



## **JACKSON WILLIAMS**

Division of Colored Metal Products, Inc.

Shelby, North Carolina | Tel: (704) 482-7943

### **SECTION 10 73 26**

### **ALUMINUM WALKWAY COVERS**

#### **PART 1 - GENERAL**

##### **1.01 SUMMARY**

A. Section Includes: Design, fabrication, and installation of welded extruded aluminum walkway cover systems including:

1. Freestanding column-supported walkway covers
2. Columns, beams, gutters, fascia, and decking
3. Internal drainage systems
4. All structural components and attachment hardware

B. Products Furnished but Not Installed Under this Section:

1. Column sleeves (foam blockouts)
2. Anchor bolts (if required for slab-mount option)

##### **1.02 RELATED SECTIONS**

A. Section 03 30 00 - Cast-in-Place Concrete: Foundations, anchor placement, and blockouts.

B. Section 04 20 00 - Unit Masonry: Attachment to masonry walls.

C. Section 05 12 00 - Structural Steel Framing: Steel support framing where indicated.

- D. Section 07 62 00 - Sheet Metal Flashing and Trim: Interface flashing.
- E. Section 07 92 00 - Joint Sealants: Perimeter sealants.

### **1.03 REFERENCES**

- A. The Aluminum Association (AA):
  - 1. Aluminum Design Manual, Current Edition
- B. ASCE 7-22 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures
- C. International Building Code (IBC) 2021
- D. AWS D1.2/D1.2M - Structural Welding Code - Aluminum
- E. ASTM Standards:
  - 1. ASTM B221 - Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes
  - 2. ASTM B209 - Aluminum and Aluminum-Alloy Sheet and Plate
  - 3. ASTM C150 - Specification for Portland Cement
  - 4. ASTM C404 - Specification for Aggregates for Masonry Grout
- F. AAMA Standards:
  - 1. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum
  - 2. AAMA 2604 - High Performance Organic Coatings on Aluminum Extrusions and Panels
  - 3. AAMA 2605 - Superior Performing Organic Coatings on Aluminum Extrusions and Panels

### **1.04 SYSTEM DESCRIPTION**

- A. Design Requirements:
  - 1. Design walkway covers in accordance with the Aluminum Design Manual, current edition.
  - 2. Comply with load requirements of IBC 2021 and ASCE 7-22.
  - 3. Provide an all-welded extruded aluminum walkway cover 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.

#### **1.05 SUBMITTALS**

- A. Product Data: Manufacturer's product information, specifications, and installation instructions for walkway cover components and accessories.
- B. Shop Drawings: Include plan dimensions, elevations, and details. Show:
  1. Layout and dimensions of walkway cover assemblies
  2. Connection details and bent configurations
  3. Concrete footing and anchorage details
  4. Expansion joint locations
- C. Samples:
  1. Selection: Manufacturer's standard range of colors for finishes selected.
  2. Verification: 2-inch-square samples of each finish selected on the substrate specified.
- D. Design Data: Design calculations bearing the seal of a Registered Professional Engineer, licensed in the state where the project is located.
- E. Structural Certification: Provide Professional Engineer certification, sealed and signed by a licensed PE in the state where the project is located, certifying that the design meets or exceeds all applicable loadings (wind load, rain live load, dead load, snow load) for the specific project location in accordance with IBC 2021 and ASCE 7-22. Include reaction tables for Engineer of Record review.

#### **1.06 QUALITY ASSURANCE**

- A. Manufacturer Qualifications:
  1. Minimum 10 years documented experience in design, fabrication, and installation of architectural aluminum systems.
  2. Manufacturer shall maintain engineering staff capable of producing project-specific designs and calculations.
  3. Manufacturer shall operate its own fabrication facility with direct control over quality.
- B. Installer Qualifications:
  1. Installation shall be performed exclusively by manufacturer's trained installation crews.
  2. Third-party installation is not acceptable.

3. Note: Alternative delivery arrangements may be available for programmatic accounts and special circumstances. Contact manufacturer.

C. Fabrication Standards:

1. All structural connections shall be welded in accordance with AWS D1.2.
2. Welding shall be performed in manufacturer's shop by AWS-certified welders.
3. Field welding is not permitted.
4. Minimum 100% weld penetration on all structural welds.

