SECTION 107500 - FLAGPOLES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. OTC Standard Conditions of Contract for Construction, Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section includes the following:

1. Aluminum flagpoles.

B. Refer to Civil drawings for locations.

1.03 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide flagpoles capable of withstanding the effects of wind loads as determined according to the building code in effect for this Project or NAAMM FP 1001, "Guide Specifications for Design Loads of Metal Flagpoles," whichever is more stringent.

1. Base flagpole design on maximum standard-size flag suitable for use with pole or flag size indicated, whichever is more stringent.

2. Basic Wind Speed: For Project location, 90 mph.

1.04 SUBMITTALS

A. Product Data: For each type of flagpole required. Include installation instructions.

B. Shop Drawings: Show general layout, jointing, grounding method, and anchoring and supporting systems.

1. Include details of foundation system for ground-set poles.

C. Finish Samples for Verification: For each finished metal used for flagpoles and accessories.

1.05 QUALITY ASSURANCE

A. Source Limitations: Obtain each flagpole as a complete unit from a single manufacturer, including fittings, accessories, bases, and anchorage devices.

1.06 DELIVERY, STORAGE, AND HANDLING

A. General: Spiral wrap flagpoles with heavy kraft paper or other weathertight wrapping and enclose in a hard fiber tube or other protective container.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Concord Industries, Inc.

2. Ewing: John Ewing & Co. Inc.

3. ICC Manufacturing Co.; Morgan-Francis Div.; AABEC Pole Div.

4. Kearney-National Inc.; American Flagpole Div.

5. Michigan Flagpole Inc.

6. Olympus Flag & Banner; EMC Div.

7. Pole-Tech Co., Inc.

2.02 FLAGPOLES

A. Pole Construction, General: Construct poles and ship to Project 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 weathertight, hairline field joints.

B. Aluminum Flagpoles: Fabricate from seamless, extruded tubing complying with ASTM B 241 (ASTM B 241M), alloy 6063, with a minimum wall thickness of 3/16 inch. Heat treat after fabrication to comply with ASTM B 597, temper T6.

1. Provide entasis-tapered aluminum flagpoles. ~~Center pole to be 33' tall, poles on either side to be 30′ tall,~~ Ewing SCA-30 or approved equivalent. ***Refer to the Drawings for flagpole dimensions.***

C. Foundation Tube: Galvanized corrugated-steel foundation tube, 0.0635-inch minimum wall thickness, sized to suit flagpole and installation. Provide with 3/16-inch steel

bottom plate and support plate; 3/4-inch- diameter, steel ground spike; and steel centering wedges all welded together. Galvanize steel parts, including foundation tube, after assembly. Provide loose hardwood wedges at top of foundation tube for plumbing pole.

2.03 FITTINGS

A. Finial Ball: Manufacturer's standard flush-seam ball, sized as indicated or, if not indicated, to match pole-butt diameter. (Aluminum poles only.)

1. 0.063-inch spun aluminum, finished to match flagpole.

B. Internal Halyard, Cam Cleat System: 5/16-inch- diameter, braided polypropylene halyard; cam cleat; and concealed revolving truck assembly with plastic-coated counterweight and sling. Provide flush access door secured with cylinder lock. Finish truck assembly to match flagpole.

2.04 MISCELLANEOUS MATERIALS

A. Concrete: Provide concrete composed of portland cement, coarse and fine aggregate, and water mixed in proportions to attain a 28-day compressive strength of not less than 3000 psi, complying with ASTM C 94.

B. Sand: ASTM C 33, fine aggregate.

C. Elastomeric Sealant: Comply with requirements of Division 7 Section "Joint Sealants."

2.05 FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations relative to applying and designating finishes.

B. Aluminum: Finish designations prefixed by AA conform to the system established by the Aluminum Association for designating aluminum finishes.

1. Surface Preparation: Clean surfaces to comply with SSPC-SP 1 (Solvent Cleaning) to remove dirt, oil, grease, and other contaminants that could impair paint bond. Remove mill scale and rust, if present, from uncoated steel to comply with SSPC-SP 5 (White Metal Blast Cleaning) or SSPC-SP 8 (Pickling).

2. Interior: Apply one coat of bituminous paint on interior of pole, or otherwise treat to prevent corrosion.

3. Polyurethane Enamel: Manufacturer's standard finish consisting of 1 or more coats of primer and 2 finish coats of high-gloss, high-build polyurethane enamel.

a. Color: Selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.01 PREPARATION

A. Prepare in-ground flagpoles by painting below-grade portions with a heavy coat of bituminous paint.

B. Excavation: For foundation, excavate to neat clean lines in undisturbed soil. Remove loose soil and foreign matter from excavation and moisten earth before placing concrete.

C. Provide forms where required due to unstable soil conditions and for perimeter of flagpole base at grade. Secure forms, foundation tube, fiberglass sleeve, or anchor bolts in position, braced to prevent displacement during concreting.

D. Place concrete immediately after mixing. Compact concrete in place by using vibrators. Moist-cure exposed concrete for not less than 7 days or use a nonstaining curing compound.

E. Trowel exposed concrete surfaces to a smooth, dense finish, free of trowel marks, and uniform in texture and appearance. Provide positive slope for water runoff to base perimeter.

3.02 FLAGPOLE INSTALLATION

A. General: Install flagpoles where shown and according to Shop Drawings and manufacturer's written instructions.

B. Foundation-Tube Installation: Install flagpole in foundation tube, seated on bottom plate between steel centering wedges. Plumb flagpole and install hardwood wedges to secure flagpole in place. Place and compact sand in foundation tube and remove hardwood wedges. Seal top of foundation tube with a 2-inch layer of elastomeric sealant and cover with flashing collar.

END OF SECTION 107500
FLAGPOLES