



Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format.

This section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings.

Delete or format in hidden text "Specifier Notes" after editing each section.

Items contained in brackets [---] indicate choices the Architect should make, in consultation with the manufacturer, to ensure the products comply with the Owner's program of requirements.

SECTION 06 60 10

STRUCTURAL POLYMER (PVC) POSTS AND COLUMNS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SECTION INCLUDES

- A. Polymer (PVC) posts and columns, including:
 - 1. Porch posts
 - 2. Columns
 - 3. Mounting devices
 - 4. Fittings and accessories

1.3 REFERENCES

- A. ASTM International:
 - 1. ASTM D 790 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.

2. ASTM D 1784 Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds
3. ASTM D 2565 Standard Practice for Operating Xenon-Arc-Type Light-Exposure Apparatus With and Without Water for Exposure of Plastics
4. ASTM D 6109 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastic Lumber
5. ASTM D 7032 Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deckboards and Guardrail Systems (Guardrails and Handrails)
6. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials.

Specifier Notes: Review and edit quality requirements. Delete requirements not applicable to the Project.

1.4 QUALITY ASSURANCE

- A. Source Limitation: Provide posts, columns, and accessories produced by or as otherwise approved by the specified manufacturer.
- B. Manufacturer's Qualifications:
 1. All raw materials are extracted and all products are manufactured within the continental United States.
 2. The manufacturer implements an environmental responsibility policy to reduce industrial waste and conserve energy consumption in its plant operations.
 3. Manufacturer has adequate trained field representatives available to monitor work in progress.

Specifier Notes: Edit submittal requirements as required. Delete submittals not required.

1.5 SUBMITTALS FOR REVIEW

- A. Manufacturer's Technical Data Sheet identifying physical properties of specified materials.
- B. Manufacturer's Color/Pattern Selections: Provide chart representing the complete range of available colors and patterns available for each type of product specified.
- C. Shop drawings showing elevations, sections, and fabrication details for specified products.

1. Provide structural calculations prepared and certified by a qualified structural engineer licensed to practice in the project jurisdiction.
- D. Samples for Verification:
1. Cross section of each type of product specified: 1'-0" in length.
 2. Stabilizers: One (1) each.

1.6 SUBMITTALS FOR INFORMATION

- A. Qualification data for manufacturer and installers. Refer to Quality Assurance Article above.

Specifier Notes: Select Certified Test Reports (1.7 B) or Manufacturer's certification (1.7 C) below.

- B. Certified test reports verifying compliance of materials with the performance requirements specified in Part 2 – Products.
- C. Manufacturer's Installation Instructions.
- D. Manufacturer's certification that materials comply with specified requirements and are suitable for the intended applications.
- E. Sample Warranty: Submit copy of manufacturer's standard warranty terms for Owner's information and review.

1.7 SUBMITTALS FOR CONTRACT CLOSEOUT

- A. Warranty: Warranty submitted on the Manufacturer's standard form, signed and dated according to the conditions of the Contract.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Refer to Manufacturer's published "Delivery Storage and Handling Requirements."
- B. Delivery and Acceptance Requirements: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- C. Storage and Handling Requirements:
1. Store and handle materials in accordance with manufacturer's instructions and to prevent damage.
 2. Keep materials in manufacturer's original, unopened containers and packaging until installation.
 3. Store materials in clean, dry area.

4. Protect materials from excessive heat exposure.
5. Protect materials during storage, handling, and installation.

1.9 WARRANTY

- A. Manufacturer’s standard warranty for applications indicated.

PART 2 – PRODUCT

2.1 MANUFACTURERS

- A. Basis of Design: Design is based upon products manufactured by Superior Plastic Products, Inc., 260 Jalyn Drive, New Holland, Pennsylvania, 17557 [(800) 633-7093]; www.superiorplasticproducts.com.
- B. Substitutions: Refer to substitution procedures specified in the bidding requirements for the Project.

2.2 PVC PHYSICAL PROPERTIES

- A. Performance Requirements: Comply with the following:

GENERAL PROPERTIES		
	TEST METHOD	VALUES/RESULTS
UV Resistance	ASTM D 7032	Strength: +4.7%; Stiffness: -3.1% Loss within 10%
Temperature Effect	ASTM D 790	MOR 7000 psi MOE 309,000 psi (@ 125 deg F test Temp)
FLEXURAL PROPERTIES		
Strength	ASTM D 790/6109	10,940 psi
Modulus	ASTM D 790/6109	363,000 psi
FIRE PERFORMANCE		
Flame Spread Index	ASTM E 84	15

Specifier Notes: Retain types of posts required for the project. Omit those not applicable.

