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### 076200 - Sheet Metal Flashing and Trim

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## **SECTION 07 6200 - SHEET METAL FLASHING AND TRIM**

### 1.1 SUMMARY

- A. The University prefers to use regional materials within a 500 mile radius of the campus.
- B. Section Includes:
  - 1. Manufactured Products:
    - a. Manufactured reglets and counterflashing.
  - 2. Formed Products:
    - a. Formed roof drainage sheet metal fabrications.
    - b. Formed low-slope roof sheet metal fabrications.
    - c. Formed steep-slope roof sheet metal fabrications.

### 1.2 PERFORMANCE REQUIREMENTS

- A. General: Sheet metal flashing and trim assemblies as indicated shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.
- B. Fabricate and install roof edge flashing and copings capable of resisting the following forces according to recommendations in FMG Loss Prevention Data Sheet 1-49:
  - 1. Wind Zone 1: For velocity pressures of 21 to 30 lbf/sq. ft. (1.00 to 1.44 kPa): 60-lbf/sq. ft. (2.87-kPa) perimeter uplift force, 90-lbf/sq. ft. (4.31-kPa) corner uplift force, and 30-lbf/sq. ft. (1.44-kPa) outward force.

### 1.3 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance. Minimum experience shall be 10 years.
- B. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual."
- C. Copper Sheet Metal Standard: Comply with CDA's "Copper in Architecture Handbook." Conform to dimensions and profiles shown unless more stringent requirements are indicated.

1.4 SHEET METALS

- A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying a strippable, temporary protective film before shipping.
- B. Copper Sheet: ASTM B 370, cold-rolled copper sheet, H00 or H01 temper.
- C. Aluminum Sheet: ASTM B 209 (ASTM B 209M), alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required.
- D. Stainless-Steel Sheet: ASTM A 240/A 240M or ASTM A 666, Type 304, dead soft, fully annealed.
- E. Zinc-Tin Alloy-Coated Stainless-Steel Sheet: ASTM A 240/A 240M, Type 304, dead-soft, fully annealed stainless-steel sheet of minimum uncoated thickness indicated; coated on both sides with a zinc-tin alloy (50 percent zinc, 50 percent tin), with factory-applied gray preweathering.
- F. Zinc-Tin Alloy-Coated Copper Sheet: ASTM B 370, cold-rolled copper sheet, H00 temper, of minimum uncoated weight (thickness) indicated; coated on both sides with a zinc-tin alloy (50 percent zinc, 50 percent tin).

1. Products:

- a. Revere Copper Products, Inc.; FreedomGray.

1.5 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.
  - 1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
    - a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating.
  - 2. Fasteners for Copper or Zinc-Tin Alloy-Coated Copper Sheet: Copper, hardware bronze or Series 300 stainless steel.
  - 3. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
  - 4. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.
  - 5. Fasteners for Zinc-Tin Alloy-Coated Stainless-Steel Sheet: Series 300 stainless steel.
- C. Solder:

1. For Copper: ASTM B 32, Grade Sn50, 50 percent tin and 50 percent lead.
2. For Stainless Steel: ASTM B 32, Grade Sn60, with an acid flux of type recommended by stainless-steel sheet manufacturer.
3. For Zinc-Tin Alloy-Coated Stainless Steel or Copper: ASTM B 32, 100 percent tin.

#### 1.6 MANUFACTURED SHEET METAL FLASHING AND TRIM

- A. Reglets: Units of type, material, and profile indicated, formed to provide secure interlocking of separate reglet and counterflashing pieces, and compatible with flashing indicated with interlocking counterflashing on exterior face, of same metal as reglet.
1. Material: Stainless steel, 0.019 inch (0.48 mm) thick.

