

SECTION 07 62 00

SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Fascias and scuppers.
 - 2. Roof flashings.
 - 3. Roof joint cover flashings.
 - 4. Gutters
 - 5. Downspouts and Strainers.
 - 6. Plumbing Vents.
 - 7. Interior Roof Drains.
 - 8. Flashings for electrical conduits, mechanical lines and plumbing water lines roof penetrations.
 - 9. Door drips.
 - 10. Formed wall flashing and trim.

1.02 REFERENCES

- A. California Building Code 2016, Chapters 14 and 15.
- B. American Society for Testing and Materials (ASTM)
 - 1. ASTM A480/A480M- General Requirements for Flat-Rolled Stainless Steel and Heat Resisting Steel Plate, Sheet, and Strip.
 - 2. ASTM A653/A653M-98 - Sheet Steel, Zinc-Coated (Galvanized) or Zinc - Iron Alloy Coated by the Hot-Dip Process
 - 3. ASTM B32 - Solder Metal
 - 4. ASTM B209 - Aluminum and Aluminum-Alloy Sheet and Plate.
 - 5. ASTM B370 - Copper Sheet and Strip for Building Construction
 - 6. ASTM B749 - Lead and Lead Alloy Strip, Sheet and Plate Products
 - 7. ASTM D4601 - Asphalt-Coated Glass Fiber Base Sheet Used in Roofing
- C. National Roofing Contractors Association (NRCA)
 - 1. NRCA Manual - Fifth Edition.
- D. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA)
 - 1. SMACNA Manual - Architectural Sheet Metal Manual, Current Edition

1.03 SUBMITTALS

- A. Shop drawings showing material profile, jointing pattern, jointing details, fastening methods and installation details.
- B. Product data.
- C. Manufacturer's installation instructions.

- D. Samples for each type of sheet metal flashing and trim indicated with field-applied color finishes.

1.04 STORAGE AND HANDLING

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

PART 2 - PRODUCTS

2.01 SHEET MATERIALS

- A. Galvanized Steel: ASTM A653/A653M-02, G90.

2.02 ACCESSORIES

- A. Fasteners: round head, galvanized steel with soft neoprene washers at exposed fasteners. Finish exposed fasteners same as flashing metal.
- B. Self-Adhesive Flashing: 40 mils, nominal, thickness composite sheet, fabricated with 8-mil polyethylene film backing and 32-mil rubberized asphalt sheet waterproofing.
 - 1. Acceptable Products: as follows, or equal, approved in accordance with Division 01, General Requirements, for substitutions.
 - a. Perm-A-Barrier sheet by Grace Construction Products, Cambridge, MA
 - b. Carlisle Coatings and Waterproofing CCW-705T-WF
 - c. Henry Company, Blueskin-SA
 - d. FortiFlash 40 Recessed Window Flashing by Fortifiber.
 - 2. Furnish with prefabricated corner pieces, if available from sheet manufacturer. Provide manufacturer's edge and top sealant or mastic, and primers.
- C. Metal Primer: For repair of Galvanized sheet metal, Zinc type, Galvillite by ZRC or equal.
- D. Protective Backing Paint: Bituminous.
- E. Sealant: Two-component, polyurethane-type specified in Section 07 92 00, Joint Sealers.
- F. Solder: ASTM B32; Grade Sn50, flux type and alloy composition as required for use with metals to be soldered. Raw muriatic acid for galvanized steel; rosin for lead; non-corrosive soldering salts for uncoated copper and acid-type flux formulated for soldering stainless steel.

2.03 WALL SHEET METAL FABRICATIONS - WALL FLASHING

- A. Openings Flashing in Frame Steel [wood] Stud Construction: Fabricate head, sill, jamb and similar opening flashings to extend 4 inches beyond wall openings. Form head and sill flashing with 2 inch high end dams. Fabricate from the following material:
 - 1. Galvanized Steel: 24 gauge thick.

2.04 FABRICATION

- A. Form sections true to shape, accurate in size, square and free from distortion or defects. Fabricate all components per SMACNA standards unless more stringent conditions are imposed by the Roofing Contractor, in that case the more stringent conditions shall prevail.
- B. Fabricate cleats and starter strips of same material as sheet, interlockable with sheet.
- C. Form pieces in longest practical lengths.
- D. Hem exposed edges on underside 1/2 inch; miter and seam corners.
- E. Form material with flat lock seam.
- F. Solder lap seams of all non-moving metal joints and seal other metal joints. After soldering, remove flux. Wipe and wash solder joints clean.
- G. Fabricate corners from one piece with minimum 18 inch long legs; seam for rigidity, seal with sealant.
- H. Fabricate vertical faces with bottom edge formed outward 1/4 inch and hemmed to form drip.
- I. Fabricate flashings to allow toe to extend 2 inches over roofing. Return and break edges.
- J. Provide expansion joints for gutters at every 30 feet. Fabricate per SMACNA details.

2.05 FINISH

- A. Shop prepare and prime exposed ferrous metal surfaces.
- B. Back paint concealed metal surfaces with protective backing paint when in contact with copper, redwood or red cedar.

PART 3 - EXECUTION

3.01 INSPECTION

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

- B. Verify membrane termination and base flashings are in place, sealed and secure.
- C. Beginning of installation means acceptance of existing conditions.

