

SECTION 10200 - LOUVERS AND VENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes fixed, extruded-aluminum louvers.
- B. See Division 15 Sections for louvers that are a part of mechanical equipment.

1.2 PERFORMANCE REQUIREMENTS

- A. Louver Structural Performance: Capable of withstanding the effects of wind and normal thermal movement without evidencing permanent deformation of blades, frames, and supports; noise or metal fatigue caused by louver blade rattle or flutter; or permanent damage to fasteners and anchors.
 - 1. Wind Load: 140 MPH, Exposure B, importance factor 1.1 per Florida Building Code 2004 - 2006 and 2007 Amendments, Section 1609.
 - 2. Thermal Movements: Movements resulting from 120 deg F change (range) in ambient and 180 deg F change (range) in surface temperatures.

1.3 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Shop Drawings: Include plans, elevations, sections, and details of installation for louver units and accessories not completely described in Product Data.
- C. Samples: For each metal finish and for each color and texture required.
- D. Product test reports.

1.4 PROJECT CONDITIONS

- A. Field Measurements: Verify louver openings by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. 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:
 - 1. Airline Products Co.
 - 2. Airolite Co.
 - 3. Ruskin Manufacturing; Tomkins Industries, Inc.
- B. Provide MFGR certification for LEED credit 4.1, Provide louvers with high recycle content, certification to include recycled content.

2.2 EXTRUDED-ALUMINUM LOUVER

- A. Construction: Fixed, horizontal louver with extruded-aluminum frame and blades.
 - 1. Aluminum Extrusions: ASTM B 221, alloy 6063-T5 or T-52.
 - 2. Aluminum Sheet: ASTM B 209, alloy 3003 or 5005 with temper as required for forming.
 - 3. Frame and Blade Thickness: 0.125 inch.
- B. Performance Requirements: Drainable-blade type with maximum standard airflow not less than 8500 cfm with not more than 0.20-inch static-pressure loss.
- C. Descriptive Requirements:
 - 1. Blade Profile: Drainable blade
 - a. Blade Angle and Spacing: 30 degrees and 3 inches deep louvers.

2.3 LOUVER SCREENS

- A. Frames: Same kind and form of metal of louvers to which screens are attached.
- B. Bird Screening: Aluminum, 1/2-inch square mesh, 0.063-inch wire.
- C. Location: Interior faces of exterior louvers.

2.4 MISCELLANEOUS MATERIALS

- A. Fasteners: Of same basic metal and alloy as fastened metal or 300 series stainless steel. Do not use metals that are incompatible with joined materials.
- B. Bituminous Paint: Asphalt mastic complying with SSPC-Paint 12 but containing no asbestos fibers, or asphalt emulsion complying with ASTM D 1187.

2.5 LOUVER FABRICATION

- A. Fabricate louvers to fit in openings of sizes indicated, with allowances made for fabrication and installation tolerances, tolerances of adjoining, and perimeter sealant joints.
- B. Join frame members to one another and to fixed louver blades with fillet welds concealed from view, as standard with louver manufacturer.

2.6 FINISHES

- A. Aluminum: Conversion-Coated and Factory-Primed Finish: Air-dried primer of not less than 2.0-mil dry film thickness.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install units, level, plumb at indicated alignment with adjacent work.

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- B. Use concealed anchorages where possible. Provide brass or lead washers fitted to screws where required to protect metal surfaces and to make a weathertight connection.
- C. Protect galvanized and nonferrous-metal surfaces from corrosion or galvanic action by applying a heavy coating of bituminous paint on surfaces that will be in contact with concrete, masonry, or dissimilar metals.
- D. Provide perimeter reveals and openings of uniform width for sealants and joint fillers.
- E. Repair damaged finishes so no evidence remains of corrective work. Return items that cannot be refinished in the field to the factory, make required alterations, and refinish entire unit or provide new units.

END OF SECTION 10200

SECTION 10416 - DIRECTORIES AND BULLETIN BOARDS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Internally illuminated directories.
 - 2. Nonilluminated directories.
 - 3. Bulletin boards.

