

## 1.0 GENERAL

### 1.1 Related Scope of Work and UBC Guidelines

- .1 Section 05 50 00 Metal Fabrications
- .2 Section 07 00 10 Building Envelope – General Requirements
- .3 Section 07 40 00 Cladding
- .4 Section 07 62 00 Sheet Metal Flashing and Trim
- .5 UBC LEED Implementation Guide
- .6 UBC Campus Plan Design Guidelines (Vancouver and Okanagan) - for metal screens and fences in the public realm.

### 1.2 Related External Documents

- .1 Latest edition of the British Columbia Building Code (BCBC).

### 1.3 Description

- .1 General requirements for steel structures on both UBC Vancouver and UBC Okanagan campuses unless stated otherwise.

### 1.4 Coordination

- 1. In instances where conflicts are found between the UBC Technical Guidelines and provincial regulations or codes, please notify the UBCV Technical Review Team Architect or UBCO Facilities Management.
- 2. 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.
- 3. The Coordinating Registered Professional (CRP) is required to coordinate these requirements with other disciplines.

## 2.0 DESIGN AND PERFORMANCE REQUIREMENTS

### 2.1 Design Requirements

- 1. Design building structures and their structural components for a 100-year service life. Refer to the Technical Guidelines Performance Objectives located here.
- 2. Structural design shall conform to Part 4 of the latest edition of the BC Building Code (BCBC). Live loads should be determined as per the BCBC for specific occupancies.

### 2.2 Performance Requirements

- .1 Metal fabrications where noted to be galvanized are to be hot-dipped galvanized.

## 3.0 MATERIAL REQUIREMENTS

### 3.1 Product Selection

- .1 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).

## **1.0 GENERAL**

### **1.1 Related Scope of Work and UBC Guidelines**

- .1 Section 05 00 00 Metals
- .2 Section 09 90 00 Painting & Coating (for exposed structural steel)
- .3 UBC LEED Implementation Guide
- .4 UBC Campus Design Guidelines (Vancouver and Okanagan) – for metal screens and finishes installed in the public realm.

### **1.2 Related External Documents**

- .1 Latest edition of the British Columbia Building Code (BCBC).

### **1.3 Description**

- 1. The Guidelines apply to all work completed within buildings on both UBC Vancouver and UBC Okanagan campuses unless stated otherwise.
- 2. Work includes miscellaneous metal fabrications, including metal screens and fences.

### **1.4 Coordination**

- 1. In instances where conflicts are found between the UBC Technical Guidelines and provincial regulations or codes, please notify the UBCV Technical Review Team Architect or UBCO Facilities Management.
- 2. 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.
- 3. 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 O&M Submittals
  - .1 Product specifications, type and colour.
  - .2 Final reviewed shop drawings for metal fabrications and where required, signed and sealed by a professional engineer registered in the Province of BC.
  - .3 Provide Letter of Assurance for 1.5.2.2 above.

## **2.0 DESIGN AND PERFORMANCE REQUIREMENTS**

### **2.5 Design Requirements**

- .1 Finishes for 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: 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.

## 2.6 Performance Requirements

- .1 Determine applicable CSA, ASTM, and similar standards.
- .2 Metal fabrications where noted to be galvanized are to be hot-dipped galvanized.

## 3.0 MATERIALS

### 3.5 Materials

- .1 Materials that are sourced locally and have a high recycled content are preferred.
- .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\*\*\*