

BuildingName  
The Description of the Project  
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**SPECIFICATION DIVISION 5**

NUMBER            SECTION DESCRIPTION

**DIVISION 05 METALS**

SECTION 055800 - FORMED-METAL FABRICATIONS

**END OF CONTENTS TABLE**



**DIVISION 05 METALS**  
**SECTION 055800 - FORMED-METAL FABRICATIONS**

**PART 1 - GENERAL**

*THIS SECTION INCLUDES A LIMITED LIST OF SHEET METAL ITEMS. OTHER POSSIBILITIES INCLUDE LIGHTING TROUGHS, COLUMN COVERS, EXTERIOR OR INTERIOR CLOSURE STRIPS, VARIOUS CANOPIES, HOODS AND OTHER ARCHITECTURAL STRUCTURES.*

**1.1 SUMMARY**

- A. This Section includes the following:

*EDIT BELOW TO SUIT PROJECT.*

1. Pockets for window treatment.
2. Filler panels.

**1.2 SUBMITTALS**

- A. Shop drawings detailing fabrication and installation of sheet metal fabrications. Include plans, elevations, sections, details of components, and attachments to other units of Work. Indicate jointing, fasteners, anchorage, accessory items, and finishes.
- B. Samples for initial selection in the form of manufacturer's color charts showing the full range of colors, textures, and patterns available for each type of sheet metal fabrication indicated.

**1.3 PROJECT CONDITIONS**

- A. Field Measurements: Check actual dimensions of other construction by accurate field measurements before fabrication of sheet metalwork; show recorded measurements on final shop drawings.
1. Where field measurements cannot be made without delaying the Work, guarantee dimensions and proceed with fabricating sheet metalwork without field measurements. Coordinate other construction to ensure that actual dimensions correspond to guaranteed dimensions.

**PART 2 - PRODUCTS**

**2.1 SHEET METAL**

- A. General: Provide sheet metal selected for surface flatness, smoothness, and freedom from surface blemishes where exposed to view in the finished unit. Do not use materials with pitting, seam marks, roller marks, variations in flatness exceeding those permitted by referenced standards for stretcher-leveled metal sheet, stains, discoloration, or other imperfections.

*SELECT MATERIALS FROM THE FOLLOWING, DELETE OTHERS, OR REVISE AS NEEDED.*

- B. Steel Sheet: Commercial-quality, cold-rolled, stretcher-leveled, carbon-steel sheet, complying with the following requirements:
  - 1. Electrolytic Zinc-Coated Steel Sheet: ASTM A 591, with Class C zinc coating; chemically treated in mill with phosphate solution and light chromate rinse.
  - 2. Uncoated Steel Sheet: ASTM A 366, Class I, matte finish.
- C. Aluminum Sheet: Not less than the strength and durability properties specified in ASTM B 209 for 5005-H15.

## 2.2 MISCELLANEOUS MATERIALS

- A. Sound-Deadening Insulation: Unfaced, mineral-fiber blanket or batt insulation complying with ASTM C 665 for Type I and passing ASTM E 136 test.
- B. Welding Electrodes and Filler Metal: Type and alloy of filler metal and electrodes as recommended by producer of metal to be welded, complying with applicable AWS specifications, and as required for strength and compatibility in the fabricated items.
- C. Fasteners: Of same basic metal and alloy as fastened metal, unless otherwise indicated. Do not use metals that are corrosive or incompatible with metals joined.
  - 1. Provide concealed fasteners for interconnection of sheet metal fabrications and for attaching them to other work except where exposed fasteners are unavoidable or are the standard fastening method.
  - 2. Provide Phillips flat-head machine screws for exposed fasteners, unless otherwise indicated.
- D. Anchors: For applications not indicated to comply with design loadings, provide anchors of type, size, and material required for type of loading and installation indicated.

**BELOW IS AN EXAMPLE ONLY. REVISE TO SUIT INSTALLATION INDICATED.**

- E. Flexible Cellular Neoprene Gaskets: ASTM D 1056, Type 1, Class A, grade as recommended by gasket manufacturer to obtain airtight seal for application indicated.
- F. Bituminous Paint: Cold-applied asphalt mastic complying with SSPC-Paint 12, except containing no asbestos fibers.
- G. Joint Sealants for Concealed Joints: Butyl sealant.