1.2 SUBMITTALS

- A. Product Data: For each type of directory, bulletin board, and accessory indicated.
- B. Shop Drawings: Include plans, elevations, sections, and details of installation.
 - 1. Recessed Units: Verify openings for recessed units by field measurements before fabrication and indicate measurements on Shop Drawings.
- C. Samples: For each exposed finish and for each color and texture required.

1.3 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Message Strips: Furnish units matching message strips installed and equal to [5] percent of amount installed.

PART 2 - PRODUCTS

2.1 NONILLUMINATED DIRECTORY

- A. 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:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- C. Basis-of-Design Product: The design for nonilluminated directory is based on . Subject to compliance with requirements, provide the named product or a comparable product by one of the following:
 - 1. Apco Graphics.

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2. ASI Sign System, Inc.
 3. or pre-approved equal
- D. Type: Recessed directory consisting of a cabinet with an operable transparent cover, and a retainer frame containing a header panel and a letter board or removable message strips.
- E. Cabinet Housing: Fabricate frame from aluminum extrusions, mitered and welded with aluminum-sheet rear panel. Provide reinforcement to prevent racking and misalignment.
- F. Frameless Cover Design: 6-mm-thick, bronze, acrylic cover with acrylic returns to engage perimeter frame.
- G. Reveal-Type Frame and Nonsectional Cover Design: 6-mm-thick float glass in extruded-aluminum frame, mounted on concealed hinges to form a reveal between outer edge of cover and inner edge of cabinet frame. Provide nonsectional one- or two-piece cover for access to message-strip columns.
- H. Sectional Perimeter Frame and Cover Design: Sectional covers, each with 6-mm-thick float glass in extruded-aluminum frame, mounted on concealed pivot hinges or continuous piano hinges, and with concealed lock.
- I. Modular Frame and Cover Design: Individual units containing a single column of message strips, with extruded-aluminum perimeter frame and lift-out transparent cover, and glazed with 6-mm-thick tempered glass.
- J. Message Strips: **[Two-ply, two-color, laminated, acrylic-sheet engraving strips of size indicated]** .
1. Message Content: **<Insert content.>**
 - a. Include blank strips to fill out directory spaces.
 2. Message Strip Color: **[As selected from manufacturer's full range]**.
 3. Letter Size: **[1/4 inch (6.4 mm)]**.
 4. Letter Style: **[Helvetica Medium]**.
 5. Letter Case: **[All capitals]**.
- K. Changeable-Letter-Type Message Strips: Grooved, black-felt, vinyl- or rubber-covered strips.
- L. Changeable-Letter Boards: Grooved black-wool-felt, fabric-covered surface, fabricated on a removable plywood back. Space grooves at 1/4 inches (6.4 mm) o.c.
1. Letters: Molded plastic with tabs for engaging grooves in the letter board or message strip. Provide boxed letter assortment of 300 letters for each size, style, color, and case required.
 2. Letter Size: **[1/2 inch (13 mm)]**.
 3. Letter Style: **[Helvetica]**.
 4. Letter Color: **[Black]**.
 5. Letter Case: **[All capitals]**.

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- M. Header Panel: [**Opaque, acrylic sheet with graphics applied by silk-screen-printing process**].
 - 1. Graphic: [**As indicated**].
- N. Provide Manufacturers Certification for LEED Credit 4.1 and high recycle content.
- O. Provide Manufacturers Certification for LEED Credit 5.1, use Building materials manufactured within 500 miles of project site as per LEED requirements.

2.2 ACCESSORIES

- A. Fasteners: Provide screws, bolts, and other exposed fastening devices of same material as items being fastened. Use theft-resistant fasteners where exposed to view.
- B. Hardware: Provide building directories and bulletin boards with the following hardware:
 - 1. Hinges: [**Concealed pivot**] hinges.
 - 2. Locks: Furnish each cover with lock; key locks alike. Furnish two keys per lock.
- C. Colors: Where items other than frames or glazing materials require color selection to distinguish graphic images from the background, provide [**colors matching sample**] [**colors as selected from manufacturer's full range**] <Insert colors>.

2.3 FINISHES

- A. Aluminum Finish: [**Class II, clear anodic coating complying with AAMA 607.1**].
 - 1. Color: [**As selected from manufacturer's full range**].

