

Wharf Construction**Marie Joseph Wharf****Guysborough County, Nova Scotia****Project No. R.076162.001**

Steel Deck

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PART 1 - GENERAL

- 1.1 Reference Standards
- .1 ASTM A653, Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - .2 CGSB 1.181, Ready-Mixed Organic Zinc-Rich Coating.
 - .3 CSA S136, Cold Formed Steel Structural Members.
 - .4 CSA S16.1, Limit States Design of Steel Structures.
 - .5 CSA W47.1, Certification of Companies for Fusion Welding of Steel Structures.
 - .6 CSA W59, Welded Steel Construction (Metal Arc Welding).
 - .7 Canadian Sheet Steel Building Institute Standard S3, Criteria for the Design of Composite Slabs.
 - .8 Canadian Sheet Steel Building Institute Standard 12M, Standard for Composite Steel Deck.
 - .9 Canadian Sheet Steel Building Institute Standard S2, Criteria for the Testing of Composite Slabs.
- 1.2 Shop Drawings
- .1 Submit shop drawings in accordance with Section 01 33 00 - Submissions / Shop Drawings.
 - .2 Indicate materials, core thicknesses, finishes, connections, joint, method of anchorage, number of anchors, supports, reinforcement, details and accessories.

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- .3 Along with shop drawings, supplier shall submit confirmation letter that composite steel deck supplied is capable of supporting wet reinforced concrete, and other loads imparted, during construction condition. Letter shall be stamped by a Professional Engineer licenced to practice in the Province of Nova Scotia.

1.3 Measurement
for Payment

- .1 This item shall not be measured separately but shall be considered incidental to the Work in accordance with Section 01 29 00 - Project Particulars and Measurement.

PART 2 - PRODUCTS

2.1 Materials

- .1 Zinc-iron Alloy (ZF) coated steel sheet, structural quality Grade 255 with ZF75 coating to ASTM A653, or as required for exterior surfaces exposed to severely corrosive marine environment.
- .2 Composite steel deck shall be non-cellular with upright embossed fluted profile, interlocking side laps and base steel thickness, depth and profile as shown on the drawings.
- .3 Zinc rich primer, ready mix to CGSB 1.181.

PART 3 - EXECUTION

3.1 General

- .1 Examine area over which deck system will be installed for conformity with the drawings. Report all discrepancies to *Departmental Representative* before beginning deck work.
- .2 Protect composite steel deck during construction in accordance with CSSBI standards.

3.2 Installation

- .1 Install composite steel deck in accordance with CSA S136 and CSSBI 12M.

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- .2 Install deck free of dirt, scale, foreign matter, dents or deformation.
- .3 Do not cut deck, unless indicated otherwise on structural drawings.
- .4 Place deck in final position before securing to supporting members, ensuring adequate bearing and end laps.
- .5 Clinch side laps at 600 mm centers to produce positive connections.
- .6 Fasten deck system to supporting members as shown on the drawings.
- .7 During installation and carrying out of work, Contractor shall ensure that construction loads on deck are not higher than capacity of composite steel deck.

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Metal Fabrication

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PART 1 - GENERAL

- 1.1 Reference Standards .1 ASTM A307, Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile.
- .2 CSA W59, Welded Steel Construction (Metal Arc Welding).
- .3 CSA G40.21, Structural Quality Steels.
- .4 CSA G164, Hot Dip Galvanizing of Irregularly Shaped Articles.
- .5 CSA S16.1, Limit States Design of Steel Structures.
- .6 CGSB 1.181, Ready-Mixed Organic Zinc-Rich Coating.
- 1.2 Shop Drawings .1 Submit shop drawings in accordance with Section 01 33 00 - Submissions / Shop Drawings.
- .2 Indicate materials, core thicknesses, finishes, connections, joints, methods of anchorage, number of anchors, supports, reinforcement, details, accessories, etc.
- 1.3 Measurement for Payment .1 This item shall not be measured separately but shall be considered incidental to the Work in accordance with Section 01 29 00 - Project Particulars and Measurement.

PART 2 - PRODUCTS

- 2.1 Materials .1 Steel channel, plate and angles: To CSA 40.21, Grade 300W.
- .2 Welding materials: To CSA W59.
- .3 Bolts and anchor bolts, including nuts and washers: To ASTM A307.

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- .4 Galvanizing: Hot dip galvanize with minimum zinc coating of 600 g/m², to CSA G164.
- .5 Zinc primer: Zinc rich, ready mix, to CGSB 1.181.
- 2.2 Fabrication
- .1 Build work square, true, straight and accurate to required size with joints closely fitted and properly secured.
- .2 Fabricate items from steel, unless noted otherwise.
- .3 Where possible, prefabricate steel work, ready for installation.
- .4 Ensure exposed welds are continuous for complete length.
- 2.3 Miscellaneous Metal Work Items
- .1 Miscellaneous anchors, bolts and inserts:
- .1 Where size, spacing and the like are not indicated, provide as necessary for the purpose.
- .2 Galvanize all miscellaneous anchors, bolts and inserts.
- .2 Miscellaneous Steel:
- .1 Provide miscellaneous steel as required for guide units and the like to the shape, size and details required.
- .2 Galvanize all miscellaneous steel.

PART 3 - EXECUTION

- 3.1 Erection
- .1 Install metalwork square, plumb, straight and true, accurately fitted with tight joints and intersections.
- .2 Make field connections with bolts to CSA S16.1, or weld.
- .3 Touch-up bolts and scratched surfaces after completion of erection with zinc primer.