

064040-H: ARCHITECTURAL WOODWORK (06410-H)

GENERAL

In general, follow the guidelines below when designing and specifying cabinetry. Unless specifically indicated otherwise, these guidelines are not intended to restrict or replace professional judgment.

Architectural Cabinets should comply with the current editions of Architectural Woodwork Institute (AWI). At areas subject to state and national regulatory review, comply with NFPA 101 Life Safety Code (editions currently enforced by BFS and Joint Commission), and the Minimum Design Standards for Healthcare Facilities in Michigan (current edition enforced by HFES), for grades of interior architectural woodwork indicated for construction, finishes, installation, and other requirements:

1. Architectural Woodwork Quality Standards: Premium grade, flush overlay style.
2. Construction Documents should list design dimensions, with a note for contractor to verify all field measurements prior to fabrication.
3. In renovation projects, in general, care should be taken to match existing cabinetry styles, finish materials, hardware style and finishes to remain within the room.
4. Generally, install millwork on subfloor prior to interior finishes.

Specify blocking, shims, hanging strips and anchorage required for installing woodwork and concealed within other construction before woodwork installation. All blocking shall meet applicable codes.

Minimize the amount of permanent built-in millwork, especially in Ambulatory Care and business occupancies. Consider the use of systems furniture for ease of future reconfiguration, or open, adjustable shelving instead of upper cabinets in staff-only areas. Many of the Lean Design principals include the ability to visualize supplies, with limited upper cabinet doors.

Refer to the Architectural cabinet [Standard Details](#) on the FPD website for a graphic explanation of these guidelines. For further information on UMHHC Interior Design standards, refer to the [Interior Design Guidelines](#) page.

CONTRACTOR SUBMITTALS:

1. Project Construction Documents should include the following requirements:
 - a. Product Data: Manufacturer's technical data for casework specified.
 - b. Shop drawings are required: To include plans, elevations, details at a large scale showing the location of each item, identify components used, hardware cut sheets, materials and indicate method of attachment.
 - i. Show locations, sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement.
 - ii. Show locations and sizes of cutouts and holes for plumbing fixtures, faucets and other items installed in architectural woodwork.
 - iii. Proposed millwork is to coordinate with existing fire alarm, electrical and interior components. Show adjacent equipment, including:
 1. Fire Cabinets
 2. Strobes & Horns
 3. Receptacles, Power and Data
 4. Switching for lighting and garbage disposals
 5. Wiremold
 6. Tackable surfaces
 7. Undercabinet lighting
 8. Fume hoods
 9. Refrigerators
 10. Medical Equipment
 11. Systems furniture
 12. Toilet Accessories

- 13. Coffeemakers
 - 14. Ice Machines.
 - 15. Shut off valves (locate inside sink base cabinet)
 - 16. Water filters (locate inside sink base cabinet)
 - 17. Other(s)
- c. Samples: Require the contractor to submit samples for UMHC Interior Design Review if product other than specified laminate or solid surface is proposed, and require samples of natural wood finishes for approval.
 - d. Mock-Up: Require the contractor to provide a mock-up for unique applications, as directed by UMHC Design Manager or Architect.

CABINETS DETAILING

1. General:

- a. Cabinet finish material is often plastic laminate. However, wood, painted metal, stainless steel or other specialty materials are used to suit project requirements.
- b. Edges: Apply 3 mil min. PVC edge banding to all exposed plastic laminate edges, to match plastic laminate.
- c. Hardware: Typically, finish is to match US26D, satin chrome, on hardware exposed to view.
- d. Wood should not be in contact with the floor.
- e. Proposed millwork is to coordinate with existing fire alarm, electrical and interior components. Fully indicate adjacent equipment in elevation, plan and details, including the following. Include critical dimensions and mounting heights. Refer to list at 1.b.iii above for items to show on interior elevations.
- f. Where natural wood cabinets are to be provided, all exposed edges should be solid hardwood to match species and finish, with biscuit, dowel or similar joint to veneer plywood.

