SECTION 12 21 13
HORIZONTAL LOUVER BLINDS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Horizontal louver blinds with aluminum slats.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Show fabrication and installation details for horizontal louver blinds.

1. Motorized Operators: Include details of installation in headrails and diagrams for power, signal, and control wiring.

C. Samples: For each exposed product and for each color and texture specified.

1.3 INFORMATIONAL SUBMITTALS

A. Product certificates.

B. Product test reports.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.5 QUALITY ASSURANCE

A. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.

1. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

PART 2 - PRODUCTS

2.1 HORIZONTAL LOUVER BLINDS

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

B. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:

1. Comfortex Window Fashions.

2. Hunter Douglas Contract.

3. Levolor Contract; a Newell Rubbermaid company.

4. Springs Window Fashions.

C. Aluminum Slats:

1. Width: 1/2 to 5/8 inch (13 to 16 mm) .

2. Thickness: Manufacturer's standard .

3. Spacing: Manufacturer's standard .

D. Slat Features:

1. Lift-Cord Rout Holes: Minimum size required for lift cord and located near back (outside) edge of slat to maximize slat overlap and minimize light gaps between slats .

E. Headrail:

1. Manual Lift Mechanism:

a. Lift-Cord Lock: Variable; stops lift cord at user-selected position within blind full operating range .

b. Operator: Extension of lift cord(s) through lift-cord lock mechanism to form cord pull.

F. Bottom Rail: Matching slats.

1. Type: Manufacturer's standard.

G. Ladders: Braided cord.

H. Valance: Manufacturer's standard.

I. Mounting Brackets: With spacers and shims required for blind placement and alignment indicated.

1. Type: Wall.

2. Intermediate Support: Provide intermediate support brackets to produce support spacing recommended by blind manufacturer for weight and size of blind.

J. Hold-Down Brackets and Hooks or Pins: Manufacturer's standard.

K. Side Channels and Perimeter Light Gap Seals: Manufacturer's standard.

L. Colors, Textures, Patterns, and Gloss:

1. Slats: As selected by Architect from manufacturer's full range.

2. Components: Provide rails, cords, ladders, and materials exposed to view matching or coordinating with slat color unless otherwise indicated.

2.2 HORIZONTAL LOUVER BLIND FABRICATION

A. Product Safety Standard: Fabricate horizontal louver blinds to comply with WCMA A 100.1 including requirements for corded, flexible, looped devices; lead content of components; and warning labels.

B. Unit Sizes: Fabricate units in sizes to fill window and other openings as follows, measured at 74 deg F (23 deg C):

1. Between (Inside) Jamb Installation: Width equal to jamb-to-jamb dimension of opening in which blind is installed less 1/4 inch (6 mm) per side or 1/2 inch (13 mm) total, plus or minus 1/8 inch (3.1 mm). Length equal to head-to-sill dimension of opening in which blind is installed less 1/4 inch (6 mm), plus or minus 1/8 inch (3.1 mm).

2. Outside of Jamb Installation: Width and length as indicated, with terminations between blinds of end-to-end installations at centerlines of mullion or other defined vertical separations between openings.

PART 3 - EXECUTION

3.1 INSTALLATION

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

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

B. Install horizontal louver blinds level and plumb, aligned and centered on openings, and aligned with adjacent units according to manufacturer's written instructions.

1. Locate so exterior slat edges are not closer than 1 inch (25 mm) from interior faces of glass and not closer than 1/2 inch (13 mm) from interior faces of glazing frames through full operating ranges of blinds.

2. Install mounting and intermediate brackets to prevent deflection of headrails.

3. Install with clearances that prevent interference with adjacent blinds, adjacent construction, and operating hardware of glazed openings, other window treatments, and similar building components and furnishings.

C. Adjust horizontal louver blinds to operate free of binding or malfunction through full operating ranges.

D. Clean horizontal louver blind surfaces after installation according to manufacturer's written instructions.

END OF SECTION

SECTION 12 24 13
ROLLER WINDOW SHADES

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes manually operated roller shades.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include styles, material descriptions, construction details, dimensions of individual components and profiles, features, finishes, and operating instructions for roller shades.

B. Shop Drawings: Show fabrication and installation details for roller shades, including shadeband materials, their orientation to rollers, and their seam and batten locations.