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install units level and plumb, attached to supporting structure with concealed fasteners.

END OF SECTION 10416

SECTION 10425 - SIGNS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Panel signs.
2. Dimensional letters and numbers.
3. Cast-metal plaques.

1.2 SUBMITTALS

A. Product Data: For each product indicated.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other Work.

1. Verify dimensions by field measurements before fabrication and indicate measurements on Shop Drawings.

C. Samples: For each exposed finish.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cast Acrylic Sheet: Cast (not extruded or continuous cast) methyl methacrylate monomer plastic sheet with minimum flexural strength of 16,000 psi (110 MPa) per ASTM D 790 and minimum allowable continuous service temperature of 176 deg F (80 deg C).

1. Transparent Sheet: Colorless sheet in matte finish, with light transmittance of 92 percent per ASTM D 1003.
2. White Translucent Sheet: Of density required to produce uniform brightness and minimum halation effects.
3. Opaque Sheet: Colored, in colors as **selected from manufacturer's full range**.

B. Plastic Laminate: High-pressure engraving stock with face and core plies in contrasting colors.

1. Colors and Finishes: [**As selected from manufacturer's full range**] <Insert colors and finishes>.

C. Aluminum Sheet: Alloy and temper recommended by manufacturer for use and finish indicated with not less than the strength and durability properties of ASTM B 209, alloy 5005-H15.

- D. Aluminum Extrusions: Alloy and temper recommended by manufacturer for use and finish indicated with not less than the strength and durability properties of ASTM B 221, alloy 6063-T5.
- E. Aluminum Castings: Alloy and temper recommended by manufacturer for casting process, use, and finish indicated.
- F. Bronze Plate: Copper alloy UNS No. C28000, muntz metal.
- G. Bronze Castings: Copper alloy UNS No. C83600, ASTM B 584.
- H. Stainless-Steel Plate, Sheet, and Strip: AISI Type 302, complying ASTM A 167.
- I. Vinyl Film: Opaque [nonreflective] vinyl film, 0.0035-inch- (0.0889-mm-) minimum thickness, with pressure-sensitive adhesive backing, suitable for exterior and interior applications.
- J. ABS Plastic: High-impact thermoplastic of copolymers of acrylonitrile, butadiene, and styrene.
- K. Fasteners: Use concealed fasteners fabricated from metals that are not corrosive to sign material and mounting surface.
- L. Anchors and Inserts: Use nonferrous metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance. Use toothed steel or lead expansion-bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete or masonry work.
- M. Colored Coatings for Acrylic Plastic Sheet: Use colored coatings, including inks and paints for copy and background colors, recommended by acrylic manufacturers for optimum adherence to surface and that are nonfading for application intended.

2.2 PANEL SIGNS

- A. 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:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- C. Basis-of-Design Product: The design for signs is based on ASI Sign Systems, Inc. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:
 - 1. APCO Graphics, Inc.
 - 2. ASI Sign Systems, Inc.
 - 3. Poblocki & Sons, Inc.
 - 4. Or Pre-Approved Equal
- D. Unframed Panel Signs: Fabricate with smooth edges mechanically finished.

