

**PART 1 GENERAL**

**1.1 Work Included**

The work of this section shall be all labour, materials, supervision and equipment necessary to complete the miscellaneous metals work as shown on the drawings and as specified herein and including the following:

- .1 Supply and install galvanized grating, checkered plate and miscellaneous steel framing as noted on the drawings.
- .2 Certified shop drawings.

**1.1 References Standards**

- .1 Canadian Standards Association:
  - CSA S16.1 - Limit States Design of Steel Structures
  - CSA W59 - Welded Steel Construction
  - CSA G40.21- Structural Quality Steels
  - CSA W48.1 - Carbon Steel Covered Electrodes for Shielded Metal Arc Welding
  - CSA W47.1 - Certification of Companies for Fusion Welding of Steel Structures.
- .2 Canadian Institute of Steel Construction:
  - Handbook of Steel Construction.
  - Field Practice of the CISC, Assembly of Structural Joints.
- .3 Steel Structures Painting Council:
  - SSPC SP3 - Power Tool Cleaning for any non-galvanized, miscellaneous steel (i.e. bollards)
- .4 Canadian General Standards Board CGSB 1-GP – Coating, Zinc Rich, Organic, Ready Mix.

**1.2 Supplier/Installer Qualifications**

- .1 Welding shall comply with CSA W59. Any fabricator undertaking to weld under this contract shall be fully approved by the Canadian Welding Bureau, under the requirements of CSA W47.1.

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- .2 Before welding commences, the Contractor will make available to the Owner's Engineering Department a summary of the Canadian Welding Bureau Qualification Certificates covering all welding operators to be employed on the project.

### **1.3 Requirements of Regulatory Agencies**

- .1 In referring to recognized Standards in this Specification, it shall be understood that the latest edition of the Standard at the time of submission of tenders is referred to.

### **1.4 Submittals**

- .1 Shop drawings shall be submitted in accordance with the Contract Documents.
- .2 Shop drawings shall bear the seal of a Registered Professional Engineer.
- .3 Revisions will be made as required and re-submissions made until final review is obtained. The steel fabricator must allow a fair and reasonable time for such approval. No shop work shall be done until final review is obtained except at the steel fabricator's own risk.

### **1.5 Handling and Storage**

- .1 Handle and store materials in such a manner that no damage will be done to the materials or the work.
- .2 The Contractor shall load, unload and transport finished steel in such a way that steel and paint work is not damaged or defaced. Damaged materials due to faulty storage or handling shall be repaired or replaced, without additional expense to the Owner.

### **1.6 Dimensions**

- .1 Check all dimensions before commencing shop drawings, fabrication and installation and report all discrepancies to the Engineer. Obtain field dimensions where new work ties into existing.

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### **1.7 Examination**

- .1 Examine the work upon which the work of this Section depends and report all defects and discrepancies to the Engineer. Do not commence the work of this Section until all defects have been corrected. Commencement of work shall imply acceptance of surfaces and conditions.

### **1.8 Protection**

- .1 Protect the work of this Section from damage resulting from the work of other Sections. Repair or replace, at no cost to the Owner, all work damaged due to the work of this Section.

### **1.9 Inspection and Testing**

- .1 Inspection and testing will be carried out at the Owner's expense. The Contractor shall permit access to his fabricating shop for inspection by the Owner or his agent and provide mill certificates when requested.

## **PART 2 PRODUCTS**

### **2.1 Materials**

- .1 Structural steel shall be new and unused material in accordance with CSA Standard G40.21 - Grade 300W for plates, angles and channels, and G350W for W shapes and HSS sections.
- .2 Electrodes for welding shall comply with CSA W48.1.
- .3 Grating: Standard NAAMM with 32 x 4.8 mm standard bearing bars at 30mm centres banded at edges, bolted end plates, galvanized by Borden or Fisher Ludlow.

### **1.10 Grating**

- .1 Floor grating and stair treads shall be rectangular type with 1 1/4" x 3/16" bearing bars spaced at 1 3/16" centers and cross bars spaced at 4" centers.
- .2 Grating shall be carbon steel with galvanized finish.
- .3 All grating edges and openings shall be banded.

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- .4 Grating shall be touched up after all cutting and banding.

**END OF SECTION**