

SECTION 10 73 16

ALUMINUM CANOPIES

PART 1 GENERAL

1.1 WORK INCLUDED

- A. Furnish a complete extruded aluminum canopy systems including labor as shown and detailed on the drawings for the following type:
 - 1. Wall Hung Aluminum Canopies

1.2 RELATED WORK

- A. Section 05 12 00 - Structural Steel
- B. Section 07 92 00 - Sealants

1.3 REFERENCES

- A. The Aluminum Association (AA):
 - 1. The Aluminum Design Manual 2000, Specifications & Guidelines for Aluminum Structures.
- B. American Architectural Manufacturers Association (AAMA):
 - 1. AAMA 611, Voluntary Specification for Anodized Architectural Aluminum.
 - 2. AAMA 2603, Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.
 - 3. AAMA 2604, Voluntary Specification, Performance Requirements and Test Procedures for High Performing Organic Coatings on Aluminum Extrusions and Panels.
 - 4. AAMA 2605, Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.
- C. American Society of Civil Engineers (ASCE):
 - 1. ASCE 7, Minimum Design Loads for Buildings and Other Structures.
- D. American Society for Testing and Materials (ASTM):
 - 1. ASTM B 209, Specification for Aluminum and Aluminum- Alloy Sheet and Plate.
 - 2. ASTM B 221, Specification for Aluminum and Aluminum- Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
 - 3. ASTM C 150, Specification for Portland Cement.
 - 4. ASTM C 404, Specification for Aggregates for Masonry Grout.

E. American Welding Society (AWS):

1. ANSI/AWS D1.2, Structural Welding Code - Aluminum.

1.4 SYSTEM DESCRIPTION

A. Design Requirements:

1. Each canopy shown on drawings is to be engineered by manufacturer's registered engineer.
2. Comply with the wind requirements of ASCE 7 and IBC 2012 edition.
3. Provide an all welded extruded aluminum system complete with internal drainage. Non-welded systems are not acceptable.
4. Provide expansion joints to accommodate temperature changes of 120 degrees F. Provide expansion joints with no metal to metal contact.

B. Performance Requirements:

1. Grout: Compressive strength of 2000 psi, minimum.
2. Concrete: Compressive strength of 3000 psi, minimum.

1.5 SUBMITTALS

- A. Comply with Section 01 33 00.
- B. Furnish complete shop drawings bearing the seal of a registered engineer showing the required live and wind loads of the project.
- C. Submit samples of the finish and color selections.
- D. Submit manufacture's brochures and product data.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: At least ten years experience in the design, fabrication, and erection of extruded aluminum canopy systems.
- B. Installation shall be done by the manufacturer of the aluminum canopy to assure a single source responsibility for the work.

1.7 WARRANTY

- A. Provide a one-year warranty against defects in materials, workmanship and installation.

PART 2 MATERIALS

2.1 MANUFACTURERS

- A. Mapes Canopies, LLC, 7748 N. 56th Street, Lincoln, NE 68514
- B. *AVAddek* walkway cover systems and canopies submitted, 9201 Winkler Drive, Houston, Texas 77017, 713-944-0988.
- C. Dittmer Architectural Aluminum, 1006 Shepard Road, Winter Springs, FL 32708-2018. Ph.: (800) 822-1755
- D. Peachtree Protective Covers, Inc., 1477 Rosedale Drive, Hiram, GA 30141, 770-439-2120, fax 770-439-2122.
- E. Canopy Solutions LLC, 2260-L Dickinson Avenue, Dickinson, Texas 77539, Phone: 713-510-3800
- F. Substitutions: Comparable products of other manufacturers will be considered under standard substitution procedures.

2.2 COMPONENTS

- A. All components shall be 6061-T6 or 6005-T5 Alloy extruded aluminum
 - 1. Canopy structural design will be the responsibility of the canopy company. All component sizes shown and detailed on drawings are desired sizes. Canopy manufacturer to verify sizes will work with design engineering requirements and make adjustments if greater sizes are needed.
- B. Beams, and deck shall be sized as shown on the drawings and shall meet the engineering requirements of the project. In the event that component sizes are different than those listed in paragraph A. Price the greater size component.
- C. Deck shall be 2-3/4" x 6" Self-Mating deck and shall meet the engineering requirements of the project. In the event that component sizes are different than those listed in paragraph A. Price the greater size component.
- D. All bolts and fasteners shall be stainless steel or finished to match adjacent components and sized by canopy engineer.
- E. Beams are open at top to drain canopy system internally into columns.
- F. Beams and columns are not part of canopy drainage system to be sealed water tight.

2.3 FINISHES

- A. Factory Finishing: Finish designations prefixed by AA comply with system established by the AAMA for designating aluminum finishes, selection of colors as determined by owner from manufacturer's selection.

- 1. Band Addition – Deck, Beams, Fascia, & Structure:

Deck Class II, Anodic Finish: AA-M12C22A31 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class II, coating 0.4 mils to 0.7 mils thick), Complying with AAMA 611.

- 2. Locker Room Building - Deck, Beams, Fascia, & Structure:

Kynar 500 finish, selected from manufacturer's standard color selection
Color: White to match metal panel.
Downspout – Zinc Grey

- C. Fasteners shall be concealed as much as is possible. Material shall be stainless steel or specially coated to provide for long life durability.

2.4 CANOPY TYPE

- A. Overhead Supported Canopy-Front

2.5 CANOPY FASCIA TYPE

- A. 8" 'G' Trim

PART 3 EXECUTION

3.1 FABRICATION

- A. All welding shall be in compliance with AWS 1.2. The certification of each welder shall be available to verify compliance. Columns and beams shall be heli-arc welded.
- B. The canopy deck is to have welded end closures at the deck terminations.
- C. Canopy shall be designed to drain through beams to columns with water tight connections
- D. Flashing shall be .040 aluminum fabricated to prevent leakage between the canopy and adjacent structures.

3.2 INSTALLATION

- A. Install the canopy in strict accordance with the manufacturer's recommendations.

- B. Erect canopy after concrete and masonry work in vicinity is completed and washed down.
- C. Install columns and beams straight and true.
- D. Install rain caps over draining sections of the deck.
- E. Finish the concrete around the columns to assure a uniform quality of workmanship and appearance with the adjacent surrounding concrete work.
- F. Above-ground column water discharge: Bottom of opening to be 4" above finish grade.
Fill downspout columns with grout to the discharge level to prevent standing water.
Deflectors should be installed after grouting.
- G. Install flashing as required.
- H. Care shall be taken to prevent damage or scratching during installation.
- I. Thoroughly clean canopy after installation.

END OF SECTION