1. Edge Condition: [**Square cut**].
 2. Edge Color for Plastic Laminate: Same as [**copy**].
 3. Corner Condition: [**Square**].
- E. Framed Panel Signs:
1. Material: [**Aluminum, extruded or cast**].
 2. Corner Condition: [**Square**].
- F. Laminated Sign Panels: Permanently laminate face panels to backing sheets using manufacturer's standard process.
- G. Brackets and Fittings: Fabricate from extruded aluminum to suit mounting conditions indicated. Factory-paint brackets in color [**matching background color of sign panel**].
- H. Engraved Surface Copy: Machine-engage letters, numbers, symbols, and other graphic devices to produce precisely formed copy, incised to uniform depth.
1. Engraved Plastic Laminate: Engrave through exposed face ply of plastic laminate sheet to expose contrasting core ply.
 2. Engraved Metal: Fill engraved copy with enamel.
 3. Engraved Opaque Acrylic Sheet: Fill engraved copy with enamel.
 4. Face-Engraved Clear Acrylic Sheet: Fill engraved copy with enamel. Apply opaque background color coating to back face of acrylic sheet.
 - a. Engrave copy to produce minimum indentation depth of 1/32 inch (0.8 mm) and minimum stroke width of 1/4 inch (6.4 mm).
- I. Subsurface-Engraved Copy: Reverse-engage back face of clear acrylic sheet. Fill resulting copy with enamel. Apply opaque background color coating over enamel-filled copy.
- J. Subsurface-Applied Copy: Apply copy to back face of clear acrylic sheet forming panel face to produce precisely formed opaque images free from rough edges.
1. Use reverse silk-screen process to print copy; overspray copy with an opaque background color coating.
 2. Use DuPont "Chromalin" heat- and pressure-laminated photopolymer film system to form copy and background color.
- K. Raised Copy: Machine-cut copy characters from matte-finished opaque acrylic sheet and chemically weld onto acrylic sheet forming sign panel face. Produce precisely formed characters with square cut edges free from burrs and cut marks.
1. Panel Material: Matte-finished [**opaque acrylic sheet**] [**transparent acrylic with opaque color coating subsurface applied**].
 2. Raised-Copy Thickness: [**Not less than 1/32 inch (0.8 mm)**]
- L. Applied Copy: Die-cut characters from vinyl film with pressure-sensitive adhesive backing. Apply copy to exposed face of sign panel.
1. Panel Material: Matte-finished

- M. Provide Manufacturers Certification for LEED Credit 4.1 and high recycle content.
- N. Provide Manufacturers Certification for LEED Credit 5.1, use building materials manufactured within 500 miles of project site as per LEED requirements.

2.3 DIMENSIONAL LETTERS AND NUMBERS

- A. 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:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- C. Basis-of-Design Product: The design for signs is based on. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:
1. APCO Graphics, Inc.
 2. ASI Sign Systems, Inc.
 3. Or Pre-Approved Equal
- D. Cast Letters and Numbers: Individual characters with smooth, flat faces, sharp corners, and precisely formed lines and profiles, free from pits, scale, sand holes, or other defects. Cast lugs into back of characters and tap to receive threaded mounting studs.
1. Metal: **[Aluminum]**.
- E. Cutout Letters and Numbers: Solid plate material; precisely cut characters with square cut, smooth edges.
1. Metal: **[Aluminum]**.
- F. Fabricated Letters and Numbers: Metal, form exposed faces and sides of characters to produce surfaces free from warp and distortion. Include internal bracing for stability and attachment of mounting accessories.
1. Aluminum Sheet: Not less than 0.090 inch (2.3 mm) thick. Fabricate by heliarc welding process.
 2. Bronze Plate: Not less than 20 gage.
 3. Stainless-Steel Sheet: Not less than 18 gage for face and 22 gage for returns.
 4. Letter Height: **[2 inches (50 mm)] [4 inches (101 mm)] [6 inches (152 mm)] [8 inches (203 mm)] [10 inches (254 mm)] [12 inches (304 mm)] [18 inches (457 mm)] <Insert dimension>**.
 5. Letter Style: **[Helvetica]**.
 6. Illuminated Units: Use manufacturer's standard lighting components including neon tubes, transformers, insulators, and other components. Make provisions for servicing and concealed connection to building system. Coordinate electrical characteristics with those of power supply provided.

- a. Backlighted Units: Use concealed white neon tubes of number indicated or required by size of characters. Include manufacturer's hardware for projection mounting of characters at distance from wall surface indicated.
- b. Facelighted Units: Fabricate letter faces from translucent plastic sheet. Attach letters to sheet metal back channels. Include neon tubes of number and spacing required to illuminate letter faces evenly.

2.4 CAST-METAL PLAQUES

- A. 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:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- C. Basis-of-Design Product: The design for signs is based on. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:
 1. APCO Graphics, Inc.
 2. ASI Sign Systems, Inc.
 3. Or Pre-Approved Equal
- D. Plaques: Castings free from pits, scale, sand holes, or other defects. Hand-tool and buff borders and raised copy to produce manufacturer's standard satin polished finish.
 1. Metal: **[Aluminum]**.
 2. Border Style: **[Raised flat band]**
 3. Background Texture: Manufacturer's standard **[pebble texture]**.
 4. Background Finish: **[Baked-enamel finish]**.