D. Field Measurements:

1. Take field measurements prior to preparation of shop drawings and fabrication to ensure proper fitting of work.
2. Contractor may provide field measurements during submittal stage in lieu of manufacturer field visit.

E. Pre-Installation Conference:

1. Conduct pre-installation conference with Architect, Contractor, and manufacturer's installer.
2. Review installation procedures, sequencing, and coordination with other trades.

## **1.07 COORDINATION**

A. Coordinate work of this section with work of other sections including concrete, masonry, structural steel, waterproofing, and sealants.

B. Verify structural adequacy of supporting construction with Structural Engineer of Record prior to fabrication.

C. General Contractor Responsibilities:

1. Install foam blockouts per manufacturer's requirements.
2. Pour concrete foundations to manufacturer's specifications.
3. Ensure protection of installed systems from other construction activities through Substantial Completion.
4. Foundation and footing design is not included in this section.

## **1.08 WARRANTY**

A. Manufacturer's Warranty: Provide manufacturer's standard warranty covering structural integrity, water tightness, and workmanship for a minimum of one (1) year from date of Substantial Completion.

B. Finish Warranty:

1. AAMA 2605 (70% PVDF/Kynar 3-coat): 20-year warranty against chalk, fade, crack, or peel.
2. AAMA 2605 (70% PVDF/Kynar 2-coat): 10-year warranty against chalk, fade, crack, or peel.
3. AAMA 2604 (High-Performance Powder Coat): 5-year warranty against chalk, fade, crack, or peel.
4. AAMA 611 Class I Anodize (Clear): 10-year warranty against excessive pitting or coating failure.
5. AAMA 611 Class I Anodize (Color): 5-year warranty against excessive fading or coating failure.

#### **1.09 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver materials in manufacturer's original protective packaging with identification labels.
- B. Store materials in clean, dry location protected from weather, moisture, and construction debris.
- C. Handle materials to prevent damage to finishes and profiles.

### **PART 2 - PRODUCTS**

#### **2.01 MANUFACTURERS**

- A. Basis of Design: Jackson Williams, Division of Colored Metal Products, Inc., Shelby, North Carolina, Tel: (704) 482-7943.
- B. Substitutions: Comparable products of other manufacturers will be considered under standard substitution procedures. Substitution requests must include documentation demonstrating compliance with all specification requirements including manufacturer qualifications.

#### **2.02 MATERIALS**

- A. Aluminum Extrusions: ASTM B221, Alloy 6063-T6.
- B. Aluminum Sheet and Plate: ASTM B209, Type 3003-H14 or 5052-H32.
- C. Fasteners: 300 series stainless steel for exposed locations; aluminum or 18-8 stainless steel for concealed locations.
- D. Protective Coating for Aluminum Columns Embedded in Concrete: Clear acrylic.
- E. Gaskets: Dry seal santoprene pressure type, UV-resistant.
- F. Columns: Square extruded aluminum, ASTM B221, Alloy 6063-T6.
  1. Minimum size: 4" x 4" x 0.125" thick.

2. Available sizes: 4" x 4", 6" x 6", 8" x 8".
- G. Beams: Extruded aluminum, ASTM B221, Alloy 6063-T6.
1. Minimum size: 4" x 6" x 0.125" thick.
  2. Drain beam and tube beam options available.
- H. Gutter/Fascia: Extruded aluminum, ASTM B221, Alloy 6063-T6.
1. Minimum size: 4" x 6" x 0.093" thick.
- I. Decking: Extruded aluminum interlocking panels.
1. Minimum size: 3" x 6" extruded panels.
  2. Roll-form panels also available.
  3. Crimped decking is not acceptable.
- J. Aluminum Flashing: ASTM B209, Type 3003-H14, 0.040 inch minimum.
- K. Grout Materials:
1. Portland Cement: ASTM C150, Type I.
  2. Sand: ASTM C404.
  3. Mix: 1 part portland cement to 3 parts sand, add water to produce pouring consistency.

