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PART 1 - GENERAL

- 1.1 Description of Work
- .1 This section specifies requirements for the following items:
    - .1 Ladders
    - .2 Mooring cleats
- 1.2 Reference Standards
- .1 ASTM A307-94 (or latest edition), Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile.
  - .2 CAN/CSA-G40.21-M92 (or latest edition), Structural Quality Steels.
  - .3 CAN/CSA-G164-M92 (or latest edition) - Hot Dip Galvanizing of Irregularly Shaped Articles.
  - .4 ASTM A48-94a (or latest edition), Gray Iron Castings
- 1.3 Related Work
- .1 Refer to other Specification Sections for related information.
  - .2 Refer to Section 01 33 00 for Shop Drawing/Submissions requirements.
- 1.4 Submissions
- .1 Shop Drawings:
    - .1 Clearly indicate the following items:
      - .1 General arrangements, dimensions, clearance locations and directions of assemblies as installed on structures.
      - .2 Locations, sizes and installation tolerances of anchor bolts, eye bolts and embedded parts.
      - .3 Types of materials used, finishes and core thickness.
      - .4 All other pertinent details and accessories.
  - .2 Product Data/Samples:
    - .1 Provide product data and manufacturers brochures for the mooring cleats.
  - .3 Test Results:
    - .1 Provide test results for the galvanized items.

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- .4 Submissions
    - .1 Provide submissions in accordance with Section 01 33 00.
  - 1.5 Measurement for Payment
    - .1 Ladders, including timber, rungs, and fasteners will be measured in accordance with Section 01 29 00.
    - .2 Mooring cleats, including fastenings, will be measured in accordance with Section 01 29 00.

## PART 2 - PRODUCTS

- 2.1 Materials
  - .1 Timber: Any timber supplied by Contractor must conform to Section 06 05 73 Dimension Timber.
  - .2 Hardware and miscellaneous items must meet the following specifications:
    - .1 Machine bolts, lag bolts, drift bolts, anchor bolts, nuts, washers to ASTM A307.
    - .2 Steel plates, ladder rungs, holdfasts and miscellaneous steel: to CSA G40.21, Grade 300W.
    - .3 Mooring cleats: cast iron to ASTM A48, Class 25, with approximate weight of 41kg (90 lb.) each.
    - .4 Do not use items manufactured or fabricated from scrap steel of unknown chemical composition or physical properties.
    - .5 Hot dip galvanize bolts, anchor bolts, nuts, washers, pip sleeves, steel plates, rungs, holdfasts U-bolts and any other miscellaneous steel to CSA G164 with minimum zinc coating of 600 g/m<sup>2</sup>.
    - .6 The material requirements for installation of light poles are given in the electrical sections/drawings.

## PART 3 - EXECUTION

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| 3.1 <u>Ladders</u>        | .1 | Assemble ladder units and install completed units in locations shown on plan or as indicated by <i>Departmental Representative</i> .                   |
|                           | .2 | Countersink bolts on exterior face of ladder.  |
|                           | .3 | Apply preservative to areas of unprotected wood exposed during course of work in accordance with Section 06 05 73.                                     |
| 3.2 <u>Mooring Cleats</u> | .1 | Install mooring cleats as shown on drawings and fasten to concrete deck and curb using anchor bolts as indicated. Allow for 25 mm of grout under base. |
|                           | .2 | Do not make alternations to any components without written permission of <i>Departmental Representative</i> .  |