

---

PART 1 - GENERAL

1.1 Reference  
Standards

- .1 CAN/CSA-G40.21-13 (or latest edition),  
Structural Quality Steels.
- .2 CSA W59-13 (or latest edition), Welded Steel  
Construction (Metal Arc Welding).
- .3 ASTM A307-14 (or latest edition),  
Specification for Carbon Steel Bolts and  
Studs, 60,000 psi Tensile.
- .4 CAN/CSA-G164-M92 (or latest edition) - Hot  
Dip Galvanizing of Irregularly Shaped  
Articles.
- .5 CAN/CGSB-1.181-92 (or latest edition),  
Ready-Mixed Organic Zinc-Rich Coating.
- .5 CAN/CSA-S16.1-14 (or latest edition), Limit  
States Design of Steel Structures.
- .6 ASTM A123/A123M-15, Specification for Zinc  
(Hot-Dip Galvanized) Coatings on Iron and  
Steel Products.

1.2 Shop Drawings

- .1 Submit shop drawings in accordance with  
Section 01 33 00.
  - .2 Shop drawings:
    - .1 Clearly indicate the following items:
      - .1 General arrangements, dimensions,  
clearance locations and directions of  
assemblies as installed on structures.
      - .2 Locations, sizes and installation  
tolerances of anchor bolts, eye bolts  
and embedded parts.
      - .3 Types of material used, finishes  
and core thickness.
      - .4 All other pertinent details and  
accessories.
  - .3 Test Results"
    - .1 Provide test results for the galvanized  
items
-

Metal Fabrication

Page 2

- 
- |    |  |
|----|--|
| .4 | Submissions:   |
| .1 | Provide submissions in accordance with section 01 33 00. |
- 
- |     |                                   |    |  |
|-----|-----------------------------------|----|--|
| 1.3 | Measurement<br><u>for Payment</u> | .1 | Measurement for payment will be in accordance with Section 01 29 00. |
|-----|-----------------------------------|----|--|
- 
- PART 2 - PRODUCTS
- 
- |     |                  |    |  |
|-----|------------------|----|--|
| 2.1 | <u>Materials</u> | .1 | Steel Sections: to CAN3-G40.21, Grade 350W.  |
|     |                  | .2 | Steel plate and angles: to CAN3-G40.21, Grade 350W.  |
|     |                  | .3 | Welding materials: to CSA W59.   |
|     |                  | .4 | Bolts and anchor bolts: to ASTM A307.  |
|     |                  | .5 | Galvanizing: hot dipped galvanizing with zinc coating 600 g/m <sup>2</sup> to CSA G164.                              |
|     |                  | .6 | Zinc primer: Zinc rich, ready mix to CGSB 1-GP-181.  |
|     |                  | .7 | Do not use items manufactured or fabricated from scrap steel of unknown chemical composition or physical properties. |
|     |                  | .8 | For adhesive anchors see Cast-in Place concrete, Section 03 30 00.   |
- 
- |     |                    |    |   |
|-----|--------------------|----|---|
| 2.2 | <u>Fabrication</u> | .1 | Build work square, true, straight and accurate to required size, with joints closely fitted and properly secured. |
|     |                    | .2 | Fabricate items from steel unless otherwise noted.  |
|     |                    | .3 | Where possible, fit and shop assemble work, ready for installation.   |
|     |                    | .4 | Ensure exposed welds are continuous for length.   |
-

- 
- 2.3 Miscellaneous Metal Work Items
- .1 Miscellaneous anchors, bolts and inserts:
    - .1 Where size, spacing and the like are not indicated, provide as necessary for the purpose.
    - .2 Galvanize all miscellaneous anchors, bolts and inserts.
  - .2 Miscellaneous Steel:
    - .1 Provide miscellaneous steel as required for guide units and the like to the shape, size and details required.
    - .2 Galvanize all miscellaneous steel items.

PART 3 - EXECUTION

- 3.1 Erection
- .1 Install metalwork square, plumb, straight and true, accurately fitted, with tight joints and intersections.
  - .2 Make field connections with bolts to CAN/CSA-S16.1, or weld.
  - .3 Touch-up bolts and scratched surfaces after completion of erection with zinc primer
- 3.2 Miscellaneous
- .1 Fabricate and install shrouds, ice shield, expansion joint and curb quarter round, All items are to be galvanized with the exception of the ice shield.
  - .2 Shrouds are to be galvanized and painted.
  - .3 Install metalwork square, plumb, straight and true, accurately fitted, with tight joints and intersections.
  - .4 Make field connections with bolts to CAN/CSA-S16.1, or weld.
-

- 
- .5 Touch-up bolts and scratched surfaces after  
completion of erection with zinc primer.

.