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**Part 1      General**

**1.1      RELATED REQUIREMENTS**

- .1      Section 07 61 00 - Sheet Metal Roofing

**1.2      REFERENCES**

- .1      American Society for Testing and Materials International (ASTM)
  - .1      ASTM A240/A240M-07e1, Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
  - .2      ASTM A606-04, Standard Specification for Steel, Sheet and Strip, High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, with Improved Atmospheric Corrosion Resistance.
  - .3      ASTM A653/A653M-07, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
  - .4      ASTM D523-89(1999), Standard Test Method for Specular Gloss.

**1.3      ACTION AND INFORMATIONAL SUBMITTALS**

- .1      Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2      Product Data:
  - .1      Submit manufacturer's printed product literature for sheet metal flashing systems materials, specifications and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.
- .3      Samples:
  - .1      Submit duplicate 50 x 50 mm samples of each type of sheet metal material, finishes and colours.

**1.4      DELIVERY, STORAGE AND HANDLING**

- .1      Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.

**Part 2      Products**

**2.1      SHEET METAL MATERIALS**

- .1      Zinc coated steel sheet: mm thickness, commercial quality to ASTM A653/A653M, with Z275 designation zinc coating.

## **2.2 SHEET METAL MATERIALS**

- .1 Pre-painted Galvanized Steel Sheet: 0.60 mm thickness, zinc coated galvanized steel sheet to ASTM A653/A653M, Coating Designation G90 (Z275), shop pre-coated;
  - .1 Profiles: as noted on drawings.

## **2.3 PREFINISHED STEEL SHEET**

- .1 Prefinished steel with factory applied polyvinyl chloride Barrier Series.
  - .1 Class: F2S.
  - .2 Red and white colour selected by Departmental Representative from manufacturer's standard range.
  - .3 Specular gloss: 30 units +/-5 to ASTM D523.
  - .4 Coating thickness:200 micrometres minimum
  - .5 Resistance to accelerated weathering for chalk rating of 8, colour fade 5 units or less and erosion rate less than 20 % to ASTM D822 as follows:
    - .1 Outdoor exposure period 5000 hours minimum.
    - .2 Humidity resistance exposure period 5000 hours minimum.

## **2.4 ACCESSORIES**

- .1 Isolation coating: alkali resistant bituminous paint.
- .2 Plastic cement: to CAN/CGSB-37.5.
- .3 Sealant: Compatible with systems materials, recommended by system manufacturer.
- .4 Exposed Sealant:
  - .1 Silicone, one part: to ASTM C 920, Type S, Grade NS, Class 25, single component neutral cure silicone sealant, plus minus 50% joint movement capability. Colour to match adjacent surfaces.
- .5 Flashings and accessories: Formed from same material as the metal roofing: Flashing to custom fabricated to profiles indicated or required.
- .6 Fasteners: Concealed.
  - .1 Where not possible to be concealed, provide plastic covered hex head screw complete with rubber gasket, colour match to sheet metal.

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## **2.5 FABRICATION**

- .1 Form sections true to shape, accurate in size, square, and free from distortion or defects.
- .2 Form pieces in longest possible lengths.
- .3 Make allowances for expansion and contraction due to solar heat gain and ambient temperatures without damaging panel system performance.
- .4 Hem all exposed edges on underside 13 mm; miter and seam corners.
- .5 Form material with flat lock seams.
- .6 Fabricate vertical faces with bottom edge formed outward 6 mm and hemmed to form drip.
- .7 Fabricate flashings for, base of wall, headers, windows, louvers and other openings to profiles indicated and as required to provide drip edge and water seal and substrate protection.
- .8 Coordinate installation with work of other sections.
- .9 Protect metals against oxidization by back painting with isolation coating where indicated.

## **Part 3 Execution**

### **3.1 MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and datasheets.

### **3.2 PREPARATION**

- .1 Install starter and edge strips, and cleats before starting installation.

### **3.3 INSTALLATION**

- .1 Secure flashings in place using concealed fasteners.
  - .1 Use exposed fasteners only where permitted.
- .2 Fit flashings tight in place.
  - .1 Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- .3 Seal metal joints watertight.

### **3.4 CLEANING**

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.

**END OF SECTION**