

SECTION 12 32 16 - PLASTIC-LAMINATE-FACED CASEWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes plastic-laminate-faced cabinets and accessories of stock design and modified as indicated.
- B. Related Requirements:
 - 1. Division 06 Section "Rough Carpentry" for wood blocking for anchoring casework.
 - 2. Division 06 Section "Finish Carpentry" for plastic-laminate-clad countertops".
 - 3. Division 09 Section "Non-Structural Metal Framing" for reinforcements in metal-framed partitions for anchoring casework.
 - 4. Division 09 Section "Resilient Base and Accessories" for resilient base applied to plastic-laminate-faced casework.
 - 5. Division 22 Sections for sinks installed in plastic laminate-faced casework.

1.3 ALTERNATE BIDS

- A. Plastic-Laminate-Faced Casework as manufactured by Stevens Industries, Inc. is included in the Base Bid. Provide alternate prices for the change in cost to provide the alternate manufacturers products in the space provided on the Bid Form for items of work as scheduled hereinafter, and in accordance with the following requirements:
 - 1. All work to be performed under accepted alternate prices shall conform to the applicable Contract Documents, and shall include all work in connection with or consequent to the alternate price work to produce a complete installation. Work associated with countertops in rooms with plastic-laminate-faced casework shall be considered part of the Alternate Bid Series.
 - 2. Alternate prices shall be all inclusive of the cost of materials, work and profit, supervision, administration, and any and all other costs in connection therewith for work in place and accepted or omitted as the case may be, and shall hold for the same period as the bid.
 - 3. Coordinate related work and modify or adjust adjacent work as necessary to ensure that work affected by the accepted Alternate is complete and fully integrated into the project. All costs to modify or adjust the adjacent work of other trades for a complete installation shall be included in the Alternate Bid.

1.4 DEFINITIONS

- A. Definitions in the AWI's, AWMAC's, and WI's "Architectural Woodwork Standards" apply to the work of this Section.

1.5 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.

1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. 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.
- C. Keying Schedule: Include schematic keying diagram and index each key set to unique designations that are coordinated with the Contract Documents.
- D. Samples for Initial Selection: For cabinet finishes.
- E. Samples for Verification: 8-by-10-inch Samples for each type of finish.

1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and manufacturer.
- B. Quality Standard: AWI Certified manufacturer.
- C. Sample Warranty: For special warranty.

1.8 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review specification requirements.
 - 2. Review installation procedures.
 - 3. Inspect project conditions.

1.9 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 meet requirements specified in "Field Conditions" Article.
- B. Keep finished surfaces covered with polyethylene film or other protective covering during handling and installation.

1.10 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install casework until building is enclosed, wet work is complete, and HVAC system is operating or adequate temporary controls are in place to maintain

temperature and relative humidity at occupancy levels during the remainder of the construction period. Maintain temperature and relative humidity during the remainder of the construction period in range recommended for Project location by the AWI's, AWMAC's, and WI's "Architectural Woodwork Standards."

- 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.

1.11 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.
 - 2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design: Subject to compliance with requirements, Plastic-Laminate-Faced Casework incorporated into the project based on products as manufactured as follows:
 - 1. Stevens Industries, Inc.; "1200 Series" and items scheduled on the Drawings.
- B. Alternate Bid Manufacturers: The alternate manufacturers listed shall provide products in accordance with this Section and products that meet the minimum standards of quality of the Basis of Design manufacturer's specified product. Provide Plastic-Laminate-Faced Casework from the following manufacturers as included in Alternate Series A1200.
 - 1. Base Bid: Stevens Industries, Inc.
 - 2. **Alt. No. A1201:** Case Systems.
 - 3. **Alt. No. A1202:** TMI Systems Design Corporation.
- C. Source Limitations: Obtain plastic-laminate-faced cabinets 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.

- B. Product Designations: Drawings indicate sizes, configurations, and finish materials of manufactured plastic-laminate-faced cabinets by referencing basis of design manufacturer's catalog numbers. Alternate bid manufacturers' casework shall be of equal or approximate sizes, door and drawer configurations, same finish materials, and comply with the Specifications.

2.3 CASEWORK

- A. Design:

1. Flush overlay.

- B. Grain Direction for Wood Grain Plastic Laminate:

1. Vertical on doors, horizontal on drawer fronts.
2. Lengthwise on face frame members.
3. Vertical on end panels.
4. Side to side on bottoms and tops of units.
5. Vertical on knee-space panels.
6. Horizontal on aprons.

- C. Exposed Materials:

1. Plastic Laminate: Grade HGS.
 - a. Colors and Patterns: As selected by Architect from manufacturer's full range.
2. Unless otherwise indicated, provide specified edgebanding on all exposed edges.

- D. Semiexposed Materials:

1. Plastic Laminate: Grade VGS unless otherwise indicated. Provide plastic laminate for semiexposed surfaces unless otherwise indicated.
 - a. Provide plastic laminate of same grade as exposed surfaces for interior faces of doors and drawer fronts and other locations where opposite side of component is exposed.
2. Hardboard: Use only for cabinet backs where exterior side of back is not exposed.
3. Unless otherwise indicated, provide specified edgebanding on all semiexposed edges.

- E. Concealed Materials:

1. Solid Wood: Any hardwood or softwood species, with no defects affecting strength or utility.
2. Plywood: Hardwood plywood.
3. Plastic Laminate: Grade BKL.
4. Particleboard.
5. MDF.