## 2.3 FABRICATION, GENERAL

- A. Coordinate dimensions and attachment methods of sheet metal fabrications with those of adjoining products and construction to produce integrated assemblies with closely fitting joints and with edges and surfaces aligned with one another in the relationship indicated.

- B. Increase metal thickness or reinforce metal with concealed stiffeners, backing materials, or both, as required to produce surfaces whose variations in flatness do not exceed those permitted by referenced standards for stretcher-leveled metal sheet and to impart sufficient strength for indicated use.
  - 1. Support joints with concealed stiffeners as required to hold exposed faces of adjoining sheets in flush alignment.
  - 2. Fill space between stiffeners with sound-deadening insulation attached to face sheet with cold-applied asphalt mastic.
- C. Assemble sheet metal fabrications in the shop to the greatest extent possible to minimize field splicing and assembly.
- D. Form sheet metal fabrications to profiles indicated in maximum lengths to minimize joints and without exposed cut edges. Fold back exposed ends of unsupported sheet metal to form a 1/2-inch-wide hem on the concealed side, or ease exposed edges with backing to a radius of approximately 1/32 inch. Produce flat, flush surfaces without cracking or grain separation at bends.
- E. Continuously weld joints and seams, except where other methods of joining are indicated. Grind, fill, and dress welds to produce smooth flush exposed surfaces in which welds are not visible after final finishing is completed.
- F. Build in straps, plates, and brackets as required for supporting and anchoring fabricated items to adjoining construction. Reinforce sheet metal units as required to attach and support other construction.

**2.4 BLIND AND DRAPERY POCKETS**

*DELETE THIS ARTICLE IF NO BLIND OR DRAPERY POCKETS. REVISE TITLE ABOVE AND TERMS BELOW IF ONLY ONE, BLIND OR DRAPERY POCKET, APPLIES.*

- A. Form pockets from sheet metal of type and thickness indicated below, with end closures. Coordinate dimensions and attachment methods with blind and drapery equipment, window frames, ceiling suspension system, and other related construction to produce a coordinated, closely fitting assembly.
  - SELECT 1 REQUIREMENT FROM BELOW, OR REVISE TO SPECIFY ANOTHER METAL OR THICKNESS.*
  - 1. Steel sheet, 0.0478 inch.
  - 2. Galvanized-steel sheet, 0.0516 inch.
  - 3. Aluminum sheet, 0.0625 inch.
- B. Reinforce pockets for attaching window treatment equipment and hardware, or increase metal thickness.
- C. Divide continuous pockets with built-in partitions located to separate adjoining drapery and blind units, coincide with window mullions, and receive filler panels at ends of partitions.

**2.5 FILLER PANELS**

*DELETE THIS ARTICLE IF NO FILLER PANELS, OR IF FILLER PANELS ARE SPECIFIED IN DIVISION 06 SECTION (CLEAR ACRYLIC PLASTIC), OR IN DIVISION 09 SECTION WITH PARTITIONS.*

- A. Form filler panels for closing ends of partition systems and for other applications indicated from sheet metal of type and thickness indicated. Incorporate reveals, trim, and concealed anchorages for attachment to adjacent surfaces.

*SELECT 1 REQUIREMENT FROM BELOW, OR REVISE TO SPECIFY ANOTHER METAL OR THICKNESS.*

- 1. Steel sheet, 0.0598 inch.
- 2. Galvanized-steel sheet, 0.0635 inch.
- 3. Aluminum sheet, 0.0625 inch.

- B. Adhesively attach gaskets to filler panel edges that abut glass. Use 1-inch-square material, unless otherwise indicated, set approximately 1/4 inch into channeled edge of filler panel.

*DELETE ABOVE OR BELOW IF NOT REQUIRED, OR REVISE TO SUIT PROJECT.*

- C. Attach gaskets to all edges of panels that abut adjacent surfaces to form a continuous seal. Use compressible gaskets or mastic sealing tape, applied to center of panel edges to be concealed from view, unless otherwise indicated.

