SECTION 064023 - INTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1   RELATED DOCUMENTS

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

1.2   SUMMARY

   A.   This Section includes the following:

         1.   Interior standing and running trim associated with casework.
         2.   Shop fabricated wood cabinets.
         3.   Shop fabricated plastic laminate casework
         4.   Solid surface countertops.
         5.   Solid-surfacing at storefront sills.

   B.   Related Sections include the following:

         1.   Division 06 Section "Rough Carpentry" for furring, blocking, and other carpentry work
               not exposed to view.
         2.   Division 09 Section "Resilient Base and Accessories" for interior base molding.

1.3   SUBMITTALS

   A.   Product Data: For each type of process and factory-fabricated product. Indicate component
         materials, dimensions, profiles, textures, and colors and include construction and application
         details.

   B.   Samples for Initial Selection:

         1.   Shop applied finishes
         2.   Plastic laminates.
         3.   PVC edge material.
         4.   Thermoset decorative panels.
         5.   Solid-surfacing materials.

   C.   Samples for Verification:

         1.   For each product, 12 inches length for running trim.
         2.   Plastic laminates, 8 by 10 inches, for each type, color, pattern, and surface finish.
         3.   Thermoset decorative-panels, 8 by 10 inches, for each type, color, pattern, and surface
               finish, with edge banding on 1 edge.
         4.   Corner pieces as follows:

               a.   Cabinet-front frame joints between stiles and rails, as well as exposed end pieces,
                     18 inches high by 18 inches wide by 6 inches deep.

         5.   Exposed cabinet hardware and accessories, one unit for each type and finish.

6.   Solid-surfacing materials, 6 inches square.

1.4   DELIVERY, STORAGE, AND HANDLING

A.   Protect materials against weather and contact with damp or wet surfaces.

B.   Deliver interior finish carpentry materials only when environmental conditions meet requirements specified for installation areas. If interior finish carpentry materials must be stored in other than installation areas, store only where environmental conditions meet requirements specified for installation areas.

1.5   PROJECT CONDITIONS

A.   Environmental Limitations: Do not deliver or install interior finish carpentry materials until building is enclosed and weatherproof, wet work in space is completed and nominally dry, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

B.   Do not install finish carpentry materials that are wet, moisture damaged, or mold damaged.

1.6   COORDINATION

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

PART 2 - PRODUCTS

2.1   MATERIALS

A.   Wood Species and Cut for Transparent Finish: White oak, rift sawn or cut.

B.   Wood Products: Comply with the following:

1.   Hardboard: AHA A135.4.
2.   Medium-Density Fiberboard: ANSI A208.2, Grade MD.
3.   Particleboard: ANSI A208.1, Grade M-2.
4.   Particleboard: Straw-based particleboard complying with requirements in ANSI A208.1, Grade M-2, except for density.
5.   Softwood Plywood: DOC PS 1 Medium Density Overlay.
6.   Veneer-Faced Panel Products (Hardwood Plywood): HPVA HP-1.

C.   Thermoset Decorative Panels: Particleboard or medium-density fiberboard finished with thermally fused, melamine-impregnated decorative paper complying with LMA SAT-1.

1.   Provide PVC or polyester edge banding complying with LMA EDG-1 on components with exposed or semi-exposed edges.

D.   High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or, if not indicated, as required by woodwork quality standard.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering high-pressure decorative laminates that may be incorporated into the Work include, but are not limited to, the following:

    a. Formica Corporation.
    b. Nevamar Company, LLC; Decorative Products Div.
    c. Wilsonart International; Div. of Premark International, Inc.

E. Solid-Surfacing Material: Homogeneous solid sheets of filled plastic resin complying with ISSFA-2.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. Avonite, Inc.
    b. E. I. du Pont de Nemours and Company.
    c. Formica Corporation.
    d. Wilsonart International; Div. of Premark International, Inc.

2. Type: Standard type, unless Special Purpose type is indicated.
3. Colors and Patterns: As selected by Architect from manufacturer's full range.

2.2 CABINET HARDWARE AND ACCESSORIES

A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets, except for items specified in Division 08 Section "Door Hardware."

