

1316 COUNTY-CITY BUILDING  
227 W. JEFFERSON BOULEVARD  
SOUTH BEND, INDIANA 46601-1830



PHONE 574/ 235-9251  
FAX 574/ 235-9171

CITY OF SOUTH BEND JAMES MUELLER, MAYOR  
**BOARD OF PUBLIC WORKS**

March 8, 2022

Mr. Lee Ellerbrook  
Aloft South Bend  
111 N. Main St.  
South Bend, IN 46601  
[lellerbrook@aloftsouthbend.com](mailto:lellerbrook@aloftsouthbend.com)

RE: Encroachment into Public Right-of-Way – 111 N. Main St.

Dear Mr. Ellerbrook:

At its March 8, 2022 meeting, the Board of Public Works approved your request for the installation of a pergola on the front of the building to extend the patio at 111 N. Main St. subject to the following staff recommendations. This encroachment was approved subject to the improvements not becoming a safety hazard. Enclosed please find copies of the permit and application. Public Works and Community Investments approved subject to the gutters must drain parallel to the building face and not across the bike lane or sidewalk and to move the structure six (6) inches to reduce the encroachment so there would be three (3) feet of sidewalk and one (1) foot of brick paver band to cover the ADA clearance. Also, that the structure follows the Sidewalk Café Ordinance.

The encroachment will be permitted to remain and continue until such time as the Board of Public Works of the City of South Bend shall determine that such encroachment is in any way impairing or interfering with the highway or with the free and safe flow of traffic thereon. Said encroachment shall not in any way prejudice or preclude the City's rights with respect to the future use of that portion of the right-of-way.

If you have any further questions, please call this office at (574) 235-9251.

Sincerely,

/s/ Theresa Heffner

Theresa M. Heffner, Clerk

Enclosures  
TH/lh



**INTEROFFICE MEMORANDUM  
BOARD OF PUBLIC WORKS**

**DATE:** January 13, 2022

**TO:** Zach Hurst, Engineering Department  
Gerard Ellis, Fire Department  
Chris Dressel, Community Investment

**FROM:** Laura Hensley, Acting Clerk

**SUBJECT:** **ENCROACHMENT RECOMMENDATION**  
**Revocable Encroachment – Aloft South Bend**

**LOCATION:** 111 N. Main St.

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**PLEASE INSERT YOUR RECOMMENDATIONS IN THE APPROPRIATE FIELD BELOW,  
BASED ON THE FOLLOWING CRITERIA:**

1. It has been determined that this encroachment in no way impairs the highway or with the free and safe flow of traffic thereon, and it is recommended that the encroachment be permitted to remain.
2. Said encroachment shall not in any way prejudice or preclude the City's rights with respect to the future use of the portion of the right-of-way.

**PUBLIC WORKS:** Favorable – gutters must drain parallel to building face, not across bike lane and sidewalk

**COMMUNITY INVESTMENT:** Recommended for Approval provided it meets the 5' Minimum pedestrian clearance from obstacles and other restrictions of the sidewalk café ordinance.

**FIRE:** Favorable



## ENCROACHMENT APPLICATION

City of South Bend - Board of Public Works  
227 W. Jefferson Boulevard, Ste. 1316  
South Bend, IN 46601

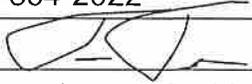
### PROPERTY OWNER INFORMATION:

Name of Business/Homeowner: Aloft South Bend / The Tower at Washington Sq  
Address: 111 N Main St  
City/State/Zip: South Bend, IN 46601  
Phone: 574-288-8000 Email: lellerbrook@aloftsouthbend.com

### ENCROACHMENT INFORMATION:

Location of Encroachment: The front side of the building (Main St) where our cafe patio exists  
Encroachment Description: Pergola  
CL Road to R/W Line: 50' Size of Encroachment: 13' x 45'  
Distance of R/W: 100' Amount in R/W: 13' encroachment

### INSTALLER'S INFORMATION:

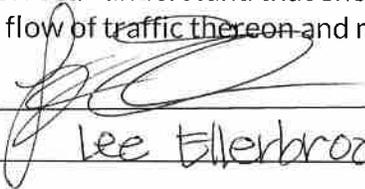
Business Name: American Elegance Homes, LLC  
Address: P.O. Box 213, 461 Kelly Street  
City/State/Zip: Rome City  
Phone: 260-854-2022 Email: james.jenkins@american-elegance.com  
Signature:   
Printed Name: James Jenkins

### INCLUDE THE FOLLOWING ITEMS WITH YOUR APPLICATION:

- Photos of the area where encroachment will take place.
- Plans and Specifications
- Completed Agreement

### AFFIRMATION

I, the undersigned do hereby certify and affirm that all the information given in this application is accurate and correct. I understand that encroachments must in no way impair the highway or free and safe flow of traffic thereon and may be revoked at any time.

