



Arcadia Building Products, Inc.



Arcadia Building Products, Inc.  
154 Ethan Allen Drive  
Dahlonega, GA 30533

Tel: 800-303-5248

Fax: 678-208-6764

Email: [info@arcadiabp.com](mailto:info@arcadiabp.com)Web: [www.arcadiabp.com](http://www.arcadiabp.com)

This Manu-Spec® utilizes the Construction Specifications Institute (CSI) *Project Resource Manual* (PRM), including *MasterFormat™*, *SectionFormat™* and *PageFormat™*. A Manu-Spec is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets [ ]; delete optional text in final copy of specification. Specifier Notes precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate product model numbers, styles and types are used in Specifier Notes and in the specification text Article titled "Acceptable Material." Metric conversion, where used, is soft metric conversion.

This Manu-Spec specifies sun control structures manufactured by Arcadia Building Products, Inc. Revise Manu-Spec section number and title below to suit project requirements, specification practices and section content. Refer to *CSI MasterFormat* for other section numbers and titles.

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## EXTERIOR SUN CONTROL DEVICES

## PART 1 GENERAL

## 1.1 SUMMARY

- A. Section Includes: Sun control structures and components.

**Specifier Note:** Revise Paragraph below to suit project requirements. Add section numbers and titles per CSI MasterFormat and specifier's practice.

- B. Related Requirements:

**Specifier Note:** Include in this Paragraph only those sections and documents that directly affect the work of this section. If a reader of this section could reasonably expect to find a product or component specified in this section, but it is actually specified elsewhere, then the related section number(s) should be listed in the Subparagraph below. Do not include Division 00 documents or Division 01 sections since it is assumed that all technical sections are related to all project Division 00 documents and Division 01 sections to some degree. Refer to other documents with caution since referencing them may cause them to be considered part of the Contract.

1. Section 033000 – Cast-In-Place Concrete for post footings.

**Specifier Note:** Select following two paragraphs, and modify as necessary, if Project includes connection to existing building.

2. [Section 061000 – Rough Carpentry for blocking at connection to existing building].
3. [ ].

**Specifier Note:** Select following paragraph if motorized operation or electrically powered components are specified in Part 2.

4. [Division 26 – Electrical; for rough-in, connections, and control wiring.

## 1.2 REFERENCES



Arcadia Building Products, Inc.

**Specifier Note:** Define terms that are unique to this Section and are not provided elsewhere in the contract documents. Include in this Article terms that are unique to the work result specified that may not be commonly known in the construction industry.

A. Definitions:

1. [ ].

**Specifier Note:** Paragraph below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain References Paragraph when specifying products and installation by an industry reference standard. List retained standard(s) referenced in this section alphabetically. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Contract Conditions Section 01 42 00 - References may establish the edition date of standards. This Paragraph does not require compliance with standard(s). It is a listing of all references used in this section. Only include here standards that are referenced in the body of the specification in PARTS 1, 2 and/or 3. Do not include references to building codes at any level.

B. Reference Standards:

1. American Architectural Manufacturers Association (AAMA).
  - a. AAMA 2604 – Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
2. ASTM International (ASTM).
  - a. ASTM A276 – Standard Specification for Stainless Steel Bars and Shapes.
  - b. ASTM B221 – Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
  - c. ASTM B429 – Standard Specification for Aluminum-Alloy Extruded Structural Pipe and Tube.
  - d. [ ].

**Specifier Note:** Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Contract Conditions and Section 01 33 00 – Submittal Procedures.

### 1.3 SUBMITTALS

A. Product Data: Manufacturer's standard specifications, and descriptive literature, including:

1. Spec-Data product information sheets.
2. Catalog cut-sheets.
3. Standard color charts.

**Specifier Note:** Select "Wiring diagrams" if motorized operation or electrically powered components are specified in Part 2.

4. [Wiring diagrams].
5. Sample warranty forms.
6. Sample maintenance contract form.

B. Shop Drawings: Graphic information specifically prepared for this Project, including:

1. Dimensioned plans, elevations, and construction details indicating full extent of work complete with requirements for component items, and accessories. Include expansion joint details and locations; details parallel and perpendicular to louvers showing how beams, gutters, pivot system, and utility spaces for mounting lights and ceiling fans fit together. [Provide flashing details to existing buildings.]
2. Verified field dimensions.
3. PE stamp; signed and dated.

C. Samples, including:

**Specifier Note:** Select one of two following paragraphs.



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1. [Manufacturer's standard size powder coat color samples, prepared on same material as finished products; for Architect's verification of intended color selection].
2. [Custom color samples, prepared on same material as finished products; for Architect's verification].
3. [ ].

## D. Certifications, including:

1. Letter prepared by manufacturer documenting "Made in America" product branding for specified products, under American Recovery and Reinvestment Act, Section 1605.
2. Letter prepared, stamped, signed and dated by professional engineer, registered to practice in state where sun control structure is to be installed, verifying that product design meets building code requirements, and project design criteria.

