SECTION 06410

CUSTOM CABINETS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Specially fabricated cabinet units.

B. Cabinet hardware.

C. Factory finishing.

D. Preparation for installing utilities.

1.02 RELATED REQUIREMENTS

A. Section 06415 - Countertops.

1.03 REFERENCE STANDARDS

A. ANSI A135.4 - American National Standard for Basic Hardboard.

B. ANSI A208.1 - American National Standard for Particleboard.

C. ANSI A208.2 - American National Standard for Medium Density Fiberboard for Interior Use.

D. BHMA A156.9 - American National Standard for Cabinet Hardware; Builders Hardware Manufacturers Association (ANSI/BHMA A156.9).

E. GSA CID A-A-1936 - Adhesive, Contact, Neoprene Rubber; Federal Specifications and Standards.

F. HPVA HP-1 - American National Standard for Hardwood and Decorative Plywood; Hardwood Plywood & Veneer Association (ANSI/HPVA HP-1).

G. NEMA LD 3 - High-Pressure Decorative Laminates; National Electrical Manufacturers Association.

H. NHLA G-101 - Rules for the Measurement & Inspection of Hardwood & Cypress; National Hardwood Lumber Association.

I. PS 1 - Structural Plywood.

J. PS 20 - American Softwood Lumber Standard; National Institute of Standards and Technology (Department of Commerce).

K. WI (MAN) - Manual of Millwork; Woodwork Institute.

1.04 SUBMITTALS

A. See Section 01350 - Submittals, for submittal procedures.

B. Shop Drawings: Indicate materials, component profiles and elevations, assembly methods, joint details, fastening methods, accessory listings, hardware location and schedule of finishes.

C. Product Data: Provide data for hardware accessories.

D. Samples: Submit actual samples of architectural cabinet construction, minimum 8 inches square, illustrating proposed cabinet substrate and finish.

1.05 QUALITY ASSURANCE

A. Perform work in accordance with WI Manual of Millwork (latest edition), Custom quality.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum 10 years of documented experience.

C. Manufacturer Qualifications: Member in good standing of Woodwork Institute.

D. Quality Certification: Provide inspection and quality certification of completed custom cabinets in accordance with WI (MAN) Certified Compliance Program prior to delivery for review by Architect. Also provide certificates of compliance and labels upon completion of work.

1.06 MOCK-UP

A. Provide mock-up of typical wall wood cabinet style door, including finishes.

B. Mock-up may not remain as part of the Work.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Protect units from moisture damage per Section 14 and 15, Article 5.1 of the WI Manual of Millwork.

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 WOODWORK INSTITUTE REPRESENTATIVE

A. Everett Nelms, Director of Architectural Services/Inspector. Tel: (714) 379-0410; Fax: (714) 379-0480; E-mail: everett@woodinst.com.

2.02 LUMBER MATERIALS

A. Softwood Lumber: NIST PS 20; Graded in accordance with WI Manual of Millwork, Grade II/Custom; average moisture content of 4-9 percent; species as recommended by manufacturer.

B. Hardwood Lumber: NHLA; Graded in accordance with WI Manual of Millwork, Grade II/Custom; average moisture content of 4-9 percent; species as indicated on drawings.

2.03 PANEL MATERIALS

A. Medium Density Fiberboard (MDF): ANSI A208.2; type as specified in WI Manual of Millwork; composed of wood fibers pressure bonded with moisture resistant adhesive to suit application; sanded faces; thickness as required.
   1. Use for painted components, concealed components, components indicated on the drawings, and components not indicated as another material.
   2. Use as backing for plastic laminate unless otherwise indicated.

2.04 LAMINATE MATERIALS

A. Manufacturers:
   1. As indicated on drawings.
   2. Substitutions: See Section 01640 - Substitutions and Options.

B. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications and follows:.

C. Provide specific types as follows:
   1. Horizontal Surfaces: HGS, 0.048 inch nominal thickness, colors as indicated, textured, low gloss finish.
   2. Vertical Surfaces: VGS, 0.028 inch nominal thickness, colors as indicated, textured, low gloss finish.
   3. Cabinet Liner: CLS, 0.020 inch nominal thickness, white color, textured, low gloss finish.
   4. Laminate Backer: BKL, 0.020 inch nominal thickness, undecorated; for application to concealed backside of panels faced with high pressure decorative laminate.