Signature of Applicant:  Date: 1/7/22  
Printed Name of Applicant: Lee Ellerbrook



# REVOCABLE PERMIT

RECOGNITION OF ENCROACHMENT UPON CITY OF SOUTH BEND-CONTROLLED PROPERTY AND PROVISIONS ALLOWING TEMPORARY CONTINUANCE OF SAME

Company/Homeowner Name Aloft South Bend, hereafter, the "APPLICANT."

The encroachment will be permitted to remain and continue under the following terms and conditions:  
The Tower at Washington Sq

- 1) Until such time as the BOARD OF PUBLIC WORKS ("BOARD") of the CITY OF SOUTH BEND ("CITY") shall determine that such encroachment is in any way impairing or interfering with the highway or with the free and safe flow of traffic thereon;
- 2) Said encroachment shall not in any way prejudice or preclude the CITY'S rights with respect to the future use of the portion of the right-of-way;
- 3) The encroachment as it now exists shall in no manner be added to or enlarged in its present scope or dimensions;
- 4) In the event of change of ownership of the fixture or any other item of personal property which constitutes the aforesaid encroachment, this permit shall become null and void;
- 5) The CITY shall not be liable to APPLICANT for any damages caused to APPLICANT that arise out of or is incidental to any activity and/or incidences authorized by this permit;
- 6) In consideration of the granting of this Permit by the BOARD, APPLICANT shall indemnify, hold harmless and defend the CITY from and against any and all actions or causes of action which the CITY may suffer or incur by reason of bodily injury, including death, to any person or persons, or by reason of damage to or destruction of any property, including the loss thereof, arising out of or in any manner connected with any activity and/or incidences authorized by this permit and/or any activities and/or incidences incidental thereto, or which the CITY may sustain or incur in connection with any litigation, investigation, or other expenditures incidental thereto, including any suit instituted by the CITY to enforce the obligation of this agreement of indemnity.  
It is the intent of the parties hereto that the APPLICANT shall indemnify the CITY under this indemnification clause to the fullest extent permitted by law.

This approval shall be binding upon everyone past or present, claiming any interest in and to the aforementioned encroachment.

### ACCEPTANCE OF TERMS AND CONDITIONS

I accept and agree to be bound by all of the terms and conditions of this permit.