1. Motor-Operated Shades: Include details of installation and diagrams for power, signal, and control wiring.

C. Samples: For each exposed product and for each color and texture specified.

D. Roller-Shade Schedule: Use same designations indicated on Drawings.

1.03 INFORMATIONAL SUBMITTALS

A. Product certificates.

B. Product test reports.

1.04 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: Fabricator of products.

B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

1. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

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

B. Basis-of-Design Product: Subject to compliance with requirements, provide MechoShade Systems, Inc Classic Meco /5 roller shade system with room darkening channels or comparable product by one of the following:

1. BTX Window Automation, Inc.
2. DFB Sales.
3. Draper Inc.
4. Hunter Douglas Contract.
5. Lutron Electronics Co., Inc.
6. MechoShade Systems, Inc.
7. Nysan Solar Control Inc.; Hunter Douglas Company.
8. OEM Shades Inc.
9. Shade Techniques, LLC.
10. Silent Gliss USA, Inc.
11. SM Automatic, Inc.

2.02 ROLLER SHADES

A. Chain-and-Clutch Operating Mechanisms: With continuous-loop bead chain and clutch that stops shade movement when bead chain is released; permanently adjusted and lubricated.

1. Bead Chains: Manufacturer's standard.
   a. Loop Length: Full length of roller shade.
   b. Limit Stops: Provide upper and lower ball stops.
   c. Chain-Retainer Type: Chain tensioner, sill mounted.

2. Spring Lift-Assist Mechanisms: Manufacturer's standard for balancing roller-shade weight and lifting heavy roller shades.

a. Provide for shadebands that weigh more than 10 lb (4.5 kg) or for shades as recommended by manufacturer, whichever criteria are more stringent.

B. Rollers: Corrosion-resistant steel or extruded-aluminum tubes of diameters and wall thicknesses required to accommodate operating mechanisms and weights and widths of shadebands indicated without deflection. Provide with permanently lubricated drive-end assemblies and idle-end assemblies designed to facilitate removal of shadebands for service.

1. Roller Mounting Configuration: Single roller.
2. Roller Drive-End Location: Right side of inside face of shade.
3. Direction of Shadeband Roll: Reverse, from front of roller.
4. Shadeband-to-Roller Attachment: Manufacturer's standard method.

C. Mounting Hardware: Brackets or endcaps, corrosion resistant and compatible with roller assembly, operating mechanism, installation accessories, and mounting location and conditions indicated.

D. Roller-Coupling Assemblies: Coordinated with operating mechanism and designed to join up to three inline rollers into a multiband shade that is operated by one roller drive-end assembly.

E. Shadebands:

1. Shadeband Material: Light-blocking fabric.

2. Shadeband Bottom (Hem) Bar: Steel or extruded aluminum.
   a. Type: Exposed with endcaps and integral light seal at bottom (sill) channels.
   b. Color and Finish: As selected by Architect from manufacturer's full range.

F. Installation Accessories:

1. Exposed Headbox: Rectangular, extruded-aluminum enclosure including front fascia, top and back covers, endcaps, and removable bottom closure.
   a. Height: Manufacturer's standard height required to enclose roller and shadeband when shade is fully open, but not less than 4 inches (102 mm).

2. Endcap Covers: To cover exposed endcaps.

3. Side Channels: With light seals and designed to eliminate light gaps at sides of shades as shades are drawn down. Provide side channels with shadeband guides or other means of aligning shadebands with channels at tops.

4. Bottom (Sill) Channel or Angle: With light seals and designed to eliminate light gaps at bottoms of shades when shades are closed.

5. Installation Accessories Color and Finish: As selected from manufacturer's full range.

2.03 SHADEBAND MATERIALS

A. Shadeband Material Flame-Resistance Rating: Comply with NFPA 701. Testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

B. Light-Blocking Fabric: Opaque fabric, stain and fade resistant.

1. Source: Roller-shade manufacturer.
2. Type: Fiberglass with acrylic backing.
3. Thickness: 19.6 mil.
4. Weight: 15.1 oz per sq yard.
5. Features: Washable.
6. Color: As selected by Architect from manufacturer's full range.

2.04 ROLLER-SHADE FABRICATION

A. Product Safety Standard: Fabricate roller shades to comply with WCMA A 100.1, including requirements for flexible, chain-loop devices; lead content of components; and warning labels.

