

STRUCTURAL STEEL FOR BUILDINGS**1 GENERAL****1.01 REFERENCES**

- .1 Canadian Institute of Steel Construction (CISC)/Canadian Paint Manufacturers Association (CPMA)
 - .1 Handbook of the Canadian Institute of Steel Construction
 - .2 CISC/CPMA Standard 2-75, Quick-Drying Primer for use on Structural Steel
- .2 Canadian Standards Association (CSA International)
 - .1 CSA G40.20/G40.21-13, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel
 - .2 CAN/CSA-S16-09, Limit States Design of Steel Structures
 - .3 CSA W47.1-09 (R2014), Certification of Companies for Fusion Welding of Steel
 - .4 CSA W59-13, Welded Steel Construction (Metal Arc Welding)

1.02 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Shop Drawings:
 - .1 Submit technical data sheet for mechanical anchors. Submission to highlight size, length and strength of anchor to be used for verification by Departmental Representative.
- .3 Fabrication Drawings:
 - .1 Submit fabrication drawings showing designed assemblies, components and connections are stamped and signed by qualified professional engineer licensed in the Province of Ontario, Canada.

1.03 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Deliver materials in manufacturer's original, undamaged containers with identification labels intact.

2 PRODUCTS**2.01 DESIGN REQUIREMENTS**

- .1 Contractor's engineer to design details and connections in accordance with requirements of CAN/CSA-S16 to resist indicated connection forces.
 - .1 Design all steel-to-steel connections for $V_f = 30$ kN in all directions, unless noted otherwise.

2.02 MATERIALS

- .1 Structural steel: to CSA-G40.20/G40.21 300W

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- .2 Anchor bolts: to CSA-G40.20/G40.21, Grade 300W
- .3 Welding materials: to CSA W59 and certified by Canadian Welding Bureau
- .4 Shop paint primer: to CISC/CPMA 2-75 solvent reducible alkyd, red oxide grey.
- .5 Mechanical anchors:
 - .1 Carbon steel anchors.
 - .2 Allowable shear capacity of minimum 50 kN for substrate concrete strength of 35 MPa, 82 mm embedment and for anchor spacing as shown on drawings.

2.03 FABRICATION

- .1 Fabricate structural steel in accordance with CAN/CSA-S16.

2.04 SHOP PAINTING

- .1 Clean, prepare surfaces and shop prime structural steel in accordance with CAN/CSA-S16

3 EXECUTION**3.01 APPLICATION**

- .1 Manufacturer's Instructions: comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.02 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.

3.03 CONNECTION TO EXISTING WORK

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

3.04 MARKING

- .1 Mark materials in accordance with CSA G40.20/G40.21. Do not use die stamping. When steel is to be left in unpainted condition, place marking at locations not visible from exterior after erection.

3.05 ERECTION

- .1 Erect structural steel, as indicated and in accordance with CAN/CSA-S16.

3.06 CLEANING

- .1 Clean in accordance with Section 01 74 11 - Cleaning.
- .2 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

END OF SECTION