

SECTION 077616 – PORCELAIN ROOF PAVERS



PART 1 - GENERAL

SCHEDULE - SECTION INCLUDES

- PRODUCT DATA SHEET - Porcelain roof pavers.
- PRODUCT DATA SHEET - Pedestal supports and pads for roof pavers.

SCHEDULE - RELATED REQUIREMENTS

[Specifier: Edit list of related requirements to correspond to Project.](#)

- PRODUCT DATA SHEET - Division 07 waterproofing section for protection mats for waterproofing membrane at pedestal support locations.
- PRODUCT DATA SHEET - Division 07 roofing section for protection mats for roof membrane and insulation cover boards at pedestal support locations.
- PRODUCT DATA SHEET - Section 076200 "Sheet Metal Flashing and Trim" for sheet metal flashing, edge closure, and roof drainage items.
- PRODUCT DATA SHEET - Section 077273 "Vegetated Roof Systems" for vegetated roof assemblies.
- PRODUCT DATA SHEET - Section 077613 "Roof Ballast Pavers" for precast concrete roof ballast pavers.
- PRODUCT DATA SHEET - Section 093013 "Ceramic Tiling" for ceramic floor and wall tile.
- PRODUCT DATA SHEET - Section 112429 "Facility Fall Protection" for roof-mounted fall protection equipment.
- PRODUCT DATA SHEET - Section 129300 "Site Furnishings" for roof-mounted unit planters.

SCHEDULE - REFERENCE STANDARDS

- PRODUCT DATA SHEET - American Society of Civil Engineers (ASCE) Structural Engineering Institute (SEI):
 - 1. ASCE/SEI 7 - Minimum Design Loads for Buildings and Other Structures.
- PRODUCT DATA SHEET - ASTM International (ASTM):
 - 1. ASTM E 108 - Standard Test Methods for Fire Tests of Roof Coverings
 - 1. ASTM E 1980 - Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces

SCHEDULE - PREINSTALLATION MEETINGS

- PRODUCT DATA SHEET - Preinstallation Conference: Conduct conference at Project site as part of roofing conference in coordination with installers of related work.
 - 1. Coordinate roof substrate protection installation, roof drain locations, and other elements affecting roof pavers.
 - . Verify compatibility of roofing system installation with load-bearing requirements of roof paver supports.

SCHEDULE - QUALITY ASSURANCE

PRODUCT DATA SHEET - Installer Qualifications: Experienced Installer with record of successful in-service performance of similar installations, and approved in writing by roof paver manufacturer.

Specifier: Retain "Mockups" Paragraph if scope or complexity of roof paver installation warrants a mockup. Edit requirements to suit Project.

PRODUCT DATA SHEET - Mockups: Build mockup in size and location indicated on Drawings, or if not indicated, not less than eight roof pavers and roof paver supports plus edge condition. Demonstrate methods and details of installation.

1. Approval of mockup does not relieve Contractor of responsibility to comply with all requirements of contract documents.
1. Approved mockup may become part of installation if approved by Architect.

SCHEDULE - ACTION SUBMITTALS

PRODUCT DATA SHEET - Product Data: Manufacturer's product data for specified products indicating compliance with requirements.

PRODUCT DATA SHEET - Shop Drawings: Provide shop drawings. Include full plans showing roof paver and roof paver supports layout, adjacent construction and penetrations, and details of each condition of installation and attachment.

1. Include data indicating compliance with performance requirements.
- . Indicate points of supporting structure and other construction elements that must coordinate with roof paver installation.

Specifier: Retain and edit below to comply with Project requirements for LEED or other sustainable design requirements.

PRODUCT DATA SHEET - Sustainable Design Submittals:

1. Product data indicating the following:
 - . Percentages by weight of post-consumer and pre-consumer recycled content.
 - . Total weight of products provided.
1. Product Test Reports: For roof materials, documentation indicating that roof materials comply with Solar Reflectance Index requirements.

PRODUCT DATA SHEET - Samples for Initial Selection: For each product specified, when selection is specified. Provide representative charts of manufacturer's full range of patterns and colors.

PRODUCT DATA SHEET - Samples for Verification: Provide manufacturer's standard size roof paver samples.

SCHEDULE - INFORMATIONAL SUBMITTALS

PRODUCT DATA SHEET - Installer qualifications.

PRODUCT DATA SHEET - Product Test Reports: Indicating compliance of products with performance requirements, from a qualified independent testing agency.

