



## SPECIFICATIONS

### Section 107312 – Floating Cantilever Canopy

#### **Part 1: General**

##### **1.1 Related Documents**

- A. The requirements of Division 1 specifications shall apply to work specified in the section.

##### **1.2 Engineering Design Criteria**

- A. International Building Code 2018
- B. ASCE 7-16, Minimum Design Loads for Buildings and Other Structures
- C. Aluminum Design Manual 2015
- D. AWS D1.2 – 2014, Structural Welding Code - Aluminum
- E. Local governing codes and standards for site location

##### **1.3 General Description of Work**

- A. Work in this section shall include design, fabrication, and installation of aluminum protective covers. All work shall be in accordance with the shop drawings and this specification section.

##### **1.4 Submittals**

- A. Shop Drawings – Submit complete shop drawings including:
  - 1) Overall canopy layout dimensions
  - 2) Cut section details including elevation, bent layout dimensions, canopy connection details, and wall connection details
  - 3) Flashing details pertaining to aluminum canopy
  - 4) Canopy anchorage details
- B. Product Data – Submit manufacturer's product information, specifications, and installation instructions for the aluminum canopy.
- C. Samples – Submit color selection samples of actual coated aluminum material or actual anodized aluminum material.
- D. Certification – Provide Professional Engineer certification that the proposed canopy design and layout meets or exceeds all applicable loadings (ex: wind load, rain live load, dead load, snow load) for the job location (city & state) in accordance with IBC 2015 and ASCE 7-16.



- 1) The Subcontractor shall be responsible for ensuring that all aluminum canopy structures are designed to withstand snow drift loads in full compliance with the current International Building Code (IBC) and ASCE 7 standards.
- 2) Structural calculations accounting for site-specific snow drift loads—including drift height, width, surcharge loads, and other contributing factors—must be included as part of the submittal package. These calculations shall be prepared and sealed by a Professional Engineer (PE) licensed in the state where the project is located.
- 3) No fabrication or installation shall commence prior to written approval of the stamped calculations by the Architect/Engineer of Record.
- 4) Compliance with this requirement is mandatory. Failure to include snow drift considerations will be grounds for rejection of submittals or installed work, and any required revisions shall be at the Subcontractor's expense.

## 1.5 Quality Assurance

- A. Manufacturer Qualifications: Minimum five years of experience in design, fabrication, and production of aluminum protective covers.
- B. Components shall be assembled in shop to greatest extent possible to minimize field assembly.
- C. Aluminum protective cover, including material and workmanship, shall be warranted from defects for a period of one year from date of completion of aluminum protective cover installation.

## Part 2: Products and Materials

### 2.1 Acceptable Manufacturer

#### A. Mitchell Metals, LLC

1761 McCoba Drive  
Smyrna, GA 30080  
Phone: 770.431.7300  
[www.mitchellmetals.net](http://www.mitchellmetals.net)

#### B. Dittmer Architectural Aluminum

1006 Shepard Road  
Winter Springs, FL 32708  
Phone: 407.699.1755  
[www.dittdeck.com](http://www.dittdeck.com)

- C. Equivalent systems by other manufacturers will be approved for substitution by addendum if the following conditions are met:
  - 1) Other manufacturers must have submitted requested information and have been qualified to bid no less than 15 days prior to bid closing date.



- 2) Manufacturer shall submit complete company literature, project references, and system documentation to the Architect for review, including proof of experience with pre-engineered aluminum canopy systems of comparable scope and design.
- 3) Manufacturer shall submit complete canopy system details, including material specifications, member sizes, and verified strength values for all structural components.
- 4) Incomplete substitution requests or requests submitted later than fifteen (15) days prior to bid closing shall not be considered.