2.05 ACCESSORIES

A. Adhesive: Type recommended by WI to suit application.

B. Plastic Edge Banding: Extruded PVC, 3 mil thickness, convex shaped; smooth finish; self locking serrated tongue; of width to match component thickness, color as selected from manufacturer's standards.
   1. Use at all exposed door and drawer edges at laminate plastic style cabinets.
   2. Use at all exposed shelf edges.

C. Fasteners: Size and type to suit application.

D. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type recommended by the WI Manual of Woodwork.

E. Concealed Joint Fasteners: Threaded steel.

F. Grommets: Standard plastic grommets for cut-outs, in color to blend with adjacent surface.

2.06 HARDWARE

A. Hardware: BHMA A156.9, types as specified in the WI Manual of Woodwork for quality grade specified.

B. Adjustable Shelf Supports: Standard side-mounted system using multiple holes for pin supports and coordinated self rests, satin chrome finish, for nominal 1 inch spacing adjustments.

C. Drawer and Door Pulls: "U" shaped wire pull, steel with satin finish, 4 inch centers.

D. Cabinet Locks: Keyed cylinder, two keys per lock, master keyed, steel with chrome finish.
   1. Product: 100DR/200DW Deadbolt Lock manufactured by Olympus Lock, Inc.

E. Drawer Slides:
   1. Type: Full extension.
   2. Static Load Capacity: Heavy Duty grade.
   3. Mounting: Side mounted.
   4. Stops: Integral type.
   5. Features: Provide self closing/stay closed type.

F. Hinges: European style concealed type, steel with satin finish.

2.07 FABRICATION

A. Wood Cabinet Style: Type 1 - Style A, as indicated on drawings.

B. Wood Cabinet Doors and Drawer Fronts: Flush Style.

C. Laminated Plastic Cabinet Style: Type 1 - Style A.

D. Laminated Plastic Cabinet Doors and Drawer Fronts: Flush style.

E. Moveable Cabinets: As indicated on drawings.

F. Drawer Construction Technique: Dovetail joints.

G. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through building openings.

H. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.

I. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting.

J. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises. Locate counter butt joints minimum 2 feet from sink cut-outs.
   1. Apply laminate backing sheet to reverse side of plastic laminate finished surfaces.
   2. Cap exposed plastic laminate finish edges with plastic trim.

K. Mechanically fasten back splash to countertops with steel brackets at 16 inches on center.

L. Provide cutouts for plumbing fixtures, inserts, appliances, outlet boxes, and fixtures and fittings. Verify locations of cutouts from on-site dimensions. Seal cut edges.

2.08 FACTORY 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. Finish work in accordance with WIC Manual of Millwork, Section 5, System #2 - Water Reducible Acrylic Lacquer in an opaque, solid color, high gloss polished finish. Color as indicated on drawings.

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 and countertops.

D. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.

E. Secure cabinets and counter bases 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.

3.03 ADJUSTING

A. Test installed work for rigidity and ability to support loads.

B. Adjust moving or operating parts to function smoothly and correctly.

3.04 CLEANING

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

END OF SECTION

SECTION 06415

COUNTERTOPS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Countertops for architectural cabinetwork.

1.02 RELATED REQUIREMENTS

A. Section 06410 - Custom Cabinets.

B. Section 15400 - Plumbing Fixtures: Sinks.

1.03 REFERENCE STANDARDS

A. ANSI A161.2 - Performance Standards for Fabricated High Pressure Decorative Laminate Countertops.

B. ANSI A208.1 - American National Standard for Particleboard.

C. ANSI A208.2 - American National Standard for Medium Density Fiberboard for Interior Use.

D. ASTM D 635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position.

E. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

F. ISSFA-2 - Classification and Standards for Solid Surfacing Material; International Solid Surface Fabricators Association

G. PS 1 - Structural Plywood.

H. WI (MAN) - Manual of Millwork; Woodwork Institute.

1.04 SUBMITTALS

A. See Section 01350 - Submittals, for submittal procedures.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Specimen warranty.