PRODUCT DATA SHEET - Manufacturer's Warranty: Submit sample warranty.

SCHEDULE - CLOSEOUT SUBMITTALS

PRODUCT DATA SHEET - Maintenance data.

PRODUCT DATA SHEET - Executed warranty.

SCHEDULE - MAINTENANCE MATERIAL SUBMITTALS

PRODUCT DATA SHEET - Furnish extra materials matching installed products, packaged with protective covering, with labels indicating contents.

1. Roof Pavers: Furnish full size units in quantity equal to 3 percent of number of units installed, for each type, pattern, color, and size.
1. Roof Paver Supports: Furnish units in quantity equal to 3 percent of number of units installed, for each type and size. Include manufacturer-furnished adjustment tool.

SCHEDULE - DELIVERY, STORAGE, AND HANDLING

PRODUCT DATA SHEET - Protect products during shipping, handling, and storage to prevent staining, chipping, deterioration of components or other damage.

SCHEDULE - WARRANTY

PRODUCT DATA SHEET - Manufacturer's Warranty: On Manufacturer's standard form, in which Manufacturer and Installer jointly agree to replace roof pavers and roof paver supports that fail in materials or workmanship within three years of substantial completion.

PRODUCT DATA SHEET -

PART 2 - PRODUCTS

SCHEDULE - MANUFACTURERS

PRODUCT DATA SHEET - Basis of Design: Provide listed porcelain roof pavers meeting requirements of this Section, available from Archatrak Inc., 2 Wisconsin Circle, Suite 700, Chevy Chase MD 20815; (866) 206-8316; sales@archatrak.com; www.archatrak.com [or comparable products of a manufacturer listed in this Section].

2. <Insert manufacturer name>.

PRODUCT DATA SHEET - Substitutions: [In accordance with Instructions to Bidders and Division 01 General Requirements] [Not allowed].

PRODUCT DATA SHEET - Source Limitations: Obtain each type of roof paver and roof paver support products from a single source with resources to provide materials and products of consistent quality in appearance and physical properties.

SCHEDULE - PERFORMANCE REQUIREMENTS

PRODUCT DATA SHEET - Delegated Design: Engage a qualified professional engineer to design roof paver installation.

Specifier: Retain "Structural Performance" Paragraph below along with "Delegated Design" Paragraph above when Contractor is required to take responsibility for structural design of installation. Edit to correspond to requirements of authorities having jurisdiction.

PRODUCT DATA SHEET - Structural Performance: Roof paver system shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

2. Floors: Uniform load of 125 lbf/sq. ft. or concentrated load of 2000 lbf, whichever produces the greater stress.

2. Walkways and Elevated Platforms Other Than Exits: Uniform load of 60 lbf/sq. ft.
2. Walkways and Elevated Platforms Used as Exits: Uniform load of 100 lbf/sq. ft.

Specifier: Retain subparagraph below and delete three remaining subparagraphs if roof wind uplift pressures are indicated on Drawings.

- . All Roof Zones (Corner, Perimeter, and Field-of-Roof) Uplift Pressures: As indicated on Drawings.
2. Roof Zone 1 (Field-of-Roof) Uplift Pressure: <Insert pressure> lbf /sq. ft.
2. Roof Zone 2 (Perimeter) Uplift Pressure: <Insert pressure> lbf /sq. ft., located within <Insert dimension> feet of roof perimeter.
2. Roof Zone 3 (Corners) Uplift Pressure: <Insert pressure> lbf /sq. ft., located within <Insert dimension> feet of roof outside corner.

Specifier: Retain "Solar Reflectance Index" Paragraph below if "cool-roof" performance is required; edit to suit Project. Verify availability of products meeting requirements.

PRODUCT DATA SHEET - Solar Reflectance Index (SRI): SRI not less than [78] when calculated according to ASTM E 1980.

PRODUCT DATA SHEET - Combustion Characteristics: Roof paver system shall meet Class A flame spread requirements of ASTM E 108 when tested by a qualified independent testing laboratory acceptable to authorities having jurisdiction.

SCHEDULE - PORCELAIN ROOF PAVERS

PRODUCT DATA SHEET - Structural Porcelain Pavers 2cm: Porcelain pavers, abrasion, freeze/thaw, chemical, and stain-resistant, intended for exterior use on specified paver supports.

