

SECTION 123213

MANUFACTURED WOOD CASEWORK

PART 1 - GENERAL

1.1 STIPULATIONS

- A. The specifications sections, "General Conditions of the Construction Contract", Special Conditions", and "Division 1 – General Requirements" form a part of this Section by this reference thereto, and shall have the same force and effect as if printed herewith in full.

1.2 SUMMARY

- A. Section includes manufactured wood-veneer-faced cabinets of stock design.
- B. Related Requirements:
 - 1. Section 123623.13 "Plastic-Laminate-Clad Countertops."

1.3 DEFINITIONS

- A. Definitions in the AWI's, AWMAC's, and WI's "Architectural Woodwork Standards" apply to the work of this Section.
- B. MDF: Medium-density fiberboard.
- C. Hardwood Plywood: A panel product composed of layers or plies of veneer, or of veneers in combination with lumber core, hardboard core, MDF core, or particleboard core, joined with adhesive and faced both front and back with hardwood veneers.

1.4 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that casework can be supported and installed as indicated.

1.5 SUBMITTALS

- A. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work. Show fabrication details, including types and locations of hardware. Show

installation details, including field joints and filler panels. Indicate manufacturer's catalog numbers for casework.

- B. Samples: For cabinet finish selection.
- C. Samples for Initial Selection: For cabinet finishes.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Cabinet installer shall have a minimum of 3 years in installing cabinetry.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver casework only after painting, utility roughing-in, and similar operations that could damage, soil, or deteriorate casework have been completed in installation areas. If casework must be stored in other-than-installation areas, store only in areas where environmental conditions comply with requirements specified in "Field Conditions" Article.
- B. Keep finished surfaces covered with polyethylene film or other protective covering during handling and installation.

1.8 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install casework until all other work is complete, to include painting and flooring.
- B. Established Dimensions: Where casework is indicated to fit to other construction, establish dimensions for areas where woodwork is to fit. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.
- C. Locate concealed framing, blocking, and reinforcements that support casework by field measurements before being enclosed, and indicate measurements on Shop Drawings.

1.9 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of casework that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Delamination of components or other failures of glue bond.
 - b. Warping of components.

- c. Failure of operating hardware.
 - d. Deterioration of finishes.
- 2. Warranty Period: 10 years from date of Final Acceptance of project.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products from manufacturers offering product type specified below. Obtain wood-veneer-faced casework from single manufacturer

2.2 CASEWORK, GENERAL

- A. Quality Standard: Unless otherwise indicated, comply with the AWI's, AWMAC's, and WI's "Architectural Woodwork Standards" for grades of casework indicated for construction, finishes, installation, and other requirements.
 - 1. Grade: Premium
 - 2. Provide label/certification that casework complies with requirements of grades specified.
- B. Regional Materials: Casework shall be manufactured within 500 miles (800 km) of Project site.
- C. Certified Wood: Casework shall be produced from wood and wood products certified as "FSC Pure according to FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship," and to FSC STD-40-004, "FSC Standard for Chain of Custody Certification."
- D. Product Designations: Drawings indicate configurations of manufactured wood-veneer-faced casework by referencing designations of Casework Design Series numbering system in Appendix A of the AWI's, AWMAC's, and WI's "Architectural Woodwork Standards."

2.3 WOOD-VENEER-FACED CABINETS

- A. Design:
 - 1. Shaker style
- B. Wood Species: Red oak, maple or cherry. Selection by Department's Design Professional.