B. Unit Sizes: Fabricate units in sizes to fill window and other openings as follows, measured at 74 deg F (23 deg C):

1. Outside of Jamb Installation: Width and length as indicated, with terminations between shades of end-to-end installations at centerlines of mullion or other defined vertical separations between openings.

PART 3 - EXECUTION

3.01 ROLLER-SHADE INSTALLATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, operational clearances, and other conditions affecting performance of the Work.

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

C. Install roller shades level, plumb, and aligned with adjacent units, according to manufacturer's written instructions.

1. Opaque Shadebands: Located so shadeband is not closer than 2 inches (50 mm) to interior face of glass. Allow clearances for window operation hardware.

D. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.

E. Clean roller-shade surfaces after installation, according to manufacturer's written instructions.

END OF SECTION

SECTION 12 36 30
LABORATORY CASEWORK

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Plastic-laminate laboratory casework.
2. Utility-space framing at backs of base cabinets.
3. Filler and closure panels.
4. Laboratory countertops.
5. Tables.
6. Shelves.
7. Laboratory accessories.

1.02 DEFINITIONS

A. MDF: Medium-density fiberboard.

B. 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.

1.03 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site .

1.04 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For laboratory casework. Include plans, elevations, sections, and attachment details.

C. Samples: For cabinet finishes and other materials requiring color selection.

D. Delegated-Design Submittal: For laboratory casework indicated to comply with seismic performance requirements, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.05 INFORMATIONAL SUBMITTALS

A. Product Test Reports for Casework: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating compliance of laboratory casework with requirements of specified product standard.

B. Product Test Reports for Countertop Surface Material: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating compliance of laboratory countertop surface materials with requirements specified for chemical and physical resistance.

1.06 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer that produces casework of types indicated for this Project that has been tested for compliance with SEFA 8 W.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following :

B. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:

1. Landscape.
2. Case Systems, Inc.
3. Sheldon Laboratory Systems.
4. Terrill Manufacturing Co. Inc.

C. Source Limitations: Obtain laboratory casework from single source from single manufacturer unless otherwise indicated.

D. Product Designations: Drawings indicate sizes and configurations of laboratory casework by referencing designated manufacturer's catalog numbers. Other manufacturers' laboratory casework of similar sizes and similar door and drawer configurations and complying with Specifications may be considered. PERFORMANCE REQUIREMENTS

E. Delegated Design: Engage a qualified professional engineer to design laboratory casework and support framing system, including attachments to other work.

2.02 CASEWORK, GENERAL

A. Casework Product Standard: Comply with SEFA 8 W, "Laboratory Grade Wood Casework."

B. Flammable Liquid Storage: Where cabinets are indicated for solvent or flammable liquid storage, provide units that are listed and labeled as complying with requirements in NFPA 30 by a testing and inspecting agency acceptable to authorities having jurisdiction.

C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

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

2.03 WOOD CASEWORK (PLASTIC-COVERED CASEWORK)

A. Provide materials that comply with requirements of the AWI woodworking standard for each type of woodwork and quality grade indicated and, where the following products are part of woodwork, with requirements of the referenced product standards that apply to product characteristics indicated:

1. Hardboard: ANSI/AHA A135.4.
2. High-Pressure Laminate: NEMA LD 3.
3. Medium Density Fiberboard: ANSI A 208.2.
4. Particleboard: ANSI A 208.1.
5. Softwood Plywood: PS 1.
6. Formaldehyde Emission Levels: Comply with formaldehyde emission requirements of each voluntary standard referenced below:
   a. Particleboard: NPA 8.
   b. Medium Density Fiberboard: NPA 9.
   c. Hardwood Plywood: HPMA FE.

B. Semi-exposed Materials:

1. Solid Wood: Sound hardwood lumber, selected to eliminate appearance defects, of any species similar in color and grain to exposed solid wood.
2. Plywood: Hardwood plywood of any species similar in color and grain to exposed plywood. Grade B faces and Grade J crossbands. Provide backs of same species as faces.
3. Provide solid wood or hardwood plywood for semiexposed surfaces unless otherwise indicated.

2.04 AUXILIARY CABINET MATERIALS

A. Acid Storage-Cabinet Lining: 1/4-inch- (6-mm-) thick, polyethylene, polypropylene, epoxy, or phenolic-composite lining material.

