

PART 1 - GENERAL

1.1 RELATED
REQUIREMENTS

- .1 Section 07 46 13 - Preformed Metal Siding.
- .2 Section 07 62 00 - Sheet Metal Flashing and Trim.
- .3 Section 32 31 13 - Chain Link Fences and Gates.
- .4 Section 32 31 26 - Wire Fences and Gates.

1.2 REFERENCE
STANDARDS

- .1 ASTM International
 - .1 ASTM A 53/A 53M-07, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
 - .2 ASTM A 307-07b, Standard Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.
- .2 CSA International
 - .1 CSA G40.20/G40.21-04(R2009), General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
 - .2 CAN/CSA G164-M92(R2003), Hot Dip Galvanizing of Irregularly Shaped Articles.
 - .3 CSA S16-09, Design of Steel Structures.
 - .4 CSA W48-06, Filler Metals and Allied Materials for Metal Arc Welding (Developed in co-operation with the Canadian Welding Bureau).
 - .5 CSA W59-M03(R2008), Welded Steel Construction (Metal Arc Welding) Metric.
- .3 Environmental Choice Program
 - .1 CCD-047-98(R2005), Architectural Surface Coatings.
 - .2 CCD-048-98(R2006), Surface Coatings - Recycled Water-borne.
- .4 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .5 The Master Painters Institute (MPI)

1.3 ACTION AND
INFORMATIONAL
SUBMITTALS

- .1 Shop Drawings:
 - .1 Submit drawings stamped and signed by professional engineer registered or licensed in Newfoundland and Labrador, Canada.
 - .2 Indicate materials, core thicknesses, finishes, connections, joints, method of anchorage, number of anchors, supports, reinforcement, details, and accessories.

1.4 QUALITY
ASSURANCE

- .1 Test Reports: submit certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certifications: submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.5 DELIVERY,
STORAGE AND
HANDLING

- .1 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials off ground in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Replace defective or damaged materials with new.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Steel sections and plates: to CSA G40.20/G40.21, Grade 300W .
 - .2 Welding materials: to CSA W59.
 - .3 Welding electrodes: to CSA W48 Series.
-

- | | | |
|----------------------------------|----|---|
| <u>2.1 MATERIALS</u>
(Cont'd) | .4 | Bolts and anchor bolts: to ASTM A 307. |
| | .5 | Grout: non-shrink, non-metallic, flowable, 15 MPa at 24 hours. |
| <u>2.2 FABRICATION</u> | .1 | Fabricate work square, true, straight and accurate to required size, with joints closely fitted and properly secured. |
| | .2 | Use self-tapping shake-proof round headed screws on items requiring assembly by screws or as indicated. |
| | .3 | Where possible, fit and shop assemble work, ready for erection. |
| | .4 | Ensure exposed welds are continuous for length of each joint. File or grind exposed welds smooth and flush. |
| <u>2.3 FINISHES</u> | .1 | Galvanizing: hot dipped galvanizing with zinc coating 600 g/m ² to CAN/CSA-G164. |
| | .2 | Zinc primer: zinc rich, ready mix to MPI-EXT 5.2C in accordance with chemical component limits and restrictions requirements and VOC limits of GS-11. |

PART 3 - EXECUTION

- | | | |
|------------------------|----|---|
| <u>3.1 EXAMINATION</u> | .1 | Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for metal fabrications installation in accordance with manufacturer's written instructions.
.1 Visually inspect substrate in presence of Departmental Representative .
.2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
.3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative . |
|------------------------|----|---|
-

3.2 ERECTION

- .1 Do welding work in accordance with CSA W59 unless specified otherwise.
- .2 Erect metalwork square, plumb, straight, and true, accurately fitted, with tight joints and intersections.
- .3 Provide suitable means of anchorage acceptable to Departmental Representative such as dowels, anchor clips, bar anchors, expansion bolts and shields, and toggles.
- .4 Exposed fastening devices to match finish and be compatible with material through which they pass.
- .5 Supply components for work by other trades in accordance with shop drawings and schedule.
- .6 Make field connections with bolts to CSA S16.
- .7 Deliver items over for casting into concrete and building into masonry together with setting templates to appropriate location and construction personnel.
- .8 Touch-up galvanized surfaces with zinc rich primer where damaged by field activities.
 - .1 Primer: maximum VOC limit 250 g/L to GS-11.

3.3 CLEANING

- .1 Progress Cleaning:
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.

3.4 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by metal fabrications installation.