2.5 FINISHES

- A. Colors and Surface Textures: For exposed sign material that requires selection of materials with integral or applied colors, surface textures or other appearance characteristics, provide color matches as selected from manufacturer's full range, unless otherwise indicated.
- B. Aluminum:
 1. Clear-Anodized Finish: Class II clear anodic coating with **[fine]** **[medium]** satin finish.
 2. Baked-Enamel Finish: Thermosetting, modified-acrylic enamel system complying with AAMA 603.8, medium gloss.
 - a. Color: **[As selected from manufacturer's full range]** **<Insert color>**.
- C. Bronze: Comply with system established by CDA.
 1. Finish: **[Natural satin, CDA-M3106x]**.
 2. Clear Organic Coating: **[Manufacturer's standard clear coating]**.
 - a. Color: Uniform, matching sample.

D. Stainless Steel:

1. Bright, Directional Polish Finish: AISI No. 4 finish.
 - a. Grain Direction: **[Horizontal]**.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install signs level, plumb, and at height indicated, with sign surfaces free from distortion or other defects in appearance.
- B. Wall-Mounted Panel Signs:
 1. Vinyl-Tape Mounting: Use double-sided foam tape to mount signs to smooth, nonporous surfaces. Do not use this method for vinyl-covered or rough surfaces.
 2. Silicone-Adhesive Mounting: Use liquid silicone adhesive recommended by sign manufacturer to attach sign units to irregular, porous, or vinyl-covered surfaces. Use double-sided vinyl tape where recommended by sign manufacturer to hold sign in place until adhesive has fully cured.
 3. Shim Plate Mounting: Provide 1/8-inch- (3.2-mm-) thick, concealed aluminum shim plates with predrilled and countersunk holes, at locations indicated, and where other mounting methods are not practicable. Attach plate with fasteners and anchors suitable for secure attachment to substrate. Attach panel sign units to plate using method specified above.
- C. Bracket-Mounted Units: Install with manufacturer's standard brackets, fittings, and hardware as appropriate for mounting signs that project at right angles from walls and ceilings. Attach brackets and fittings securely to walls or ceilings with concealed fasteners and anchoring devices.
- D. Dimensional Letters and Numbers: Mount letters and numbers using standard fastening methods recommended by manufacturer for letter form, type of mounting, wall construction, and condition of exposure indicated. Use heavy paper template to establish letter spacing and to locate holes for fasteners.
 1. Flush Mounting: With letter backs in contact with wall surface.
 2. Projected Mounting: With letter backs separated from wall surface by distance indicated.
- E. Cast-Metal Plaques: Mount plaques using standard method recommended by manufacturer for type of wall surface indicated.
 1. Concealed Mounting: Mount plaques by inserting threaded studs into tapped lugs on back of plaque. Set in predrilled holes filled with quick-setting cement.
 2. Face Mounting: Mount plaques using exposed fasteners with rosettes attached through face of plaque into wall surface.

END OF SECTION 10425

SECTION 10520 - FIRE-PROTECTION SPECIALTIES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes portable fire extinguishers.
- B. See Division 7 Section "Through-Penetration Firestop Systems" for firestopping sealants at fire-rated cabinets.
- C. See Division 9 Section "Painting" for field-painting fire-protection cabinets.

1.2 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for fire-protection specialties.
 - 1. Fire Extinguishers: Include rating and classification.
 - 2. Cabinets: Include door hardware, cabinet type, trim style, panel style, and details of installation.
- B. Samples: For each exposed cabinet finish.

1.3 QUALITY ASSURANCE

- A. NFPA Compliance: Fabricate and label fire extinguishers to comply with NFPA 10, "Standard for Portable Fire Extinguishers."
- B. Fire Extinguishers: Listed and labeled for type, rating, and classification by an independent testing agency acceptable to authorities having jurisdiction.

1.4 COORDINATION

- A. Coordinate size of cabinets to ensure that type and capacity of hoses, hose valves, and hose racks indicated are accommodated.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aluminum: ASTM B 209 sheet and ASTM B 221 extrusions, alloy and temper recommended by aluminum producer and manufacturer for type of use and finish indicated.