B. 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.

2.05 COUNTERTOP TABLETOP SHELF MATERIALS

A. Epoxy: Factory-molded, modified epoxy-resin formulation with smooth, nonspecular finish.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
   a. Durcon, Inc.
   b. Prime Industries, Inc.
   c. Thermo Fisher Scientific.
2. Physical Properties:
   a. Flexural Strength: Not less than 10,000 psi (70 MPa).
   b. Modulus of Elasticity: Not less than 2,000,000 psi (1400 MPa).
   c. Hardness (Rockwell M): Not less than 100.
   d. Water Absorption (24 Hours): Not more than 0.02 percent.
   e. Heat Distortion Point: Not less than 260 deg F (127 deg C).
3. Chemical Resistance: Epoxy-resin material has the following ratings when tested with indicated reagents according to NEMA LD 3, Test Procedure 3.4.5:
   a. No Effect: Acetic acid (98 percent), acetone, ammonium hydroxide (28 percent), benzene, carbon tetrachloride, dimethyl formamide, ethyl acetate, ethyl alcohol, ethyl ether, methyl alcohol, nitric acid (70 percent), phenol, sulfuric acid (60 percent), and toluene.
   b. Slight Effect: Chromic acid (60 percent) and sodium hydroxide (50 percent).
4. Color: Black.

2.06 FABRICATION

A. Construction: Provide high pressure plastic-covered laboratory casework complying with NEMA GP-28 standards for vertical grade.

B. Tables: Solid-hardwood legs, not less than 2 inches (50 mm) square with solid-hardwood stretchers as needed to comply with product standard. Bolt stretchers to legs and cross-stretchers, and bolt legs to table aprons. Provide leveling device at bottom of each leg.

C. Utility-Space Framing: Steel framing units consisting of two steel slotted channels connected at top and bottom by U-shaped brackets.

D. Filler and Closure Panels: Provide where indicated and as needed to close spaces between cabinets and walls, ceilings, and indicated equipment. Fabricate from same material and with same finish as adjacent exposed cabinet surfaces unless otherwise indicated.

2.07 HARDWARE

A. General: Provide laboratory casework manufacturer's standard, commercial-quality, heavy-duty hardware complying with requirements indicated for each type.

B. Butt Hinges: Stainless-steel, five-knuckle hinges complying with BHMA A156.9, Grade 1, with antifriction bearings and rounded tips.

C. Frameless Concealed Hinges (European Type): BHMA A156.9, Type B01602, 100 degrees of opening, self-closing.

D. Hinged Door and Drawer Pulls: Solid-aluminum, stainless-steel, or chrome-plated-brass back-mounted pulls. Provide two pulls for drawers more than 24 inches (600 mm) wide.

E. Sliding Door Pulls: Stainless-steel or chrome-plated recessed flush pulls.

F. Door Catches: Nylon-roller spring catches.

G. Adjustable Wall Shelf Supports: Surface-type steel standards and steel shelf brackets, with epoxy powder-coated finish, complying with BHMA A156.9, Type B04102 and Type B04112.

2.08 COUNTERTOPS, TABLETOPS , SHELVES AND SINKS

A. Countertops, General: Provide units with smooth surfaces in uniform plane, free of defects. Make exposed edges and corners straight and uniformly beveled. Provide front and end overhang of 1 inch (25 mm), with continuous drip groove on underside 1/2 inch (13 mm) from edge.

B. Sinks, General: Provide sizes indicated or laboratory casework manufacturer's closest standard size of equal or greater volume, as approved by Architect.

1. Outlets: Provide with strainers and tailpieces, NPS 1-1/2 (DN 40), unless otherwise indicated.
2. Overflows: Where indicated, provide overflow of standard beehive or open-top design with separate strainer. Height 2 inches (50 mm) less than sink depth. Provide in same material as strainer.