C. Shop Drawings: Complete details of materials and installation; combine with shop drawings of cabinets and casework specified in other sections.

D. Selection Samples: For each finish product specified, color chips representing manufacturer's full range of available colors and patterns.

E. Test Reports: Chemical resistance testing, showing compliance with specified requirements.

F. Installation Instructions: Manufacturer's installation instructions and recommendations.

G. Maintenance Data: Manufacturer's instructions and recommendations for maintenance and repair of countertop surfaces.

1.05 QUALITY ASSURANCE

A. Fabricator Qualifications: Same fabricator as for cabinets on which tops are to be installed.

B. Installer Qualifications: Fabricator.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.07 FIELD CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.01 COUNTERTOP ASSEMBLIES

A. Solid Polymer Countertops: Solid polymer sheet over continuous substrate.
   1. Flat Sheet Thickness: 3/4 inch, minimum.
   2. Solid Polymer Sheet: Dupont Corian.
      a. Finish On Exposed Surfaces: Matte, gloss rating of 5 to 20.
      b. Color and Pattern: As indicated on drawings.
      c. Manufacturers:
         1) Dupont: www.corian.com.
         2) Substitutions: See Section 01640 - Product Requirements.
   3. Exposed Edge Treatment: Built up to minimum 1-1/4 inch thick; radiused edge.
   4. Back and End Splashes: Same sheet material, radiused top; minimum 4 inches high.

B. Quartz Surfacing Countertops: Quartz surfacing sheet over continuous substrate.
   1. Flat Sheet Thickness: 3/4 inch minimum.
   2. Quartz Surfacing Sheet: Caesar Stone Quartz Surfacing.
      a. Finish On Exposed Surfaces: Polished, gloss rating of 55 to 80.
      b. Color and Pattern: As indicated on drawings.
      c. Manufacturers:
         1) U.S. Quartz Products Inc: www.caesarstoneus.com.
         2) Substitutions: See Section 01640 - Product Requirements.
   3. Exposed Edge Treatment: Built up to minimum 1-1/2 inch thick; radiused edge.
   4. Back and End Splashes: Same sheet material, square top; minimum 4 inches high or as detailed on drawings.

C. Composite Surfacing: Composite surfacing over continuous substrate.
   1. Flat Sheet Thickness: 3/4 inch, minimum.
   2. Composite Surfacing Sheet: Paper stone.
      a. Finish On Exposed Surfaces: Satin sheen.
      b. Color and Pattern: As indicated on drawings.
      c. Manufacturers:
         1) Paper Stone: www.paperstoneproducts.com.
         2) Substitutions: See Section 01640 - Product Requirements.
   3. Exposed Edge Treatment: Built up to minimum 1-1/4 inch thick; radiused edge.
   4. Back and End Splashes: Same sheet material, radiused top; minimum 4 inches high.

2.02 ACCESSORY MATERIALS

A. Plywood for Supporting Substrate: PS 1 Exterior Grade, A-C veneer grade, minimum 5-ply; minimum 3/4 inch thick; join lengths using metal splines.

B. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.

C. Joint Sealant: Mildew-resistant silicone sealant, clear.

2.03 FABRICATION

A. Fabricate in accordance with Woodwork Institute standards governing fabrication quality that are specified in Section 06410.

B. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
   1. Join lengths of tops using best method recommended by manufacturer.
   2. Fabricate to overhang fronts and ends of cabinets 1 inch except where top butts against cabinet or wall.
   3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.

C. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.
   1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
   2. Height: 4 inches, unless otherwise indicated.

D. Solid Surfacing: Fabricate tops up to 144 inches long in one piece; join pieces with adhesive sealant in accordance with manufacturer's recommendations and instructions.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Alexander + Hibbs AIA, Inc. of unsatisfactory preparation before proceeding.

C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

3.02 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

A. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.

3.04 CLEANING

A. Clean countertops surfaces thoroughly.

3.05 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION