

SECTION 12 32 00
MANUFACTURED WOOD CASEWORK

SPEC WRITER NOTES:

1. Use this section only for NCA projects.
2. Delete between //----// if not applicable to project. Also delete any other item or paragraph not applicable in the section and renumber the paragraphs.

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies // wood veneer casework, // plastic laminate casework // as detailed on the drawings, including related components and accessories required to form integral units. Provide wood casework items shown on the drawings, but not specified below, as part of the work under this section; applicable portions of the specification apply to these items. Provide like items of casework of the same design and by one manufacturer.

1.2 RELATED WORK

- A. Custom Casework: Section 06 20 00, FINISH CARPENTRY.
- B. Color and Finish of Plastic Laminate: Section 09 06 00, SCHEDULE FOR FINISHES.
- C. Lavatories and Plumbing in Casework: Section 22 40 00, PLUMBING FIXTURES.

1.3 PERFORMANCE REQUIREMENTS

- A. Sustainably Harvested Wood: Comply with requirements of Section 01 81 13, SUSTAINABLE DESIGN REQUIREMENTS.
- B. Engineered Wood Products:
1. Provide products with no added urea formaldehyde; determine formaldehyde concentrations in air from wood products under test conditions of temperature and relative humidity in accordance with ASTM D6007 or E1333.
 2. Bio-based Content:
 - a. Interior Panels: Engineered products designed specifically for interior applications and providing a surface that is impact-, scratch-, and wear-resistant and that does not absorb or retain moisture; provide minimum 55 percent bio-based content.
 - b. Structural Interior Panels: Engineered products designed for use in structural construction applications; provide minimum 89 percent bio-based content.

c. Structural Wall Panels: Engineered products designed for use in structural walls, curtain walls, floors and roofs; provide minimum 94 percent bio-based content.

3. VOC Emissions:

a. Provide low VOC products with Green Seal Certification to GS-36 and description of the basis for certification //; or // . //

SPEC WRITER NOTES:

1. Select the paragraph a. or b. or both.

b. //Submit manufacturer's certification that products comply with SCAQMD Rule 1168 in areas where exposure to freeze/thaw conditions and direct exposure to moisture will not occur. In areas where freeze/thaw conditions do exist or direct exposure to moisture can occur, submit manufacturer's certification that products comply with Bay Area AQMD Reg. 8, Rule 51 for containers larger than 16 oz. and with California Air Resources Board (CARB) for containers 16 oz. or less. //

1.4 MANUFACTURER'S QUALIFICATIONS

A. Provide casework by a manufacturer who produces casework similar to the casework specified and shown.

1.5 SUSTAINABILITY REQUIREMENTS

A. Materials in this section may contribute towards contract compliance with sustainability requirements. See Section 01 81 13, SUSTAINABLE DESIGN REQUIRMENTS, for project // local/regional materials, // low-emitting materials, // recycled content, // certified wood // _____// requirements.

B. Biobased Material: For products designated by the USDA's BioPreferred® program, provide products that meet or exceed USDA recommendations for biobased content, subject to the products compliance with performance requirements in this Section. For more information regarding the product categories covered by the BioPreferred® program, visit <http://www.biopreferred.gov>.

1.6 SUBMITTALS

A. Submit in accordance with Section `01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Provide documentation of conformance with performance requirements of this section.

C. Manufacturer's Literature and Data:

1. Sinks, trim and fittings.

2. Locks for doors and drawers.
 3. Casework Hardware.
 4. Adhesive cements.
- D. Samples:
1. Counter top or cabinet face, plastic laminate, 150 mm (six inch) square.
 2. Wood Face Veneer or Hardwood Plywood.
- E. Shop Drawings (1/2 size):
1. All casework, showing details of construction, including materials, hardware and accessories.
 2. Cabinets and counters showing faucets in connection with sink bowls, and electrical fixtures and receptacles which are mounted on cabinets and counters.
 3. Fastenings and method of installation.
- F. //Mock-Up: Where required for special casework and where four or more similar units are involved, submit a mock-up of a typical unit for approval by COR. //

1.7 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by the basic designation only. Comply with applicable provisions and recommendations of the following, except as otherwise shown or specified.

SPEC WRITER NOTES:

1. Remove reference citations that do not remain in Part 2 or Part 3 of edited specification.
2. Verify and make dates indicated for remaining citations the most current at date of submittal; determine changes from date indicated on the TIL download of the section and modify requirements impacted by the changes.