B. Frameless Concealed Hinges (European Type): BHMA A156.9, B01602, 135 degrees of opening, self-closing.

C. Back-Mounted Pulls: BHMA A156.9, B02011.

D. Wire Pulls: Back mounted, solid metal, 4 inches long, 5/16 inch in diameter.

E. Catches: Magnetic catches, BHMA A156.9, B03141.

F. Adjustable Shelf Standards and Supports: BHMA A156.9, B04071; with shelf rests, B04081.

G. Shelf Rests: BHMA A156.9, B04013; metal.

H. Drawer Slides: BHMA A156.9, B05091.

1. Standard Duty (Grade 1, Grade 2, and Grade 3): Side mounted; full-extension type; zinc-plated steel with polymer rollers.
2. Box Drawer Slides: Grade 1; for drawers not more than 6 inches high and 24 inches wide.

I. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.

1. Satin Chromium Plated: BHMA 626 for brass or bronze base; BHMA 652 for steel base.

J.   For concealed hardware, provide manufacturer's standard finish that complies with product class requirements in BHMA A156.9.

2.3   INTERIOR STANDING AND RUNNING TRIM FOR TRANSPARENT FINISH

A.   Grade: Custom.

B.   For trim items wider than available lumber, use veneered construction. Do not glue for width or thickness.

C.   Backout or groove backs of flat trim members and kerf backs of other wide, flat members, except for members with ends exposed in finished work.

D.   Assemble casings and moldings in shop except where limitations of access to place of installation require field assembly. Miter corners in shop and prepare for field assembly with bolted fittings designed to pull connections together.

2.4   WOOD CABINETS FOR TRANSPARENT FINISH

A.   Grade: Custom.

B.   AWI Type of Cabinet Construction: Reveal overlay on face frame.

C.   Wood Species and Cut for Exposed Surfaces: White oak, plain sawn or sliced.

    1.   Grain Direction: Horizontally for drawer fronts, doors, and fixed panels.
    2.   Matching of Veneer Leaves: Book match.
    3.   Vertical Matching of Veneer Leaves: End match.
    4.   Veneer Matching within Panel Face: Running match.

D.   Semiexposed Surfaces: Provide surface materials indicated below:

    1.   Surfaces Other Than Drawer Bodies: Thermoset decorative panels.
    2.   Drawer Sides and Backs: Solid-hardwood lumber, same species indicated for exposed surfaces.
    3.   Drawer Bottoms: Hardwood plywood.

E.   Provide dust panels of 1/4-inch plywood or tempered hardboard above compartments and drawers, unless located directly under tops.

2.5   PLASTIC-LAMINATE CABINETS

A.   AWI Type of Cabinet Construction:

    1.   Flush overlay - typical
    2.   Flush with exposed face frame

B.   Laminate Cladding for Exposed Surfaces: High-pressure decorative laminate complying with the following requirements:

    1.   Horizontal Surfaces Other Than Tops: Grade HGL.

> 2.   Postformed Surfaces: Grade HGP.
> 3.   Vertical Surfaces: Grade VGS.
> 4.   Edges: Grade HGS.

C.   Materials for Semi-exposed Surfaces:

> 1.   Surfaces Other Than Drawer Bodies: High-pressure decorative laminate, Grade VGS.
>
> > a.   Edges of Plastic-Laminate Shelves: PVC edge banding, 0.12 inch thick, matching laminate in color, pattern, and finish.
> > b.   For semi-exposed backs of panels with exposed plastic-laminate surfaces, provide surface of high-pressure decorative laminate, Grade VGS.
>
> 2.   Drawer Sides and Backs: Thermoset decorative panels.
> 3.   Drawer Bottoms: Thermoset decorative panels.

D.   Concealed Backs of Panels with Exposed Plastic Laminate Surfaces: High-pressure decorative laminate, Grade BKL.

E.   Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:

> 1.   As selected by Architect from laminate manufacturer's full range in the following categories:
>
> > a.   Solid colors, matte finish.
> > b.   Wood grains, matte finish.
> > c.   Patterns, matte finish.

