

Part 1 General

1.1 REFERENCES

- .1 American Society for Testing and Materials International, (ASTM)
 - .1 ASTM A53/A53M-02, Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
 - .2 ASTM A307-02, Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-1.40-97, Anti-corrosive Structural Steel Alkyd Primer.
 - .2 CAN/CGSB-1.181-92, Ready-Mixed, Organic Zinc-Rich Coating.
- .3 Canadian Standards Association (CSA International)
 - .1 CAN/CSA-G40.20/G40.21-98, General Requirements for Rolled or Welded Structural Quality Steel.
 - .2 CAN/CSA-G164-M92(R1998), Hot Dip Galvanizing of Irregularly Shaped Articles.
 - .3 CAN/CSA-S16.1-01, Limit States Design of Steel Structures.
 - .4 CSA W48-01, Filler Metals and Allied Materials for Metal Arc Welding (Developed in co-operation with the Canadian Welding Bureau).
 - .1 CSA W59-1989(R2001), Welded Steel Construction (Metal Arc Welding)

1.2 SUBMITTALS

- .1 Product Data:
 - .2 Submit manufacturer's printed product literature, specifications and data sheet in accordance with City of Winnipeg Standard Construction Specification Submittal Procedures.
- .2 Shop Drawings
 - .3 Submit shop drawings in accordance with City of Winnipeg Standard Construction Specification Submittal Procedures. Indicate materials, core thicknesses, finishes, connections, joints, method of anchorage, number of anchors, supports, reinforcement, details, and accessories.

1.3 QUALITY ASSURANCE

- .1 Pre-installation Meetings: Conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements.

1.4 DELIVERY, STORAGE, AND HANDLING

.1 Packing, Shipping, Handling and Unloading:

Deliver, store, handle and protect materials in accordance with Section 01610 Basic Product Requirements.

Part 2 Products

1.1 MATERIALS

.1 Steel sections and plates: to CAN/CSA-G40.20/G40.21, Grade as indicated.

.2 Steel pipe: to ASTM A53/A53M standard weight, black finish.

.3 Welding materials: to CSA W59.

.4 Welding electrodes: to CSA W48 Series.

.5 Bolts and anchor bolts: to ASTM A307.

.6 Grout: non-shrink, non-metallic, flowable, 15 MPa at 24 hours.

1.2 FABRICATION

.5 Fabricate work square, true, straight and accurate to required size, with joints closely fitted and properly secured.

.6 Use self-tapping shake-proof headed screws on items requiring assembly by screws or as indicated.

.7 Where possible, fit and shop assemble work, ready for erection.

.8 Ensure exposed welds are continuous for length of each joint. File or grind exposed welds smooth and flush.

1.3 FINISHES

.8 Galvanizing: hot dipped galvanizing with zinc coating 600 g/m² to CAN/CSA-G164.

.9 Shop coat primer: to CAN/CGSB-1.40.

.10 Zinc primer: zinc rich, ready mix to CAN/CGSB-1.181.

1.4 SHOP PAINTING

.9 Apply one shop coat of primer to metal items, with exception of galvanized or concrete encased items.

- .10 Use primer unadulterated, as prepared by manufacturer. Paint on dry surfaces, free from rust, scale, grease. Do not paint when temperature is lower than 7 degrees C.

Clean surfaces to be field welded; do not paint.

1.5 ANGLE LINTELS

- .10 Steel angles: galvanized, sizes indicated for openings. Provide 150 mm minimum bearing at ends.
- .11 Weld or bolt back-to-back angles to profiles as indicated.

1.2 DOWN PIPE

- .1 Steel pipe to size, diameter and height as indicated.
- .2 Galvanized finish.

1.3 METAL PLATES

- .1 Metal plates and bars as indicated.
- .2 Shop coat primer.
- .3 Paint finish coat on site.

Part 2 Execution

1.1 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.
- .1 Provide suitable means of anchorage acceptable to Contract administrator 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 Provide components for building by other sections in accordance with shop drawings and schedule.
- .6 Make field connections with bolts to CAN/CSA-S16.1, or weld.

- .7 Hand items over for casting into concrete or building into masonry to appropriate trades together with setting templates.
- .8 Touch-up rivets, field welds, bolts and burnt or scratched surfaces after completion of erection with primer.

Touch-up galvanized surfaces with zinc rich primer where burned by field welding.

2.2 CLEANING

- .1 Perform cleaning after installation to remove construction and accumulated environmental dirt.
- .2 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

END OF SECTION