Submitted By: Lee Fillerbrook  
 Signature: [Signature]  
 Date: 1/7/22

CITY OF SOUTH BEND, INDIANA  
BOARD OF PUBLIC WORKS

[Signature]  
Elizabeth A. Maradik, President

[Signature]  
Gary A. Gilot, Member

[Signature]  
Murray L. Miller, Member

[Signature]  
Joseph R. Molnar, Vice President

[Signature]  
Jordan V. Gathers, Member

[Signature]  
Attest: Theresa M. Heffner, Clerk

Date: March 8, 2022

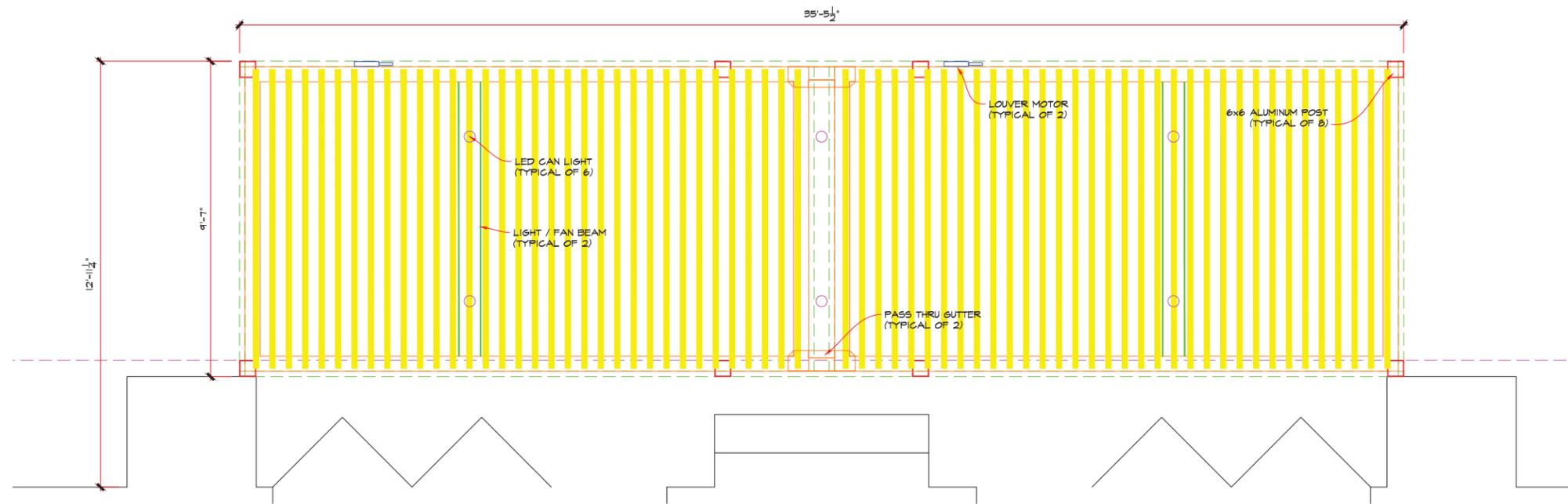
Revised on 9.14.21

**PLAN NOTES:**  
 SQUARE FOOTAGE TOTALS WILL VARY ACCORDING TO CALCULATION METHODS USED  
 ACTUAL FIELD DIMENSIONS WILL VARY SLIGHTLY  
 ALL INTERIOR DIMENSIONS ARE FROM FACE OF FRAMING TO FACE OF FRAMING.

REVISIONS	DATE

**SQUARE FOOTAGE**

<b>GARAGE:</b>	
<b>FINISHED BASEMENT:</b>	
<b>1st FLOOR FINISHED:</b>	
<b>2nd FLOOR FINISHED:</b>	
<b>3rd FLOOR FINISHED:</b>	
<b>TOTAL AREA =</b>	
<b>DECK:</b>	000SF
<b>COVERED PORCH:</b>	000SF
<b>CEILING HEIGHT:</b>	



**SMART PERGOLA LAYOUT**

SCALE: 1/2" = 1'-0"



**PROJECT NAME & LOCATION**

**Aloft South Bend**  
 111 N. Main Street  
 South Bend, IN 46601

<b>DRAWN BY</b>	JAMES JENKINS
<b>CHECKED BY</b>	
<b>DATE</b>	4/15/2021
<b>SCALE</b>	AS NOTED
<b>JOB NUMBER</b>	

SHEET  
**A1.0**

THIS PLAN, DESIGN, AND/OR SPECIFICATIONS ARE THE PROPERTY OF AMERICAN ELEGANCE HOMES, LLC, KENDALLVILLE, IN AND MAY NOT BE REPRODUCED IN ANY PART OR FORM WITHOUT THE WRITTEN CONSENT OF AMERICAN ELEGANCE HOMES, LLC. DIMENSIONS ALWAYS TAKE PRECEDENCE. DO NOT SCALE!



## 1. Product Name

- Arcadia™ Pivot

## 2. Manufacturer

Arcadia Building Products, Inc.  
154 Ethan Allen Drive  
Dahlonega, GA 30533  
Phone: 800-303-5248  
678-208-6762  
Fax: 678-208-6764  
E-mail: [info@arcadiabp.com](mailto:info@arcadiabp.com)  
Web: [www.arcadiabp.com](http://www.arcadiabp.com)

## 3. Product Description

### Basic Use

The Arcadia Pivot is a unique exterior sun/shade shelter/structure with operable louvers that pivot with a full 170-degree range of motion in place of a roof or rafters.

The Arcadia Pivot adjusts to maximize the comfort and use of any outdoor space. By adjusting the louvers, the user can let sunlight into the space below or keep sunlight out for complete shade. With the benefits of sky views and ventilation, the Arcadia Pivot provides protection from direct, unbroken sunlight.

The original Arcadia System has been improved and perfected since its inception in 2011. Its award-winning pivot design gives a full 170-degree range of motion to provide a cool oasis and protection from the elements. Now available with a slide design that allows full sky view and Arcadia's iLouver technology.

