

## SECTION 05 50 00 - METAL FABRICATIONS

NOTE: This guide specification covers the basic requirements for Metal Fabrications.

Incorporate this information into the specifications for your project. For any deviations, please discuss with your designated LAWA representative.

### PART 1 - GENERAL

### 1.1 SUMMARY

A. This Section includes structural support for rest room counter tops, ceiling hung toilet partitions and miscellaneous steel trim.

### **1.2 PERFORMANCE REQUIREMENTS**

- A. Structural Performance:
  - 1. **Counter Tops and Vanities:** Provide countertop and vanity framing capable of withstanding the following structural loads without exceeding the allowable design working stress of the materials involved, including anchors and connections, or of exhibiting excessive deflections in any of the components making up the countertops and vanities:
    - a. All dead-loads.
    - b. 500 pound live load placed on the countertop and vanity.
    - c. Deflection at Midspan: L/500 times span or 1/8" whichever is less.
  - 2. **Tube Framing for Partial Height Walls**: Provide tube framing for partial height walls capable of withstanding a deflection not to exceed 2L/1440 of the wall height when subjected to a positive and negative pressure of 5 psf.

### **1.3 SUBMITTALS**

- A. Product Data: Submit product data for the following:
  - 1. Paint products.
- B. Shop Drawings: Submit shop drawings detailing the fabrication and erection of each metal fabrication indicated. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.
  - 1. For installed products indicated to comply with design loads, include structural analysis data, for information only, signed and sealed by the qualified professional engineer responsible for their preparation.

### 1.4 QUALITY ASSURANCE

A. Fabricator/Installer Qualifications: A firm experienced in producing metal fabrications similar to those indicated for this Project for a minimum of 5 years, with a record of successful in-service performance, with sufficient production capacity to produce required units without causing delay in the work.



- B. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in the State of California and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of metal fabrications that are similar to those indicated for this Project in material, design, and extent.
- C. Welding: Qualify procedures and personnel according to the following:
  - 1. AWS D1.1, "Structural Welding Code--Steel."
  - 2. AWS D1.3, "Structural Welding Code--Sheet Steel."
  - 3. Certify that each welder has satisfactorily passed AWS qualification tests for welding processes involved and, if pertinent, has undergone recertification.
- D. Determination of existing structure to accommodate new loads.

### 1.5 STORAGE, DELIVERY AND HANDLING

A. Store metal fabrications in a dry, well-ventilated, weather tight place. Deliver and handle so as to prevent any type of damage to the fabricated work.

### **1.6 PROJECT CONDITIONS**

- A. Field Measurements: Where metal fabrications are indicated to fit walls and other construction, verify dimensions by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
  - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating metal fabrications without field measurements. Coordinate construction to ensure that actual dimensions correspond to established dimensions. Allow for trimming and fitting.

### 1.7 COORDINATION

A. Coordinate installation of anchorages for metal fabrications. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

## PART 2 - PRODUCTS

#### 2.1 METALS, GENERAL

A. Metal Surfaces, General: For metal fabrications exposed to view in the completed Work, provide materials with smooth, flat surfaces without blemishes. Do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.

#### 2.2 FERROUS METALS

- A. Steel Plates, Shapes, and Bars: ASTM A36/A36M.
- B. Cold Finished Steel Bars: ASTM A108, grade as selected by fabricator.
- C. Steel Tubing: Cold-formed steel tubing complying with ASTM A500, or hot formed steel tubing complying with ASTM A501.



