1.0 *GENERAL*

1.1 *Related Work and UBC Guidelines*

.1 Section 06 10 00 Rough Carpentry
.2 Section 07 00 10 Building Envelope – General Requirements
.3 Section 07 10 00 Damproofing and Waterproofing
.4 Section 07 40 00 Cladding
.5 Section 07 50 00 Membrane Roofing
.6 section 07 61 00 Sheet Metal Roofing

1.2 *Related External Documents*

1. *RCABC Roofing Practices Manual.*
2. *Fabricate to SMACNA (Sheet Metal and Air Conditioning Contractor's National Association) – Architectural Sheet Metal Manual Standards.*
3. *CSSBI-S8 "Quality and Performance Specification for Pre-Finished Sheet Steel Used for Building Products".*
4. *ASTM-A924/A924M "Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process".*
5. *CAN/CGSB-1.171 "inorganic Zinc Coating".*
6. *ASTM-A653/A653M "Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process."*

1.3 *Description*

1. *Section includes sheet metal flashing and trim for wall and roof assemblies.*

1.4 *Coordination*

.1 The Guidelines apply to all work completed within buildings on both UBC Vancouver and UBC Okanagan campuses unless stated otherwise.
.2 In instances where conflicts are found between these guidelines and provincial regulations or codes, please notify the UBCV Technical Review Team Architect or UBCO Facilities Management.
.3 These guidelines are intended to be read by design consultants and their content integrated into construction drawings and specifications. Construction documents are not to reference the technical guidelines directly.
.4 The Coordinating Registered Professional (CRP) is required to coordinate these requirements with other disciplines.

1.5 *Submittals*

.1 Submit required documents to consultants in accordance with Section 013300 Submittal Procedures.

.2 Provide samples for colour selection only if it is a Construction Office project.

.3 O&M Submittals
.1 Product specifications, type and colour.
.2 Environmental Product Declaration (EPD).
.3 Final reviewed shop drawings (including all enclosure interface details).
.4 Manufacturer performance test data to confirm performance criteria.
.5 Maintenance Data
.1 Source for replacement.
.2 Maintenance instructions.

1.6 ***Quality Control and Assurance***

.1 Quality Assurance
- *.1 Refer Sections 07 40 00 Cladding,07 50 00 Membrane Roofing and 07 61 00 Sheet Metal Roofing.*
- *.2 Follow all recommendations of the "RGC Roofing Practices Manual", as a minimum.*
- *.3 Include flashings in mockups as specified for work of other sections.*

.2 Quality Control
- *.1 Refer Sections 07 40 00 Cladding, 07 50 00 Membrane Roofing and 07 61 00 Sheet Metal Roofing.*

2.0 *DESIGN AND PERFORMANCE REQUIREMENTS*

2.1 ***Design Requirements***

.1 Meet the guarantee standards of the Roofing Contractors Association of British Columbia Guarantee Corp. (Roofstar Guarantee) as published in the "RGC Roofing Practices Manual" for a 5-year guarantee.

.2 Provide sheet metal in base metal thickness specified. Where no thickness is specified, provide base sheet metal in thickness recommended in SMACNA Architectural Sheet Metal Manual for type of item being fabricated, but not less than 24 gauge thickness for all installations.

.3 Zinc coated steel sheet: 24 gauge thickness minimum, commercial quality to ASTM A653/A653M, with Z275 (G90) designation zinc coating.

.4 Aluminum-zinc alloy coated steel sheet: to ASTM A792/A792M, commercial quality, grade 33 with AZ150 coating, regular spangle surface, 24 Gauge base metal thickness.

.5 Provide continuous clip-type fasteners at all parapet flashings, of same material as flashing.

.6 Provide 19mm (¾") high standing seam or 1" pocket S-Lock joints between flashing section

.7 Provide overflow scuppers whenever perimeter walls exceed 100 mm (4") in height, to BC Building Code requirements. Refer to SMACNA Appendix A-7, Scupper Sizing.

.8 Fabrication shall be standing seams only at inside and outside corners, provide S-lock at all other locations

.9 Apply isolating coating to all metal surfaces in contact with cementitious materials.

.10 Avoid the use of reglets as roof membrane terminations.

.11 Avoid surface fasteners.

.12 Provide a minimum of 10% slope at all flashings.

.13 Cap flashings to extend a minimum of 10mm beyond the face of the walls to avoid drip lines.

3.0 *MATERIALS*

3.1 ***Product Selection***

.1 Base metal for sheet metal accessories and for sheet metal flashing and trim to be:
- *.1 Zinc coated sheet steel conforming to the requirements of ASTM A653 (or A653M as applicable) with a minimum zinc coating of G90 (Z275), or*
- *.2 Prefinished steel sheet with coating system consisting of base metal with factory applied pre-treatment, primer, and fluoropolymer (PVDF) topcoat meeting requirements of CSSBI S8.*
  - *.1 Finished colour finished on both sides.*
  - *.2 Exposed coating thickness: dry film coating system thickness not less than 22 micrometres.*
  - *.3 Flashing should be humidity, salt spray and chalk resistant.*
- *.3 Aluminium-zinc coated (Galvalume) steel sheet conforming to the requirements of ASTM A792 (or A792M) with a minimum coating of AZ50 (AZM150) or*
- *.4 Aluminum sheet conforming to CSA HA Series1975, plain:*
  - *.1 Generally minimum 0.81 mm (20 gauge), 1.02 mm (18 gauge) at parapets and flashings 200mm (8") width or wider.*
- *.5 Minimum 24 gauge thickness.*

.2 Provide sheet metal in base metal thickness specified. Where no thickness is specified, provide base sheet metal in thickness recommended in SMACNA Architectural Sheet Metal Manual for type of item being fabricated, but not less than 24 gauge thickness for all installations.

.3 Zinc coated steel sheet: 24 gauge thickness minimum, commercial quality to ASTM A653/A653M, with Z275 (G90) designation zinc coating.

.4 Aluminum-zinc alloy coated steel sheet: to ASTM A792/A792M, commercial quality, grade 33 with AZ150 coating, regular spangle surface, 24 Gauge base metal thickness.

.5 Flashing used in contact with treated wood must be compatible with the treated wood and last long enough to be suitable for the intended application. Flashing must also be of the same type of metal as any fasteners that penetrate through them to avoid galvanic corrosion.

******END OF SECTION******