

PART 1 - GENERAL

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| <u>1.1 RELATED REQUIREMENTS</u> | .1 | Section: 09 97 19 - PAINTING EXTERIOR METAL SURFACES. |
| <u>1.2 REFERENCES</u> | .1 | ASTM International Inc.
.1 ASTM A 325-07a, Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength. |
| | .2 | Canadian Standards Association (CSA International)
.1 CSA G40.20/G40.21-04, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
.2 CSA W59-03, Welded Steel Construction (Metal Arc Welding). |
| <u>1.3 ACTION AND INFORMATIONAL SUBMITTALS</u> | .1 | Provide submittals in accordance with Section 01 33 00 - Submittal Procedures. |
| | .2 | Erection drawings:
.1 Submit erection drawings indicating details and information necessary for assembly and erection purposes including:
.1 Description of methods.
.2 Sequence of erection.
.3 Type of equipment used in erection.
.4 Temporary bracings. |
| | .3 | Fabrication drawings:
.1 Submit fabrication drawings showing designed assemblies, components and connections. |
| | .4 | Connection design: submit shop drawings stamped by an engineer registered in Prince Edward Island. |
| <u>1.4 DELIVERY, STORAGE AND HANDLING</u> | .1 | Deliver materials in manufacturer's original, undamaged containers with identification labels intact. |
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PART 2 - PRODUCTS

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| <u>2.1 DESIGN REQUIREMENTS</u> | <ul style="list-style-type: none">.1 Design details and connections in accordance with requirements of CAN/CSA-S16 to resist forces, moments, shears and allow for movements indicated..2 Shear connections:<ul style="list-style-type: none">.1 Select or design connections to support reaction from maximum uniformly distributed load that can be safely supported by beam in bending, provided no point load acts on beam, when shears are not indicated..3 Submit sketches and design calculations stamped and signed by Qualified Professional Engineer licensed in the Province of Prince Edward Island..4 Lateral bracing connections designed to 60% of maximum tensile capacity of cross-section..5 Railing: connections designed for loading stated in National Building Code of Canada 2010..6 Cable & Accessories:<ul style="list-style-type: none">.1 All must be galvanized..2 Connections & Accessories must support minimum breaking strength of cable..3 Cable size as shown on drawings. |
| <u>2.2 MATERIALS</u> | <ul style="list-style-type: none">.1 Structural steel: to CSA-G40.20/G40.21.<ul style="list-style-type: none">.1 Plate and bar to be grade 300W..2 HSS to be grade 350W Class C..3 Rolled W-Sections to be grade 350W..4 Rolled channels to be grade 300W..5 Rolled channels to be grade 300W..2 Anchor bolts: Grade 300W round bar, hot dipped galvanized..3 Bolts, nuts and washers: to ASTM A 325..4 Welding materials: to CSA W59 and certified by Canadian Welding Bureau. |
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- 2.3 METAL GRATING
- .1 Finish: Serrated-surface grating.
 - .2 Material: Galvanized steel, after fabrication.
 - .3 Design requirements: factored uniformly distributed load of 8.0 kPa with span as shown on drawings.
 - .4 Deflection: Deflection under specified loading not to exceed 1/240.
 - .5 Provide specification from manufacturer.
 - .6 All metal grating to be fully banded.

- 2.4 FABRICATION
- .1 Fabricate structural steel in accordance with CAN/CSA-S16 and in accordance with reviewed shop drawings.
 - .2 Continuously seal members by continuous welds, grind smooth.

- 2.5 SHOP PAINTING
- .1 Clean, prepare surfaces and shop prime structural steel in accordance with CAN/CSA-S16.
 - .2 Clean members, remove loose mill scale, rust, oil, dirt and foreign matter. Prepare surface according to NACE No.3/SSPC-SP-6.
 - .3 Shop Paint: all structural steel to Section 09 97 19 - Painting Exterior Metal Surfaces.
 - .4 Apply paint under cover, on dry surfaces when surface and air temperatures are above 5 degrees C.
 - .5 Maintain dry condition and 5 degrees C minimum temperature until paint is thoroughly dry.

PART 3 - EXECUTION

- 3.1 GENERAL
- .1 Structural steel work: in accordance with CAN/CSA-S16.
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- .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 Departmental Representative for direction before commencing fabrication. No extra cost will be paid by Departmental Representative due to failure to verify dimension and condition of existing work.

3.3 ERECTION

- .1 Erect structural steel, as indicated and in accordance with CAN/CSA-S16 and in accordance with reviewed erection drawings.
- .2 Temporary bracing is the responsibility of the contractor to design and install as required.
- .3 Field cutting or altering structural members: to approval of Departmental Representative.
- .4 Clean with mechanical brush and touch up shop primer to bolts, rivets, welds and burned or scratched surfaces at completion of erection.
- .5 Continuously seal members by continuous welds where indicated. Grind smooth.

3.4 CLEANING

- .1 Clean in accordance with Section 01 74 11 - Cleaning.