- B. Composite Panel Association (CPA):
- | | |
|----------------|-----------------------------------------------------------|
| ANSI A208.1-22 | Particleboard |
| ANSI A208.2-22 | Medium Density Fiberboard (MDF) for Interior Applications |
- C. U.S. Department of Commerce Product Standards (Prod. Std):
- | | |
|--------|-------------------------------------|
| PS1-09 | Construction and Industrial Plywood |
|--------|-------------------------------------|
- D. Hardwood, Plywood and Veneer Association (HPVA):
- | | |
|--------|---------------------------------|
| HP1-20 | Hardwood and Decorative Plywood |
|--------|---------------------------------|
- E. Architectural Woodwork Institute (AWI):

Architectural Woodwork Quality Standards, Guide Specifications Quality Certification Program

- F. American Society of Mechanical Engineers (ASME):
 A112.18.1-18 Plumbing Fixture Fittings
- G. National Electrical Manufacturers Association (NEMA):
 LD3-05 High Pressure Decorative Laminates
 LD3.1-95 Performance, Application Fabrication and Installations of High-Pressure Decorative Laminates
- H. Builders Hardware Manufacturers Association (BHMA)
 BHMA 156 Complete set of BHMA Standards
- I. American Society for Testing and Materials (ASTM):
 D6007-22 Determining Formaldehyde Concentrations in Air from Wood Products Using a Small-Scale Chamber
 E1333-22 Determining Formaldehyde Concentrations in Air and Emission Rates from Wood Products Using a Large Chamber

PART 2 - PRODUCTS

SPEC WRITER NOTES:

1. Make material requirements agree with applicable requirements specified in the referenced Applicable Publications. Update and specify only that which applies to the project.
2. Review USDA Biopreferred Categories for listed materials within the scope of the following paragraph and include additional requirements, unless justification for non-use exists.

2.1 PLYWOOD, HARDWOOD FACE VENEER

SPEC WRITER NOTES:

1. Edit or add species.

- A. HPVA HP-1, Premium Grade // plain sliced Red Oak // Rotary cut Select White Birch // ____ //.

2.2 PLASTIC LAMINATE

- A. NEMA LD-3.
- B. Exposed decorative surfaces including countertops, both sides of cabinet doors, and for items having plastic laminate finish.
- C. Cabinet Interiors Including Shelving: Both of following options to comply with NEMA, LD3.1 as a minimum.
1. Plastic laminate clad plywood or particle board.

2.3 PLYWOOD, SOFTWOOD

- A. Prod. Std. PS1, five ply construction from 13 mm to 28 mm (1/2 inch to 1-1/8 inch) thickness, and seven ply for 31 mm (1 1/4 inch) thickness.

2.4 PARTICLEBOARD

- A. CPA A208.1, Type 1, Grade 1-M-3.

2.5 MEDIUM DENSITY FIBERBOARD (MDF)

- A. Fully waterproof bond confirming to CPA A208.1 and CPA A208.2.

2.6 SOLID WOOD

- A. Provide wood required for edge banding // moldings // legs // of same species as wood face veneer.

2.7 FIRE-RETARDANT TREATMENT

- A. Provide fire-retardant-treated wood products that are free of halogens, sulfates, ammonium phosphate and formaldehyde.
- B. Fire retardant treatment of wood products must conform to the requirements of AWPA Standard U1, Commodity Specification H and AWPA Standard T1, Section H.

2.8 HARDWARE

- A. Provide hardware and accessory materials associated with interior architectural woodwork.
- B. Comply with BHMA 156.9
 1. Extension drawer slides: ANSI/BHMA A156.9, Type B85071.
 2. Semi-concealed hinges: ANSI/BHMA A156.9, Type B81201, 1-1/2 inches.
 3. Full surface hinges: ANSI/BHMA A156.9, Type B81131, 1-1/2 inches.
 4. Knob pulls: ANSI/BHMA A156.9, 1-inch diameter, Type B12132.
 5. Bar type pulls: ANSI/BHMA A156.9, 4-inch overall length, Type B12012.
 6. Semi-concealed hinges: ANSI/BHMA A156.9, Type B81201, 40 millimeter.
 7. Full surface hinges: ANSI/BHMA A156.9, Type B81131, 40 millimeter.
 8. Knob pulls: ANSI/BHMA A156.9, 25 millimeter diameter, Type B12132.
 9. Bar type pulls: ANSI/BHMA A156.9, 100 millimeter overall length, Type B12012.
 10. Locks, keying, and keys: As directed.
 11. Catches: Magnetic, 22 newton 5-pound pull.
 12. Sliding door set: Impregnated fiberboard track; Nylon glides.
- C. Finishes: Comply with BHMA 156.18
- D. Shelf Standards (Except For Fixed Shelves):

1. Bright zinc-plated steel for recessed mounting with screws, 16 mm (5/8 inch) wide by 5 mm (3/16 inch) high providing 13 mm (1/2 inch) adjustment, complete with shelf supports.

