

ITEM 11615.8080 M - HELICAL SCREW PILES FOR FLAGPOLE FOUNDATION

DESCRIPTION

This work shall consist of furnishing and installing Helical Screw Piles, as shown on the plans or as directed by the Engineer.

MATERIALS

The Helical Screw Piles shall be designed to meet the specified loads and acceptance criteria as shown on the drawings.

Materials shall conform to the following requirements:

- A. Materials to have an allowable torque capacity of 7.5 KN.M and an ultimate capacity for axial loaded foundation of 245 KN.
- B. Material to be hot dip galvanized per ASTM A153
- C. The central shaft shall material shall comply with ASTM A29 or mechanical equivalent.
- D. The Helix material shall be low carbon steel meeting the general requirements of AISI, or ASTM A572 or A935, or ASTM A656 or A936.
- E. The bolts used to connect the central steel shaft shall conform to ASTM A320 grade L7.
- F. Plates, Shapes or Pier Caps shall conform to ASTM A572 grade 50.
- G. All Helical Screw Piles shall be Boca approved as per Boca #94-27.

The manufacturer's specifications, product data and installation instructions shall be made available to the Engineer three weeks prior to delivery of the Helical Screw Piles to the project site.

CONSTRUCTION DETAILS

Installation equipment shall be rotary type, hydraulic power driven torque motor with clockwise and counterclockwise rotation capabilities, capable of applying adequate downward pressure and torque simultaneously to suit project soil conditions and load requirements. A calibrated torque indicator shall be used during the pile installation.

The Helical Screw pile shall satisfy the minimum installation torque an minimum overall length criteria as per manufacturer recommendations. The torque as measured during the installation shall not exceed the torsional strength rating of the central steel shaft. If the minimum torque requirement has not been satisfied at the minimum depth level, the Contractor shall have the following options:

- A. Install the pile deeper using additional extensions until the specified torque level is obtained.
- B. Removed the existing pile and install a pile with larger and/or more helices. The revised pile shall be installed beyond the termination depth of the original pile, as directed by the Engineer.
- C. Add additional piles as recommended by the Engineer.

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If underground obstructions are encountered during installation, the Contractor shall have the option of removing the obstruction if possible or relocating the pile with the Engineer's approval.

METHOD OF MEASUREMENT

The work will be measured for payment as the number of meters of Helical Screw Piles for Flagpole Foundation satisfactorily furnished and installed.

BASIS OF PAYMENT

The unit price bid for Helical Screw Pile for Flagpole Foundation shall include the cost of all labor, material and equipment necessary to satisfactorily perform the work.