

**SECTION 07631**

**GUTTERS, DOWNSPOUTS & TRIM**

**PART 1 - GENERAL**

**1.1 SECTION INCLUDES**

- A. Aluminum gutters and downspouts.

**1.2 REFERENCES**

- A. ASTM B209 - Aluminum and Aluminum Alloy Sheet and Plate.
- B. National Roofing Contractors' Association - Roofing Manual (NRCA)

**1.3 SUBMITTALS**

- A. Shop Drawings: Indicate locations, configurations, jointing methods, fastening methods, locations, and installation details.
- B. Product Data: Provide data on prefabricated components.
- C. Samples: Submit two samples, 4 inch long illustrating component design, finish, color, and configuration.

**1.4 QUALITY ASSURANCE**

- A. Perform work in accordance with NRCA standard details and requirements.
- B. Coordinate work of this section with interfacing and adjoining work for proper sequencing of each installation. Ensure best possible weather resistance and durability of work and protection of materials and finishes.

**1.5 DELIVERY, STORAGE, AND HANDLING**

- A. Stack preformed and prefinished material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope to drain.
- B. Prevent contact with materials during storage which may cause discoloration, staining, or damage.

**1.6 QUALIFICATIONS**

- A. Fabricator and Installer: Company specializing in sheet metal work with not less than five years experience.

## PART 2 - PRODUCTS

### 2.1 FLASHING AND SHEET METAL MATERIALS

- A. Gutters, Flashing, Gravel Guards 0.040" Aluminum, pre-finished enamel.
- B. Downspouts: 0.032" Aluminum pre-finished enamel.

Note: Colors for A, B, C & D must match exactly.

### 2.2 MISCELLANEOUS MATERIALS AND ACCESSORIES

- A. Fasteners same metal as flashing/sheet metal or, other non-corrosive metal as recommended by sheet manufacturer. Match finish of exposed heads with material being fastened.
- B. Bituminous Coating: FS TT-C-494 or SSPC - Paint 12, solvent type bituminous mastic, nominally free of sulfur, compounded for 15 mil dry film thickness per coat.
- C. Mastic Sealant: Polyisobutylene; nonhardening, nonskinning, non-drying, nonmigrating sealant.
- D. Epoxy Seam Sealer: 2-part noncorrosive metal seam cementing compound, recommended by metal manufacturer for exterior/interior non-moving joints including riveted joints.
- E. Adhesives: Type recommended by flashing sheet manufacturer for waterproof/weather-resistant seaming and adhesive application of flashing sheet.
- F. Metal Accessories: Provide sheet metal clips, straps, anchoring devices and similar accessory units as required for installation of work, matching or compatible with material being installed, noncorrosive, size and gage required for performance.
- G. Roofing Cement: Must be compatible with materials with which it comes in contact.

### 2.3 FABRICATED UNITS

- A. General Metal Fabrication: Shop-fabricated work to greatest extent possible. Comply with details shown, and with applicable requirements of SMACNA "Architectural sheet Metal Manual" and other recognized industry practices. Fabricate for waterproof and weather-resistant performance; with expansion provisions for running work, sufficient to permanently prevent leakage, damage or deterioration of the work. Form work to fit substrates. Comply with material manufacturer instructions and recommendations for forming material. Form exposed sheet metal work without excessive oil-canning, buckling and tool marks, true to line and levels indicated, with exposed edges folded back to form hems.

- B. Seams: Fabricate nonmoving seams in sheet metal with flat-lock seams. For metal other than aluminum, tin edges to be seamed form seams, and solder. For aluminum seams with epoxy seam sealer, rivet joints for additional strength where required.
- C. Expansion Provision: Where lapped or bayonet-type expansion provisions in work cannot be used, or would not be sufficiently water/weatherproof, form expansion joints of intermeshing hooked flanges, not less than 2" deep, filled with mastic sealant (concealed within joints).
- D. Sealant Joints: Where movable, non-expansion type joints are indicated or required for proper performance of work, form metal to provide for proper installation of elastomeric sealant, in compliance with SMAACNA standards.
- E. Separations: Provide for separation of metal from noncompatible metal or corrosive substrates by coating concealed surfaces at locations of contact, with bituminous coating or other permanent separation as recommended by manufacturer/fabricator.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION REQUIREMENTS**

- A. General: Except as otherwise indicated, comply with manufacturer's installation instructions and recommendations, and with SMAACNA "Architectural Sheet Metal Manual". Anchor units of work securely in place by methods indicated, providing for thermal expansion of metal units, conceal fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints and seams which will be permanently watertight and weatherproof.
- B. Underlayment: Where aluminum is to be installed directly on cementitious or wood substrates, install a slip sheet of red rosin paper and a course of polyethylene underlayment.
- C. Bed Flanges of work in a thick coat of bituminous roofing cement where required for waterproof performance.
- D. Install reglets to receive counter-flashing in manner and by methods indicated. Where shown in concrete, furnish reglets to trades of concrete work for installation as work of Division-3 sections. Where shown in masonry, furnish reglets to trades of masonry work, for installation as work of Division-4 sections.
- E. Install Counter-Flashing in reglets, either by snap-in seal arrangement, or by wedging in place for anchorage and filling reglet with mastic or elastomeric sealant, as indicated and depending on degree of sealant exposure.

### 3.2 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces, removing substances which might cause corrosion of metal or deterioration of finishes.
- B. Protection: Installer shall advise Contractor of required procedures for surveillance and protection of flashings and sheet metal work during construction, to ensure that work will be without damage or deterioration, other than natural weathering, at time of substantial completion.

**END OF SECTION**