

## SECTION 123216 – MANUFACTURED PLASTIC-LAMINATE CLAD CASEWORK

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- A. Extent of casework and fixtures is shown on drawings.
- B. Work includes the fabrication and installation of standard furniture components of base cabinets, wall cabinets, storage cabinets, cabinets under structures for shelf units and other units as indicated. Quality standards shall be A.W.I. (Latest edition) Custom Grade, reveal overlay construction as outlined in A.W.I. Section 400.
- C. Tops and accessories common to casework are included as work in this section.
- D. Stainless steel sinks.

## 1.3 DEFINITIONS

- A. Exposed Surfaces of Casework: Surfaces visible when doors and drawers are closed, including visible surfaces in open cabinets.
- B. Semiexposed Surfaces of Casework: Surfaces behind opaque doors or drawer fronts, including interior faces of doors and interiors and sides of drawers. Bottoms of wall cabinets are defined as "semiexposed."
- C. Concealed Surfaces of Casework: Surfaces not usually visible after installation, including sleepers, web frames, dust panels, bottoms of drawers, and ends of cabinets installed directly against and completely concealed by walls or other cabinets. Tops of wall cabinets and utility cabinets are defined as "concealed."

## 1.4 SUBMITTALS

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

- B. Shop Drawings: For cabinets and countertops. Include plans, elevations, details, and attachments to other work. Show materials, finishes, filler panels, hardware, edge and backsplash profiles and methods of joining countertops.
- C. Samples for Initial Selection: Manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available for each type of material exposed to view.
- D. Product Certificates: Signed by manufacturers of casework certifying that products furnished comply with requirements.

## 1.5 QUALITY ASSURANCE

- A. Source Limitations for Cabinets: Obtain cabinets and countertops through one source from a single manufacturer.

## 1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install casework until building is enclosed, wet-work is complete, and HVAC system is operating and will maintain temperature and relative humidity 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 for Countertops: Verify dimensions of countertops by field measurements after base cabinets are installed but before countertop fabrication is complete. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

## 1.7 COORDINATION

- A. Coordinate layout and installation of blocking and reinforcement in partitions for support of casework.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:
  - 1. Cabinets:
    - a. L.S.I. Corporation of America, Inc.

- b. Stevens Cabinet Co.
- c. Specified Structures, Inc.
- d. TMI Systems Design Group
- e. CiF Furniture Limited
- f. McRoyal Industries Inc.
- g. Universal Custom Millwork
- h. Worden
- i. Polyvision
- j. Case Systems Inc.
- k. Southern Cabinetry Inc.

2. Plastic Laminate for Countertops:

- a. Formica Corp.
- b. Laminart.
- c. Nevamar Corp.
- d. Wilson: Ralph Wilson Plastics Co

3. Stainless Steel Sinks

- a. Elkay (Basis of Design)
- b. Just
- c. Advance Tabco

2.2 COLORS, TEXTURES, AND PATTERNS

- A. Colors, Textures, and Patterns: As selected by Architect from manufacturer's full range.

2.3 CABINET MATERIALS

- A. Base Material: shall be minimum 45 lb. high density flakeboard meeting ANSI A208.1 or solid hardwood. Door and drawer fronts shall be  $\frac{3}{4}$ " thickness. Cabinet bodies shall be  $\frac{3}{4}$ " thickness.
- B. Decorative Laminate: Color to be selected by Architect from manufacturer's standard colors from Wilson Art Brand full line.
- 1. Plastic Laminate: High-pressure decorative laminate GP50 (.050) complying with NEMA LD 3 for countertops. Laminate shall be counter balanced in wet areas.
  - 2. High pressure decorative laminate, NEMA LD-3 equal to Wilson Art Brand "Chemsurf".
  - 3. High pressure decorative laminate GP28 (.028), NEMA LD-3 for exposed vertical surfaces and panel ends, drawer fronts, shelves, as well as cabinet doors. Laminate shall be counter balanced. Cabinet doors and drawer fronts shall have CL20 liner on back.

4. Melamine laminate tested to meet NEMA LD-3 or CL20 for semi-exposed parts (interior of open cabinets, not including drawer bodies), and concealed surfaces. Laminate shall be counter balanced.
5. Melamine laminate tested to meet NEMA LD-3 for drawer sides and backs. Provide on all visible surfaces with drawer in normal open position.
6. Drawer bottoms shall be melamine panel product or particle-board.
7. Plastic Edging: Color match cabinet face. Black is not acceptable.