## **2.03 FABRICATION**

- A. Shop Assembly: Assemble components in shop to greatest extent possible to minimize field assembly.
- B. Welding: In accordance with AWS D1.2. Make welds smooth and uniform using inert gas shielded arc. Perform suitable edge preparation to assure 100% penetration.
- C. Bent Construction: Factory assemble beams to columns to form one-piece rigid bents. Grind welds only where interfering with adjoining structure to allow for flush connection. Field welding is not permitted.
- D. Deck Construction: Fabricate from extruded modules that interlock in a self-flashing manner. Positively fasten interlocking joints creating a monolithic structural unit capable of developing the full strength of the sections. Fastenings must have minimum shear strength of 350 pounds each. Assemble deck with sufficient camber to offset dead load deflection.
- E. Columns: Provide radius-cornered tubular extrusions with cutout and internal diverter for drainage where indicated. Circular downspout opening in column is not acceptable.
- F. Expansion Joints: Provide expansion joints to accommodate temperature changes of 120 degrees F. Provide expansion joints with no metal to metal contact.

## **2.04 FINISHES**

- A. Finish designations prefixed by AA comply with system established by the Aluminum Association for designating aluminum finishes.
- B. Available Finishes:
  - 1. Class II Clear Anodic Finish: AA-M12C22A31, complying with AAMA 611. Anodic coating 0.4 to 0.7 mils thick.
  - 2. Class I Clear Anodic Finish: AA-M12C22A41, complying with AAMA 611. Anodic coating 0.7 mils or thicker.
  - 3. Class I Color Anodic Finish: AA-M12C22A42/A44, complying with AAMA 611. Integrally colored or electrolytically deposited color coating 0.7 mils or thicker.
  - 4. Baked-Enamel Finish: Complying with AAMA 2603. Minimum dry film thickness of 1.5 mils.
  - 5. High-Performance Organic Coating (AAMA 2604): 50% PVDF resin-based coating system.
  - 6. Fluoropolymer Coating (AAMA 2605): 70% PVDF (Kynar 500/Hylar 5000) resin-based coating, 2-coat or 3-coat system.

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that all concrete, masonry, and roofing work in the vicinity is complete and cleaned.
- B. Verify anchor and blockout locations match approved shop drawings.
- C. Report discrepancies to Architect and General Contractor before proceeding.

### **3.02 COLUMN INSTALLATION**

- A. Embedded Columns (Foam Blockout Method):
  - 1. Manufacturer furnishes foam blockouts; General Contractor installs per shop drawings.
  - 2. General Contractor pours concrete foundation around blockouts.
  - 3. Installer removes foam after concrete cure, sets column in cavity.
  - 4. Lock column with steel rod through bottom of column below finished floor.
  - 5. Fill cavity with minimum 2000 psi grout to discharge level (draining columns) or finished slab level (non-draining columns).
- B. Slab-Mounted Columns:

1. Threaded rod epoxy anchored to existing slab.
2. Anchor size per engineering calculations (typically 5/8" diameter minimum).
3. Base plate attachment per approved shop drawings.
4. Slab design and adequacy verification by others.

C. Concrete-Set Columns:

1. Columns set in wet concrete by others.
2. Manufacturer provides column setting diagrams with required embedment depth.
3. Foundation design and concrete installation by others.

D. Drainage:

1. Draining columns: Internal drainage path from deck to column discharge at or below grade.
2. Non-draining columns: Provide weep holes minimum 1/4" diameter at top of grout fill to remove condensation.

### **3.03 ERECTION**

- A. Erect walkway cover true to line, level, and plumb.
- B. Protect aluminum columns embedded in concrete with clear acrylic coating.
- C. Fill draining columns with grout to the discharge level to prevent standing water.
- D. Install weep holes at top of concrete in non-draining columns to remove condensation.
- E. Provide hairline miters and fitted joints.
- F. Install with minimum slope to allow water flow to draining columns and eliminate ponding.

### **3.04 CLEANING**

- A. Clean all walkway cover components promptly after installation using mild soap and water.
- B. Remove construction debris and protective coverings.
- C. Do not use abrasive cleaners or solvents that may damage finish.

### **3.05 PROTECTION**

- A. Protect materials during and after installation from damage by other trades.
- B. Replace components damaged after installation.

**END OF SECTION 10 73 26**