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5.30 SUPPLY OF METAL BIN RETAINING WALL

5.30.1 GENERAL

This specification covers the supply of galvanized Metal (cellular) Bin Retaining Wall of various sizes depending on the retaining wall design.

5.30.2 APPLICABLE SPECIFICATIONS

- CSA G164 Hot Dip Galvanizing of Irregularly Shaped Articles.
- ASTM A525M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip process.
- ASTM B695 Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel.
- ASTM A568M Standard Specification for Steel, Sheet, Carbon, and High-Strength, Low-Alloy, Hot Rolled and Cold-Rolled, General Requirements.
- ASTM A780 Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.
- ASTM A325 Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength.
- ASTM A526M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process.

5.30.3 MATERIALS

Metal Bin Retaining Wall shall be fabricated from steel galvanized sheets to the requirements of the latest edition of American Society for Testing and Materials (ASTM) A525M and A526M Specification. The steel components shall be manufactured in accordance with the latest edition of ASTM A568M specification and hot dipped galvanized to the latest edition of Canadian Standards Association (CSA) G164 with a minimum zinc coating designation of Z600.

Fasteners (bolts & nuts) shall be manufactured in accordance with ASTM A325M and shall be mechanically galvanized to ASTM B695 GR 50 or hot dipped galvanized to CSA G164 Class 5.

Vertical Connectors shall be fabricated from a minimum 5.0 mm thick grade 250W steel and hot-dip galvanized after fabrication to CSA G164 specification.

5.30.4 REQUIREMENTS

All steel members shall be carefully formed to the required structural shape and punched accurately in the manufacturer's plant, and shall be straight and true. All members of the same type, thickness and length shall be interchangeable.

Minor damage to the galvanized coating shall be repaired as specified in the latest edition ASTM A780 specification.

The manufacturer shall provide drawings (shop drawings) that complement the Consultant's drawings. Any exclusions to the Consultant's drawings shall be noted and made very clear on the manufacturer's shop drawings. The manufacturer's drawings shall clearly show the height and depth of all bins, thickness of all stringers and spacers and any special details.

5.30.5 MARKING

Each sheet, or each 600-1500 mm length of steel coil or strip, shall be mill-stencilled with the following information with 5 mm or larger letters.

- Manufacturer's name or trademark.
- Material designation and cell class.
- Nominal thickness of steel sheet in millimetres.
- The applicable specification designation.
- Date of manufacture and plant designation.

5.30.6 INSPECTION, SAMPLING AND TESTING

All materials shall be subject to inspection, sampling and quality assurance testing by the Consultant and the Contractor shall provide safe, convenient access, acceptable to the Consultant, for inspection and sampling of the materials, and shall cooperate in the inspection and sampling process when requested to do so.

The Contractor shall contact the Consultant at least 72 hours prior to shipping the materials to coordinate any inspection, sampling or testing at the manufacturing location and the delivery site that the Consultant deems necessary.

Any material found unacceptable by the Consultant shall be replaced with acceptable material by the Contractor at his expense.

5.30.7 METHOD OF MEASUREMENT AND PAYMENT

Payment for the supply of metal bin retaining wall including all necessary hardware and appurtenances will be included in the unit price bid per square metre for metal retaining wall installation for the various design types of retaining wall installed.

When more than one design of retaining wall is specified, the designs will be shown by letter suffixes following the pay item.