With the iLouver smart phone app, the Arcadia structure can be controlled from the palm of your hand and the Pivot can intuitively control the effects of the weather.

### Composition and Materials

Extruded aluminum, 6063-T6 and 6061-T6 and stainless steel 304 alloy components, screws and bolts.

### Features and Benefits

- Made in America
- Smart motor technology
- A full 170 degrees of motion
- Rain and wind programmability
- Patented interlocking louver design
- App-driven iLouver operating system
- Protection from UV exposure and other weather elements
- Arcadia Care maintenance and cleaning program available



- Fully extruded aluminum components are lightweight, strong, non-corrosive, resilient, reflective, non-combustible, recyclable, and accept finishes
- 360 degree integrated gutter system with interlocking louvers that channel water into a fully-extruded five-inch gutter system that encompasses the entire perimeter of each zone, providing more efficient water management with gutters closed
- Allows maximum light into a space with the louvers fully opened; minimizes resistance and uplift in high winds
- Arcadia's Premium Powder Coating Process is PPG's Envirocyl® and Envirocron® powder coatings that are aesthetically pleasing, produce a durable uniform finish and can be custom formulated for a range of finishes, including Arcadia's matte finish; PPG's Ultradurable Polyester Powder Coatings provide a combination of good physical and chemical resistance properties with excellent resistance to outdoor weathering
  - VOCs are essentially zero
  - Good chemical resistance
  - Excellent Exterior durability
  - Available in a wide range of colors and finishes
  - Specifically formulated to meet the requirements of AAMA 2604

### Colors

Standard colors:

- White
- Beige
- Bronze
- Adobe

Custom solid and woodgrain RAL colors available.

**Table 1—Motor Specifications (2000N)**

Input voltage (VDC)	12
<b>Load</b>	
Static load (Fx) maximum	2000 (450 pounds)
Dynamic load (Fx) maximum	2000 (450 pounds)
Stroke length	custom
<b>Current</b>	
Current consumption, rated load (A)	45/22
Current consumption, stall/in-rush (A)	14/80
Speed, no load	5.8 mm/23 seconds
Speed, rated load	4 mm/16 seconds
Operation temperature limits	-13 to 167 degrees F (-25 to 75 degrees C)
Dual cycle, maximum	10%
Average life	10K cycles
Sound level	<45 dBA
Lead screw type	Acme
Protection class	IP67
Certificates	CE (EN60601-1) UL (UL60601-1)

**Sizes/Dimensions**

The finished size of an Arcadia Pivot system is always custom. These are component sizes.

**Louver Lengths (in inches)**

- 89
- 113
- 137

**Posts (in inches)**

- 4 × 4 × 1/8
- 4 × 4 × 1/4
- 6 × 6 × 1/8
- 6 × 6 × 1/4
- 8 × 8 × 1/4

**Post Bases and Post Base Bracket (in inches)**

- 4 × 4
- 6 × 6
- 8 × 8
- 6 × 6 (post base bracket)

**Beams (in inches)**

- 2 × 8 × 1/8
- 2 × 10 × 1/8

**Post-to-Beam Connectors (in inches)**

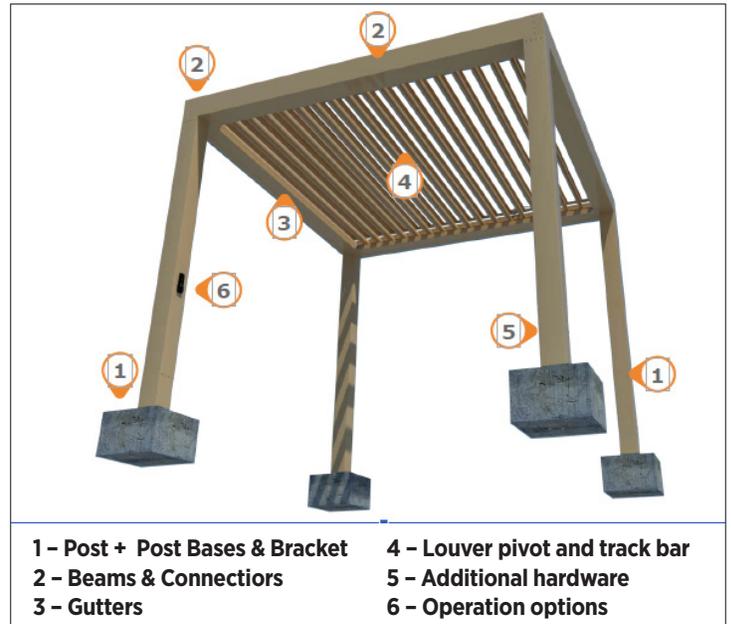
- 4 × 4
- 6 × 6
- 8 × 8
- Beam corner connector
- U-channel connector

**Motor Specifications**

See Table 1.