2. Basis of Design: [Archatrak, Kronos Ceramiche SPA](#), <Insert color or pattern name> [color and pattern as selected by Architect].
2. Size: [24 by 24 inches] [24 by 48 inches] [48 by 16 inches] [36 by 18 inches], nominal.
2. Thickness: 3/4 inch, nominal.
2. Weight: 9 lb/sq. ft.

PRODUCT DATA SHEET - Structural Porcelain Pavers 3cm: Porcelain pavers, abrasion, freeze/thaw, chemical, and stain-resistant, intended for exterior use on specified paver supports.

2. Basis of Design: [Archatrak, Kronos Ceramiche SPA](#), <Insert color or pattern name> [color and pattern as selected by Architect].
2. Size: [24 by 24 inches] [16 by 32 inches], nominal.
2. Thickness: 1 1/8 inch, nominal.
2. Weight: 13.5 lb/sq. ft.

PRODUCT DATA SHEET -

SCHEDULE - PAVER SUPPORTS

Specifier: Retain one or both of the following "Supports" paragraphs based upon support types required for Project.

PRODUCT DATA SHEET - Adjustable Height Pedestal Supports: Continuously variable adjustable height high-density copolymer polypropylene screw-jack-type supports accommodating height adjustments from 1-1/8 inch to 21-3/4 inches and slope substrate compensation up to five percent, with cushioned SBR rubber top fitting providing support for specified pavers, and adjustable fittings as required to provide level paver installation as indicated.

2. Basis of Design Product: [Archatrak, Eterno Adjustable Pedestal System](#).

- . Load Capacity: Not less than 2,000 lb.
- . Paver Spacer Tabs: 5/32 inch (4 mm).
- . Shims: Support manufacturer's standard.

PRODUCT DATA SHEET - Fixed Height Pad Supports: SBR rubber cushioning pads of varying thickness with shims and spacers, accommodating height adjustments from 3/8 inch to 1-1/2 inch, with top fitting providing support for specified pavers.

2. Basis of Design Product: [Archatrak Fixed Height Paver Supports](#).
- . Load Capacity: Not less than 1,500 lb.
- . Paver Spacer Tabs: 5/32 inch (4 mm).
- . Shims: Support manufacturer's standard.

PART 3 - EXECUTION

SCHEDULE - EXAMINATION

PRODUCT DATA SHEET - Examine substrates and conditions, with Installer present, for compliance with manufacturer's requirements for installation tolerances and other conditions affecting performance of the Work.

PRODUCT DATA SHEET - Proceed with installation only after unsatisfactory conditions have been corrected.

SCHEDULE - PREPARATION

PRODUCT DATA SHEET - Coordinate placement of protection sheet at roof paver supports with work of roofing section.

PRODUCT DATA SHEET - Lay out roof paver and roof paver support locations and mark for application of protection sheet.

SCHEDULE - INSTALLATION, ROOF PAVER SUPPORTS

PRODUCT DATA SHEET - General: Set roof paver supports in locations coordinated with approved roof paver layout. Install in accordance with support manufacturer's written instructions and approved submittals. Adjust roof paver support heights prior to, and following, installation of roof pavers. Shim where fine adjustment is necessary using manufacturer-provided shims.

PRODUCT DATA SHEET - Tolerances for Roof Paver Supports:

3. Maximum of 1/16-inch height variation between adjacent roof pavers.
3. Individual roof pavers shall not vary more than 1/16 inch from level across width of the paver.
3. Paved areas shall not vary more than 1/4 inch from level in a distance of 10 feet measured at any location and in any direction.

SCHEDULE - INSTALLATION, PAVERS

PRODUCT DATA SHEET - Install roof pavers according to manufacturer's written instructions and approved shop drawings. Set in place using placement methods that result in stable installation free from rocking using sound roof pavers with no edge or surface damage. Make final in-place height adjustments using manufacturer's furnished tool.

SCHEDULE - CLEANING AND PROTECTION

PRODUCT DATA SHEET - Remove and replace loose, chipped, broken, stained or otherwise damaged roof pavers, or if roof pavers do not match adjoining units or pattern indicated on Drawings.

PRODUCT DATA SHEET - Cleaning: Remove soiling from exposed roof paver surfaces, wash and scrub clean.
Leave joints between roof pavers open and clean of debris to allow for proper drainage and air flow.

PRODUCT DATA SHEET - Provide final protection and maintain roof pavers without damage or deterioration
at time of substantial completion.

END OF SECTION