PART 1 - GENERAL

1.1 General Requirements

.1 All conditions of the contract and Division 1, General Requirements apply to this section.

.2 All materials and equipment must be set up in a position satisfactory to the Owner's representative.

.3 All materials shall be new and free from defects which may impair strength, durability or appearance.

.4 Scheduling of the work shall be discussed with, and be subject to, the approval of the Owner.

1.2 References

.1 Comply with requirements of the following documents, latest edition:

.1 ASTM A606, Specification for Steel, Sheet and Strip, High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, with Improved Atmospheric Corrosion Resistance.

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

.3 ASTM A792/A792, Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.

.4 CAN/CGSB 51.32, Sheathing, Membrane, Breather Type.

.5 CAN/CGSB 93.1, Sheet, Aluminum Alloy, Prefinished, Residential.

.6 SMACNA, Sheet Metal and Air Conditioning Contractors National Association – "Architectural Sheet Metal Manual"

.7 Canadian Roofing Contractors Association (CRCA), Roofing Specifications Manual.

.8 CGSB 93-GP-3, Sheet, Steel, Galvanized Prefinished, Reaffirmed December 1985.

.9 CSSBI Bulletin No. 9, Care and Maintenance of Prefinished Sheet Steel Building Products, August, 1983.

.10 Ontario Building Code.

1.3 Quality Assurance

.1 Contractor Qualification:

.1 Contractor and their staff must be accredited by the membrane manufacturer to supply

and install the specified materials.

.2 Contractor must be approved by the Owner and Consultant.

.3 Contractor must be a member in good standing of the Ontario Industrial Roofing Contractors Association (OIRCA) or equivalent provincial body, AND/OR have a minimum ten (10) years of relevant experience.

.2 Work in this section shall comply with the guidelines, standards and current details from the following related organizations:

.1 Sheet Metal and Air Conditioning Contractors National Association - SMACNA

.2 Canadian Roofing Contractors Association – CRCA

.3 National Roofing Contractors Association – NRCA

.3 Field Review:

.1 Review of sheet metal flashing and trim installations will be carried out by the Consultant. Contractor to make site available for review at Consultant's request. Any work not accepted by the Consultant shall be corrected by the Contractor to meet the requirements of the specifications, manufacturer's requirements and/or good construction practices.

1.4 Delivery, Storage and Handling

.1 Deliver and store materials to manufacturer's instructions and CSSBI guidelines.

.2 Store materials under cover on elevated platforms.

.3 Remove and replace damaged material.

1.5 Protection

.1 Protect the work of this section from damage. Damaged work, which cannot be satisfactorily repaired, restored or cleaned, shall be replaced at no cost to the Owner.

1.6 Warranty

.1 Submit a Contractor's written warranty for repair work specified in this section covering a period of two (2) years, including materials and application, at no cost to the Owner. The contractor shall warrant that the installation will be free from defects related to workmanship or material deficiencies.

.2 Any repair required under the warranty will be carried out in accordance with the specifications at no cost to the Owner.

PART 2 - PRODUCTS

2.1 Materials

.1 Prefinished Sheet Metal Flashings:

.1 Galvanized steel, 0.6mm (24ga) core nominal thickness unless specified otherwise on drawings, with Z275 (G90) zinc coating designation to ASTM A653M (A653), complete with factory applied silicone modified polyester resin coating system; WeatherXL by Valspar Corp. or Perspectra Series by Baycoat Ltd. Colour to be approved by Owner.

.2 Cleats and Hook Strips Not Otherwise Specified:

.1 Two gauges heavier of matching materials of flashing being employed. Minimum 0.76mm (22ga) and of the same material. All hook strips shall be continuous and secured at 6" (152mm) on center in an alternating high – low pattern. Lower fasteners to be within 1.25" (32mm) of drip.

.3 Adhered Transition Membrane:

.1 Transition Membrane:

.1 Blueskin PE 200 HT by Henry;
.2 Lastobond Shield HT by Soprema;
.3 AcrylicStick SA by IKO;
.4 Clad-Gard SA Metal Underlayment by Firestone;
.5 Approved equivalent.

.2 Transition Membrane Primer:

.1 Blueskin Primer by Henry;
.2 Elastocol Stick Primer by Soprema
.3 SA-Solvent Based (SB) Primer by Firestone;
.4 Approved equivalent.

.3 Transition Membrane Sealant: As recommended by the membrane manufacturer.

.4 Underlay:

.1 Smooth unsaturated quality rosin sized paper weighing not less than 6 lbs per 100ft2 (0.3 Kg/m2) unless otherwise shown to CSA A123.3.

.5 Fasteners:

.1 Use galvanized, copper, aluminium or stainless steel screws as most compatible with materials being employed. Use fasteners as most generally suitable to.

.2 Fasteners for Wood:

.1 No. 10, flathead, size and length to suit material.

.3 Exposed Fasteners:

.1 No.10 hex head cadmium plated with neoprene and solid washers by Atlas Bolt or approved equal. Fastener to penetrate substrate by 25mm (1″). Consult manufacturer for screw type and sizing for materials being secured. Provide caps for screw heads to match colour of flashing as specified or shown.

.4 Fasteners for Masonry and Concrete Substrates:

.1 Tapcon fasteners with "Climaseal" corrosion resistant finish, as manufactured by Buildex/Red Head or approved equivalent. Screw to be of sufficient length to penetrate into substrate a minimum of 38mm (1½″).