- 2. Millwork Soffits:** Typically detail flush millwork soffits above wall cabinets instead of sloped tops or gypsum board soffits. Face of millwork soffit should be flush with the cabinet doors and filler strips below. Detail in such a way that if the cabinet is removed, the ceiling grid does not require rework. Flat tops may not be provided on wall or tall cabinets except in non-patient occupancies. Sloped tops, with a minimum 30 degree slope, may be installed at very high ceilings, staff areas or other locations at Design Manager's discretion.

- 3. Countertops and Backsplashes:** Select countertop materials with appropriate characteristics in consultation with UMHC Design Manager.

- a. Typically design 4" backsplashes, or no backsplash, at standing-height work counters without sinks.
- b. Desk-height work counters are typically systems furniture. Where a built-in counter is provided, it is typically plastic laminate with no base cabinets or backsplash. Typical seated height counter shall be 28-1/2" high with 27" minimum clearances between finish floor and underside of counter.
- c. Plastic Laminated counters shall not be self-edged. Wood, vinyl or other materials shall be used for the nosing.
- d. Radial scallops may be provided at back of countertops which are 6-1/2" width and 2" depth for cable connections instead of plastic grommets at desk surfaces. Center scallop in workstation, unless workstation is on a corner, then provide one scallop 10" on either side of the corner, total of two. Where grommets are used, specify Doug Mockett 3" round.
- e. At wet surfaces and sink locations:
 - i. Typically specify solid surface, stainless steel or other specialty countertops to suit project requirements. The use of plastic laminate at wet locations should only be in consultation with the UMHC Design Manager, and only as permitted by state code.
 - ii. Solid surface counters and other wet locations must be backed with water resistant backing board.
 - iii. All Countertops are to be provided with eased corners.

- iv. A no-drip countertop edge is preferred.
- v. Backsplashes and sidesplashes are to be integrally fabricated with the countertop as one piece, in the shop, with a coved transition between the counter and splash. Backsplash is not to be field applied and caulked.
- vi. Back and sidesplashes at sink locations should extend to the underside of the upper wall cabinets, in public and patient areas.
- vii. An eight inch high back and side splash is the minimum for wet locations. If a lower backsplash is considered due to budget constraints, the wall surface above the sink must be covered with waterproof material.
- viii. Design solid surface splash guards between the sink and the adjacent counter in clinical areas to prevent water splashes from contaminating the adjacent work surface, minimum 8" high, if the adjacent counter is to be used for paperwork, the preparation of sterile bandages or other materials.
- ix. Sinks in solid surface counters should be stainless steel under-mount, integral solid surface (specified without overflow vents), or other specialty product to suit function.
- x. Drains should be offset from the faucet above and not directly below the faucet.
- xi. Counters shall be designed to support 250 pounds per linear foot minimum. Heavier equipment may require greater capacities.

4. Countertop Supports: Architect to coordinate on elevation drawings with UMHHC provided keyboard trays, file cabinets and knee space.

- a. Countertop supports to be located 4'-0" on center maximum.
- b. Supports to be equal to or greater than 1000 lb. capacity per pair.
- c. Supports should not extend to the floor except where an end panel is required.

5. Sinks:

- a. Sinks should be placed as close as design allows to entry doors in patient and exam rooms, and ideally should be located to allow staff to face and talk with the patient while washing hands.
- b. Install all hung sinks, toilets, urinals and other plumbing fixtures on a waterproof wall surface material rather than painted gypsum board.
- c. Where stainless steel sinks are installed in stainless steel counters, they shall be factory welded into one integral unit with slopes to the sink.
- d. Do not provide prefabricated "patient care units" ("swivettes", toilet/sink combinations) unless specifically authorized by Design Manager under unusual circumstances. Instead, provide standard plumbing fixtures, grab bars, accessories with a custom cabinetry sink. Refer to plumbing design guidelines and PML for further information on standard plumbing fixtures.
- e. d. Refer to DG 220010-H "Supplemental Plumbing Specialties" for additional plumbing fixture requirements.