- D. Steel Pipe: ASTM A53, standard weight (Schedule 40) minimum, unless otherwise indicated or required to satisfy the performance requirements; finish as follows:
  - 1. Black finish, unless otherwise indicated.
  - 2. Galvanized finish for exterior installations and where indicated.
- E. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

### 2.3 PAINT

- A. Shop Primer for Ferrous Metal: Fast-curing, lead- and chromate-free, universal modifiedalkyd primer complying with performance requirements in FS TT-P-664; selected for good resistance to normal atmospheric corrosion, compatibility with finish paint systems indicated, and capability to provide a sound foundation for field-applied topcoats despite prolonged exposure.
- B. Galvanizing Repair Paint: High-zinc-dust-content paint for re-galvanizing welds in steel, complying with SSPC-Paint 20.
- C. Bituminous Paint: Cold-applied asphalt mastic complying with SSPC-Paint 12, except containing no asbestos fibers, or cold-applied asphalt emulsion complying with ASTM D1187.

## 2.4 FASTENERS

- A. General: Provide Type 304 or 316 stainless-steel fasteners for exterior use and zinc-plated fasteners with coating complying with ASTM B633, Class Fe/Zn 5, where built into exterior walls. Select fasteners for type, grade, and class required.
- B. Bolts and Nuts: Regular hexagon-head bolts, ASTM A307, Grade A (ASTM F568M, Property Class 4.6); with hex nuts, ASTM A563 (ASTM A563M); and, where indicated, flat washers.
- C. Anchor Bolts: ASTM F1554, Grade 36.
- D. Machine Screws: ASME B18.6.3 (ASME B18.6.7M).
- E. Lag Bolts: ASME B18.2.1 (ASME B18.2.3.8M).
- F. Plain Washers: Round, carbon steel, ASME B18.22.1 (ASME B18.22M).
- G. Lock Washers: Helical, spring type, carbon steel, ASME B18.21.1 (ASME B18.21.2M).
- H. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and equal to four times the load imposed when installed in concrete, as determined by testing per ASTM E 488, conducted by a qualified independent testing agency.
  - 1. Indoor Expansion Anchor Material: Carbon-steel components zinc-plated to comply with ASTM B 633, Class Fe/Zn 5.
  - Exterior Expansion Anchor Material: Alloy Group 1 or 2 stainless-steel bolts complying with ASTM F593 (ASTM F738M) and nuts complying with ASTM F594 (ASTM F836M).
- I. Toggle Bolts: FS FF-B-588, tumble-wing type, class and style as needed.



# 2.5 FABRICATION, GENERAL

- A. Shop Assembly: Preassemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.
  - 1. Welded connections may be used where bolted connections are shown.
- B. Shear and punch metals cleanly and accurately. Remove burrs.
- C. Ease exposed edges to a radius of approximately 1/32 inch (1 mm), unless otherwise indicated. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- D. Weld corners and seams continuously along entire line of contact to comply with the following:
  - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  - 2. Obtain fusion without undercut or overlap.
  - 3. Remove welding flux immediately.
  - 4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.
- E. Provide for anchorage of type indicated; coordinate with supporting structure. Fabricate and space anchoring devices and fasteners to secure metal fabrications rigidly in place and to support indicated loads.
- F. Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.
- G. Fabricate joints that will be exposed to weather in a manner to exclude water, or provide weep holes where water may accumulate.
- H. Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges.
- I. Remove sharp or rough areas on exposed traffic surfaces.
- J. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Use exposed fasteners of type indicated or, if not indicated, Phillips flat-head (countersunk) screws or bolts. Locate joints where least conspicuous. Make up threaded connections tight so that threads are entirely concealed.

### 2.6 MISCELLANEOUS FRAMING AND SUPPORTS

- A. General: Provide steel framing and supports indicated and as necessary to complete the Work and which are not a part of the structural framework, including but not limited to countertop and vanities, ceiling hung toilet compartments, framing for partial height walls, mechanical and electrical equipment.
- B. Fabricate units from structural-steel shapes, plates, and bars of welded construction, unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to



receive adjacent construction retained by framing and supports. Cut, drill, and tap units to receive hardware, hangers, and similar items.

- C. **Framing for Ceiling Hung Toilet Compartments:** Provide framing for ceiling hung toilet compartments, coordinated with the partitions and including provisions for partition anchorage as required to sustain imposed loads and to limit deflections to L/360 between hangers, fabricated from the following.
  - 1. Structural Steel Shapes, Plates and Bars: ASTM A36/A36M.
  - 2. Modular Structural Framing System: ASTM A569; modular, structural quality steel pre-formed "U" channel framing system with continuous open slot prepared to receive attachment nuts, bolts, straps, threaded rods, beam clamps, hanger rods support brackets and other accessories. Provide manufacturers standard corrosion resistant finish.
  - 3. Provide steel rods, <sup>1</sup>/<sub>2</sub>" diameter, spaced not more than 36" o.c. Thread rods to receive anchor and stop nuts. Fit hangers with wedge shape washers for full bearing on sloping flanges of support beam.
  - 4. Coordinate installation with toilet compartment manufacturer's written instructions and recommendations.
- D. **Countertop and Vanity Framing:** Custom fabricate countertop and vanity framing, using steel shapes and plates, and cold finished mild steel bars at exposed conditions, for support framing and plywood, to the thicknesses, sizes and shapes shown, and as required to produce work of adequate strength and durability, without objectionable deflections. Use proven details of fabrication, as required, to achieve proper assembly and alignment of the various components of the work.

## 2.7 MISCELLANEOUS STEEL TRIM

- A. Unless otherwise indicated, fabricate units from structural-steel shapes, plates, and bars of profiles shown with continuously welded joints, and smooth exposed edges. Miter corners and use concealed field splices where possible.
- B. Provide cutouts, fittings, and anchorages as needed to coordinate assembly and installation with other work. Provide anchors, welded to trim, for embedding in concrete or masonry construction, spaced not more than 6 inches (150 mm) from each end, 6 inches (150 mm) from corners, and 24 inches (600 mm) o.c., unless otherwise indicated.
- C. **Surface Applied Corner Guards:** Provide stainless steel corner guards fabricated from angles of sizes shown, or if not shown, of minimum 3-1/2" x 3-1/2" x <sup>1</sup>/4" thick equal leg angles with <sup>1</sup>/4" wide taper legs. Drill and countersink legs of angles, for fastening to substrates indicated, with holes spaced 24" on center. Provide corner guard lengths of 42" if not otherwise indicated.

### 2.8 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Finish metal fabrications after assembly.



# 2.9 STEEL AND IRON FINISHES

- A. Galvanizing: Hot-dip galvanize items as indicated to comply with applicable standard listed below:
  - 1. ASTM A123, for galvanizing steel and iron products.
  - 2. ASTM A153/A153M, for galvanizing steel and iron hardware.
- B. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces by removing oil, grease, and similar contaminants in accordance with SSPC -SP 1 "Solvent Cleaning," followed with the SSPC surface-preparation specifications listed below and environmental exposure conditions of installed metal fabrications. Surface preparation shall be done after fabrication and immediately prior to shop painting. Apply shop coat of paint within 4 hours after cleaning and before rust bloom occurs.
  - 1. Interiors (SSPC Zone 1A): SSPC-SP 3, "Power Tool Cleaning."
- C. Apply a minimum of one coat of shop primer to uncoated surfaces of metal fabrications, except those with galvanized finishes and those to be field welded, and those to be embedded in concrete, sprayed-on fireproofing, or masonry, unless otherwise indicated. Comply with SSPC- PA 1, "Paint Application Specification No. 1," for shop painting.
  - 1. Stripe paint corners, crevices, bolts, welds, and sharp edges.
  - 2. Dry Film Thickness of Primer: 2.5 to 3.0 mils, dry film thickness. Apply paint thoroughly and evenly to dry surfaces, free from holidays and pinholes, in accordance with manufacturer's directions.
- D. Stainless Steel
  - 1. Material Stainless Steel, Type 304
  - 2. Finish No. 6
  - 3. Corner Radius -1/8"
  - 4. Taper  $-\frac{1}{4}$ " from leg edges
  - 5. Mounting flat head countersunk screws through shop drilled countersunk holes.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing metal fabrications to in-place construction. Include threaded fasteners for concrete and masonry inserts, toggle bolts, through-bolts, lag bolts, wood screws, and other connectors. Drill holes for bolts to the exact diameter of the bolt. Provide screws threaded full length to the screw head.
- B. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.
- C. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.



- D. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.
- E. Field Welding: Comply with the following requirements:
  - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  - 2. Obtain fusion without undercut or overlap.
  - 3. Remove welding flux immediately.
  - 4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

### 3.2 INSTALLING MISCELLANEOUS FRAMING AND SUPPORTS

- A. General: Install framing and supports to comply with requirements of items being supported, including manufacturers' written instructions and requirements.
- B. Ceiling Hung Toilet Partitions: Anchor supports securely to, and rigidly brace from, overhead building structure.

### 3.3 ADJUSTING AND CLEANING

- A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
  - 1. Apply by brush or spray to provide a minimum 2.0-mil (0.05-mm) dry film thickness.

END OF SECTION 05 50 00



# SECTION 05 75 30.13 – COLUMN COVERS

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. Section Includes:
  - 1. Column covers with metal and glass finish with LED Light Panel System.

**NOTE:** LAWA has developed this specification standard for column covers in order to provide a unifying design for the public areas of the terminals while providing long term durability and ease of maintenance.

### **1.2 PERFORMANCE REQUIREMENTS**

A. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

## **1.3 ACTION SUBMITTALS**

- A. Product Data: For each type of product indicated. Include finishing materials.
- B. Shop Drawings: Show fabrication and installation details for column covers.
  - 1. Include plans, elevations, component details, and attachments to other work.
  - 2. Indicate materials and profiles of each column cover, fittings, joinery, finishes, fasteners, anchorages, and accessory items.
  - 3. Indicate LED light panel.
- C. Samples for Verification:
  - 1. Stainless Steel: For each type of exposed finish required, prepared on 12-inch square Samples of metal of same thickness and material indicated for the Work.
  - 2. Laminated Glass with Colored Interlayer: 18 inches square.

### 1.4 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Show dimensions of structural columns, fireproofing (if any), attachments, and necessary clearances.
- B. Product Certificates: For glass and glazing products, from manufacturer.

### 1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For stainless-steel finish to include in maintenance manuals.

### 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Fabricator of products.
- B. Source Limitations for Glass: Obtain laminated glass from single source from single manufacturer.



- C. Mockups: Build mockups to demonstrate aesthetic effects and set quality standards for fabrication and installation.
  - 1. Construct one mockup of each type of column cover.
  - 2. Approved mockups may not become part of the completed Work.
  - 3. All mockups shall be constructed at the jobsite.
- D. Pre-installation Conference: Conduct conference at Project site.
- E. Column Cover installation shall commence only upon receiving written LAWA approval of the Mock Up.

# 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver column covers wrapped in protective coverings and strapped together in suitable packs or in heavy-duty cartons. Remove protective coverings before they stain or bond to finished surfaces.
- B. Store products on elevated platforms in a dry location.

### **1.8 PROJECT CONDITIONS**

A. Field Measurements: Verify actual locations of walls, columns, beams, and other construction contiguous with column covers by field measurements before fabrication and indicate measurements on Shop Drawings.

### **1.9 COORDINATION**

- A. Coordinate installation of anchorages for column covers. Installation of anchors shall not damage the column reinforcement. Furnish setting drawings, templates, and directions for installing anchorages, including concrete inserts, anchor bolts, and items with integral anchors that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- B. Coordinate installation of column covers with adjacent construction to ensure that wall assemblies, flashings, trim, and joint sealants, are protected against damage from the effects of weather, age, corrosion, and other causes.