2.2 PORTABLE FIRE EXTINGUISHERS

- A. 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:

- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. J. L. Industries, Inc.
 - 2. Larsen's Manufacturing Company.
 - 3. Samson Products, Inc.
- C. General: Provide fire extinguishers for each cabinet and other locations indicated.
 - 1. Mounting Brackets: Manufacturer's standard steel, designed to secure extinguisher indicated and with plated or baked-enamel finish.
 - a. Provide brackets for extinguishers located in cabinets.
- D. Multipurpose Dry-Chemical Type: UL-rated A:60-B:C, 10-lb nominal capacity, in enameled-steel container.

2.3 FIRE-PROTECTION CABINETS

- A. 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:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. J. L. Industries, Inc.
 - 2. Larsen's Manufacturing Company.
 - 3. Samson Products, Inc.
- C. Fire Protection Cabinet
 - 1. Cabinet Construction: Provide manufacturer's standard box (tub), with trim, frame, door, and hardware to suit cabinet type, trim style, and door style indicated. Weld joints and grind smooth. Miter and weld perimeter doorframes.
 - a. Cabinet Metal: Aluminum sheet.
 - 2. Cabinet Type: Suitable for fire extinguisher.
 - 3. Cabinet Mounting: Semi-Recessed.
 - 4. Cabinet Trim Style: Fabricate cabinet trim in one piece with corners mitered, welded, and ground smooth.
 - a. Exposed Trim: One-piece combination trim and perimeter door frame overlapping surrounding wall surface with exposed trim face and wall return at outer edge (backbend).
 - 1. Flat Trim for Recessed Cabinets: 1/4-to 5/16 inch backbend depth.
 - 5. Cabinet Trim Material: Manufacturer's standard aluminum sheet

6. Door Material: Manufacturer's standard aluminum sheet.
7. Door Glazing: Manufacturer's standard, as follows:
 - a. Bubble: One-piece clear break acrylic.
8. Door Style: Manufacturer's standard design full bubble with frame.
9. Door Construction: Fabricate doors according to manufacturer's standards, of materials indicated, and coordinated with cabinet types and trim styles selected.
 - a. Provide minimum 1/2-inch- thick doorframes, fabricated with tubular stiles and rails, and hollow-metal design.
 - b. Provide inside latch and lock for break-glass panels.
10. Door Hardware: Provide manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated. Provide either lever handle with cam-action latch, or exposed or concealed door pull and friction latch. Provide concealed or continuous-type hinge permitting door to open 180 degrees.
 - a. Break-Glass Strike: Provide manufacturer's standard metal strike, complete with chain and mounting clip, secured to cabinet.
 - b. Door Locks: Provide cylinder lock, with all cabinets keyed alike.
11. Identification: Provide lettering to comply with authorities having jurisdiction for letter style, color, size, spacing, and location. Locate as directed by Architect.
 - a. Identify fire extinguisher in cabinet with the words "FIRE EXTINGUISHER" applied to door.
 1. Application Process: Silk-screened.
 2. Lettering Color: White.
 3. Orientation: Vertical.

2.4 FINISHES

- A. Aluminum Cabinet and Door Finishes: Provide manufacturer's standard baked-enamel paint for the following:
 1. Exterior of cabinets and doors, except for those surfaces indicated to receive another finish.
 2. Interior of cabinets and doors.
- B. Aluminum Baked-Enamel Organic Finish: Thermosetting, modified-acrylic enamel primer/topcoat system complying with AAMA 603.8 except with a minimum dry film thickness of 1.5 mils, medium gloss.
 1. Color: As selected from manufacturer's standard.
- C. Surface Preparation: Clean surfaces of dirt, oil, grease, mill scale, rust, and other contaminants that could impair paint bond using manufacturer's standard methods.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Examine roughing-in for hose valves, hose racks, and cabinets to verify actual locations of piping connections before cabinet installation.
- B. Examine walls and partitions for suitable framing depth and blocking where recessed and semirecessed cabinets are to be installed.
- C. Examine fire extinguishers for proper charging and tagging. Remove and replace damaged, defective, or undercharged units.
- D. Install in locations and at mounting heights indicated or, if not indicated, at heights acceptable to authorities having jurisdiction.
 - 1. Prepare recesses for cabinets as required by type and size of cabinet and trim style.
 - 2. Fasten mounting brackets to structure and cabinets, square and plumb.
 - 3. Fasten cabinets to structure, square and plumb.
- E. Adjust cabinet doors that do not swing or operate freely.
- F. Refinish or replace cabinets and doors damaged during installation.

