SECTION 05731

ORNAMENTAL ALUMINUM COLUMNS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum Columns.

B. Aluminum Column Capitals.

C. Aluminum Column Bases.

1.2 RELATED SECTIONS

A. Section 05120 - Structural Steel.

B. Section 05500 - Metal Fabrications.

C. Section 06100 - Rough Carpentry.

D. Section 06400 - Architectural Woodwork.

E. Section 09900 - Paints and Coatings.

1.3 REFERENCES

A. ASTM B 179 - Standard Specification for Aluminum Alloys in Ingot Form for Castings from All Casting Processes.

B. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes.

C. ASTM B 221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes (Metric).

1.4 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product Data: Manufacturer's descriptive literature for specified components; indicate compliance to specified requirements.

C. Shop Drawings: Indicate locations, sizes, and heights of columns; include construction and installation details, and interface with adjacent construction.

D. Verification Samples:
   1. One (1) column section, minimum size 12 inches (300 mm) long by diameter of specified column, with specified capital and base, representing actual color and finish of products to be installed.
   2. Return samples of capital and base to manufacturer when so directed by Architect, or at project closeout.
   3. Accepted samples of capital and base may be incorporated into Work as last units of type.
   4. Samples will be retained by Architect.

E. Quality Assurance Submittals:
   1. Design Data: Loading calculations for columns, bearing seal and signature of structural engineer licensed to practice in the State in which the project is located.
   2. Certificates:
      a. Contractor's certification that installer meets specified qualifications.
      b. Manufacturer's certification that installer is approved.
   3. Manufacturer's Instructions: Printed installation instructions for each product, including product storage requirements and instructions for bracing and shoring of adjacent construction.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Minimum three (3) years documented experience installing products specified in this section, and approved by manufacturer.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store products of this section in manufacturer's unopened packaging until installation.

B. Maintain storage area conditions for products of this section in accordance with manufacturer's instructions until installation.

1.7 PROJECT CONDITIONS

A. Field Measurements: When construction schedule permits, take field measurements at locations where columns are to be installed prior to ordering components.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Moultrie Manufacturing Company, Moultrie GA 31768. ASD. Telephone (800) 841-8674.
B. Requests for substitution will be considered in accordance with provisions of Section 01600.

C. Substitutions: Not permitted.
D. Unless otherwise specified for an individual product or material, supply all products specified in this section from the same manufacturer.

2.2 COMPONENTS

A. Square Column Assemblies:
1. Column: Fabricated staves of extruded aluminum conforming to ASTM B 221/ASTM B 221M, Alloy 6063, Temper T6; with snap-fitting vertical seams for field assembly:
a. Style: Old South Traditional Square Column, fluted vertical faces.
b. Style: Old South Federal Square Column, flat vertical faces.
c. Style: Old South Square Plantation Column, single-indent vertical faces.
d. Style: Old South Square Plantation Column, double-indent vertical faces.
e. Size: 3 inches (76 mm) square; 10,000 pounds (4,530 kg) load-bearing capacity.
f. Size: 4 inches (101 mm) square; 15,000 pounds (6,795 kg) load-bearing capacity.
g. Size: 6 inches (152 mm) square; 22,000 pounds (9,966 kg) load-bearing capacity.
h. Size: 8 inches (203 mm) square; 30,000 pounds (13,590 kg) load-bearing capacity.
i. Size: 10 inches (254 mm) square; 30,000 pounds (13,590 kg) load-bearing capacity.
j. Size: 12 inches (305 mm) square; 30,000 pounds (13,590 kg) load-bearing capacity.
k. Column length: __ feet __ inches (__ m).
l. Column length: Indicated on drawings.

2. Capital and base: Cast of aluminum conforming to ASTM B 179; size for slip-fit over column:
    a. Capital: Standard square.
    b. Capital: Architectural square.
    c. Capital: Architectural II square.
    d. Base: Standard square.
    e. Base: Architectural square.
    f. Base: Architectural II square.
3. Finish: Factory primer.
4. Finish: Factory baked-on powder coat enamel, White color.
5. Finish: Factory baked-on powder coat enamel, Alabaster color.
6. Finish: Factory baked-on powder coat enamel, Biscuit color.
7. Finish: Factory baked-on powder coat enamel, Clay color.
8. Finish: Factory baked-on powder coat enamel, Brown color.

