

## PART 1 - GENERAL

### 1.1 Related Work

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|----|--------------------|---------|----------|
| .1 | Plastic Skylights: | Section | 08 62 10 |
| .2 | Doors              | Section | 08 11 00 |

### 1.2 References

- .1 Aluminum Association (AA).
  - .1 AA DAF-45-[R03], Designation System for Aluminum Finishes - 9th Edition.
- .2 AA ASM-35-[October 2000], Specifications for Aluminum Sheet Metal Work in Building Construction, Section
- .3 ASTM A 167-[99], Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
- .4 ASTM A 240/A 240M-[02a], Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
- .5 ASTM A 653/A 653M-[02a], Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- .6 ASTM A 792/A 792M-[02], Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot Dip Process.
- .7 ASTM B 32-[00e1], Standard Specification for Solder Metal.
- .8 ASTM B 370-[98], Standard Specification for Copper Sheet and Strip for Building Construction.
- .9 ASTM D 523-[89(1999)], Standard Test Method for Specular Gloss.
- .10 ASTM D 822-[01], Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings.

### 1.3 Samples

- .1 Submit duplicate 2"x2" (50 x 50 mm) samples of each type of sheet metal material, colour, and finish in accordance with Section 01340.

### 1.4 Warranty

- .1 Provide written warranty in accordance with Section 01340 that sealants will remain in place, retain adhesion, and not breakdown from environmental conditions for a period of ten (10) years from date of final completion of the work.

### 1.3 Waste Management

- .1 Separate waste, remove from site and dispose of as per Section 01 74 21.

## PART 2 - PRODUCT

### 2.1 Metal Sheet

- .1 Steel Sheet with zinc and Aluminum Alloy Coating:
  - .1 Ribbed, majestic profile shape, 900mm wide preformed sheets, 19mm rib height, prefinished 26 ga. minimum thickness, color one of 15 minimum colors.
  - .2 Full line of coordinating trims, flashings, caps and corners.
- .2 Zinc Coated Steel Flashing
  - .1 to ASTM A 653/A 653M
  - .2 zinc strip system installed to prevent fungus, moss and algae growth under ridge cap as per manufactures instructions.

### 2.2 Accessories

- .1 Isolation Coating: alkali resistant bituminous paint to CGSB 1-GP-108C
- .2 Plastic cement: to CGSB 37-GP-5M.
- .3 Underlay for Metal Flashing : No. 15 perforated asphalt to CSA A123.3-M or approved equal.
- .4 Sealants: in accordance with Section 07900, color to match adjacent materials. Only sealant listed on CGSB Qualities Products List are acceptable for use on this project. Compatible with systems materials, recommended by system manufacturer.
- .5 Cleats: of same material, and temper as sheet metal, minimum 50mm wide. Thickness same as sheet metal being secured.
- .6 Fasteners: of same material as sheet metal, to CSA B111, screws of length and thickness suitable for metal flashing application.
- .7 Washers: of same material as sheet metal, 1 mm thick with rubber packings. Alternate: Neoprene
- .8 Touch-up paint: as recommended by metal flashing and trim manufacturer.

### 2.3 Fabrication

- .1 Fabricate metal flashings and other sheet metal work in accordance with applicable CRCA 'FL' series specifications and as indicated. Fabricate aluminum sheet metal in accordance with AA ASM-35.
- .2 Form pieces in 2400 mm maximum lengths. Make allowance for expansion at joints.
- .3 Hem exposed edges on underside 12mm, mitre and seal corners with sealant.
- .4 Form sections square, true and accurate to size, free from distortion and other defects detrimental to appearance or performance.
- .5 Apply isolation coating to metal surfaces to be embedded in concrete or mortar.

## PART 3 - EXECUTION

### 3.1 Installation

- .1 Use concealed fastenings except where approved by Departmental Representative before installation.
- .2 Provide underlay under sheet metal roofing. Secure in place and lap joints 100 mm minimum.
- .3 Apply slip sheet over asphalt felt underlay to prevent bonding between sheet metal and felt. Secure with minimum anchorage and lap joints 50 mm minimum in direction of water flow.
- .4 Install sheet metal roof panels using cleats spaced as per manufacture's instruction.
- .5 Secure cleats as per manufacturer's instruction.
- .6 Flash roof penetrations with material matching roof panels, and make watertight.
- .7 Form seams in direction of water-flow and make watertight.
- .9 Perform soldering with well heated coppers, heat seam thoroughly and sweat solder through its full width.
- .10 Clean and flux metals before soldering.
- .11 Follow sheet metal manufacturer's recommendations for soldering procedures.
- .12 As work progresses, neutralize excess flux with 5% to 10% washing soda solution, and thoroughly rinse. Leave work clean and free of stains.

### 3.2 STANDING SEAM ROOFING

- .1 Fold lower end of each pan under 20 mm as per manufactures instructions
- .2 Apply sheet metal roofing beginning at eaves. Loose lock pans to valley flashing and edge strips at eaves and gable rakes.
- .3 Finish standing seams 25 mm high on flat surfaces. Bend up one side edge 40 mm and other 45 mm.

- .1 Make first fold 6 mm wide single fold and second fold 12 mm wide, providing locked portion of standing seam with 5 plies in thickness.
- .2 Fold lower ends of seams at eaves over at 45 degrees angle.
- .3 Terminate standing seams at ridge and hips by turning down in tapered fold.
  
- .4 Form valleys of sheets not exceeding 3 m in length. Lap joints 150 mm in direction of flow.
  - .1 Extend valley sheet minimum 150 mm under roofing sheets.
  - .2 At valley line, double fold valley and roofing sheets and secure with cleats spaced 450 mm on centre.

\*\* END OF SECTION \*\*