*DELETE BELOW IF NOT REQUIRED.*

- D. Fill interior of panel with sound-deadening insulation permanently attached to inside panel faces.

**2.6 ALUMINUM FINISHES**

*DELETE THIS ARTICLE IF NO ALUMINUM. RETAIN FINISHES BELOW APPLICABLE TO PROJECT.*

- A. Finish designations prefixed by AA conform to the system established by the Aluminum Association for designating aluminum finishes.
- B. Class I, Clear Anodic Finish: AA-M12C22A41 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, clear coating 0.7 mil or thicker) complying with AAMA 607.1.
- C. Class I, Color Anodic Finish: AA-M12C22A42/A44 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, integrally colored or electrolytically deposited color coating 0.7 mil or thicker) complying with AAMA 606.1 or AAMA 608.1.

*RETAIN COLOR REQUIREMENT BELOW WITH EITHER CLASS OF COLOR ANODIC FINISH RETAINED ABOVE.*

- 1. Color: Dark bronze.
- 2. Color: Black.

D. Baked-Enamel Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid chromate-fluoride-phosphate conversion coating; Organic Coating: as specified below). Apply baked enamel complying with paint manufacturer's specifications for cleaning, conversion coating, and painting.

1. Organic Coating: Thermosetting, modified-acrylic enamel primer/topcoat system standard with manufacturer, with minimum dry film thickness of 1.5 mils, medium gloss.

**RETAIN 1 COLOR REQUIREMENT FROM BELOW.**

2. Color: As indicated by manufacturer's standard color designations.

3. Color: Match Architect's samples.

4. Color: As selected by Architect from manufacturer's full range of colors.

**2.7 STEEL SHEET FINISHES**

**DELETE THIS ARTICLE IF NO UNCOATED OR ELECTROLYTIC ZINC-COATED STEEL SHEET.**

A. Surface Preparation: Solvent-clean surfaces to comply with SSPC-SP 1 to remove dirt, oil, grease, and other contaminants that could impair paint bond. Remove mill scale and rust, if present, from uncoated steel to comply with SSPC-SP 5 (White Metal Blast Cleaning) or SSPC-SP 8 (Pickling).

B. Pretreatment: Immediately following surface preparation, apply a conversion coating of type suited to organic coating applied over it.

C. Factory Priming for Field-Painted Finish: Apply shop primer specified below immediately following surface preparation and pretreatment.

1. Shop Primer for Ferrous Metal: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with performance requirements of 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.

**DELETE BELOW IF NO FACTORY-APPLIED BAKED-ENAMEL FINISH FOR STEEL SHEET.**

D. Baked-Enamel Finish: Immediately after cleaning and pretreating, apply manufacturer's standard 2-coat, baked-enamel finish consisting of prime coat and thermosetting topcoat. Comply with paint manufacturer's instructions for applying and baking to achieve a minimum dry film thickness of 2.0 mils.

**RETAIN 1 COLOR REQUIREMENT FROM BELOW.**

1. Color and Gloss: As indicated by manufacturer's standard color and gloss designations.

2. Color and Gloss: Match Architect's sample.

3. Color and Gloss: As selected by Architect from manufacturer's full range of choices for color and gloss.

**TO ENSURE OBTAINING EXACT FINISH DESIRED, INSERT PRODUCT AND MFRS' NAMES OF COATING SYSTEM OR SYSTEMS.**

**PART 3 - EXECUTION**

**3.1 INSTALLATION**

- A. Locate and place sheet metal fabrications plumb, level, and in alignment with adjacent construction. Use concealed anchorages where possible. Form tight joints with exposed connections accurately fitted together. Provide reveals and openings for sealants and joint fillers as indicated.
- B. Install concealed gaskets, joint fillers, insulation, and flashings as the work progresses to make work soundproof or lightproof as required.
- C. Corrosion Protection: Coat concealed surfaces of aluminum, zinc-coated, and nonferrous metals that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.

**3.2 ADJUSTING AND PROTECTION**

- A. Restore finishes damaged during installation and construction period so that 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 as required.
- B. Protect finishes of sheet metal fabrications from damage during construction period. Remove temporary protective coverings at the time of Substantial Completion.

**END OF SECTION 055800**