

Plastic Laminate Faced Casework

1.1 General

1.2 Summary

- A. This section includes the following Scope of Work as referred to in the plans:
 - 1. Plastic laminate manufactured casework
 - 2. Plastic laminate countertops

1.3 Related Sections

- A. Applicable Provisions
 - 1. All General, Supplementary and Special conditions listed elsewhere, and requirements including, but not limited to, shop drawing submittals, color schedules, completion schedules and sample requirements.
- B. Work not included in this section
 - 1. Rough carpentry
 - 2. Millwork, moldings, trim and related items
 - 3. Plumbing, electrical and mechanical fixtures, cutouts, locations and installation
 - 4. Blocking within walls (locations to be referenced on casework shop drawings)
 - 5. Finished toe base, if other than plastic laminate
 - 6. Fixture cutouts, installation and connections that occur in products defined in this section.

1.4 Definitions

- A. Exposed Surfaces
 - 1. Surfaces visible with doors and drawers closed
 - 2. Wall unit bottoms 42 or more inches above finished floor
 - 3. Interiors of all open cabinets (cabinets without doors and/or drawers)
 - 4. Interiors of all glass door cabinets, or other transparent facematerial
- B. Semi-Exposed Surfaces
 - 1. Interior surfaces not visible with doors and drawers in closed position
- C. Concealed Surfaces
 - 1. Surfaces not visible after installation, or during use of the product.

1.5 Qualifications and Quality Assurance

- A. Specifications and drawings are based on casework as manufactured by Casework USA® by WB Manufacturing, 507 East Grant Street, Thorp WI 54771. www.wibenchmfg.com (715) 669-5360.
- B. Construction to comply with AWI Custom Grade, unless otherwise indicated herein.
- C. All products to be supplied with a one year manufacturers warranty against defects in manufacturing and workmanship.

1.6 Project Conditions

- A. Products are not to be installed until the building is enclosed, and climate controlled under the following conditions:
 - 1. Average temperature to be between 60 and 70 degrees Fahrenheit.
 - 2. Maximum humidity not to exceed 70 percent.
- B. Products are not to be installed until all overhead utilities and ceiling work are completed in the areas where casework is to be installed.

2.1 Products

2.2 Materials

- A. Core Materials
 - 1. Particleboard
 - a. High performance industrial grade particleboard, 45 pound density, ANSI A 208.1-1993 M-3. Thickness as described herein. Provide at all components unless otherwise specified herein.
 - 2. Medium Density Fiberboard
 - a. 45 pound density, ANSI A208.2. Use at all glass doors and where indicated.
 - 3. Plywood
 - a. Exterior grade. Used at toe base.
- B. Decorative Laminate
 - 1. High-pressure plastic laminate, for exposed surfaces shall meet NEMALD3-2000 standards including thickness as listed:
 - a. Horizontal Grade Postform (.039) to be used for countertops and work surfaces
 - b. Vertical Grade Surface (.028) to be used for all exposed surfaces
 - c. CLS Cabinet Liner (.020) to be used to balance finished surfaces
 - d. Colors to be selected from manufacturers standard offerings
 - e. Grain direction for exposed surfaces shall be vertical on doors, drawer faces, end panels, fascia panels, and exposed backs; horizontal at aprons and light valances behind extended doors. Material size limitations may override. See shop drawings for deviations.
 - 2. Thermally fused melamine, for semi-exposed surfaces, compliant with NEMA performance standards. Color: White, unless otherwise indicated.
- C. Edge banding
 - 1. 1mm nominal (.020/.018) PVC
 - 2. 3mm nominal (.118) PVC, edges and corners to be machined to a nominal 1/8" (.125) radius.

2.3 Hardware

- A. Hinges
 - 1. Heavy duty, five knuckle 2 3/4 inch, shall meet ANSI/BHMA A156.9 Grade 1 requirements, color as noted on drawings

2. Concealed hinges, 120 degree swing. Provide base plates to maintain 1/8 inch nominal reveals between doors/drawers within the same cabinet, and between doors of adjoining cabinets. Doors shall be self-closing and fitted with silencer bumpers.
 - a. Provide door catches as required to comply with Americans with Disabilities Act for opening resistance.
- B. Pulls
 1. Wire design, 96mm, color as noted on drawings. Pulls are to be factory installed in reverse position.
- C. Drawer Slides
 1. Standard Drawers
 - a. 100# undermount slides, color matched to cabinet interior color
 2. File and Paper Storage Drawers
 - a. 150# full extension, side mount
- D. Adjustable Shelf Supports
 1. Twin pin design with anti tip-up shelf restraints shelves with slot to mechanically attach shelf to clip. Load rating shall be minimum 300 lbs. each support.
- E. Cabinet Locks, if required by drawings
 1. Disc tumbler deadbolt action, bright nickel finish
 - a. All locks within a room keyed alike, each room keyed differently
 - b. Minimum of two master keys required
- F. Wardrobe rod
 1. 14 gauge, 1-1/16 inch diameter chrome-plated hand rod with captive supports at each end, securely fastened to cabinet sides and/or fixed vertical divider.
- G. Grommets
 1. Nylon with removable cap. 2-1/2 inch diameter or as noted on drawings
 2. Color: Black, or as noted on drawings.
- H. Specialty hardware
 1. Hardware not listed herein, as required for specialty products, shall be of the manufactures standard, or as approved by the architect before manufacture.

2.4 Detailed Cabinet Construction

- A. Surfaces
 1. Exposed surfaces
 - a. Decorative laminate, grade VGS
 2. Semi-exposed surfaces
 - a. Closed Interior: Thermofused melamine, color white.
 - b. Reverse faces of exposed surfaces: CLS Cabinet Liner, color white.
 - c. Drawer boxes: Thermofused melamine, color white.
 3. Edges

- a. Cabinet body edge: nominal 1mm PVC at all exposed and semi-exposed.
 - b. Door and drawer front edge: 3mm PVC four sides.
 - c. Shelves: nominal 1mm PVC, front edge. Color to match shelf color
 - d. Drawer boxes: nominal 1mm PVC. Color to match drawer box color.
4. Material balancing
- a. Components to receive plastic laminate to receive laminate, liner or backer on the reverse face. Panels with unbalanced or unfinished faces are not permitted regardless of location.
 - b. Thermofused melamine is to be applied to both faces. Panels with melamine on one side only, or with decorative laminate balanced with melamine are not permitted.

B. Cabinet Construction

1. Components

- a. Material Thicknesses:
 - a. 11/16 inch particle board core door and drawer face, base, wall, and tall cabinet tops and bottoms, cabinet sides, drawer spreaders, cabinet back rear hang strips, structural dividers, and exposed cabinet backs.
 - b. ½ inch particle board core drawer body, drawer bottoms and semi-exposed cabinet backs.
- b. Fastening Methods
 - a. All fixed components permanently assembled with dowel connectors, with additional support at these locations:
 - i. Vertical dividers to be mechanically fastened through the cabinet back at no more than 24" on center.
 - ii. Wall cabinet bottoms to be mechanically fastened through the hang rail at no more than 24" on center, via castle mortise or pocket screw method, so screw heads do not protrude.
 - b. Quantity and locations per AWI Custom Grade requirements.
- c. Tops and bottoms
 - a. Exterior exposed wall cabinet bottoms shall be white, unless noted otherwise.
 - b. Solid sub-top shall be furnished for all base and tall cabinets, except sink cabinets.
 - c. Sink cabinets to have full width doweled in place spreader, with factory cutout for sink clearance. Clips or other mechanical type fasteners are not permitted, unless used to strengthen the spreader.
- d. End panels
 - a. Exposed exterior cabinet ends shall be laminated with decorative laminate, balanced with cabinet liner at semi-exposed, decorative laminate at exposed.
 - b. Holes drilled for adjustable shelves 1 ¼ inches on center.
- e. Backs

- a. Cabinet back shall be fully bound (dadoed) into sides, top, and bottom. Rear, unexposed, side of back shall be toe-nailed to cabinet body with mechanical fasteners and solidified with a continuous bead of industrial grade hot melt adhesive.
- b. Rear hang rails shall be doweled to cabinet end panels. Provide minimum of 2 at base, 2 at wall, and 3 at cabinets over 60" tall.
- c. At cabinets over 36 inches wide, bottom hang rail to be mechanically fastened to cabinet back and/or end panels.
- d. Provide removable back panels and closure panels for plumbing access at all sink cabinets, and where shown on drawings.
- f. Shelves
 - a. $\frac{3}{4}$ inch thick up to 36 inches in length, 1 inch thick over 36 inches in length.
 - b. Fixed shelves to be securely fastened to end panels and/or dividers during the manufacturing process. Locations as indicated on drawings or as defined by manufacturer model number. Field applied fasteners or clips to create a fixed shelf are not permitted.
 - c. All shelves to be installed in cabinets prior to shipment.
- g. Vertical and Horizontal Dividers
 - a. Secured in cabinet with dowels and mechanical fasteners.
- h. Drawer Spreaders
 - a. Provide minimum $\frac{3}{4}$ inch x 4 inch x full width cabinet body rails immediately behind all door/drawer and multiple drawer horizontal joints to maintain exact body dimensions, close off reveal, and be locator for lock strikes.
- i. Drawers
 - a. Drawer sides shall be doweled and glued to receive front and back, machine squared and held under pressure, to set.
 - b. Drawer bottom shall be fully bound into front, sides, and back. Routing, in drawer body for bottom, shall receive glue. Reinforce drawer bottoms with $\frac{1}{2}$ inch x 4 inch side to side intermediate underbody stiffeners.
 - c. Drawer fronts shall be applied to separate drawer body component sub-front.
- j. Door and Drawer Fronts
 - a. Laminated door and drawer fronts shall be $\frac{3}{4}$ inch finished thickness for all hinged and sliding doors. Drawer fronts and hinged doors shall overlay the cabinet body. Maintain a maximum $\frac{1}{8}$ inch reveal between pairs of doors (dependant on hinge selection), between door and drawer front, at bottom of cabinet, or between multiple drawer fronts within the cabinet. Maximum $\frac{1}{4}$ " reveal at top of base cabinets to the underside of the countertop.
 - b. Stile and Rail doors shall be $\frac{3}{4}$ inch thick medium density fiberboard with machined exposed interior frame. All exposed light-opening edges shall be finished with black paint and sealed.
- k. Cabinet Base /Toe Kick

- a. Each base and tall cabinet to have factory applied ladder base system unless noted otherwise on contract drawings. Material is to be plywood.
 - b. Full length ladder base system is acceptable provided it is factory assembled to the size requirements for each location, for field placement, leveling and securing.
- I. Filler panels and Scribes
- a. Laminated filler panels shall be $\frac{3}{4}$ inches thick and made from the same material as the cabinet end panels and are not to exceed 3 inches in width.
 - b. Color to match cabinet door and drawer front color, vertical grain.
 - c. Fillers to be oversized in width and field cut as necessary to provide a tight fit between the cabinet and wall.
2. Workmanship
- a. Water resistant adhesives containing no health hazardous ingredients are required. Methods requiring heat and/or "contact laminating" are not allowed.
 - b. Cabinet parts shall be accurately machined and bored to ensure consistent sizing. End panels shall be doweled to receive bottom and top.
 - c. All cases shall be square, plumb, and true.

2.5 Plastic Laminate Countertops

- A. Construction to comply with AWI Custom Grade, unless otherwise indicated herein.
- B. Decorative plastic laminate bonded to core. Thickness as shown on plans. Underside shall be properly balanced with heavy gauge backing sheet. Furnish countertops with edge treatment and design profile as shown on drawings. Provide tops in as long as practical continuous lengths. Provide mechanical fasteners at splines and joints. No joints closer than 24 inches either side of sink cutout, unless conditions do not allow.
- C. For decorative laminate edging, edging is to be applied before decorative laminate.
- D. Particle board core at all locations
- E. No splines or joints are to occur over open areas below, and are to be fully supported by casework. No ledger strips or other supports at open areas are allowed.
- F. Unsupported spans are not to exceed 48" without brackets or blocking. See drawings for type of support required.
- G. Provide grommets as shown on drawings.

3.1 Execution

3.2 Coordination

- A. Coordinate work of this Section with related work of other trades to ensure proper installation of all items.

3.3 Preparation

- A. Prior to delivery, casework representative is to verify that the job site conditions as required by this section have been established. Work is not to proceed until conditions are acceptable.
- B. Prior to installation, casework and countertops are to be conditioned to the average prevailing humidity levels of the building.

3.4 Installation

A. Casework

1. Install casework level, plumb, true and straight. Shim as required, including base/toe kick assemblies.
2. Align and secure all adjoining cabinets to each other, and to wall via in wall blocking, or direct if masonry or other type of solid wall is present.

B. Countertops

1. Anchor to cabinets at a maximum of 24 inches on center, front and back
2. Install all splashes, supports and grommet as shown on manufacturers drawings, and as required in this section.
3. Seal all joints between countertops, splashes and walls with clear acrylic caulk.

3.5 Adjusting and Cleaning

- A. Adjust all hardware to manufacturer specifications to ensure smooth operation.
- B. Adjust all doors and drawers as required to maintain uniform reveals.
- C. Remove and dispose of all packing materials. Dispose all installation debris and dust.
- D. Deliver any keys, built as drawings, warranty information or other materials that were shipped with casework and countertops to the on-site Project Superintendent.

End of Section