3.02 PREPARATION

- A. Field measure site conditions prior to fabricating Work.
- B. Install starter and edge strips and cleats before starting installation.
- C. Install reglets true to lines and levels. For surface-mounted seal top of reglets with sealant.
- D. Insert counterflashings into reglets to form tight fit. Seal flashings into reglets with sealant.
- E. Secure flashings in place using concealed fasteners. Use exposed fasteners only in locations approved by Architect.
- F. Lock and seal all joints.
- G. Apply plastic-cement compound between metal flashings and felt flashings.
- H. Fit flashings tight in place. Make corners square, surfaces true and straight in planes and lines accurate to profiles.
- I. Seal metal joints watertight.

3.03 INSTALLATION

- A. Wall Flashing: Flashing shall be installed in such a manner so as to prevent moisture from entering the wall or to redirect it to the exterior. Flashing shall be installed at the perimeters of exterior door and window assemblies, penetrations and terminations of exterior wall assemblies, exterior wall intersections with roofs, decks, balconies and similar projections and at built-in gutters and similar locations where moisture could enter the wall. Flashings with projecting flanges shall be installed on both sides and the ends of copings, under sills and continuously above projecting trim, Section 1405.3 CBC.
- B. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to SMACNA recommendations. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.
- C. Openings Flashing in Frame Stud Construction: Install continuous head, sill, jamb, and similar opening flashings to extend 4 inches beyond wall openings. Install over self-adhesive flashings.
- D. Sealants for penetrations: specified in section 07 92 00 Joint Sealers.

- E. Submit shop drawings showing details for approval and use minimum of 24 gauge galvanized steel .
- F. Fascias and Scuppers: Fabricate to detail of 20 gauge galvanized sheet. Apply sealant in all crevices. Fabricate scuppers with 6 inch flanges.
- G. Roof Flashings: Provide roof flashings as indicated in drawings and required to complete entire project. Submit shop drawings showing details for approval, use minimum of 24 gauge galvanized steel.
- H. Reglets and Counterflashings: Minimum 24 gauge as detail in drawings, submit shop drawings.
 - 1. Reglets: For Surface-mounted and imbed applications.
 - 2. Counterflashings: Over bituminous base flashings.
 - 3. Counterflashings: Roof mounted mechanical equipment and vent stacks.
 - 4. Counterflashings: Roof Hatches and Skylights.
- I. Roof Joint Cover Flashings: Provide roof joint covers as indicated in drawings. Submit shop drawings showing details for approval and use minimum of 24 gauge galvanized steel. Fabricate tops slope to drain.
- J. Gutters: Fabricate to detail of 20 gauge galvanized sheet metal. Install an expansion joint every 30 linear feet of gutter; install cover plates over expansion joints. Fabricate gutter without longitudinal seams. Install cradles of 1/4 inch x 1-1/2 inch galvanized steel at 36 inch centers. Gutters shall rest in cradles, but shall not be mechanically fastened to allow for expansion and contraction.
- K. Downspouts and Strainers: Downspouts shall be 20 gauge galvanized steel, rectangular unless noted otherwise. Strainers shall be 10 gauge galvanized steel wire basket type. Provide all anchor clips and straps as required for installation. Install a wire basket strainer in all downspouts at gutter level. Rivet and solder flange of downspout to gutters per SMACNA details. Locate downspouts every 30 feet unless otherwise noted on drawing. Provide splash pan.
 - 1. At steel pipe overflow-drain and interior drain pipe leaders install Downspout Nozzle #1770 by JR Smith, Montgomery, Alabama. Nickel bronze with bird screen cast bronze body and flange. Refer to Drawings for pipe sizes and locations of drains and leaders. Minimum pipe size Schedule 40, 4 inches, galvanized. .
- L. Plumbing Vents - Vandal Proof: Provide pre-manufactured flashings and counterflashings for plumbing vent penetrations. Flashing, 4 lb lead, seamless, reinforced with steel boot, with 6" flange.
 - 1. Counterflashing: cast iron Vandal Flash Hood with set screw to secure to pipe. Model 1100-5 Series by Elmdor/Stoneman, City of Industry, CA. Install per manufacturer's instructions.
 - 2. Provide vandal proof vent cap: Zurn Z193 or approved equivalent.
- M. Interior Roof Drains: Provide 16 oz. Copper 30" x 30" flashing at single roof drains, 30" x 48" at drain and overflow drain unit.
 - 1. Refer to drawings.

- N. Roof Pipe Penetrations Flashings: Provide pre-manufactured flashings and counterflashings for pipe penetrations for electrical conduits, mechanical and plumbing lines. Flashing, 4 lb lead, seamless, reinforced with steel boot, with 6" flange, field seal per Section 07 92 00.
 - 1. Counterflashing: Single pipe penetration, cast iron ring with set screw to secure to pipe,. Model 1100-4 Series by Elmdor/Stoneman, City of Industry, CA. Install per manufacturer's instructions.
 - 2. Counterflashing: Multiple pipe penetration, within single pre-manufactured flashing unit: Counterflashing PVC cap, adapter base and compression nut. Compression rings and gasket. Model 915 by Elmdor/Stoneman, City of Industry, CA. Install per manufacturer's instructions.
 - O. Door Drips: Provide door drips of 20 gauge galvanized sheet metal at heads of all doors and windows in exterior walls where no roof or overhead protection occurs. Extend drips 2 inches beyond jambs, unless otherwise indicated.
 - P. Miscellaneous: Provide miscellaneous flashings as indicated in drawings and required to complete entire project, except for items provided under other Sections. Submit shop drawings showing details for approval and use minimum of 24 gauge galvanized steel.
 - 1. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.
- 3.04 FINISH
- A. Paint exposed metal flashings with high performance paints in accordance with Section 09 90 00, for Special Coatings.

END OF SECTION