C. Epoxy Countertops Tabletops:

1. Countertop Fabrication: Fabricate with factory cutouts for sinks, holes for service fittings and accessories, and butt joints assembled with epoxy adhesive and concealed metal splines.
   a. Countertop Configuration: Flat, 3/4 inch (19 mm) thick, with rounded edge and corners, and with drip groove and applied backsplash.
   b. Countertop Configuration: Raised (marine) edge, 3/4-inch (19-mm) minimum thickness, with integral or applied raised edge having rounded edge and corners, and with applied] backsplash.
   c. Countertop Configuration: As indicated.
   d. Countertop Construction: Uniform throughout full thickness.
2. Tabletop Fabrication:
   a. Tabletop Configuration: Flat, 3/4 inch (19 mm) thick, with rounded edge and corners, and with drip groove at perimeter.
   b. Tabletop Configuration: Raised (marine) edge, 3/4-inch (19-mm) minimum thickness, with integral or applied raised edge having rounded edge and corners.
   c. Tabletop Construction: Uniform throughout full thickness.

2.09 LABORATORY ACCESSORIES

A. Reagent Shelves: Provide as indicated, fabricated from same material as adjacent countertop unless otherwise indicated.

B. Burette Rods: Aluminum or stainless-steel rods, 1/2 inch (13 mm) in diameter and 18 inches (450 mm) long, threaded on one end to fit tapered plug adapter for flush socket receptacle. Provide with tapered plug adapter and receptacle.

C. Upright Rod Assembly and Metal Crossbar: Aluminum or stainless steel. Two vertical rods and one horizontal crossbar, 3/4 inch (19 mm) in diameter and 36 inches (900 mm) long unless otherwise indicated; two flush socket receptacles and two crossbar clamps. Ends of vertical rods are tapered to fit receptacles; all other rod ends are rounded.

D. Greenlaw Arm Assembly: Aluminum or stainless-steel vertical rod, tapered on one end to fit flush socket receptacle. Adjustable crossbar of hardwood with black, acid-resistant finish, secured to upright with adjustable clamp. Provide with receptacle.

E. Lattice Assembly: Aluminum or stainless-steel, vertical and horizontal rod lattice assembly with 3/4-inch- (19-mm-) diameter rods at approximately 12 inches (300 mm) o.c. with two flush socket receptacles for mounting.

F. Pegboards: Polypropylene, epoxy, or phenolic-composite pegboards with removable polypropylene pegs and stainless-steel drip troughs with drain outlet.

G. Pegboards: Stainless-steel pegboards with removable polypropylene pegs and stainless-steel drip troughs with drain outlet.

PART 3 - EXECUTION

3.01 INSTALLATION OF CABINETS

A. Comply with installation requirements in SEFA 2.3. Install level, plumb, and true; shim as required, using concealed shims. Where laboratory casework abuts other finished work, apply filler strips and scribe for accurate fit, with fasteners concealed where practical.

B. Utility-Space Framing: Secure to floor with two fasteners at each frame. Fasten to partition framing, wood blocking, or metal reinforcements in partitions and to base cabinets.

C. Base Cabinets: Fasten cabinets to utility-space framing, partition framing, wood blocking, or reinforcements in partitions, with fasteners spaced not more than 16 inches (400 mm) o.c. Bolt adjacent cabinets together with joints flush, tight, and uniform.

1. Where base cabinets are installed away from walls, fasten to floor at toe space at not more than 24 inches (600 mm) o.c. and at sides of cabinets with not less than two fasteners per side.

D. Wall Cabinets: Fasten to hanging strips, masonry, partition framing, blocking, or reinforcements in partitions. Fasten each cabinet through back, near top, at not less than 16 inches (400 mm) o.c.

E. Install hardware uniformly and precisely. Set hinges snug and flat in mortises.

F. Adjust laboratory casework and hardware so doors and drawers align and operate smoothly without warp or bind and contact points meet accurately. Lubricate operating hardware as recommended by manufacturer.

3.02 INSTALLATION OF COUNTERTOPS

A. Comply with installation requirements in SEFA 2.3. Abut top and edge surfaces in one true plane with flush hairline joints and with internal supports placed to prevent deflection. Locate joints only where shown on Shop Drawings.

B. Field Jointing: Where possible, make in same manner as shop-made joints using dowels, splines, fasteners, adhesives, and sealants recommended by manufacturer. Shop prepare edges for field-made joints.

C. Fastening:

1. Secure countertops, except for epoxy countertops, to cabinets with Z-type fasteners or equivalent, using two or more fasteners at each cabinet front, end, and back.
2. Secure epoxy countertops to cabinets with epoxy cement, applied at each corner and along perimeter edges at not more than 48 inches (1200 mm) o.c.
3. Where necessary to penetrate countertops with fasteners, countersink heads approximately 1/8 inch (3 mm,) and plug hole flush with material equal to countertop in chemical resistance, hardness, and appearance.

