

**SECTION 107500 FLAGPOLES**

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.2 SECTION INCLUDES

- A. Work of this Section includes all labor, materials, equipment and services necessary to complete the flagpoles as shown on the drawings and/or specified herein.

1.3 RELATED SECTIONS

- A. Cast-in-Place Concrete - Section 033000.

1.4 QUALITY ASSURANCE

- A. Manufacturing Standards: Provide each flagpole as a complete unit produced by a single manufacturer, including fittings, accessories, bases and anchorage devices.
- B. Design Criteria: Provide flagpoles and installations constructed to withstand a 90 mph wind velocity minimum when flying flag of appropriate size. Use heavier pipe sizes if required for flagpole type and height shown.
- C. Pole Construction: Construct pole and ship to site in one piece, if possible. If more than one piece is necessary, provide snug-fitting, precision joints with self-aligning, internal splicing sleeve arrangement for weather-tight, hairline field joints.

1.5 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data and installation instructions for each type of flagpole required.
- B. Shop Drawings: Submit shop drawings of flagpoles and bases, showing general layout, jointing and complete anchoring and supporting systems.
- C. Samples: Submit samples of each finished metal for flagpoles, and accessories as may be required.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Spiral wrap flagpoles with heavy Kraft paper or other protective wrapping and prepare for shipment in hard fiber tube or other protective container.
- B. Deliver flagpoles and accessories completely identified for installation procedure. Handle and store flagpoles to prevent damage or soiling.

## PART 2 - PRODUCTS

### 2.1 FLAGPOLE MATERIALS

- A. Provide cone tapered aluminum flagpoles fabricated from seamless extruded tubing complying with ASTM B241, alloy 6063-T6, having a minimum wall thickness of 3/16" (0.1875"), tensile strength not less than 35,000 psi and a yield of 30,000 psi. Heat-treat and age-harden flagpoles after fabrication.
- B. Flagpole units shall have internal halyard system conforming to the following:
  - 1. 45' exposed high, 8" butt, 4" top diameter, in wall thickness of .188, ground set.
  - 2. Finish: Bronze anodized finish conforming to NAAMM-C22A42, Class I (0.7 mils).
  - 3. Ball: 4" dia., seamless, aluminum, 14 ga., to match pole finish.
  - 4. Truck: Extra heavy, non-fouling, ball-bearing, revolving truck, heavy duty; finish to match pole finish.
  - 5. Winch Assembly: For raising and lowering flag, heavy duty winch assembly shall have bronze drum and hardened steel gear. Mount winch on galvanized steel frame within flagpole. Shaft of winch shall finish flush with outside face of pole through 1" (max.) diameter hole. Provide aluminum plug for winch shaft hole; plug to screw in, to finish flush with pole and to have same finish as pole. Provide removable winch handle. Provide access door in flagpole opposite winch. Access door to finish flush with pole, have same finish as pole, have concealed stainless steel hinges and lock, have stainless steel cylinder lock flush with door, and have hairline joints between door and pole.
  - 6. Halyard: Provide one concealed, continuous 3/16" min. diameter stainless steel aircraft type cable. Halyard shall run concealed within pole from winch to top of pole, and then exposed over sheave and extend down outside of pole for sufficient length to properly fit flag. Flag end of halyard shall have two white neoprene- covered bronze swivel snaps, spaced for flag size. Flag size shall be determined by Architect. At bottom of flag end of halyard, provide rubber coated weight and Teflon-coated stainless steel rope sling around pole.
  - 7. Foundation Tube: Provide 16 ga. min. galvanized corrugated steel tube, or 12 ga. rolled steel tube, sized to suit flagpole and installation. Furnish complete with welded steel bottom base and support plate, lightning ground spike, and steel centering wedges, all welded construction. Provide loose hardwood wedges at top for plumbing pole after erection. Galvanize steel parts after assembly, including foundation tube.
  - 8. Base: Equal to No. 1240 made by American Flagpole, finish to match pole.

## PART 3 - EXECUTION

### 3.1 INSPECTION

- A. Examine the areas and conditions where flagpoles are to be installed and correct any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work.

### 3.2 INSTALLATION

- A. Excavation: Excavate for foundation concrete to neat clean lines in undisturbed soil. Provide forms where required due to unstable soil conditions. Remove wood, loose soil, rubbish and other foreign matter from excavation, and moisten earth before replacing concrete.

- B. Concrete: Provide concrete composed of Portland cement, coarse aggregate, fine aggregate and water, mixed in proportions to attain 28-day compressive strength of not less than 3000 psi. Use not less than 5 sacks of Portland cement, complying with ASTM C150, per cu. yd. of wet concrete.
  - 1. Place concrete immediately after mixing. Perform chuting to avoid segregation of mix. Compact concrete in place by use of vibrators to consolidate.
- C. Flagpole Installation: Install flagpoles plumb and in compliance with final shop drawings and manufacturer's instructions.
  - 1. Provide positive lightning ground for each flagpole installation.
  - 2. Paint portions of ground-set flagpole below grade with heavy coat of bituminous paint.
  - 3. At time of erection, remove all protective wrappings.

END OF SECTION 107500