.5 Stainless Steel Pop Rivets:

.1 3mm (1/8″) diameter.

.6 Wedges:

.1 Rolled plumber sheet lead. Secure metal flashings on the inside and should be secured with No.10 galvanized screws through neoprene washers at 760mm (30") o.c.

.7 Solder:

.1 Block solder 50% tin, 50% lead to ASTM B32. Use only rosin flux.

.8 Touch-up paint:

.1 As recommended by pre-finished material manufacturer.

.9 Bituminous Paint:

.1 Gilsonite asphalt 910-02 by Bakelite to CGSB 1-GP-108 Type II.

.10 Scuppers:

.1 To be fabricated complete with gravel stop edge on three sides.

.2 Face of scupper to be encapsulated with prefinished metal cover.

.3 Colour to be chosen by Owner.

.11 Sealants:

.1 To Section 07 92 00.

PART 3 - EXECUTION

3.1 Examination

.1 Examine the drawings and specifications to determine the extent of the work involved, together with other data affecting the work, as in no circumstances will any claims against the Owner be allowed resulting from failure to ascertain the extent of such work shown, herein described or implied.

3.2 Fabrication

.1 Verify all dimensions on site prior to fabrication.

.2 Use competent mechanics and work accurately to details indicated and as herein specified.

.3 Fabricate all possible work in shop in 2.4m (8ft) lengths by brake forming, bench cutting, drilling and shaping. On high vertical sections install metal in 1.2m (4ft) section as specified and detailed.

.4 On coping or flashing with a horizontal dimension of 406mm (16") or greater, fabricate metal flashings in maximum 1.2m (4 ft) sections.

.5 On coping or flashing with a horizontal dimension of 508mm (20") or greater, use 25mm (1") lock folded standing seam joints.

.6 Form bends with straight sharp lines, angles and corners into true planes, free from twists, buckles, dents and other visual distortions.

.7 Double-back exposed metal edges at least 13mm (1/2"). Raw edges will not be permitted.

.8 End joints where adjacent lengths of metal flashing meet shall be made in accordance with jointing method specified hereinafter.

3.3 Dissimilar Materials

.1 Protect material from electrolytic action when dissimilar metals are in contact with one another.

.2 Paint the mating surfaces of aluminum and galvanized steel with bituminous or zinc chromate primers. Taping or gasketing with non-absorptive materials or sealants is also acceptable.

3.4 Installation

.1 Install sheet metal flashings at copings, walls, joints, roof openings and other components required to protect the membrane flashings as shown on the drawings, or otherwise required.

.2 Install continuous concealed hook strips where indicated or required to present a true, non-waving, leading edge. Install cleats as required to protect membrane roofs and flashings from damage at lock joints and as required to permanently hold flashing in place. Secure cleats at

150mm (6″) o.c. in V-pattern, keeping lower fastener within 32mm (1-1/4″) of the drip edge.

.3 Sheet metal work shall be installed to cover the entire area it protects and shall be watertight under all service and weather conditions. Install in a uniform manner, level, true to line, free of dents, warping and distortion.

.4 Back-paint at the rate of 0.12L/m^2 (1/4 Gal/100 ft^2) with bituminous paint, sheet metal that comes into contact with another kind of metal, masonry or concrete.

.5 Install sheet metal with concealed fasteners at lock joints. Exposed fastening will be permitted only with the approval of the Consultant. Space all fasteners evenly in an approved manner. Use lead plugs and screws where fasteners are exposed, otherwise use concrete drive fasteners where metal flashings are installed over concrete or masonry.

.6 Install underlay under sheet metal, installed directly over wood or masonry surfaces. Overlap joints and turn up at edges where horizontal surfaces intersect vertical planes 76mm (3") minimum.

.7 Join sheet metal by "S" lock seams, to permit thermal movement. Fill all joints with caulking as flashing is being installed. Clean off all excessive material visible subsequent to installation. Space joints evenly where exposed. Form inside and outside corners by means of raised seams. Lock seams and caulk all overlaps to ensure water tightness. Do not use pop rivets. Provide fully caulked standing seams at all cap flashing joints 8″ (200 mm) or wider.

.8 Slope all metal to interior to maintain minimum 10% slope. Do not form open joints or pockets that fail to drain water.

.9 Caulk all open sheet metal joints. Solder corners and other locations as required for a permanent waterproof connection.

.10 Insert metal flashing under cap flashing and behind other claddings a minimum of 38mm (1½″).

.11 Prepare a mock up installations of the metal flashing details for approval by Consultant prior to the installation of the metal flashings.

3.5 Finish

.1 At project completion, leave surface and adjacent work areas free of damage and clean of debris. Finished surfaces of formed metal flashings shall be free of oil canning, dents and be perfectly colour matched. Changes in colour between sheets and dented or oil canned surfaces that detract from the visual appearance of finished product are to be replaced at the Contractor's expense. Remove and replace damaged, defaced or defective work.

.2 Paint all exposed metal due to cutting.

.3 Touch-up finish surfaces damaged during handling and erection in conformance with manufacturer's recommendations. Refinish shop applied finishes as approved by Consultant.

.4 Remove deposits or protections and wash metals left unpainted and exposed to view as specified by metal manufacturer.

3.6 Cleaning

.1 Daily as the work proceeds and on completion, remove all surplus materials and debris resulting from the foregoing work.

.2 Remove all stains, caulking or other adhesive from all affected surfaces.

END OF SECTION – 07 62 00