B. Round Column Assemblies:
1. Column: Fabricated staves of extruded aluminum conforming to ASTM B 221/ASTM B 221M, Alloy 6063, Temper T6; with snap-fitting vertical seams for field assembly:
    a. Style: Old South Round Column, fluted vertical faces.
    b. Size: 5 inches (127 mm) diameter; 16,000 pounds (7,248 kg) load-bearing capacity.
    c. Size: 6 inches (152 mm) diameter; 22,000 pounds (9,966 kg) load-bearing capacity.
    d. Size: 8 inches (203 mm) diameter; 29,000 pounds (13,137 kg) load-bearing capacity.
    e. Size: 10 inches (254 mm) diameter; 21,000 pounds (9,513 kg) load-bearing capacity.
    f. Size: 12 inches (305 mm) diameter; 28,000 pounds (12,684 kg) load-bearing capacity.
    g. Size: 15 inches (381 mm) diameter; 31,000 pounds (14,043 kg) load-bearing capacity.
    h. Size: 18 inches (457 mm) diameter; 31,000 pounds (14,043 kg) load-bearing capacity.
    i. Size: 24 inches (609 mm) diameter; 31,000 pounds (14,043 kg) load-bearing capacity.
    j. Size: 36 inches (914 mm) diameter; __,___ pounds (__,___ kg) load-bearing capacity.
    k. Column length: __ feet __ inches (__ m).
    l. Column length: Indicated on drawings.

2. Capital and base: Cast of aluminum conforming to ASTM B 179; size for slip-fit over column:
   a. Capital: Standard round.
   b. Capital: Doric round.
   c. Capital: Corinthian round.
   d. Capital: Scamozzi round.
   e. Base: Standard round.
   f. Base: Doric round.
3. Finish: Factory primer.
4. Finish: Factory baked-on powder coat enamel, White color.
5. Finish: Factory baked-on powder coat enamel, Alabaster color.
6. Finish: Factory baked-on powder coat enamel, Biscuit color.
7. Finish: Factory baked-on powder coat enamel, Clay color.
8. Finish: Factory baked-on powder coat enamel, Brown color.

C. As indicated on shop drawings, provide column sections, capital, and base fabricated in split components for retro-fit installation; provide for concealed fastening of split component halves.

D. Accessories: Provide accessories specified in manufacturer's instructions or indicated on shop drawings, including, but not limited to, lally columns, load distribution plates, angle clips, and fasteners.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that heights of locations to receive columns are in accordance with shop drawings.

B. Installer's Examination:
1. Have installer of this section examine conditions under which construction activities of this section are to be performed, then submit written notification if such conditions are unacceptable.
2. Transmit two copies of installer's report to Architect within 24 hours of receipt.
3. Beginning construction activities of this section before unacceptable conditions have been corrected is prohibited.

4. Beginning construction activities of this section indicates installer's acceptance of conditions.

3.2 PREPARATION

A. Shore and brace adjacent construction in accordance with manufacturer's instructions.

3.3 INSTALLATION

A. Install components in accordance with shop drawings and manufacturer's installation instructions.

B. Remove shoring and bracing immediately after completion of column installation.

C. Site Tolerances:
1. Maximum variation from indicated location: 1/4 inch (6 mm).
2. Maximum variation from plumb: 1/4 inch (6 mm) in 10 feet (3 m).

D. Field Finishing: Specified in Section 09900.

3.4 CLEANING

A. Clean component finishes in accordance with manufacturer's instructions immediately after installation; protect finishes from soiling until Substantial Completion.

3.5 PROTECTION

A. Protect components and component finishes from damage by subsequent construction activities until Substantial Completion.

B. Repair damage in accordance with manufacturer's recommendations; replace units which cannot be repaired to Architect's acceptance.

END OF SECTION