END OF SECTION 10520

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SECTION 10801 - TOILET AND BATH ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Toilet and bath accessories.

1.2 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required. Use room and product designations indicated on Drawings.

1.3 WARRANTY

- A. Special Mirror Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace mirrors that develop visible silver spoilage defects within fifteen (15) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. 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:

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

C. Basis-of-Design Products: The design for toilet and bath accessories described in Part 2 is based on products indicated. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:

1. Toilet and Bath Accessories:

- a. BoBrick Washroom Equipment, Inc.
- b. American Specialties, Inc.
- c. Bradley Corporation.
- d. Georgia-Pacific.

D. Provide Manufacturers Certification for LEED credit 4.1, provide accessories with high recycle content, 50%-70% recycled stainless steel.

2.2 MATERIALS

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- A. Stainless Steel: ASTM A 666, Type 304, No. 4 finish (satin), 0.0312-inch minimum nominal thickness, unless otherwise indicated.
- B. Mirror Glass: ASTM C 1036, Type I, Class 1, Quality q2, nominal 6.0 mm thick, with silvering, electroplated copper coating, and protective organic coating complying with FS DD-M-411.
- C. Galvanized Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.
- D. Fasteners: Screws, bolts, and other devices of same material as accessory unit, tamper and theft resistant when exposed, and of galvanized steel when concealed.
- E. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six (6) keys to Owner's representative.

2.3 TOILET AND BATH ACCESSORIES

- A. Toilet Paper Dispenser: BoBrick Model B-68546 at toilet rooms and stalls.
 - 1. Basis-of-Design Product: Double-roll dispenser
 - 2. Mounting: Surface mounted with concealed anchorage.
 - 3. Material: Stainless steel.
 - 4. Operation: Control delivery with standard spindle
- B. Liquid-Soap Dispenser: At all ADA toilet rooms and ADA stalls.
 - 1. Basis-Of-Design Product: BoBrick Model B-4112.
 - 2. Mounting: Surface.
 - 3. Capacity: 40 Fl oz.
 - 4. Materials: Polished stainless steel.
 - 5. Stainless Steel Soap Valve: Designed for dispensing liquid soap.
 - 6. Lockset: Tumbler type.
 - 7. Refill Indicator: Window type.
- D. Grab Bar: At all ADA toilet rooms and stalls.
 - 1. Basis-of-Design Product: BoBrick Model B-68137.
 - 2. Material: Stainless steel, 0.05 inch thick.
 - 3. Mounting: Concealed.
 - 4. Gripping Surfaces: Slip-resistant texture.
 - 5. Outside Diameter: 1-1/2 inches for heavy-duty applications.
- E. Mirror Unit: At all ADA toilet rooms and stalls.
 - 1. Basis-of-Design Product: BoBrick Model B-165-2436
 - 2. Frame: Polished stainless steel angle, 0.05 inch thick.

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- F. Robe Hook: At all ADA toilet rooms and all stalls.
 - 1. Basis-of-Design Product: BoBrick Model B-6827.
 - 2. Single-prong-unit: Stainless steel, double prong robe hook.
- G. Recessed Waist Receptacle: At all toilet rooms.
 - 1. Basis of Design: Georgia-Pacific Model 59491
 - 2. Material: Polished stainless steel.
- H. Recessed Automated Touchless Towel Dispenser: At all toilet rooms.
 - 3. Basis of Design: Georgia-Pacific Model 59466.
 - 4. Material: Polished stainless steel.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install accessories using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.
 - 1. Install grab bars to withstand a downward load of at least 250 lbf, when tested according to method in ASTM F 446.
- B. Adjust accessories for unencumbered, smooth operation and verify that mechanisms function properly. Replace damaged or defective items. Remove temporary labels and protective coatings.

END OF SECTION 10801