2.6   CABINET FABRICATION

A.   Plastic-Laminate-Faced Cabinet Construction: As required by referenced quality standard, but not less than the following:

> 1.   Bottoms and Ends of Cabinets, and Tops of Wall Cabinets and Tall Cabinets: 3/4-inch particleboard, plastic-laminate faced on exposed surfaces, thermoset decorative panels on semiexposed surfaces.
> 2.   Shelves: 3/4-inch plywood, plastic-laminate faced.
> 3.   Backs of Cabinets: 1/2-inch particleboard, plastic-laminate faced on exposed surfaces, thermoset decorative panels on semiexposed surfaces.
> 4.   Drawer Fronts: 3/4-inch particleboard, plastic-laminate faced.
> 5.   Drawer Sides and Backs: 1/2-inch solid-wood or veneer-core hardwood plywood, with glued dovetail or multiple-dowel joints.
> 6.   Drawer Bottoms: 1/4-inch hardwood plywood, thermoset decorative panels glued, and dadoed into front, back, and sides of drawers. Use 1/2-inch material for drawers more than 24 inches wide.
> 7.   Doors: 3/4-inch particleboard or MDF, plastic-laminate faced.

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 satin-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.

B.   Butt Hinges: Stainless-steel, semi-concealed, 5-knuckle hinges complying with BHMA A156.9, Grade 1, with antifriction bearings and rounded tips. Provide 2 hinges for doors less than 48 inches high and 3 hinges for doors more than 48 inches high.

C.   Pulls: Solid stainless-steel wire pulls, fastened from back with two screws. For sliding doors, provide recessed stainless-steel flush pulls. Provide 2 pulls for drawers more than 24 inches wide.

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.
2.   Box Drawer Slides: Grade 1, for drawers not more than 6 inches high and 24 inches wide.
3.   File Drawer Slides: Grade 1, 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 1, for computer keyboard shelves.

E.   Drawer and Hinged Door Locks: Cylindrical (cam) type, 5-pin 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.

F.   Sliding-Door Hardware Sets: Manufacturer's standard, to suit type and size of sliding-door units.

G.   Adjustable Shelf Supports: 2-pin locking plastic shelf rests complying with BHMA A156.9, Type B04013.

H.   Adjustable Shelf Supports: Mortise-type, zinc-plated steel standards and shelf rests complying with BHMA A156.9, Types B04071 and B04091.

I.   Grommets for Cable Passage through Countertops: 1-1/4-inch OD, black, molded-plastic grommets and matching plastic caps with slot for wire passage.

2.8   SOLID-SURFACING-MATERIAL COUNTERTOPS AND SILLS

A.   Fabricate tops in one piece, unless otherwise indicated. Comply with solid-surfacing-material manufacturer's written recommendations for adhesives, sealers, fabrication, and finishing.

1.   Fabricate tops with shop-applied edges of materials and configuration indicated.
2.   Fabricate tops with loose backsplashes for field application.

B.   Integral Sink Bowls: Comply with ISSFA-2 and ANSI Z124.3, Type 5 or Type 6, without a precoated finish.-do we have these coordinate w/SPA & IOTT

C.   Solid-Surfacing-Material Thickness: 3/4 inch.

D.   Coordinate installation at sills at storefronts with substrate available.

2.9   MISCELLANEOUS MATERIALS

A.   Fasteners for Interior Finish Carpentry: Nails, screws, and other anchoring devices of type, size, material, and finish required for application indicated to provide secure attachment, concealed where possible.

B.   Adhesives: As recommended for indicated use by adhesive manufacturer for specified product.

2.10   SHOP FINISHING

A.   Grade: Provide finishes of same grades as items to be finished.

B.   General: Finish architectural woodwork at fabrication shop as specified in this Section. Defer only final touchup, cleaning, and polishing until after installation.

C.   Shop Priming: Shop apply the prime coat including backpriming, if any, for transparent-finished items specified to be field finished. Refer to Division 09 painting Sections for material and application requirements.

D.   Preparation for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing architectural woodwork, as applicable to each unit of work.

   1.   Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of woodwork. Apply two coats to back of paneling and to end-grain surfaces. Concealed surfaces of plastic-laminate-clad woodwork do not require backpriming when surfaced with plastic laminate, backing paper, or thermoset decorative panels.

E.   Transparent Finish:

   1.   Grade: Custom.
   2.   AWI Finish System: Catalyzed polyurethane.
   3.   Staining: Match approved sample for color.
   4.   Wash Coat for Stained Finish: Apply wash-coat sealer to woodwork made from closed-grain wood before staining and finishing.
   5.   Sheen: Gloss, 61-100 gloss units measured on 60-degree gloss meter per ASTM D 523.

