 psi lengthwise and crosswise.
 - 5. Deflection at Rupture: 0.2 inches.
 - 6. Screw holding: 300 pounds, #10 surface; 200 pounds #10 end grain.

7. Flatness Warpage: Not to exceed 3/8-inch in 96 inches of length or 1/4-inch in a 48 inch width.
- C. Sides, fronts and shelves: 3/4-inch thickness and shall be flush type with 5/32-inch reveals at the panel joints.
- D. Backs: 3/4-inch thickness and shall be fully overlaid on the sides.
- E. Panels: Equipped with 3/16-inch diameter holes drilled 1-1 /4 inches on center and 1-1/2 inches from the face to facilitate adjustable shelving, drawers, system hardware and accessories.
- F. Worksurface Tops: 1-1/8 inch thickness with 1-1/8 inch PVC banding on all four edges. Backsplashes shall be 3/4-inch minimum thickness.
- G. Cabinet Parts: Accurately machined and bored for premium quality grade joinery construction utilizing automatic machinery to insure consistent sizing of modular components.
- H. Fabricate casework to ensure durable and rigid units and to permit plumb and level site installation with tight joints between sections.
- I. Worksurface Tops: Fasten to base with concealed screws of adequate length through brackets or top shelf provided at top insides of bases. Seal all cutouts and exposed edges.
- J. Provide cutouts with appropriate grommets for plumbing fixtures, inserts, appliances, out boxes, and other fixtures and fittings.
 1. Verify locations of cutouts from on-site dimensions.
 2. Prime paint or seal contact surfaces of cut edges.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Casework Installation

1. Casework: Installed in accordance with reviewed shop drawings and manufacturer's written instructions.
2. Field verify site dimensions of casework locations prior to fabrication.
3. Set all casework straight to line, true, square, plumb, level and ready to receive tops.
4. Apply casework attachment rails to wall along entire length of wall to facilitate installation of wall cabinets.
5. Hang all wall-mounted casework to attachment rails. Level and adjust wall unit mounting brackets.
6. Work surface tops: Installed and assembled on site with the use of concealed screws on bases such as base cabinets pedestals or columns.
7. Fabricate casework in as many individual pieces as required to fit through doors.

3.2 PROTECTION

- A. Protect casework in shipping. Replace any cabinets or panels damaged in transit.

- B. Protect finished installation from damage by water, heat and other causes until final acceptance.
- C. Warpage, surface discoloration and damage will be cause for rejection and replacement at no additional cost to the Owner.

3.3 CLEAN UP

- A. Upon completion of work, remove from the premises all rubbish and other accumulated materials not caused by other trades and leave the work area in a clean and orderly condition acceptable to the Owner and Design Criteria Professional.
- B. Remove dirt with a damp cloth and soap and water. Stubborn dirt may be removed with: Non-flammable chlorinated solvents. Lacquer thinner, MEK or contact adhesive solvent if area is ventilated sufficiently to prevent the build-up of fumes and noticeable odors. Do not use harsh abrasive cleaners.
- C. Repair small scratches and surface blemishes on units or replace units prior to final completion.

END OF SECTION 12300