**Options/Accessories**

- Ceiling fans
- Accent lighting
- Custom colors
- Wood/faux cladding
- Custom columns
- Cornice style facade
- Pergola cuts/corbel ends
- Motorized solar screens



- 1 – Post + Post Bases & Bracket
- 2 – Beams & Connectors
- 3 – Gutters
- 4 – Louver pivot and track bar
- 5 – Additional hardware
- 6 – Operation options

- Outdoor curtains
- Outdoor heating and cooling
- Manual operation
- Smartphone app

**System Information**

Complete system brochure available [here](#).

**4. Technical Data**

**Applicable Standards**

**American Architectural Manufacturers Association (AAMA)**

- **AAMA 2604** Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix)

**ASTM International**

- **ASTM B117** Standard Practice for Operating Salt Spray (Fog) Apparatus
- **ASTM E84** Standard Test Method for Surface Burning Characteristics of Building Materials
- **ASTM D522** Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings
- **ASTM D523** Standard Test Method for Specular Gloss
- **ASTM D968** Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
- **ASTM D2247** Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity
- **ASTM D2794** Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)
- **ASTM D3359** Standard Test Methods for Rating Adhesion by Tape Test
- **ASTM D3363** Standard Test Method for Film Hardness by Pencil Test



- **ASTM D4214A** Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films

#### C-UL

- **Bluetooth CE (CAN ICES-3 (B)/NMB-3(B))**

#### International Electrotechnical Commission (IEC)E

- **IP67, CE (EN 60601-1)**

#### UL International

- **UL (UL60601-1)**

#### Approvals

- **FCC: WLL report # 14118-01 Rev 0** (Arcadia Smart Device Control)
- **Miami-Dade County, Florida, Notice of Acceptance**
- **US Army Corps of Engineers (USACE)**

#### Environmental Considerations

This product may contribute to LEED® points.

## 5. Installation

### Weather/ambient considerations

Above freezing, dry, safe working environment. Verify that site conditions are acceptable for installation. Do not proceed with installation until unacceptable conditions are corrected.

Please consult with the manufacturer for complete installation information and instructions.

## 6. Availability and Cost

Please contact manufacturer for availability and pricing.

## 7. Warranty

Arcadia offers a limited lifetime warranty. Arcadia Building Products, Inc. extends a transferable limited warranty to the structural components and moveable accessories of our products.

Arcadia warrants our products for the lifetime of each product against manufacturer's defects in materials.

Electrical components and drive motor: five years.

Manual operator: ten years.

Structural components: 15 years.

## 8. Maintenance

Arcadia Louvered Roof Systems are easy to maintain. Generally, normal rainfall is sufficient to keep its appearance clean. If cleaning is required, we recommend the following steps. Attention should be given to areas under eaves, porches, awnings, and other overhangs that have limited exposure to the natural cleansing effect of rainfall.

### Moderate Dirt

An occasional washing with clear water using a garden hose and soft-bristled brush is recommended, such as a long handled, car-washing brush is ideal for this purpose.

### Heavier Dirt Accumulation

Wash in the manner indicated above, but use the following solution:

- 1/3 cup detergent (e.g. Tide®)
- 2/3 cup trisodium phosphate powder (TSP)
- 1 gallon of water

### Mildew Accumulation

Mildew can collect on surfaces of all types of building products and is often evident on surfaces that have not been properly maintained. Normally, mildew will appear as black spots. Mildew is easy to remove by using the following cleaning solution:

- 1/3 cup detergent (e.g. Tide)
- 2/3 cup trisodium phosphate powder (TSP)
- 1 quart sodium hypochloride 5% solution (e.g. Clorox®)
- 3 quarts water

### Environmental Black Streaking

Black streaking can also collect on the surface of a structure. Black streaking can be removed by using Gutter Zap 4, which can be purchased from the dealer that installed your unit.

### Caulking Compounds, Tar, etc.

Use mineral spirits in reasonable amounts, apply directly to foreign substance. Rinse the area thoroughly with water immediately after cleaning.