**Specifier Note: Specify submittals to document manufacturer's storage, installation and other instructions.**

## E. Manufacturer's Instructions, including:

1. Delivery, storage and handling.
2. Preparation and Installation.
3. [ ].

## 1.4 CLOSEOUT SUBMITTALS

**Specifier Note: Coordinate Article below with Contract Conditions and with Section 01 78 36 – Warranties.**

## A. Warranties:

1. System Warranty: Manufacturer's limited lifetime warranty against defects in manufacturing of sun control structures.
2. Support Components Warranty: Manufacturer's 15-year warranty against defects in materials of posts, beams, gutters, and louvers.

**Specifier Note: Arcadia Pivot is available in manual or power operation. Select one of two following paragraphs.**

3. [Manually Operated Components Warranty: Manufacturer's 10-year warranty against defects in materials of manual operator, and movable parts.]
4. [Power Operated Components Warranty: Manufacturer's 5-year warranty against defects in materials of motor, solar panel, power supply, receiver, solar regulator, and electronic controls].

## B. Maintenance Information:

1. Manufacturer's standard instructions.

## 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized dealer.
- B. Installation Documents On-Site: Maintain installation and other execution documents on-site; make available as needed.
- C. [ ].

## 1.6 DELIVERY, STORAGE AND HANDLING

**Specifier Note: Coordinate Article below with Contract Conditions and with Section 01 60 00 – Product Requirements.**

- A. Deliver, store and handle sun control structures, and accessories in accordance with manufacturer's written instructions.
- B. [ ].
- C. Remove packaging materials from site and dispose of at appropriate recycling facilities.

## PART 2 PRODUCTS



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**Specifier Note: Retain Article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as “or equal”, “approved equal” or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining “or equal” products.**

## 2.1 SUN CONTROL STRUCTURES

**Specifier Note: Include in the following Paragraph; manufacturer’s name, address, phone number, fax number, email address and website URL.**

A. Manufacturer: Arcadia Building Products, Inc.; 154 Ethan Allen Drive; Dahlonega, GA 30533; Tel: 800-303-5248; Fax: 678-208-6764; Email: info@arcadiabp.com; Website: www.arcadiabp.com.

1. Single Source Responsibility: Provide components and materials specified in this section from a single manufacturer.

**Specifier Note: Substitution procedures must either be in the Contract Conditions or in Section 01 25 00 – Substitution Procedures. Do not include substitution procedures here.**

2. Substitutions: In accordance with [Contract Conditions] [Section 012500 – Substitution Procedures] [No substitutions permitted].

**Specifier Note: Include an overall description of the system, assembly, product or material. Include required properties or characteristics that do not obviously belong under other titles. Examples: Configuration, size and color.**

B. Product: Arcadia Pivot; Pre-engineered, sun control and wet weather roof structure with columns and beams supporting a louvered roof composed of one or more zones of pivoting, interlocking, and drainable louvers; including, gutter and drain system, and specified additional components.

1. Engineering:
  - a. Design sun control structure for dead load, specified live load, calculated additional uniform dead load, additional concentrated dead loads required for equipment, and combinations of these loads.
  - b. Load reduction due to tributary loaded area not allowed.
  - c. Basic design loads:
    - 1) Roof live load: 20 pounds per square foot.
    - 2) Wind velocity: As required by authorities having jurisdiction.
    - 3) Collateral loads: Calculated additional dead load, in pounds per square foot, for plumbing, heating and cooling, and lighting.
    - 4) Beams: Maximum live load deflection of L/360.
2. Materials:
  - a. Extruded structural aluminum tube: Types 6061-T6, or 6063-T6 alloy and temper; meeting ASTM B429.
  - b. Extruded aluminum shapes: Type 6063-T6 alloy and temper; meeting ASTM B221, and B429.
  - c. Stainless steel pins: Type 304; meeting ASTM A276.
  - d. [\_\_\_\_\_].

**Specifier Note: Arcadia provides three exterior types of powder coating finishes. Select one type.**

3. Finish: [Polyester] [Polyester urethane] [Acrylic] powder coating.

**Specifier Note: Arcadia provides powder coating finishes in four standard colors, and custom colors. Select one of two following paragraphs, and edit within selected paragraph.**

- a. [[Standard color: [White] [Beige] [Bronze] [Adobe].]]
- b. [[Custom color: [Match Architect’s sample] [As noted on drawings] [\_\_\_\_\_].]]

**Specifier Note: Arcadia Pivot is available with manual or motorized louver operation. Select one.**



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4. Operation: [Manual] [Motorized].