2.4 MATERIALS

- A. Maximum Moisture Content for Lumber: 7 percent for hardwood and 12 percent for softwood.

- B. Hardwood Plywood: HPVA HP-1, particleboard core except where veneer core is indicated.
- C. Softwood Plywood: DOC PS 1.
- D. Particleboard: ANSI A208.1, Grade M-2.
- E. MDF: ANSI A208.2, Grade 130.
- F. Hardboard: ANSI A135.4, Class 1 Tempered.
- G. Plastic Laminate: High-pressure decorative laminate complying with NEMA LD 3.
- H. Edgebanding for Plastic Laminate: Rigid PVC extrusions, through color with satin finish, 3 mm thick at doors and drawer fronts, 1 mm thick elsewhere.
- I. Glass for Glazed Doors: Clear laminated tempered glass complying with ASTM C 1172, Kind LT, Condition A, Type I, Class I, Quality-Q3; with two plies not less than 3.0 mm thick and with clear, polyvinyl butyral interlayer.

2.5 COLORS AND FINISHES

- A. Plastic-Laminate Colors, Patterns, and Finishes: As selected by Architect from plastic-laminate manufacturer's full range in the following categories:
 - 1. Solid colors.
 - 2. Wood grains.
 - 3. Patterns.
- B. PVC Edgebanding Color: As selected from casework manufacturer's full range.
- C. A maximum of 8 laminates will be selected and a maximum of 4 edgebands will be selected.

2.6 FABRICATION

- A. Construction: Provide plastic-laminate laboratory casework of the following minimum construction unless noted otherwise:
 - 1. Bottoms and Ends of Cabinets, and Tops of Wall Cabinets and Tall Cabinets: 3/4-inch- thick particleboard.
 - 2. Sink Bases: 3/4-inch – thick plywood.
 - 3. Shelves: 3/4-inch- thick particleboard up to 36 inches in length and 1-inch-thick particleboard for shelves 36 inches and longer.
 - 4. Exposed Backs of Cabinets: 1/2-inch- thick particleboard or MDF.
 - 5. Backs of Cabinets: 1/4-inch MDF.
 - 6. Mounting Frames: 3/4-inch- thick particleboard with a minimum of two dowel pins per frame end joint.
 - 7. Boxes (toe kicks): 3/4-inch exterior grade plywood.
 - 8. Glazed Door Frames: 3/4-inch, one-piece panel with cutout for insertion of glass pane, held in place with extruded two trim mounting with removable back bead.
 - 9. Drawer Fronts: 3/4-inch- thick particleboard.
 - 10. Drawer Sides and Backs: 1/2-inch- thick particleboard.
 - 11. Drawer Bottoms: 1/4-inch MDF glued and dadoed into front, back, and sides of drawers.

- 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 CASEWORK HARDWARE AND ACCESSORIES

- A. Hardware, General: Unless otherwise indicated, provide manufacturer's standard finish, commercial-quality, heavy-duty hardware.
 - 1. Use threaded metal or plastic inserts with machine screws for fastening to particleboard except where hardware is through-bolted from back side.
 - 2. Color and finish to be selected from manufacturer's full range of colors and finishes.
- B. Butt Hinges: Steel, semiconcealed, five-knuckle hinges complying with BHMA A156.9, Grade 1, with antifriction bearings and rounded tips. Provide two hinges for doors less than 48 inches high, and provide three hinges for doors more than 48 inches high.
- C. Pulls: Solid wire pulls, fastened from back with two screws. For sliding doors, provide recessed stainless-steel or chrome-plated flush pulls. Provide two pulls for drawers more than 24 inches wide.
- D. Door Catches: Nylon-roller spring catch. Provide two catches on doors more than 48 inches high.
- E. Drawer Slides: BHMA A156.9, Type B05091.
 - 1. Standard Duty (Grades 1, 2, and 3): Side mounted and extending under bottom edge of drawer; full-extension type; epoxy-coated steel with polymer rollers.
 - 2. Box Drawer Slides: Grade 1HD-100, for drawers not more than 6 inches high and 24 inches wide.
 - 3. File Drawer Slides: Grade 1HD-100, for drawers more than 6 inches high or 24 inches wide.
 - 4. Pencil Drawer Slides: Grade 1, for drawers not more than 3 inches high and 24 inches wide.
 - 5. Keyboard Slides: Grade 1HD-100, for computer keyboard shelves.
 - 6. Provide label holders where indicated.
- F. Drawer and Hinged Door Locks: Cylindrical (cam) type, five-pin tumbler or deadbolt type, 6 tumbler, brass with chrome-plated finish, and complying with BHMA A156.11, Grade 1.
 - 1. Provide a minimum of two keys per lock and six master keys.
 - 2. Provide locks on all doors and drawers.
 - 3. Keying: Key locks alike within each room, key each room separate unless otherwise noted.
- G. Sliding-Door Hardware Sets: Injection-molded clear polycarbonate with integral lock tabs to secure shelf.
 - 1. Adjustment Spacing: 1-1/4 inches.
 - 2. Loading Capacity: 200 lbs per support.

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 of a single plane. Align similar adjoining doors and drawers to a tolerance of 1/16 inch. 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 of a single plane. Fasten to hanging strips, masonry, framing, wood blocking, or reinforcements in walls and partitions. Align similar adjoining doors to a tolerance of 1/16 inch.
- 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 Architect.

END OF SECTION 12 32 16