### Arcadia Care Preventative Maintenance Program

By joining the Arcadia Care Preventative Maintenance Program you will receive standard coverage offered by the general Arcadia Product Warranty as well as the following add-ons.

- Testing of moving parts
- General wear and tear checked
- Comprehensive cleaning of louvered roof
- System gutter cleaning

Please contact your dealer that installed your system for more details and pricing. (Not all Authorized Arcadia Dealers participate in Arcadia Care, please check with you local dealer).

### 9. Technical Services

**Arcadia Academy:** full Installation training available at corporate training facilities. Free technical support via phone. Renderings, shop drawings and engineering available. Fees apply.

### 10. Filing Systems

- ConstructConnect
- Additional product information is available from the manufacturer upon request ↪



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.

10 71 13

## 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.



Arcadia Building Products, Inc.

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



Arcadia Building Products, Inc.

**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.**



Arcadia Building Products, Inc.

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: 1/4 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. [ ].



Arcadia Building Products, Inc.

**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**

**Subcategory: 6000 Series Aluminum Alloy; Aluminum Alloy; Metal; Nonferrous Metal**

### Composition Notes:

Aluminum content reported is calculated as remainder.  
Composition information provided by the Aluminum Association.

**Key Words:** UNS A96063; ISO AlMg0.5Si; Aluminium 6063-T6; AA6063-T6

Component	Wt. %	Component	Wt. %	Component	Wt. %
Al	Max 97.5	Mg	0.45 - 0.9	Si	0.2 - 0.6
Cr	Max 0.1	Mn	Max 0.1	Ti	Max 0.1
Cu	Max 0.1	Other, each	Max 0.05	Zn	Max 0.1
Fe	Max 0.35	Other, total	Max 0.15		

### Material Notes:

Data points with the AA note have been provided by the Aluminum Association, Inc..

Physical Properties	Metric	English	Comments
Density	2.7 g/cc	0.0975 lb/in <sup>3</sup>	AA; Typical

### Mechanical Properties

Hardness, Brinell	73	73	AA; Typical; 500 g load; 10 mm ball.
Hardness, Knoop	96	96	Converted from Brinell Hardness Value.
Hardness, Vickers	83	83	Converted from Brinell Hardness Value.
Ultimate Tensile Strength	241 MPa	35000 psi	AA; Typical.
Tensile Yield Strength	214 MPa	31000 psi	AA; Typical.
Elongation at Break	12 %	12 %	AA; Typical; 1/16 in. (1.6 mm) Thickness.
Modulus of Elasticity	68.9 GPa	10000 ksi	AA; Typical; Average of tension and compression. Compression modulus is about 2% greater than tensile modulus.
Ultimate Bearing Strength	434 MPa	62900 psi	Edge distance/pin diameter = 2.0.
Bearing Yield Strength	276 MPa	40000 psi	Edge distance/pin diameter = 2.0.
Poisson's Ratio	0.33	0.33	
Fatigue Strength	68.9 MPa	10000 psi	AA; 500,000,000 cycles completely reversed stress; RR Moore machine/specimen.
Machinability	50 %	50 %	0-100 Scale of Aluminum Alloys.
Shear Modulus	25.8 GPa	3740 ksi	
Shear Strength	152 MPa	22000 psi	AA; Typical.

### Electrical Properties

Electrical Resistivity	3.32e-006 ohm-cm	3.32e-006 ohm-cm	AA; Typical at 68°F
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### Thermal Properties

CTE, linear 68°F	23.4 µm/m-°C	13 µin/in-°F	AA; Typical; Average over 68-212°F range.
CTE, linear 250°C	25.6 µm/m-°C	14.2 µin/in-°F	Average over the range 20-300°C.
Specific Heat Capacity	0.9 J/g-°C	0.215 BTU/lb-°F	
Thermal Conductivity	200 W/m-K	1390 BTU-in/hr-ft <sup>2</sup> -°F	AA; Typical at 77°F.
Melting Point	616 - 654 °C	1140 - 1210 °F	AA; Typical range based on typical composition for wrought products 1/4 inch thickness or greater.
Solidus	616 °C	1140 °F	AA; Typical.
Liquidus	654 °C	1210 °F	AA; Typical.

### Processing Properties

Annealing Temperature	413 °C	775 °F	hold at temperature for 2 to 3 hr; cool at 50°F per hour from 775 to 500°F.
Solution Temperature	521 °C	970 °F	
Aging Temperature	177 °C	350 °F	hold at temperature for 8 hrs.