### 1.10 WARRANTY

- A. Manufacturer's Special Warranty on Laminated Glass: Manufacturer's standard form in which laminated-glass manufacturer agrees to replace laminated-glass units that deteriorate within specified warranty period. Deterioration of laminated glass is defined as defects developed from normal use that are not attributed to glass breakage or to maintaining and cleaning laminated glass contrary to manufacturer's written instructions. Defects include edge separation, delamination materially obstructing vision through glass, and blemishes exceeding those allowed by referenced laminated-glass standard.
  - 1. Warranty Period: Five years from date of Substantial Completion.



# PART 2 - PRODUCTS

### 2.1 SHEET METAL

- A. General: Provide sheet metal without pitting, seam marks, roller marks, stains, discolorations, or other imperfections where exposed to view on finished units.
- B. Stainless-Steel Sheet: ASTM A240/A240M or ASTM A666, Type 304, stretcher-leveled standard of flatness.

### 2.2 GLASS AND GLAZING MATERIALS

- A. Bent Laminated Glass: ASTM C1464, Kind BL, and ASTM C1172, Kind LA (laminated annealed), Condition A (uncoated), Type I (transparent), Quality-Q3 with two plies of glass and polyvinyl butyral interlayer not less than 0.060 inch thick.
  - 1. Glass Color: Clear.
  - 2. Interlayer Color: White.
  - 3. Glass Plies: 6.0 mm thick, each.

**NOTE:** The bent glass is comprised of 3/16 inch Starphire / .060 #4640/ 3/16 Starphire, flat polish all edges. Glass shall comply with CPSC CFR 1201 Cat II.

B. Glazing Cement and Accessories for Structural Glazing: Glazing cement, setting blocks, shims, and related accessories as recommended or supplied by column cover manufacturer for installing structural glazing.

## 2.3 ILLUMINATION

- A. LED Light Panel System: Molded clear acrylic (PMMA) 0.3125" thick lens, 0.125" channel around edge, edges, or perimeter, 0.0625" x 0.0625" wire, mesh grid overlay, strings of LEDs in channel around edge, edges, or perimeter with flat metal led covers, flat white plastic sheet on top sides covered with white plastic tape, and low-voltage wire extruding from corner, side, ore rear of panel with barrel connector.
- B. Manufacturer:
  - 1. E Connect: 740 Flower Avenue, Venice, CA 90291, Telephone: 310-616-5055
- C. UL Approved.

# 2.4 MISCELLANEOUS MATERIALS

- A. Sealants, Interior: Non-sag, paintable, non-staining, latex sealant complying with ASTM C 834; of type and grade required to seal joints in column covers; and as recommended in writing by column covers manufacturer.
  - 1. Sealants shall have a VOC content of not more than 250 g/L when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- B. Fasteners: Fabricated from same basic metal and alloy as fastened metal unless otherwise indicated. Do not use metals that are incompatible with materials joined.
  - 1. Provide concealed fasteners for interconnecting column covers items and for attaching them to other work unless otherwise indicated.



- C. Nonstructural Anchors: Provide metal expansion sleeve anchors of type, size, and material necessary for type of load and installation indicated, as recommended by manufacturer, unless otherwise indicated.
- D. Anchor Materials for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B633 or ASTM F1941 (ASTM F1941M), Class Fe/Zn 5, unless otherwise indicated.
- E. Isolation Coating: Manufacturer's standard bituminous paint.