6. Wall Cabinets:

- a. Where doors extend to ceiling, drop doors 1" minimum from ceiling. Allow opening clearance around sprinkler heads and other ceiling mounted items.
- b. Include a 2-1/2" under cabinet light valance where under cabinet lights are to be installed. Allow front of cabinet box to extend down 2-1/2" from cabinet bottom to cover under cabinet light. Side of cabinetry to extend down where there are exposed ends. Doors to extend down, flush with bottom of light valance. At offsite outpatient and business occupancies, the light valance may be installed separately. Coordinate with size and location of undercabinet lights. The underside of wall cabinets are to be designed such that a continuous valance light fixture is possible.
- c. Specify 3/4" thick bottoms for wall cabinets.
- d. Distance between top of countertop to underside of wall cabinet to accommodate equipment and use, 18" minimum. Consider coffeemakers, paper towel dispensers, equipment, computer monitors, kitchen equipment, printers, etc.
- e. Provide PVC edge banding around door and drawer faces.

7. Base Cabinets:

- a. Sink base cabinets should not be provided. Instead, typically provide an angled apron per the architectural detail D06040H-5.pdf, available on the FPD website. These apron panels should be 3/4" thick, removable with finish to match cabinet face. Removable panels should be easily removable by one person with a screwdriver, and should be detailed to prevent access by children in exam rooms.
 - b. Detail a minimum of 1" overhangs from face of countertop edge to front face of cabinet doors, drawers or side panels.
 - c. Foot pedals should typically be adjusted to the right of the centerline of the base cabinet and located in the field. Where the sink is located at the far right side of the wall, in the corner, consider left justified foot controls.
 - d. All exposed surfaces should be clad in the same plastic laminate unless noted otherwise.
 - e. Provide adjustable cabinet levelers instead of wood base, Peter Meier Inc. products or equal, at any wet location. At offsites, pressure treated wood bases may be used.
 - f. Provide 4" high removable toe kick to allow access under cabinetry in case of leaks or need to adjust cabinet levelers.
 - g. Provide 4" deep toe kick at front of cabinetry and a 1" deep side toe kick from cabinet box face to face of kick panel, at exposed ends.
 - h. Concealed backs of panels with exposed plastic laminate surfaces can be high pressure decorative laminate, Grade BKL.
- 8. Doors and Drawer Fronts:**
- a. 3/4" thick with finish to match cabinet face. Provide thicker material for doors greater than 48-inches high. Make accommodations to door/drawer thicknesses if required to create a uniform, flush cabinet front.
 - b. Each cabinet door shall not be greater than 24" wide.
 - c. Door and Drawer fronts, substrate material should be finished with the same thickness of material on front and back, typically horizontal grade plastic laminate, unless in an area with light usage
 - d. Provide PVC edge band to match plastic laminate.
 - e. At drawers, a plastic or metal prefabricated drawer box system can be used.
- 9. Ends and Partitions:** 3/4" minimum thick. Detail exposed parts with finish to match cabinet face. Detail semi-exposed parts with finish to match cabinet interior. Provide PVC edge banding to match.
- 10. Adjustable Shelves:** At Utility areas, consider the use of open wire shelving instead of laminated shelves. If plastic laminated shelves are desired, the minimum thickness as indicated or as required by function. Provide exposed parts with finish to match cabinet face. At open shelving, provide heavy duty, double shelf standards, minimum 24" on center, KV 185 product or equal. Provide PVC edge banding to match.
- a. 30" or less: 3/4" thick minimum.
 - b. Longer than 30": 1" thick minimum.
 - c. Shelves should not be longer than 48". For longer runs, use multiple shelves.
 - d. Consider the use of freestanding shelves.
- 11. Fillers:**
- a. Detail a minimum of 1" filler panel where cabinets are adjacent to walls.
 - b. Detail a minimum of 3" filler panel at inside corner of "L" shaped cabinet layouts.
 - c. Other fillers should be no more than 2".
 - d. At upper cabinets, top and bottom fillers are required to infill the void at the corner, unless a corner cabinet is planned.
 - e. Fillers shall typically be flush with the adjacent cabinet faces.
- 12. Tall Cabinets:**
- a. Comply with AWI guidelines, hardware manufacturer's guidelines and good practice to determine material and thickness for full height and/or wide doors, and quantity of hinges.
 - b. Increase quantity of hinges for cabinets with door widths greater than 24".
- 13. Hardware:**
- a. Hinges: Concealed type, self-closing, Grass Institutional hinges or equal. Provide quantity of hinges per manufacturers standards.
 - b. Recessed pull design standard: Preferred at wall and base cabinets in all areas.

