

## **SECTION 064100 CUSTOM CABINETS**

### **PART 1 GENERAL**

#### **1.01 SECTION INCLUDES**

- A. Specially fabricated cabinet units.
- B. Countertops.
- C. Hardware.
- D. Factory finishing.
- E. Preparation for installing utilities.

#### **1.02 RELATED REQUIREMENTS**

- A. Section 061000 - Rough Carpentry: Support framing, grounds, and concealed blocking.
- B. Section 088000 - Glazing: Glass for casework.

#### **1.03 REFERENCE STANDARDS**

- A. AWI (QCP) - Quality Certification Program; Current Edition.
- B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
- C. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.
- D. BHMA A156.9 - Cabinet Hardware; 2020.
- E. GSA CID A-A-1936 - Adhesives, Contact, Neoprene Rubber; 1996a (Validated 2013).
- F. HPVA HP-1 - American National Standard for Hardwood and Decorative Plywood; 2020.
- G. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.
- H. UL (DIR) - Online Certifications Directory; Current Edition.
- I. WI (CCP) - Certified Compliance Program (CCP); Current Edition.
- J. WI (MCP) - Monitored Compliance Program (MCP); Current Edition.

#### **1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Convene a preinstallation meeting not less than one week before starting work of this section; require attendance by all affected installers.

#### **1.05 SUBMITTALS**

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
- C. Product Data: Provide data for hardware accessories.
- D. Samples: Submit actual samples of architectural cabinet construction, minimum 12 inches square, illustrating proposed cabinet and countertop substrate and finish.
- E. Samples: Submit actual sample items of proposed pulls, hinges, and shelf standards, demonstrating hardware design, quality, and finish.

#### **1.06 QUALITY ASSURANCE**

- A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.

#### **1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Protect units from moisture damage.

#### **1.08 FIELD CONDITIONS**

- A. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.

## **PART 2 PRODUCTS**

### **2.01 CABINETS**

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.

### **2.02 WOOD-BASED COMPONENTS**

- A. Wood fabricated from old growth timber is not permitted.

### **2.03 LUMBER MATERIALS**

- A. Softwood Lumber: NIST PS 20; Graded in accordance with AWI/AWMAC Architectural Woodwork Quality Standards Illustrated, Grade III/Economy; average moisture content of 4-9 percent; species as follows:
  - 1. Exposed Surfaces: Species See Finish Drawings for Materials.
  - 2. Semi-Exposed Surfaces: Species See Finish Drawings for Materials.
- B. Hardwood Lumber: NHLA; graded in accordance with AWI/AWMAC Architectural Woodwork Quality Standards Illustrated,, Grade III/Economy; average moisture content of 4-9 percent; species and grade as follows:
  - 1. Exposed Surfaces: Species See Finish Drawings for Materials.
  - 2. Semi-Exposed Surfaces: Species See Finish Drawings for Materials.

### **2.04 PANEL MATERIALS**

- A. Exposed Surfaces: PS 1; APA A-A Grade, plain-sliced (See Finish Drawings for materials) face veneer, Interior rated adhesives, core of particleboard, medium density fiberboard, or engineered combination, thickness as indicated.
- B. Hardwood Faced Plywood: HPVA HP-1; graded in accordance with AWI/AWMAC Architectural Woodwork Quality Standards Illustrated, core of veneer (wood plies); type of glue recommended for specific application; thickness as required.
- C. Hardboard: AHA A135.4; Pressed wood fiber with resin binder, Class 1 - Tempered, 1/4 inch thick, smooth one side (S1S), located as follows:

### **2.05 LAMINATE MATERIALS**

- A. Manufacturers: See Finish Drawings for Manufacturer's and styles.
  - 1. Substitutions: Not permitted.
- B. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications.
  - 1. Plastic Laminate for countertops: Use medium density fiberboard (plywood at all wet areas) substrate covered with HPDL, conventionally fabricated and self-edge banded. For material selection, see Finish Drawings.
- C. Provide specific types as indicated.