SPEC WRITER NOTES:

1. Make selection and edit the following paragraphs.

2.9 ADHESIVES

- A. Product compliant with Performance Requirements.

2.10 FABRICATION

- A. Casework to be of the // flush overlay // exposed face frame // reveal overlay // design and, except as otherwise specified, be of premium grade construction and of component thickness in conformance with AWI Quality Standards.
- B. Provide both wall and base cabinet assemblies to consisting of individual units joined into continuous sections as indicated.
- C. Provide fastenings to permit removal and replacement of individual units without affecting the remainder of the installation.
- D. Support Members for Tops of Tables and Countertops:
 1. Construct as detailed on construction documents.
 2. Provide miscellaneous steel members and anchor as shown on construction drawings.
- E. Legs for Counters:
 1. Fabricate legs for counters of 1.6 mm (0.0635 inch) thick, 38 mm (1 1/2 inch) square tubular // stainless // steel.
 2. Secure legs to counter tops and provide legs at bottom with shoes not less than 25 mm (1 inch) in height.
 3. Fabricate shoes of stainless steel, aluminum or chromium plated brass.
- F. // Cantilever Table Supports:
 1. Wall mounted steel supports to carry // // mm (// // inch) wide table and supported load of // // kg (// // pounds). //

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install woodwork to comply with AWI Section 1700.
- B. Field measure installation locations prior to fabrication, including coordination of mechanical, electrical and plumbing services.

- C. Begin only after work of other trades is complete, including wall and floor finish completed, ceilings installed, light fixtures and diffusers installed and connected and area free of trash and debris.
- D. Set casework in place; level, plumb and accurately scribe and secure to walls, and/or floors.
- E. Provide complete installation including all trim and hardware; leave the casework clean and free from defects.
- F. Install without distortion so doors and drawers fit openings and operate unencumbered.

3.2 FASTENINGS

- A. Provide fastenings for securing casework to adjoining construction as detailed on the shop drawings.
- B. See Section 05 50 00, METAL FABRICATIONS, for reinforcement of walls and partitions for casework anchorage.

3.3 TOLERANCES

- A. Install woodwork plumb, level, true, and straight with no distortions.
- B. Install to a tolerance of 3 mm in 2400 mm (1/8 inch in 96 inches) for plumb and level including countertops.
- C. Install cabinets and countertops no more than 3 mm in 2400 mm (1/8 inch in 96 inches) sag, bow, or other variation from a straight line.

3.4 REPAIR, ADJUSTING, AND CLEANING

- A. It is at the CORs discretion to reject any visually damaged or defective woodwork, or insufficient repairs, and in the event of woodwork unaccepted due to quality, will be replaced.
- B. Repair damaged and defective woodwork where possible. Where not possible to repair, replace woodwork.
- C. Clean, lubricate, and adjust all hardware to operate as intended.
- D. Clean all woodwork on all exposed and all interior surfaces.

- - - E N D - - -

VA Specifications Part 3 Execution for Reference:

PART 3 - EXECUTION

3.1 COORDINATION

- A. Begin only after work of other trades is complete, including wall and floor finish completed, ceilings installed, light fixtures and diffusers installed and connected and area free of trash and debris.

- B. Verify location and size of mechanical and electrical services as required and perform cutting of components of work installed by other trades.
- C. Verify reinforcement of walls and partitions for support and anchorage of casework.
- D. Coordinate with other Divisions and Sections of the specification for work related to installation of casework systems to avoid interference and completion of service connections.

