

SECTION 07 76 00 – COMPOSITE ROOF PAVERS

This specification is provided as a courtesy on an as-is basis, and is not intended to substitute for specific design services provided by an architect, engineer, roof consultant, or other design professional. It is in the building owner's interest to consult with these professionals prior to executing the specified project. The building owner will ultimately assume the entire risk as to results, quality and performance of the roofing system specified.

EDITOR'S NOTE: Text underlined and/or red in color must be addressed to complete a final specification document. It is the sole responsibility of the editor to exercise appropriate care and sound professional judgment in the execution of this task.

PART 1 – GENERAL

1.1 SUMMARY

A. A Composite Roof Paver System consisting of:

1. AZEK Pavers, Choose Either Height and Any or All Sizes: AZEK Resurfacing Pavers sizes 8"x8", 4"x8", 4"x4" with 1.75" height or AZEK Standard Pavers sizes 8"x8", 4"x8", 4"x4" with 2.40" height brick-shaped pavers, color(s) selected by the designer and indicated below, set on a 16" x 16" grid in the pattern(s) indicated below.
2. Drainage mat, with woven or dimpled design and attached filter layer on top and bottom, must be installed under the composite paver assembly.

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM).
- B. Canadian Standards Association (CSA).
- C. Underwriters Laboratories (UL).

1.3 GENERAL CONDITIONS

A. As specified in Section_____.

1.4 RELATED SECTIONS

Choose One:

- A. Section 07 53 23 – Ethylene-Propylene-Diene-Monomer (EPDM) Membrane Roofing: Single ply elastomeric roofing system.
or
- A. Section 07 54 23 –Thermoplastic Polyolefin (TPO) Membrane Roofing: Single ply elastomeric roofing system.
or
- A. Section 07 52 16 –Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing: multi-ply bituminous membrane roofing.

B. Section 07 71 00 - Roof Specialties: Manufactured copings, fascias, gravel stops, and other flashing-related items.

1.5 SUBMITTALS

- A. Product Data: Include manufacturer's specification and testing sheet.
- B. Shop Drawings: Include Setting Drawings showing layouts, sizes, sections, profiles, and any other applicable details for AZEK Pavers and drainage mat.
- C. Samples – For the following products:
 - 1. AZEK Pavers, one brick of each selected color, **Choose One:**
Resurfacing 4"x8"x1.75" or Standard 4"x8"x2.40", set on a 16" x 16" grid.
 - 2. Drainage mat, 5" x 5" sample
- D. Manufacturer's Instructions: Include manufacturer's installation instructions, noting any special procedures and/or conditions requiring special attention.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Utilize an installer having successfully completed AZEK Pavers installation similar in design, material and extent indicated on this project, or an installer that agrees to receive training from AZEK Pavers on proper installation protocol and best practices.
- B. Provide AZEK Paver products that are free of cracks, seams, and defects impairing appearance, structural integrity or function.
- C. Contractor shall conform to all local, state licensing and bonding requirements.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to project site in original packages.
- B. Store materials in a clean, dry location.

1.8 FIELD CONDITIONS

- A. Roofing system installation must be complete at area where AZEK Pavers are to be installed.

PART 2 - PRODUCTS

2.1 AZEK Pavers

A. Manufactured by: AZEK Building Products, Scranton, PA www.azek.com.

B. AZEK Pavers,

1. Color(s): **Choose Any or All: [Redwood](#), [Boardwalk](#), [Village](#), [Waterwheel](#), [Olive](#);**
2. Dimensions, and thickness: **Choose Either Height and Any or All Sizes: [AZEK Resurfacing Pavers sizes 8"x8", 4"x8", 4"x4" with 1.75" height](#) or [AZEK Standard Pavers sizes 8"x8", 4"x8", 4"x4" with 2.40" height](#), with 16"x16" installation grid. Dimensions are based on manufacturer's standard drawings.**