C. Components:

1. Posts and beams: Extruded structural aluminum tubes with post mounting bases, brackets, and beam to post connectors.

**Specifier Note: Arcadia provides posts in three sizes; 4 inches (102 mm) by 4 inches (102 mm), 6 inches (152 mm) by 6 inches (152 mm), and 8 inches (203 mm) by 8 inches (203 mm).**

**Specifier Note: Arcadia provides beams in six sizes; standard 2 inches (51 mm) by 8 inches (203 mm), and 2 inches (51 mm) by 10 inches (254 mm); and additional 4 inches by 8 inches (203 mm), 4 inches by 10 inches (254 mm), 6 inches by 8 inches (203 mm), and 6 inches by 10 inches (254 mm).**

- a. Post and beam sizes: [As noted on approved shop drawings].
- b. Post and beam thicknesses: [As noted on approved shop drawings].
- c. Pivot track pins: 1/2 inch.
- d. Pivot track pins: 5/16 inch.
2. Pivot System: Extruded aluminum; U-shaped pivot bars, T-shaped track bars, and cap bars; stainless steel pivot and track pins; beam to post connectors, and pivoting mechanism for manual or motor operation.
3. Louvers: Extruded aluminum; interlocking, drainable louvers mounted in pivot system with 170-degree rotation. Can be mounted vertically or horizontally.

**Specifier Note: Arcadia provides louvers in three lengths; 89 inches (2,261 mm), 113 inches (2,871 mm), and 137 inches (3,480 mm).**

- a. Lengths: [As noted on approved shop drawings].
4. Gutters: Extruded aluminum; straight gutters, corners, and pass-through gutter configurations.
  - a. Depth: 5 inches (127 mm).
  - b. Lengths: [As noted on approved shop drawings].
5. Snap-on covers and trim: Aluminum fabrications as recommended by manufacturer.
6. Motor operator: 12 VDC, 45/22 A; Acme lead screw type drive system; CE and UL listed and labeled.
  - a. Load: 450 pounds, maximum.
  - b. Speed: 5/32 inch (4 mm) in 16 seconds at rated load.
  - c. Sound level: Less than 45 dBa.

**Specifier Note: Select additional components to meet project requirements. Note additional components on drawings, or schedule with other components in PART 3, Attachments.**

## 2.2 ADDITIONAL COMPONENTS

- A. [App-driven remote control].
- B. [Automatic control for weather conditions].
- C. [Ceiling fans].
- D. [Corbeled beam ends].
- E. [Curtains].
- F. [Custom columns].
- G. [Custom fascia].
- H. [Hand crank for manual operation].
- I. [Heating and cooling].

- J. [Lighting].
- K. [Motorized solar screens].
- L. [Solar powered electrical system].
- M. [ ].

### 2.3 ACCESSORIES

- A. Metal screws: No. 12 by 1 inch (25.4 mm), self-tapping; Type 410 stainless steel meeting ASTM A276; unless noted otherwise.
- B. Concrete and masonry screws: ¼ inch (6.35 mm) diameter by length required, Hex-head or Phillips flat-head; Type 410 stainless steel meeting ASTM A276; unless noted otherwise.
- C. Metal flashing: Minimum, 0.040 inch (1 mm) thick aluminum sheet, or as recommended by manufacturer; match color of other members; attach flashing with concealed fasteners, or exposed fasteners with heads finished to match color of other members.
- D. Joint sealers: Recommended by manufacturer.
- E. [ ].

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify that conditions of work previously installed under other sections or contracts are acceptable for installation of sun control structures in accordance with manufacturer's written instructions and approved submittals.
  1. Notify [Architect] of unacceptable conditions upon discovery.
  2. Proceed with preparation and installation only after unacceptable conditions have been corrected.
- B. [ ].

**Specifier Note: Specify actions required to prepare the surface, area or site for incorporation of the section's primary products. Describe requirements for exposure or removal of existing assemblies, components, products or materials.**

### 3.2 PREPARATION

**Specifier Note: Specify preparatory work required prior to installation/application/erection of primary products.**

- A. Prepare footings and mounting locations for installation of posts and beams in accordance with manufacturer's written instructions and approved submittals.
- B. [ ].

### 3.3 INSTALLATION

- A. Install sun control structures in accordance with manufacturer's written instructions and approved submittals.
- B. [ ].

### 3.4 CLEANING

- A. Clean-up waste and debris daily during installation.
- B. Upon completion, remove surplus materials, remaining debris, tools and equipment.
- C. Collect recyclable waste and dispose of as specified.
- D. [ ].



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**Specifier Note: Specify protection methods completed after installation, but prior to acceptance by the owner. Protection of surrounding areas and surfaces during application or installation is included under PART 3, Preparation. Include only statements unique to this Section.**

### 3.5 PROTECTION

- A. Protect installed products from damage during subsequent construction.
- B. Repair damage to adjacent materials caused by installation of sun control structures.
- C. .

**Specifier Note: Arcadia Care Preventative Maintenance Program is available through Authorized Arcadia Dealers.**

### 3.6 MAINTENANCE

- A. Provide annually renewable maintenance program furnished by manufacturer's authorized dealer, and beginning at Date of Substantial Completion, for Owner's consideration.
- B. .

### 3.7 ATTACHMENTS

**Specifier Note: Schedules are sometimes placed in the specifications rather than on drawings. Include schedules that indicate item/element/product/equipment, location and other coordinating data.**

- A. Sun Control Structure Schedule:
- B. .

**END OF SECTION**