All guidelines apply to both UBC Vancouver and UBC Okanagan campuses unless stated otherwise.

<table>
<thead>
<tr>
<th>Section</th>
<th>UBC Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 05 00 00</td>
<td>Metals</td>
</tr>
<tr>
<td>Section 05 50 00</td>
<td>Metal Fabrications</td>
</tr>
<tr>
<td></td>
<td>Vancouver and Okanagan</td>
</tr>
</tbody>
</table>
1.0 GENERAL

1.1 Steel Construction – Structural Requirements

.1 Design building structures and their structural components for a 100 year service life.

.2 Structural design to conform to Part 4 of the BC Building Code.

.3 Increase live loads for specific occupancies as per the BC Building Code section 4.1.6 and more specifically Table 2.2.2 in the Technical Guidelines. https://technicalguidelines.ubc.ca/technical/structural_design_snow_loads.html

.4 Design light roofs for a minimum net factored uplift of 1.0 kPa.

.5 Refer to the UBC Vancouver Campus Plan – Part 3 Design Guidelines, Section 2.6.5 for guidelines relating to the design and choice of materials for screens and fences in the landscape.

1.2 Materials

.1 Ensure that the contract documents require all structural steel to be shop primed except for the appropriate exclusions.

.2 Exterior ledger angles and related components are to be galvanized for corrosion protection.

.3 Where decking is specified, use only galvanized steel decking as suitable for the exposure of the decking (interior or exterior).

***END OF SECTION***
1.0 GENERAL

1.1 Related UBC Guidelines

.1 Section 05 00 00 Metals
.2 Section 09 90 00 Painting & Coating (for exposed structural steel)
.3 UBC LEED Implementation Guide

1.2 Co-ordination Requirements

.1 All trades.

1.3 Description

.1 Miscellaneous metal fabrications including but not limited to the following:
   .1 Guardrails, handrails and balustrades: stainless steel, powder-coated or galvanized as per project requirements.
   .2 Exterior metal stairs and roof ladder, brackets and connections: galvanized.
   .3 Bollards: shop prepped and primed, finish painted on site.
   .4 Elevator hoisting beams at top of hoistways and elevator divider beams: shop painted.
   .5 Elevator pit ladders: galvanized.
   .6 Steel angle supports for brick veneer and concrete block: galvanized.
   .7 Steel angles at junction of concrete block walls and concrete slabs over concrete block walls: galvanized.
   .8 Steel channel frame to overhead rolling grilles and rolling doors: shop painted.
   .9 Trench drains: cast iron grating set in galvanized angle frame.
   .10 Louvre frames: powder-coated. Steel supports for aluminum louvres: galvanized.
   .11 Corner guards in parking garages on concrete block walls: shop prepped and primed, finish painted on site.
   .12 Pipe and conduit guards in parking garages: shop painted
   .13 Sump covers and frames: galvanized.
   .14 Anchor bolts/nuts/washers: zinc-coated fasteners for exterior use or where built into exterior, and interior side of moisture barrier.
   .15 Concrete inserts: hot-dipped galvanized.
   .16 Nuts, bolts and washers are to be hot-dipped galvanized. Anchor bolts shall be in accordance with ASTM A36/A36M or A307. Coordinate with structural drawings for anchor bolts.
   .17 Metal screens to secure enclosed spaces such as mechanical ducts, pipes, and intake and exhaust vents from bird ingress.
   .18 Burglar bars: galvanized or shop painted as per project requirements.
   .19 Bike racks: galvanized, stainless steel or powder-coated as per project requirements.
   .20 Other miscellaneous metal fabrication as shown on drawings or details.

1.4 Performance Standards

.1 Determine applicable CSA, ASTM, and similar standards.
.2 Registered structural engineer in the Province of British Columbia to provide signed and sealed shop drawings and Letters of Assurance for guardrails, handrails and other miscellaneous metal fabrications.
.3 Metal fabrications where noted to be galvanized are to be hot-dipped galvanized.
2.0 MATERIALS

2.1 Performance Requirements

.1 None.

2.2 Prescriptive Requirements

.1 Materials
  .1 Consider using materials that are sourced locally and have a high recycled content.
  .2 All exterior ledger angles, lintels and related components (connections, bolts, plates, etc.): hot dip galvanized.
  .3 Zinc Rich Galvanized Primer for touch-up work.
  .4 High zinc dust content paint for re-galvanizing welds in galvanized steel, conform to ASTM A780/A780M-09.

***END OF SECTION***