

**Part 1 General**

**1.1 REFERENCES**

- .1 American Society for Testing and Materials International, (ASTM)
  - .1 ASTM A325-06, Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength.
- .2 Canadian Institute of Steel Construction (CISC)/Canadian Paint Manufacturer's Association (CPMA).
  - .1 CISC/CPMA 2-75, Quick-Drying, Primer for use on Structural Steel.
- .3 Canadian Standards Association (CSA International)
  - .1 CAN/CSA G40.20/G40.21-98, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
  - .2 CAN/CSA-S16-01, Limit States Design of Steel Structures.
  - .3 CSA W47.1-92(R2001), Certification of Companies for Fusion Welding of Steel Structures.
  - .4 CSA W48-01, Filler Metals and Allied Materials for Metal Arc Welding.
  - .5 CSA W55.3-1965(R1998), Resistance Welding Qualification Code for Fabricators of Structural Members Used in Buildings.
  - .6 CSA W59-M1989(R2001), Welded Steel Construction (Metal Arc Welding) Metric.
- .4 The Society for Protective Coatings (SSPC)
  - .1 SSPC SP-6/NACE No. 3-00, Commercial Blast Cleaning.
- .5 Provide structural steel Fabricator's affidavit stating that materials and products used in fabrication conform to applicable material and products standards specified and indicated.

**1.2 WASTE MANAGEMENT AND DISPOSAL**

- .1 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .2 Do not dispose of unused paint materials into sewer systems, into lakes, streams, onto ground or in other location where it will pose health or environmental hazard.

**Part 2 Products**

**2.1 MATERIALS**

- .1 Structural steel: to CAN/CSA- G40.21 Grade 300W
- .2 Steel pipe: to ASTM A53/A53M standard weight, black finish.
- .3 Bolts, nuts and washers: to ASTM A325.

- .4 Welding materials: to CSA W48 Series, to CSA W59 and certified by Canadian Welding Bureau.
- .5 Anchors: HIT RE 500 Adhesive anchor system (9.5 mm diam.) with HAS-E standard rod by Hilti Canada or approved equal by consultants.
- .6 Hot dip galvanizing: galvanize steel, where indicated, to CAN/CSA-G164, minimum zinc coating of 600 g/m<sup>2</sup>.

## **2.2 FABRICATION**

- .1 Fabricate structural steel in accordance with CAN/CSA-S16.
- .2 Do welding in accordance with CSA W59. The contractor to be certified under the requirements of CSA W47.1, and by the Canadian Welding Bureau

## **Part 3 Execution**

### **3.1 GENERAL**

- .1 Structural steel work: in accordance with CAN/CSA-S16.
- .2 Welding: in accordance with CSA W59.
- .3 Companies to be certified under Division 1 or 2.1 of CSA W47.1 for fusion welding of steel structures and/or CSA W55.3 for resistance welding of structural components.

### **3.2 CONNECTION TO EXISTING WORK**

- .1 Verify dimensions and condition of existing work, report discrepancies and potential problem areas to Consultant for direction before commencing fabrication.

### **3.3 MARKING**

- .1 Mark materials in accordance with CAN/CSA G40.20/G40.21. Do not use die stamping.

### **3.4 ERECTION**

- .1 Erect structural steel, as indicated and in accordance with CAN/CSA-S16.
- .2 Field cutting or altering structural members: to approval of Engineer.
- .3 Clean with mechanical brush and touch up shop primer to bolts, rivets, welds and burned or scratched surfaces at completion of erection.
- .4 All structural members shall be protected against loads exceeding the design capacity during construction.

---

**3.5 ANCHORING TO EXISTING CONCRETE**

- .1 Install anchoring system as per schedule shown on drawing
- .2 Install anchors in an 11.2 mm diam. X100 mm deep hole and as per manufacturer's recommendations.

**3.6 FIELD QUALITY CONTROL**

- .1 Provide safe access and working areas for testing on site, as required by testing agency and as authorized by Consultant.
- .2 Owner will pay costs of testing when required by Consultants

**3.7 FIELD PAINTING**

- .1 Touch up damaged surfaces during erection and surfaces without shop primer

**END OF SECTION**