2.3 STRUCTURAL PVC PORCH POSTS

- A. Series: 100 with Aluminum Pipe Insert and Poly Stabilizers
 1. Style:
 - a. Heritage: **[4”] [5”]**

- b. Kinzer: **[4"] [5"]**
 - c. Lexus: 5"
 - d. Madison:**[4"] [5"]**
 - e. Manchester:6"
 - f. Oxford: **[4"] [5"]**
 - g. Plain: **[4"] [5"] [6"]**
 - h. Raised Panel: 5"
 - i. Recessed Panel: **[5"] [6"]**
 - j. Richmond: 5"
 - k. Traditional: **[4"] [5"]**
 - l. Vintage: 6"
- 2. Maximum Structural Load: **[4" – 10,500 lbs] [5" – 15,500 lbs] [6" – 18,000 lbs]**
 - 3. Maximum Wind Uplift Resistance: 1475 lbs (4" – 6")

Specifier Notes: Refer to Manufacturer's Price Book to determine availability of color for specific styles.

- 4. Color: **[Almond] [Clay] [Tan] [White]**
- B. Series: 400 with Aluminum Pipe Insert and Poly Stabilizers
- 1. Style:
 - a. Classic: 4.5"
 - b. Madison: **[4"] [5"]**
 - c. Traditional: **[4"] [5"]**
 - 2. Maximum Structural Load: **[4" – 7,800 lbs] [4.5" – 11,800 lbs] [5" – 10,500 lbs]**
 - 3. Maximum Wind Uplift Resistance: 1750 lbs (4" – 5")
 - 4. Color: **[Almond] [Clay] [Tan] [White]**

Specifier Notes: Retain types of columns required for the project. Omit those not applicable.

2.4 STRUCTURAL PVC COLUMNS

- A. Style:
 - 1. Round Tapered Fluted: 8"
 - 2. Savannah (Square): 8" x 8" at Base, (Mount Base: 6") 6" x 6" at Top.
 - 3. Straight Round: **[6"] [8"]**
 - 4. Square: 8"
 - 5. Tapered Round: **[6"] [8"] [10"]**

Specifier Notes: Refer to Manufacturer's Price Book to determine availability of color for specific styles.

- 6. Color: **[Almond] [Clay] [Tan] [White]**
- B. Structural Performance:
 - 1. Smooth Column
 - a. Maximum Structural Load: **[6" – 7,500 lbs] [8-10" – 18,000 lbs]**
 - b. Maximum Wind Uplift Resistance: 1,600 lbs (6" –10")
 - 2. Fluted Column
 - a. Maximum Structural Load: 26,000 lbs
 - b. Maximum Wind Uplift Resistance: 1,600 lbs

2.5 ACCESSORIES

- A. Post Plates: Cast aluminum top and bottom plates for securing posts to substrates.
- B. Column Plates: Cast aluminum top and bottom plates for securing columns to substrates.
- C. Post Stabilizers: To fill the annular space between aluminum structural pipe and PVC post/column extrusions, and as follows
 - 1. 100 Series & 400 Series Porch Posts: High Density Polyethylene
 - 2. Columns: Vinyl.
- D. Fasteners, Inserts, and Sleeves: Provide non-corrosive fasteners as provided by the manufacturer for applications indicated. Provide polymer caps for fasteners to match color of plates so that fastener heads are concealed from view.

- E. Column Trim: Molded PVC matching the column size and profile to conceal plates and fasteners when properly installed.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Take accurate field measurements to assure proper fit and function of specified products. Record measurements on the final shop drawings.
- B. Take adequate measures to protect existing site improvements in the work area, including but not limited to landscaping, irrigation, and plantings that may be affected by installation.
- C. Lay out work in advance to assure proper spacing.

3.2 INSTALLATION

- A. Install posts/columns in accordance with the approved shop drawings and the manufacturer's instructions.

3.3 CLEAN-UP

- A. Wipe down surfaces of products that have been soiled by construction operations.

END OF SECTION