## 2.5 FABRICATION, GENERAL

- A. Shop Assembly: Preassemble column covers items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.
- B. Coordinate dimensions and attachment methods of column covers items with those of adjoining construction to produce integrated assemblies with closely fitting joints and with edges and surfaces aligned unless otherwise indicated.
- C. Form metal to profiles indicated, in maximum lengths to minimize joints. Produce flat, flush surfaces without cracking or grain separation at bends. Fold back exposed edges of unsupported sheet metal to form a 1/2-inch wide hem on the concealed side, or ease edges to a radius of approximately 1/32 inch and support with concealed stiffeners.
- D. Increase metal thickness or reinforce with concealed stiffeners, backing materials, or both, as needed to provide surface flatness equivalent to stretcher-leveled standard of flatness and sufficient strength for indicated use.
  - 1. Support joints with concealed stiffeners as needed to hold exposed faces of adjoining sheets in flush alignment.
- E. Build in straps, plates, and brackets as needed to support and anchor fabricated items to adjoining construction. Reinforce column covers items as needed to attach and support other construction.
- F. Provide support framing, mounting and attachment clips, splice sleeves, fasteners, and accessories needed to install column cover items.

### 2.6 GLAZING PANEL FABRICATION

- A. General: Fabricate to sizes and shapes required; provide for proper edge clearance and bite on glazing panels.
  - 1. Clean-cut or flat-grind edges at butt-glazed sealant joints to produce square edges with slight chamfers at junctions of edges and faces
  - 2. Grind smooth exposed edges, including those at open joints, to produce square edges with slight chamfers at junctions of edges and faces.
- B. Glass Column Covers: Factory-bond glass to base and top-rail channels in manufacturer's plant using glazing cement to comply with manufacturer's written specifications.



# 2.7 COLUMN COVERS

- A. Snap-Together Type: Form column covers to shapes indicated from metal of type and minimum thickness indicated below. Return vertical edges and bend to form hook that will engage continuous mounting clips.
  - 1. 304 Stainless-Steel Sheet: 11 gauge
    - a. Finish: custom decorative/textured.
  - 2. Form returns at vertical joints to provide hairline V-joints.
  - 3. Fabricate column covers with reveals at horizontal joints produced by forming returns on mating ends of metal column cover sections. Provide snap-in metal filler strips at reveals. Locate horizontal joints as indicated.
  - 4. Fabricate base rings, intermediate reveals, and ceiling rings to match column cover metal finish.
- B. Glass Column Covers: Factory-bond glass to base and top-rail channels in manufacturer's plant using glazing cement to comply with manufacturer's written specifications.

## 2.8 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Complete mechanical finishes of flat sheet metal surfaces before fabrication where possible. After fabrication, finish all joints, bends, abrasions, and other surface blemishes to match sheet finish.
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- D. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

## PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of column covers.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Locate and place column covers level and plumb and in alignment with adjacent construction. Perform cutting, drilling, and fitting required to install column covers.
  - 1. Do not cut or abrade finishes that cannot be completely restored in the field. Return items with such finishes to the shop for required alterations, followed by complete refinishing, or provide new units as required.

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- B. Use concealed anchorages where possible. Provide brass or lead washers fitted to screws where needed to protect metal surfaces.
- C. Form tight joints with exposed connections accurately fitted together.
- D. Install concealed gaskets, joint fillers, sealants, and insulation, as the Work progresses, to make interior column covers soundproof and lightproof as applicable to type of fabrication indicated.
- E. Corrosion Protection: Apply bituminous paint or other permanent separation materials on concealed surfaces where metals would otherwise be in direct contact with substrate materials that are incompatible or could result in corrosion or deterioration of either material or finish.

### 3.3 ADJUSTING AND CLEANING

- A. Unless otherwise indicated, clean metals by washing thoroughly with clean water and soap, rinsing with clean water, and drying with soft cloths.
- B. Restore finishes damaged during installation and construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit or provide new units.
- C. Clean and polish glass as recommended in writing by manufacturer. Wash exposed surfaces in each area of Project not more than four days before date scheduled for inspections that establish date of Substantial Completion.

### 3.4 PROTECTION

A. Protect finishes of column covers from damage during construction period with temporary protective coverings approved by column cover manufacturer. Remove protective coverings at time of Substantial Completion.

END OF SECTION 05 75 30.13