- C. Options for specifying veneer cuts in "Face Veneer Cut" Paragraph below are examples only; revise to suit products available from manufacturers. Plain sliced is typical cut for manufactured wood casework.
- D. Face Veneer Cut: Plain sliced
- E. Veneer Matching:
 - 1. Provide veneers for each cabinet from a single flitch.
 - a. Provide continuous matching of adjacent drawer fronts within each cabinet; and cabinet ends that are exposed.
- F. Grain Direction:
 - 1. Vertical on both doors and drawer fronts, with continuous vertical matching.
- G. Exposed Materials:
 - 1. Plywood: Hardwood plywood with face veneer of species indicated, selected for compatible color and grain. Provide backs of same species as faces.
 - 2. Solid Wood: Clear hardwood lumber of species indicated and selected for grain and color compatible with exposed plywood.
- H. Semi exposed Materials:
 - 1. Solid Wood: Sound hardwood lumber, selected to eliminate appearance defects, same species as exposed wood.
 - 2. Plywood: Hardwood plywood of same species as exposed wood. Provide backs of same species as faces.
 - 3. Provide solid wood or hardwood plywood for semi-exposed surfaces unless otherwise indicated.
 - 4. Hardboard: Use only for cabinet backs where exterior side of back is not exposed.
 - 5. Metal for Steel Drawer Pans: Cold-rolled, carbon-steel sheet complying with ASTM A 1008/A 1008M; matte finish; suitable for exposed applications.
- I. Concealed Materials:
 - 1. Solid Wood: Any hardwood or softwood species, with no defects affecting strength or utility.
 - 2. Plywood: Hardwood plywood. Provide backs of same species as faces.
 - 3. Hardboard.

2.4 MATERIALS

- A. Low-Emitting Materials: Fabricate manufactured wood casework, including countertops, with adhesives and composite wood products containing no urea formaldehyde.

- B. Hardwood Plywood: HPVA HP-1, particleboard core except where veneer core is indicated; made without urea formaldehyde.
- C. Softwood Plywood: DOC PS 1.
- D. Particleboard: ANSI A208.1, Grade M-2; made with binder containing no urea formaldehyde.
- E. Retain "Particleboard" Paragraph below instead of "Particleboard" Paragraph above if required for LEED-NC, LEED-CI, or LEED for Schools Credit MR 6. Below also complies with low-emitting materials requirement for LEED-NC and LEED-CI Credit IEQ 4.4.
- F. Particleboard: Straw-based particleboard complying with ANSI A208.1, Grade M-2, except for density.
- G. Edge banding: Minimum 1/8-inch- (3-mm-) thick, solid wood of same species as face veneer OR Wood veneer of same species as face veneer
 - 1. Select wood edge banding for grain and color compatible with face veneers.
 - 2. Colors: To match cabinetry

2.5 COLORS AND FINISHES

- A. Wood Colors and Finishes: As selected by Department's Design Professional from casework manufacturer's full range.

2.6 FABRICATION

- A. Wood-Veneer-Faced Cabinet Construction: As required by referenced quality standard, but not less than the following:
 - 1. Bottoms of Cabinets and Tops of Wall Cabinets: 3/4-inch (19-mm) veneer-core hardwood plywood.
 - 2. Ends of Cabinets: 3/4-inch (19-mm) hardwood plywood.
 - 3. Shelves: 3/4-inch (19-mm) veneer-core hardwood plywood or 1-inch (25-mm) particleboard-core hardwood plywood.
 - 4. Base Cabinet Top Frames: 3/4-by-2-inch (19-by-51-mm) solid wood with mortise and tenon or doweled connections, glued and pinned or screwed.
 - 5. Base Cabinet Stretchers: 3/4-by-4-1/2-inch (19-by-114-mm) plywood, particleboard, or MDF strips or solid-wood boards at front and back of cabinet, glued and pinned or screwed
 - 6. Base Cabinet Subtops: 3/4-inch (19-mm) panel product, glued and pinned or screwed
 - 7. Backs of Cabinets: 3/4-inch (19-mm) particleboard-core hardwood plywood where exposed, 1/4-inch (6.4-mm) veneer-core hardwood plywood

