SECTION 07 6200
SHEET METAL FLASHING AND TRIM

PART I - GENERAL

1.01 RELATED DOCUMENTS

A. This Section is part of the entire set of Contract Documents and shall be coordinated with the applicable provision of the other parts.

1.02 SECTION INCLUDES

A. Sheet metal coping, gravel stop / fascia, counterflashing and miscellaneous flashing.

1.03 RELATED REQUIREMENTS

A. Section 07 5300 - Elastomeric Membrane Roofing.

1.04 REFERENCE STANDARDS

A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2020.

B. SMACNA (ASMM) - Architectural Sheet Metal Manual 2012.

C. ANSI/SPRI ES-1-2003 Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems.

1.05 SUBMITTALS

A. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.

B. Samples: Submit selection and verification samples for finishes, colors and textures. Color to be selected by the Owner

1.06 QUALITY ASSURANCE

A. Perform work in accordance with SMACNA (ASMM) requirements and standard details, except as otherwise indicated.

B. Fabricator and Installer Qualifications: Company specializing in sheet metal work with 5 years of documented experience. Engage an experienced installer who has completed sheet metal flashing and trim work similar in material, design and extent to that indicated for this Project and with a record of successful in-service performance.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.

B. Prevent contact with materials that could cause discoloration or staining.

C. Do not expose to direct sunlight or extreme heat trim material with factory applied strippable film.

PART II - PRODUCTS

2.01 SHEET METAL FLASHING AND TRIM

A. Sheet Materials
   1. Galvanized Steel for Continuous Cleat: ASTM A 653, with G90 zinc coating; minimum 0.034 inch (22 gauge) thick base metal.
   2. Galvanized Steel Base Metal: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24-gauge, 0.0239-inch (0.61 mm) thick base metal.

B. Prefinished Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24-gauge, 0.0239-inch (0.61 mm) thick base metal, shop pre-coated with PVDF coating.

1. Fluoropolymer Coating: High performance organic powder coating, AAMA 2604; multiple coat, thermally cured fluoropolymer finish system.
2. Color: As selected by Owner from manufacturer's standard colors.
3. Acceptable Manufacturers:
    a. Holcim Elevate: Una-Clad
    b. Petersen Aluminum Corporation: Pac-Clad

C. Accessories
1. Fasteners: Same metal as sheet metal flashing or other noncorrosive metal as recommended by sheet metal manufacturer.
2. Gasketed washers: Soft neoprene washers.
3. Elastomeric Sealant: High performance, one component polyurethane-base, non-sag elastomeric sealant as manufactured by one of the following manufacturers or approved equivalents:
    a. Sika Corporation, Sikaflex - 1a
    b. Tremco, Vulkem 116

D. Fabrication, General
1. Sheet Metal Fabrication Standard: Fabricate sheet metal flashing and trim to comply with recommendations of SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal and other characteristics of the item indicated.
2. Comply with details shown to fabricate sheet metal flashing and trim that fit substrates and result in waterproof and weather-resistant performance once installed. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
3. Form material with watertight end joints and seams.
4. Fabricate vertical faces with bottom edge hemmed 1/2-inch and bent outward to form a drip edge unless specified otherwise.
5. Form exposed sheet metal work, shop fabricated or field fabricated, that is without excessive oil canning, buckling, and tool marks and that is true to line and levels indicated.
6. Sealed Joints: Form non-expansion, but movable, joints in metal to accommodate elastomeric sealant to comply with SMACNA standards.
7. Conceal fasteners and expansion provision where possible. Exposed fasteners are not allowed on faces of sheet metal exposed to public view.
8. Corners: corners must be formed, mitered, lapped, notched, sealed or soldered as necessary to provide a continuous system that is not more susceptible to leaks than straight sections.

E. Fabrication, Sheet Metal
1. General: Fabricate sheet metal items in thickness or weight needed to comply with performance requirements but not less than that listed below for each application and metal.
2. Premanufactured Metal Edge System
    a. Acceptable Manufacturers
        1) TerminEdge EX Fascia as manufactured by Hickman
        2) SecureEdge 2000 Standard Fascia as manufactured by Metal-Era
3. Counterflashing: Fabricate from the following material:
    a. Prefinished Galvanized Steel: 0.0276 inch (24 gauge) thick.
    b. Fabricate the surface mounted counterflashing in accordance with RTA Detail No. 2. Fabricate the counterflashing with a hemmed drip edge along the bottom edge and a minimum face of 4-inches.
    c. Fabricate the surface mounted counterflashing (curb slip flashing) in accordance with SMACNA Figure 4-5B. Fabricate the counterflashing with a hemmed drip edge along the bottom edge and a minimum face of 4-inches. Fabricate the top edge nailing flange 2-1/2-inches tall to isolate the existing EPDM from the new EPDM on the low slope roof area walls. See RTA Detail No. 2.

4. Miscellaneous Flashing: Fabricate from the following material:
    a. Galvanized Steel: 0.028 inch (24 gauge) thick.
    b. Fabricate penetration pockets in accordance with SMACNA Figure 8-11C. Fabricate the penetration pockets with 4-inch tall sides (minimum), 4-inch wide flanges and soldered corner stiffeners.
    c. Fabricate the pipe chase closure box flashing in accordance with SMACNA Figure 8-9A. Closure box size shall be as required to accommodate the pipes. Pipe penetration diameters shall closely match the pipe diameters. Provide watershedding slope in the closure box cap. Fabricate the vertical curb covers with 4-inch wide faces and hemmed bottom edges. Lap widths: 1-inch minimum. Seam and solder all joints in the closure box where possible.

PART III - EXECUTION

3.01 EXAMINATION

A. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.

B. Verify roofing termination and base flashings are in place, sealed, and secure.

3.02 INSTALLATION

A. Unless otherwise indicated, install sheet metal flashing and trim to comply with performance requirements, manufacturer's installation instructions and SMACNA's "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 that will be permanently watertight and weatherproof.

B. Expansion Provisions: Provide for thermal expansion of exposed sheet metal work. Space movement joints at maximum of 10 feet with no joints allowed within 24 inches of corner of intersection.

C. Counterflashing
    1. Surface Mounted Counterflashing: Install counterflashing to slip behind the existing sill flashing on Area A. See RTA Detail No. 2. The counterflashing must cover the top edge of the new EPDM flashing a minimum of 3-inches. Notch and lap the corners and end joints in the counterflashing 4-inches.
    2. Curb Slip Flashing: Install counterflashing along the top of any curb where the top of the base flashing is not protected by a minimum of 3-inches. The counterflashing must cover the top edge of the base flashing a minimum of 3-inches. The top edge of the counterflashing must be concealed by the curb cap a minimum of 2-inches. Secure 24-inches on center with gasketed screws. Notch and lap the corners and end joints in the counterflashing 4-inches.

D. Penetration Pocket
    1. Secure the penetration pocket flanges with screws into the roof deck. Seal the flanges in accordance with the manufacturer's typical details.
    2. Fill the flashing with the specified non-shrink grout and pourable sealer. The pourable sealer must be mounded to promote watershedding capabilities.

3.03 FIELD QUALITY CONTROL

A. Inspection will involve surveillance of work during installation to ascertain compliance with specified requirements.

3.04 CLEANING

A. In areas where finished surfaces are soiled by work of this section, consult manufacturer of surfaces for cleaning advice and conform to their documented instructions.

B. Repair or replace defaced or damaged finishes caused by work of this section.

END OF SECTION