PART 3 - EXECUTION

3.1   COORDINATION

A.   If concealed blocking is required, coordinate with trades to provide same, and ensure timely installation and location of blocking within the appropriate sequence of construction.

3.2   EXAMINATION

A.   Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.

B.   Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.

C.   Proceed with installation only after unsatisfactory conditions have been corrected.

3.3   PREPARATION

A.   Clean substrates of projections and substances detrimental to application.

3.4   INSTALLATION, GENERAL

A.   Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, or too small to fabricate with proper jointing arrangements. Do not use manufactured units with defective surfaces, sizes, or patterns.

B.   Install interior finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.

    1.   Scribe and cut interior finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.
    2.   Countersink fasteners, fill surface flush, and sand where face fastening is unavoidable.
    3.   Install to tolerance of 1/8 inch in 96 inches for level and plumb. Install adjoining interior finish carpentry with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.
    4.   Coordinate interior finish carpentry with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate interior finish carpentry.

3.5   CASEWORK INSTALLATION

A.   Install level, plumb, and true; shim as required, using concealed shims. Where manufactured wood casework abuts other finished work, apply filler strips and scribe for accurate fit, with fasteners concealed where practical.

B.   Base Cabinets: Set cabinets straight, level, and plumb. Adjust subtops within 1/16 inch of a single plane. Fasten cabinets to masonry or framing, wood blocking, or reinforcements in walls and partitions with fasteners spaced 24 inches o.c. Bolt adjacent cabinets together with joints flush, tight, and uniform. Align similar adjoining doors and drawers to a tolerance of 1/16 inch.

       1.   Where base cabinets are not installed adjacent to walls, fasten to floor at toe space with fasteners spaced 16 inches o.c. Secure sides of cabinets to floor, where they do not adjoin other cabinets, with not less than two fasteners.

C.   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, or framing, blocking, or reinforcements in walls or partitions. Align similar adjoining doors to a tolerance of 1/16 inch.

       1.   Fasten through back, near top and bottom, at ends, and not more than 16 inches o.c.
       2.   Use toggle bolts at hollow masonry.
       3.   Use expansion anchors at solid masonry.
       4.   Use No. 10 wafer-head screws sized for 1-inch penetration at wood hanging strips.
       5.   Use No. 10 wafer-head screws sized for 1-inch penetration into wood framing or blocking at wood-framed partitions.
       6.   Use No. 10 wafer-head sheet metal screws through metal backing or metal framing behind wall finish at metal-framed partitions.

D.   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.

E.   Adjust casework and hardware so doors and drawers operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.

3.6   INSTALLATION OF TOPS

A.   Field Jointing: Where possible make in the same manner as shop jointing, using dowels, splines, adhesives, and fasteners recommended by manufacturer. Prepare edges to be joined in shop so Project-site processing of top and edge surfaces is not required. Locate field joints where shown on Shop Drawings.

       1.   Secure field joints in plastic-laminate countertops with concealed clamping devices located within 6 inches of front and back edges and at intervals not exceeding 24 inches. Tighten according to manufacturer's written instructions to exert a constant, heavy-clamping pressure at joints.

B.   Secure tops to cabinets with Z- or L-type fasteners or equivalent, using two or more fasteners at each front, end, and back.

C.   Abut top and edge surfaces in one true plane, with internal supports placed to prevent deflection.

D.   Secure backsplashes and end splashes to tops with concealed metal brackets at 16 inches o.c. and walls with adhesive.

E.   Seal junctures of tops, splashes, and walls with mildew-resistant silicone sealant or another permanently elastic sealing compound recommended by countertop material manufacturer.

3.7   ADJUSTING

   A.   Replace interior finish carpentry that is damaged or does not comply with requirements. Interior finish carpentry may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing. Adjust joinery for uniform appearance.

3.8   CLEANING

   A.   Clean interior finish carpentry on exposed and semiexposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas.

3.9   PROTECTION

   A.   Protect installed products from damage from weather and other causes during remainder of the construction period.

   B.   Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.

        1.   Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
        2.   Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 064023