8. Drawer Fronts: 3/4-inch (19-mm) particleboard-core hardwood plywood or solid hardwood.
 9. Drawer Sides and Backs: 1/2-inch (12.7-mm) solid-wood or veneer-core hardwood plywood, with glued dovetail or multiple-dowel joints.
 10. Drawer Bottoms: 1/4-inch (6.4-mm) veneer-core hardwood plywood, glued and dadoed into front, back, and sides of drawers. Use 1/2-inch (12.7-mm) material for drawers more than 24 inches (600 mm) wide.]
 11. Drawer Bodies: Steel drawer pans formed from 0.0359-inch- (0.9-mm-) thick metal, metallic phosphate treated, and finished with manufacturer's standard two-coat, baked-enamel finish consisting of prime coat and thermosetting topcoat with a minimum dry film thickness of 1 mil (0.025 mm) for topcoat and 2 mils (0.05 mm) for system.
 12. Doors 48 Inches (1220 mm) or Less in Height: 3/4 inch (19 mm) thick, with solid hardwood stiles and rails,] particleboard or MDF cores, and hardwood face veneers and crossbands.
 13. Doors More Than 48 Inches (1220 mm) in Height: 1-1/16 inches (27 mm) thick, with solid hardwood stiles and rails, honeycomb cores, and hardwood face veneers and crossbands.
 14. Doors More Than 48 Inches (1220 mm) in Height: 1-1/8 inches (29 mm) thick, with particleboard cores and hardwood face veneers and crossbands.
- B. Filler Strips: Provide as needed to close spaces between cabinets and walls, ceilings, and indicated equipment. Fabricate from same material and with same finish as cabinets.

2.7 FINISH

- A. Finish shall be factory applied, stained
- B. Stain color shall be selected by Department's Design Professional from manufacturer's full range of colors.

2.8 CASEWORK HARDWARE AND ACCESSORIES

- A. Hardware, General: Unless otherwise indicated, provide manufacturer's standard commercial-quality, heavy-duty hardware.
 1. Hardware finish shall be selected by Department's Design Professional from a full range of finishes.
 1. Use threaded metal or plastic inserts with machine screws for fastening to particleboard, except where hardware is through bolted from back side.
- B. Concealed Hinges (European Type): BHMA A156.9, Type B01602, 170 degrees of opening. Provide two hinges for doors less than 48 inches (1220 mm) high, and provide three hinges for doors more than 48 inches (1220 mm) high.

- C. Pulls: Solid aluminum pulls, fastened from back with two screws.
- D. Drawer Slides: BHMA A156.9, Type B05091.
 - 1. Heavy Duty (Grade 1HD-100 and Grade 1HD-200): Side mounted; full extension type; zinc-plated, steel ball-bearing slides.
- E. Adjustable Shelf Supports: Mortise-type, zinc-plated steel standards and shelf rests complying with BHMA A156.9, Type B04071 and Type B04091.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas, with Installer present, for compliance with requirements for installation tolerances, location of framing and reinforcements, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 CASEWORK INSTALLATION

- A. Grade: Install cabinets to comply with same grade as item to be installed.
- B. Install casework level, plumb, and true; shim as required, using concealed shims. Where casework abuts other finished work, apply filler strips and scribe for accurate fit, with fasteners concealed where practical.
- C. Base Cabinets: Set cabinets straight, level, and plumb. Adjust subtops within 1/16 inch (1.5 mm) of a single plane. Align similar adjoining doors and drawers to a tolerance of 1/16 inch (1.5 mm). Bolt adjacent cabinets together with joints flush, tight, and uniform.
- D. Wall Cabinets: Hang cabinets straight, level, and plumb. Adjust fronts and bottoms within 1/16 inch (1.5 mm) of a single plane. Fasten cabinets to hanging strips, masonry, framing, wood blocking, or reinforcements in walls and partitions. Align similar adjoining doors to a tolerance of 1/16 inch (1.5 mm).
- E. Fasten cabinets to adjacent cabinets and to masonry, framing, wood blocking, or reinforcements in walls and partitions to comply with the AWI's, AWMAC's, and WI's "Architectural Woodwork Standards."
- F. Install hardware uniformly and precisely. Set hinges snug and flat in mortises unless otherwise indicated. Adjust and align hardware so moving parts operate freely and contact points meet accurately. Allow for final adjustment after installation.
- G. Adjust casework and hardware so doors and drawers operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.

3.3 CLEANING

- A. Repair or remove and replace defective work as directed on completion of installation.
- B. Clean finished surfaces, touch up as required, and remove or refinish damaged or soiled areas to match original factory finish, as approved by Design Professional.

END OF SECTION