## 2.2 Design & Assembly

- A. Canopy shall use 4" x 8" perimeter extruded gutter and extruded decking running perpendicular to wall being attached to. Extruded Decking shall be a roll-locked design where the extruded cap and pan shall interlock to make a rigid structure. Crimped decking is not allowed.
- B. Canopy gutter frame shall be riveted together at the corners and caulked inside to make a water-tight frame.
- C. Canopy shall be secured to the wall using I-beam supports within the gutter & decking which uses a fully welded steel plate to beam connection (minimum S 3x5.7 A36 Steel I Beam). The canopy support I-beam shall utilize a minimum of 5" x 7" x .50" welded plate where the required support I-beam sits directly in the center of the plate along the 5" axis. The plate shall require a minimum of four wall fasteners (details of connection by canopy manufacturer).
- D. Canopies shall drain from the decking, to the perimeter gutter and discharge from the bottom of the gutter out of a drain scupper. Downspouts can be used to drain the water from the floating cantilever canopy to the ground upon the architect's request.
- E. Canopy shall be installed flat and gravity will direct water toward the corresponding scupper/downspout to allow proper drainage out of the canopy frame.

## 2.3 Materials

- A. I-Beam Supports
  - 1) Size of beam used shall exceed loading requirements in section 1.2 – Engineering Design Criteria. Minimum beam size shall be S3 x 5.7 A36 Steel I-Beam.
- B. Decking
  - 1) Decking shall be a rigid roll-locked design that is self flashing and utilizes interlocking sections.



- 2) Extruded decking shall exceed loading requirements in section 1.2 – Engineering Design Criteria. Minimum 3” x 6” cap and pan. (Roll Form Decking is acceptable upon Architect’s approval)
- C. Gutter
- 1) Gutter shall be radius cornered aluminum extrusion that exceeds loading requirements in section 1.2 – Engineering Design Criteria. Minimum gutter size shall be 4”x 8” at 0.093” thick.
- D. Flashing
- 1) Flashing shall be made of aluminum sheet painted to match the color of the canopy. Minimum flashing thickness shall be 0.040” thick.

## 2.4 Fasteners

- A. All framing fasteners shall be 300 series stainless steel with neoprene washers. All rivets are 3/16” aluminum. All decking fasteners shall be long life coated steel with a 300 series stainless steel cap and neoprene washer.
- B. All connecting bolts shall be hot dipped galvanized.

## 2.5 Finishes

- A. Factory applied baked enamel
  - 1) Enamel is to comply with AAMA 2603.
  - 2) Color is to be as selected by architect from manufacturer’s standard color chart.
  - 3) Finish shall be applied under controlled factory conditions with documented pretreatment, bake schedule, and film-thickness verification.
- B. Fluoropolymer Finish (Kynar 500®/Hylar 5000®):
  - 1) Factor -applied coating meeting AAMA 2605 (“Superior Performance Organic Coatings on Aluminum Extrusions and Panels”), minimum 70 % PVDF resin content.
  - 2) Coating shall be applied by a certified applicator with documented quality-control procedures and coating manufacturer certification.
  - 3) Field application or in-house application by the canopy manufacturer shall not be permitted.
- C. Powder coating aluminum, field-applied coatings, or finishes not meeting the above criteria will not be accepted.

## Part 3: Installation and Execution

### 3.1 Erection

- A. Canopies are to be installed according to approved shop drawings and plans.



- B. The entire structure shall be installed straight, true, and plumb according to standard construction procedures.
- C. All fasteners penetrating the building's face shall be caulked.
- D. Any blocking necessary to install the overhead supported canopy shall be installed by the General Contractor according to the approved shop drawings prior to canopy installation.
- E. Canopies shall be installed with minimal slope to allow water flow from top of canopy to draining scuppers/downspouts and eliminate ponding.
- F. All joints, corners, and connections shall be tight and clean.
- G. All exposed fasteners and galvanized members are to be painted to match the canopy color.
- H. Decking is to be aligned and secured to aluminum frame structure.

### **3.2 Cleaning**

- A. All canopy surfaces exposed are to be cleaned after installation is complete.
- B. Surplus materials and debris shall be removed from the jobsite after installation is complete.

### **3.3 Protection**

- A. General Contractor shall ensure protection of installed aluminum canopies from other construction so that canopies are without damage at time of substantial completion of project