D. Seal unfinished edges and cutouts in plastic-laminate countertops with heavy coat of polyurethane varnish.

E. Provide scribe moldings for closures at junctures of countertop, curb, and splash with walls as recommended by manufacturer for materials involved. Match materials and finish to adjacent laboratory casework. Use chemical-resistant, permanently elastic sealing compound where recommended by manufacturer.

F. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

3.03 INSTALLATION OF LABORATORY ACCESSORIES

A. Install accessories according to Shop Drawings, installation requirements in SEFA 2.3, and manufacturer's written instructions.

B. Securely fasten adjustable shelving supports, stainless-steel shelves, and pegboards to partition framing, wood blocking, or reinforcements in partitions.

C. Install shelf standards plumb and at heights to align shelf brackets for level shelves. Install shelving level and straight, closely fitted to other work where indicated.

D. Securely fasten pegboards to partition framing, wood blocking, or reinforcements in partitions.

3.04 CLEANING AND PROTECTING

A. Clean finished surfaces, touch up as required, and remove or refinish damaged or soiled areas to match original factory finish, as approved by Architect.

B. Protect countertop surfaces during construction with 6-mil (0.15-mm) plastic or other suitable water-resistant covering. Tape to underside of countertop at a minimum of 48 inches (1200 mm) o.c.

END OF SECTION

SECTION 12 36 61
SIMULATED STONE COUNTERTOPS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Solid-surface-material countertops, backsplashes, and window sills.

1.2 ACTION SUBMITTALS

A. Product Data: For countertop materials.

B. Shop Drawings: For countertops. Show materials, finishes, edge and backsplash profiles, methods of joining, and cutouts for plumbing fixtures.

C. Samples: For each type of material exposed to view.

PART 2 - PRODUCTS

2.1 SOLID-SURFACE-MATERIAL COUNTERTOPS

A. Configuration: Provide countertops with the following front and backsplash style:

1. Front: 3/4-inch (19-mm) bullnose.
2. Backsplash: Straight, slightly eased at corner .
3. Endsplash: Matching backsplash.

B. Countertops: 3/4-inch (19-mm) thick, solid surface material with front edge built up with same material.

C. Countertops: 1/4-inch (6.4-mm) thick, solid surface material laminated to 3/4-inch (19-mm) thick particleboard with exposed edges built up with 3/4-inch (19-mm) thick, solid surface material .

D. Backsplashes: 3/4-inch- (19-mm-) thick, solid surface material.

2.2 SOLID-SURFACE-MATERIAL WINDOW SILLS

A. Solid Surface for Horizontal and Vertical Surface: 1/2-inch thick integral material.

1. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
    a. Provide selections made by ENGINEER from manufacturer's full range of standard colors and finishes in the following categories:
    b. Solid colors.
    c. Patterns.
2. Edge Treatment: Same solid surface color as on horizontal surfaces.

2.3 COUNTERTOP MATERIALS

A. Certified Wood Materials: Fabricate countertops with wood and wood-based products produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."

B. Composite Wood and Agrifiber Products: Provide products that comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers," including 2004 Addenda.

C. Particleboard: ANSI A208.1, Grade M-2 .

D. Plywood: Exterior softwood plywood complying with DOC PS 1, Grade C-C Plugged, touch-sanded.

E. Adhesives: Adhesives shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

F. Solid Surface Material: Homogeneous solid sheets of filled plastic resin complying with ANSI SS1.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
    a. Avonite Surfaces.
    b. E. I. du Pont de Nemours and Company.
    c. Formica Corporation.
    d. LG Chemical, Ltd.
    e. Meganite Inc.
    f. Samsung Chemical USA, Inc.
    g. Swan Corporation (The).
    h. Transolid, Inc.
    i. Wilsonart International.
2. Type: Provide Standard Type unless Special Purpose Type is indicated.

3. Integral Sink Bowls: Comply with ISSFA-2 and ANSI Z124.3, Type 5 or Type 6, without a precoated finish.
4. Colors and Patterns: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Fasten countertops by screwing through corner blocks of base units into underside of countertop. Align adjacent surfaces and, using adhesive in color to match countertop, form seams to comply with manufacturer's written instructions. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

END OF SECTION