- c. Wire Pulls design standard: 4" metal, 5/16"Ø aluminum can be used at upper cabinets or full height cabinets where budget is a concern. Wire pulls should not be used at base cabinets where cart, bed or stretcher traffic is anticipated.
 - d. Drawer Slides: Heavy duty, bottom mounted, with a minimum load capacity of 100 lbs or to suit function.
 - e. Provide full extension drawer glides and drawers and trash receptacle cabinets
 - f. Catches: Magnetic type with adjustment slots for screw attachment.
 - g. Adjustable Shelf Supports within cabinet boxes: Heavy duty flush mounted aluminum/ steel pilaster standards and supports,
 - h. At open shelves, provide surface mounted double aluminum or steel pilasters and supports.
 - i. Label Frames: Provide as requested, and at trash and linen pull out cabinets
- 14. Locks:** Specify at all doors and drawers in exam rooms and public areas unless otherwise noted. Do not install on trash and linen pull outs. Do not install in staff areas unless specifically requested.
- a. Must be pin tumbler (cannot be wafer or disc tumbler).
 - b. Can not be cam or pin tumbler cam lock.
 - c. Specify if cores and keying are provided by UMHHC or Contractor, in consultation with Owners Representative.
- 15. Windowsills:** Solid surface or stone windowsills should be specified where windowsills are included. Plastic laminate windowsills should not be provided at exterior windows.

IDENTIFICATION OF PARTS: COMPLY WITH AWI SECTION 400 AND AS FOLLOWS:

- 1. General:**
No exposed raw wood in exposed or semi-exposed locations, including bottom of counter, except in non-patient, dry areas.
- 2. Exposed Parts:** Surfaces visible when:
 - a. Consider tops less than 72" above finished floor as exposed.
 - b. Tops and Bottoms:
 - i. Design full solid tops and bottoms. Design exposed parts with finish to match cabinet face.
 - c. Drawer fronts and doors are closed.
 - a. Cabinets and shelving are open-type or behind clear glass doors.
 - b. Bottoms of cabinets are seen 42" or more above finish floor.
 - c. Tops of cabinets are seen below 78" above finish floor, or are visible from an upper floor or staircase after installation.
 - d. Portions of cabinets are visible when fixed appliances are installed. Front edges of cabinet body members are visible or seen through a gap of greater than 1/8" with doors and drawers closed.
- 2. Semi-Exposed Parts:** Surfaces visible when:
 - a. Drawer/Doors are in open position.
 - b. Bottoms of cabinets are between 30" and up to 42" above finish floor.
 - c. All front edges of shelving behind doors.
- 3. Concealed Surfaces:** Surfaces are concealed when:
 - a. Surfaces are not visible after installation.
 - b. Bottoms of cabinets are less than 30" above finish floor.
 - c. Tops of cabinets are over 78" above finish floor and are not visible from an upper level.
 - d. Stretchers, blocking and/or components are concealed by drawers.