3.2 INSTALLATION

- A. Install casework in accordance with manufacturer's written instructions // and per SEFA 2.3 recommendations //.
 - 1. Install in available space; arranged for safe and convenient operation and maintenance.
 - 2. Align cabinets for flush joints except where shown otherwise.
 - 3. Install with bottom of wall cabinets in alignment and tops of base cabinets aligned level, plumb, true, and straight to a tolerance of 3.2 mm in 2438 mm (1/8 inch in 96 inches).
 - 4. Install corner cabinets with hinges on corner side with filler or spacers sufficient to allow opening of drawers.
- B. Support Rails:
 - 1. Install true to horizontal at heights shown on construction documents; maximum tolerance for uneven floors is plus or minus 13 mm (1/2 inch).
 - 2. Shim as necessary to accommodate variations in wall surface not exceeding 5 mm (3/16 inch) at fastener.
- C. Wall Strips:
 - 1. Install true to vertical and spaced as shown on construction documents.
 - 2. Align slots to assure that hanging units will be level.
- D. Plug Buttons:
 - 1. Install plug buttons in predrilled or prepunched perforations not used.
 - 2. Use chromium plate plug buttons or buttons finish to match adjacent surfaces.
- E. Seal junctures of casework systems with mildew-resistant silicone sealants as specified in Section 07 92 00, JOINT SEALANTS.

3.3 . CLOSURES AND FILLER PLATES

- A. Close openings larger than 6 mm (1/4 inch) wide between cabinets and adjacent walls with flat, steel closure strips, scribed to required contours, or machined formed steel fillers with returns, and secured with sheet metal screws to tubular or channel members of units, or bolts where exposed on inside.

- B. Where ceilings interfere with installation of sloping tops, omit sloping tops and provide flat steel filler plates.
- C. Secure filler plates to casework top members, unless shown otherwise on construction documents.
- D. Secure filler plates more than 152 mm (6 inches) in width top edge to a continuous 25 x 25 mm (1 x 1 inch) 0.889 mm (1/16 inch) thick steel formed steel angle with screws.
- E. Anchor angle to ceiling with toggle bolts.
- F. Install closure strips at exposed ends of pipe space and offset opening into concealed space.
- G. Finish closure strips and fillers with same finishes as cabinets.

3.4 FASTENINGS AND ANCHORAGE

- A. Do not anchor to wood ground strips.
- B. Provide hat shape metal spacers where fasteners span gaps or spaces.
- C. Use 6 mm (1/4 inch) diameter toggle or expansion bolts, or other appropriate size and type fastening device for securing casework to walls or floor. Use expansion bolts shields having holding power beyond tensile and shear strength of bolt and breaking strength of bolt head.
- D. Use 6 mm (1/4 inch) diameter hex bolts for securing cabinets together.
- E. Use 6 mm (1/4 inch) by minimum 38 mm (1-1/2 inch) length lag bolt anchorage to wood blocking for concealed fasteners.
- F. Use not less than No. 12 or 14 wood screws with not less than 38 mm (1 1/2 inch) penetration into wood blocking.
- G. Space fastening devices 305 mm (12 inches) on center with minimum of three (3) fasteners in 915 or 1220 mm (3 or 4 foot) unit width.
- H. Anchor floor mounted cabinets with a minimum of four (4) bolts through corner gussets. Anchor bolts may be combined with or separate from leveling device.
- I. Secure cabinets in alignment with hex bolts or other internal fastener devices removable from interior of cabinets without special tools. Do not use fastener devices which require removal of tops for access.
- J. Where units abut end to end, anchor together at top and bottom of sides at front and back. Where units are back to back, anchor backs together at corners with hex bolts placed inconspicuously inside casework.
- K. Where type, size, or spacing of fastenings is not shown on construction documents or specified, show on shop drawings proposed fastenings and method of installation.

3.5 ADJUSTMENTS

- A. Adjust equipment to insure proper alignment and operation.
- B. Replace or repair damaged or improperly operating materials, components or equipment.

3.6 CLEANING

- A. Immediately following installation, clean each item, removing finger marks, soil and foreign matter.
- B. Remove from job site trash, debris and packing materials.
- C. Leave installed areas clean of dust and debris.

3.7 INSTRUCTIONS

- A. Provide operational and cleaning manuals and verbal instructions in accordance with Article INSTRUCTIONS, SECTION 01 00 00, GENERAL REQUIREMENTS.
- B. Provide in service training both prior to and after facility opening. Coordinate in service activities with COR.
- C. Commencing at least seven (7) days prior to opening of facility, provide one (1) four (4) hour day of on-site orientation and technical instruction on use and cleaning procedures application to products and systems specified herein.