## 2.4 CASEWORK HARDWARE AND ACCESSORIES

- A. General: Manufacturer's standard units of type, material, size, and finish as selected from manufacturer's standard choices.
- B. Provide manufacturer's standard, satin finish hardware units, unless otherwise indicated.
- C. Hinges: Institutional type 2-3/4", 5 knuckle, overlay type, hospital tipped. Provide one pair for doors less than 4 ft. high and 1-1/2 pair for doors over 4 ft.
- D. Pulls: Solid metal, staple style with round cross section similar to Stanley #4484 for drawers and swing doors, mounted with 2 screws fastened from back. For sliding doors, provide recessed flush pulls. Provide 2 pulls for drawers over 24" wide.
- E. Catches: Provide dual self-aligning permanent magnetic catches or nylon roller spring catches on all swinging doors. Enclose magnetic catches in a plastic case and operate against a strike plate on door. Provide catch on both leaves of double doors without locks. Provide a positive catch on left hand door and catch on right hand door. Provide two (2) catches on doors over 4 feet high.
- F. Drawer Slides: Shall be bottom mounted with epoxy finish to match drawer body color. Slide to support minimum 100 lb. dynamic load at full extension and have a built-in positive stop to prevent inadvertent drawer removal. Drawer side and slide maybe one piece meeting the above requirements.
- G. File drawer slides shall be bottom mounted, heavy duty, full extension, minimum 100 lb. load, zinc or epoxy finished.
- H. Label Holders: Provide where indicate, size to receive standard label cards approximately 1" X 2" nominal size, finished to match other expose hardware.
- I. Sliding Door Hardware Sets: Manufacturer's standard, to suit type and size of sliding door units. Upper and lower tracks shall be concealed behind plastic laminate apron or painted to match cabinet color.
- J. Clothes rods shall be minimum 1" chrome plated steel supported by chrome flange.
- K. *Double Coat* hooks shall be clear anodized aluminum *for cubbies.* <sup>(Bulletin 1)</sup>

- L. Adjustable Shelf Supports: High strength nylon supports capable of holding a minimum of 150 lbs. per support. Supports shall have two pins that set in holes drilled in cabinet body and be formed with locking device to prevent accidental shelf slide off.

## 2.5 CABINET CONSTRUCTION

- A. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated, or if not indicated, as required by woodwork quality standard.
- B. Grade: Custom
- C. Provide through color plastic laminate.
- D. Fabricate casework to dimensions, profiles and details shown.
- E. Assemble units in the shop in as large components as practical to minimize field jointing.
- F. Construction shall be manufacturer's standard with reveal overlay type drawer fronts and doors. Cabinets shall be assembled using all concealed fasteners and gluing. All units shall have full backs unless shown other wise.
- G. Install hardware uniformly and precisely after final finishing is complete. Set hinges snug and turn screws to flat seat. Adjust and align hardware so that moving parts operate freely and contact points meet accurately. Allow for final field adjustment after installation.
- H. Unit door and drawer fronts shall be  $\frac{3}{4}$  inch thick particleboard and laminated with high pressure decorative laminate GP28 color as selected on the exposed surface and high pressure laminate cabinet liner CL20 on the interior surface. All edges shall be finished with 3 mm PVC to match solid color selected for the cabinet face. Framed glass insert doors shall be  $\frac{1}{4}$ " thick plate glass trimmed with extruded PVC plastic. Upper cabinets with sliding glass doors shall be without frame and ground smooth. Cabinets with glass doors shall be considered to have open interiors. Interior surfaces shall be finished as described below in a color to match exterior of cabinet as selected by Architect.
- I. Unit Body Open Interior: Exposed cabinet sides shall be  $\frac{3}{4}$  inch thick particleboard laminated both sides with high pressure decorative laminate GP28 in color as selected. The front edge shall be edgebanded with 1 mm PVC to match the door and drawer front edge color. Unexposed cabinet sides shall be  $\frac{3}{4}$  inch thick particleboard laminated on the interior with high pressure decorative laminate GP28 and balanced with high pressure laminate cabinet liner CL20. The front edge shall be edgebanded with 1 mm PVC to match the door and drawer front edge color.
  - 1. Unit top or sub-top shall be  $\frac{3}{4}$  inch thick particleboard laminated on the interior with high pressure decorative laminate GP28 and balanced with high pressure laminate cabinet liner CL20. Front edged with 3 mm PVC to match door and drawer front edge color. All sub-tops shall be full depth.
  - 2. Bottom of base and wardrobe units shall be  $\frac{3}{4}$  inch thick particleboard laminated on the interior with high pressure decorative laminate GP28 and balanced with high pressure

cabinet liner CL20. Front edged with 1 mm PVC to match the door and drawer front edge color. All sub-tops shall be full depth.