#### 1.7 ROOF DRAINAGE SHEET METAL FABRICATIONS

- A. Hanging Gutters: Fabricate to cross section indicated, complete with end pieces, outlet tubes, and other accessories as required. Fabricate in minimum 96-inch- (2400-mm-) long sections. Furnish flat-stock gutter spacers and gutter brackets fabricated from same metal as gutters, of size recommended by SMACNA but not less than twice the gutter thickness.
- B. Downspouts: Fabricate downspouts complete with mitered elbows. Furnish with metal hangers, from same material as downspouts, and anchors.
- C. Parapet Scuppers: Fabricate scuppers of dimensions required with closure flange trim to exterior, 4-inch- (100-mm-) wide wall flanges to interior, and base extending 4 inches (100 mm) beyond cant or tapered strip into field of roof. Fabricate from the following materials:
1. Copper: 16 oz./sq. ft. (0.55 mm thick).
- D. Conductor Heads: Fabricate conductor heads with flanged back and stiffened top edge and of dimensions and shape indicated complete with outlet tubes, exterior flange trim, and built-in overflows. Fabricate from the following materials:
1. Copper: 16 oz./sq. ft. (0.55 mm thick).
- E. Splash Pans: Fabricate from the following materials:
1. Copper: 16 oz./sq. ft. (0.55 mm thick).

#### 1.8 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

- A. Copings: Fabricate in minimum 96-inch- (2400-mm-) long, but not exceeding 10-foot- (3-m-) long, sections. Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg and drill elongated holes for fasteners on interior leg. Miter corners, seal, and solder or weld watertight.

- B. Base Flashing: Fabricate from the following materials:
  - 1. Copper: 20 oz./sq. ft. (0.68 mm thick).
  - 2. Zinc-Tin Alloy-Coated Copper: 20 oz./sq. ft. (0.68 mm thick).
- C. Counterflashing: Fabricate from the following materials:
  - 1. Copper: 16 oz./sq. ft. (0.55 mm thick).
  - 2. Zinc-Tin Alloy-Coated Copper: 16 oz./sq. ft. (0.55 mm thick).
- D. Flashing Receivers: Fabricate from the following materials:
  - 1. Copper: 16 oz./sq. ft. (0.55 mm thick).
  - 2. Zinc-Tin Alloy-Coated Copper: 16 oz./sq. ft. (0.55 mm thick).
- E. Roof-Penetration Flashing: Fabricate from the following materials:
  - 1. Copper: 16 oz./sq. ft. (0.55 mm thick).
  - 2. Zinc-Tin Alloy-Coated Copper: 16 oz./sq. ft. (0.55 mm thick).
- F. Roof-Drain Flashing: Fabricate from the following materials:
  - 1. Copper: 12 oz./sq. ft. (0.41 mm thick).

#### 1.9 STEEP-SLOPE ROOF SHEET METAL FABRICATIONS

- A. Apron, Step, Cricket, and Backer Flashing: Fabricate from the following materials:
  - 1. Copper: 16 oz./sq. ft. (0.55 mm thick).
  - 2. Zinc-Tin Alloy-Coated Copper: 16 oz./sq. ft. (0.55 mm thick).
- B. Valley Flashing: Fabricate from the following materials:
  - 1. Copper: 16 oz./sq. ft. (0.55 mm thick).
  - 2. Zinc-Tin Alloy-Coated Copper: 16 oz./sq. ft. (0.55 mm thick).
- C. Drip Edges: Fabricate from the following materials:
  - 1. Copper: 16 oz./sq. ft. (0.55 mm thick).
  - 2. Zinc-Tin Alloy-Coated Copper: 16 oz./sq. ft. (0.55 mm thick).
- D. Eave, Rake Flashing: Fabricate from the following materials:
  - 1. Copper: 16 oz./sq. ft. (0.55 mm thick).
  - 2. Zinc-Tin Alloy-Coated Copper: 16 oz./sq. ft. (0.55 mm thick).
- E. Counterflashing: Fabricate from the following materials:
  - 1. Copper: 16 oz./sq. ft. (0.55 mm thick).
  - 2. Zinc-Tin Alloy-Coated Copper: 16 oz./sq. ft. (0.55 mm thick).

- F. Flashing Receivers: Fabricate from the following materials:
  - 1. Copper: 16 oz./sq. ft. (0.55 mm thick).
  - 2. Zinc-Tin Alloy-Coated Copper: 16 oz./sq. ft. (0.55 mm thick).
  
- G. Roof-Penetration Flashing: Fabricate from the following materials:
  - 1. Copper: 16 oz./sq. ft. (0.55 mm thick).
  - 2. Zinc-Tin Alloy-Coated Copper: 16 oz./sq. ft. (0.55 mm thick).

END OF SECTION 07 6200