### **2.06 COUNTERTOPS**

- A. See Finish Drawings for specifications of all countertops.

### **2.07 ACCESSORIES**

- A. Adhesive: Type recommended by fabricator to suit application.
- B. Glass: Clear Float Glass as specified in Section 088000 .
- C. Fasteners: Size and type to suit application.
- D. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; galvanized or chrome-plated finish in concealed locations and stainless steel or chrome-plated finish in exposed locations with trim ring.
- E. Concealed Joint Fasteners: Threaded steel.
- F. Grommets: Standard plastic grommets for cut-outs, in color to match adjacent surface.

## **2.08 HARDWARE**

- A. Hardware: BHMA A156.9, Types as indicated. As manufactured by Blum.
- B. Adjustable Shelf Supports: Standard side-mounted system using recessed metal shelf standards and coordinated self rests, polished chrome finish, for nominal 1 inch spacing adjustments.
- C. Drawer and Door Pulls: Stainless Steel satin finish grade 630.
- D. Sliding Door Pulls: Elongated shape for recessed installation, steel with chrome finish.
- E. Keyed Cabinet Locks: Keyed cylinder, two keys per lock, master keyed, steel with chrome finish.
- F. Cabinet Catches and Latches:
- G. Drawer Slides:
  - 1. Type: Full extension.
  - 2. Mounting: Side mounted.
  - 3. Stops: Integral type.
  - 4. Features: Provide self closing/stay closed type.
  - 5. Manufacturers:
    - a. Accuride International, Inc.: [www.accuride.com](http://www.accuride.com).
      - 1) Drawer width up to 24 inches or less: Medium Duty 100lb capacity - Accuride 7432.
      - 2) Drawer width 24 inches or more and file drawers: Heavy Duty over travel slide 200lb capacity side mount - Accuride 3640A.
- H. Hinges: Concealed (fully mortised) self-closing type, steel with polished finish.
- I. Silencers: For doors and drawers, use 3/8 inch neoprene disks.

## **2.09 SHOP TREATMENT OF WOOD MATERIALS**

- A. Provide UL (DIR) listed and approved identification on fire retardant treated material.
- B. Deliver fire retardant treated materials cut to required sizes. Minimize field cutting.

## **2.10 SITE FINISHING MATERIALS**

- A. Finishing: Site finished as specified on Finish Drawings.

## **2.11 FABRICATION**

- A. Fabricate casework to dimensions, profiles and details listed below.
  - 1. Cabinet style: Flush overlay
- B. Case Construction
  - 1. Joinery shall be 8mm fluted hardwood dowels and Hafele Conformat 7mm x 50mm, self-countersinking, steel, zinc-plated screw. Tops, bottoms, and other components such as rear and front rails are joined to the case sides by this method. A minimum of 4 dowels and screws on 15 inch deep wall cabinets and 5 dowels and screws on 24 inch deep base cabinets are used. The back will be captive on three sides for base cabinets and four sides for wall cabinets. The un-captured (top) edge of the base cabinet back butts against the bottom of the counter top.
  - 2. Unless specifically indicated, the carcass core material will be 3/4 inch particle board with thermally fused white (WA 1573-60) melamine.
  - 3. Case backs will be 1/4 inch pre-laminated particleboard, hardboard, or MDF and fully bound (dadoed) four sides. Back panel to be sealed with full-perimeter high-strength hot melt adhesive.
  - 4. All exposed edges and semi-exposed edges of case parts will have edgebanding machine applied with waterproofing hot melt glue.
  - 5. Shelf core shall be 3/4 inch thick particleboard core edgebands on all edges to match interior color.
- C. Drawers:

1. Box type drawer box - drawer sides, front and back shall be 1/2 inch or thicker particleboard laminated with thermally fused white (WA 1573-60) melamine on 2 sides. Parts are joined with staples and/or screws. No sides shall be greater than 10 inches tall. Part edges are edge banded with matching high pressure laminate GP50 (.050), color to match exposed face. Door is laminated first and edge applied last. Drawer bottom will be 1/4 inch or thicker pre-laminated particleboard or MDF captive on all sides. Drawer slides are bottom mount type and are screwed through bottom of drawer runner into sides.
- D. Door and Drawer Fronts:
1. Standard - Unless specifically indicated, the door/drawer front carcass core material will be 3/4 inch particleboard laminated with thermally fused melamine to match interior case color.
  2. Optional - 3/4 inch particleboard laminated with high pressure laminate GP50 on the exposed face and thermally fused melamine to match the interior case color.
  3. No doors will be greater than 24 inches wide.
  4. Gaps between fronts, and between fronts and top edges of cases to be 6mm or less.
  5. For optional grained patterns, grain to run vertical on doors, and horizontal on drawer fronts and false fronts.
- E. Toe Bases:
1. Standard - Toe base will be of a separate continuous ladder type construction. Core material shall be 3/4 inch southern pine plywood, pressure impregnated with CCA in accordance with Federal Specification TT-W-571 to a minimum retention of 40lbs. of CCA per cubic foot of wood and American Wood Preservers Association (AWPA) Standards, and shall be kiln dried after treatment.
  2. Exposed surfaces may be laminated with high-pressure laminate or left unfinished to be covered with rubber cove base. Rubber cove base shall be furnished and installed by others.
- F. Countertops
1. Standard - Countertops shall be 1 1/2 inches thick, 1 inch overhang, self edged type. Top face laminated with high-pressure laminate.
  2. Wet Areas - Countertop shall be 3/4 inch thick plywood, 1 inch overhang, self edged type. Top face laminated with high-pressure laminate.
  3. Optional - Specialty tops supplied through distributors. Reference Finish plans for type and location.
  4. Provide cutouts for plumbing fixtures. Verify locations and size of cutouts from on-site dimensions. Seal cut edges.
  5. Locate counter butt joints two feet from sink cut outs. Fit corners and joint hairline; secure with concealed fasteners.
  6. Provide 1-1/2 inch radius corners on all countertops at outside corners.

## **2.12 SHOP FINISHING**

- A. Sand work smooth and set exposed nails and screws.
- B. For opaque finishes, apply wood filler in exposed nail and screw indentations and sand smooth.
- C. On items to receive transparent finishes, use wood filler matching or blending with surrounding surfaces and of types recommended for applied finishes.
- D. Finish work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 5 - Finishing for grade specified and as follows:
  1. Transparent:
    - a. Sheen: Flat.
  2. Opaque:
    - a. Color: As selected by Architect.
    - b. Sheen: Flat.
- E. Prime paint surfaces in contact with cementitious materials.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify adequacy of backing and support framing.
- B. Verify location and sizes of utility rough-in associated with work of this section.

### **3.02 INSTALLATION**

- A. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.
- B. Use fixture attachments in concealed locations for wall mounted components.
- C. Use concealed joint fasteners to align and secure adjoining cabinet units.
- D. Carefully scribe casework abutting other components, with maximum gaps of 1/8 inch. Do not use additional overlay trim for this purpose.
- E. Secure divider panels, divider panels, and divider panels to floor using appropriate angles and anchorages.
- F. Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.
- G. Site glaze glass materials using Interior Dry method; see Section 088000.
- H. Provide filler or scribing strip of the same material and finishes as adjacent casework. Fill horizontal void at base of cabinet created by filler with strip material to close all varmit access behind cabinets.
- I. Joints between casework and wall surfaces shall be sealed flush with sealant conforming to ASTM 90 TYPE GRADE NS Class 25. Color as indicated on finish drawings.

### **3.03 ADJUSTING**

- A. Adjust installed work.
- B. Adjust casework and hardware so door and drawers are centered in openings and operate smoothly without warp or bind.

### **3.04 CLEANING**

- A. Clean casework, counters, shelves, hardware, fittings, and fixtures.

**END OF SECTION**