3. Standard unit backs shall be ¼ inch thick prefinished hardboard laminated with high pressure decorative laminate or 1/2 inch thick particleboard laminated with high pressure decorative laminate GP28 and balanced with high pressure cabinet liner CL20. Color to match other interior surfaces. Exposed back on fixed or movable cabinet to be ¾ inch thick particleboard laminated with GP28 on the interior as selected and Gp28 on the exterior as selected.
  4. Adjustable shelves shall be 1 inch thick particleboard laminated both sides with high pressure decorative laminate GP28. The front edge of the shelf is to be edged with 1 mm PVC to match the shelf color.
- J. Unit Body Closed Interiors: Exposed cabinets sides shall be ¾ inch thick particleboard laminated on the exterior with pressure decorative laminate GP28 in color as selected and balanced with high pressure cabinet liner CL20. The front edge shall be edgebanded with 1 mm PVC to match the door and drawer front edge color.
1. Unexposed cabinet sides shall be ¾ inch thick particleboard laminated both sides with melamine and the front edge shall be edgebanded with 1 mm PVC to match the door and drawer front edge color.
  2. Unit top or subtop shall be ¾ inch thick particleboard laminated both sides with melamine and front edged with 1 mm PVC to match the door and drawer front edge color. All subtops shall be full depth.
  3. Bottom base and wardrobe units shall be ¾ inch thick particleboard laminated both sides with melamine and front edged with 3 mm PVC to match the door and drawer front edge color.
  4. Standard unit backs shall be ¼ inch thick prefinished hardboard laminated with melamine or ½ inch thick prefinished particleboard laminated with melamine. Color to match other interior surfaces. Exposed back on fixed or movable cabinet to be ¾ inch thick particleboard laminated with CL20 on the interior to match melamine color and GP28 on the exterior as selected.
  5. Adjustable shelves shall be ¾ inch thick particleboard up to 30 inches wide and 1 inch thick particleboard over 30 inches wide, laminated both sides with melamine. The front edge of the shelf shall be edged with 1 mm PVC to match the shelf color.
- K. Wall Unit: The exposed bottom edge of each wall cabinet side shall be edgebanded with 1 mm PVC. The underside of all wall cabinets shall be finished with high pressure decorative laminate GP28 color to match cabinet face.
- L. Drawers: sides, back and sub-front shall be particleboard, ½ inch thick, laminated with melamine. Top edge is banded with 1 mm PVC edging in a matching color. Drawer bottom shall be ½ inch thick prefinished particleboard. Paper storage drawers are of heavy-duty ¾ inch particleboard laminated both sides with melamine. Constructed with retaining hood at the rear of each drawer. As an alternate construction, the drawer slide and side may be one piece of heavy duty steel with a baked epoxy coating meeting the requirements called for under drawer slides.

## 2.6 COUNTER TOP MATERIALS

- A. Core: 1 inch ANSI A 208.1, M-2 particleboard.
- B. Surface: HGS/HGP high pressure decorative laminate with balanced backer sheeting.

## 2.7 PLASTIC LAMINATE COUNTERTOPS

- A. Tops, Box Curbs, Slash Rim: Provide smooth clean, exposed tops and edges, in uniform plane free of defects. Make exposed edges and corners square.
- B. Top sizes: Furnish tops in maximum practicable lengths. Locate joints where they will not detract from durability, performance or appearance. Joints will not be allowed at or within 12" of a sink cut out. All cutouts in countertops shall be made by the casework installer.
- C. Top Thickness: Maintain 1" thickness with tolerance not exceeding plus or minus 1/32". Provide front and end overhang of 1" over base cabinets.
- D. Plastic Laminate: Provide plastic laminate sheet, with satin, complying with NEMA LD-3. Use general purpose grade 0.050" thick for tops. Shop-bonded with fully waterproof bond glue to sub-top of hardwood faced plywood, medium density overlaid plywood, or phenolic resin bonded particleboard. Smooth sand surfaces to which plastic laminate is to be bonded. Apply standard phenolic backing sheet to backing sheet to back of panels. Build up exposed edges of tops to 1-1/4" thickness. Self-edge exposed edges of top, splash, and openings with same plastic laminate used for tops. Make all joints tight hairlines using mechanical clamping devices on concealed side. Back splash to have square corners and profile. Field apply with mastic, providing a chemical resistant permanently elastic sealing compound between backsplash and counter top.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Install casework with no variations in flushness of adjoining surfaces; use concealed shims. Where casework abuts other finished work, scribe and cut for accurate fit. Provide filler strips, scribe strips, and moldings in finish to match casework face.
- B. Install casework without distortion so doors and drawers fit openings and are aligned. Complete installation of hardware and accessories as indicated.
- C. Install casework and countertop 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, at ends and not less than 24 inches (600 mm) o.c. with No. 10 wafer-head screws sized for 1-inch (25-mm) penetration into wood framing, blocking, or hanging strips.

2. Fasten wall cabinets through back, near top and bottom, at ends and not less than 24 inches (600 mm) o.c., with toggle bolts through metal backing behind gypsum board.
- 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 glue and concealed clamping devices designed for this purpose.

### 3.2 ADJUSTING AND CLEANING

- A. Adjust casework 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.

END OF SECTION 123216