C. Composite Roof Pavers must meet the following required technical specifications,

1. Nominal Weight: **Choose one: [Resurfacing 11.3 lbs](#) or [Standard 16.1 lbs](#)** per each (pavers set in one grid).
2. Coverage: 1.78ft² per each (pavers set in one grid).
3. Water Absorption: <1% when tested in accordance with ASTM C-140, or CSA A231.1 – 99.
4. Recycled Content: up to 95% postconsumer recycled content.
5. Compressive Strength (2.0" thickness only): >2000psi, per ASTM C140-09 Section 7.
6. Flexural Strength (2.0" thickness only): Ultimate Flexural Strength 695psi, Flexural Modulus 3842psi, per ASTM C140-09 Annex A6.
7. Coefficient of Friction: Dry (static) 0.99, Wet (static) 0.67; per ASTM C1028-07 (Neolite pad). Dry (static) 0.57 / (sliding) 0.46, Wet (static) 0.94 / (sliding) 0.86) per ASTM D2394-05e1.
8. Coefficient of Thermal Expansion: 44×10^{-6} at 68°F.
9. Flame Spread, Intermittent Flame, Burning Brand: ASTM E108-007 (tested at 1/2":12" slope), Class "C"; meets UL94 Section 7 (horizontal burn rate less than 0.1" per second).
10. Chemical Resistance: No visual discoloration after 30 day exposure to household bleach or muriatic acid. No known discoloration due to exposure to road/deicing salt (sodium chloride or magnesium chloride), engine oil, grease, or common household cleansers.
11. Cold Water Absorption: PASS <1% by mass, average saturation coefficient (after 1 hour boil): 0.05, per ASTM C67 Section 8.
12. Freeze-Thaw Cycling: PASS freeze-thaw cycled 52 times over 75 days; no visual signs of cracking, warping, or crazing; per ASTM C67 Section 9.

D. Drainage mat

1. Thickness: 0.30" to 0.50".
2. Woven or Dimpled Design (e.g. EnkaDrain 3801 or SiteDrain 186).

3. Protection Fabric on both sides.
4. Roll Size: 4.0' x 50.0'.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance.
- B. Verify that the roof membrane installation is completed.
- C. Verify that all identified defects in the roof membrane have been repaired to the satisfaction of the roof membrane manufacturer prior to installation of drainage mat and AZEK Pavers.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 SURFACE PREPARATION

- A. All substrates must be clean, dry, smooth, free of sharp edges, fins, loose or foreign materials, oil, grease, and other materials which may damage the roofing membrane, prior to installation.

3.3 INSTALLATION

- A. Lay drainage mat sections tight together, with the length of the drainage mat going with the slope of the roof.
- B. Cut the drainage mat to fit the area to be covered by AZEK Pavers, and around any protrusions or drains (a box cutter may be used).
- C. Begin laying grids starting from one corner. Lay out at least 10 grids to allow for sufficient room to work. Offset seams of the grids with seams of the drainage mat for best results.
- D. Grids can be cut to fit using a mitre saw or jigsaw. If the ending grid is less than 4", cut off 4" or 8" of the grid before it, so the ending grids can be longer and will connect with overlapping pavers.
- E. Bring stacks of pavers to the starting point. Empty pavers off of the grid.
- F. Lay pavers using chosen pattern (e.g. herringbone, basket weave, running bond), mixing different colors if desired. At least one paver must overlap the adjacent grid in all directions, connecting the grids together. Continue laying out grids and pavers until all full pavers are installed
- G. Field cutting of pavers: Use a mitre saw or jigsaw. Install cut pavers last.
- H. Adhering Pavers to Grid: desired in certain cases to mitigate wind uplift, around drains, or when pavers have been cut. Use a solvent-based advanced polymer adhesive or a water-based adhesive designed for landscaping, place a 1/8" bead across the top ribs of the grid, set the paver in place and press firmly, leaving the paver in place for the duration of the adhesive cure time.

3.4 PROTECTION AND CLEANING

- A. Do not permit foot or vehicular traffic on unprotected membrane or on adhered pavers during adhesive cure time.
- B. Protect roofing membrane from damage and wear during the remainder of the construction period.
- C. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by the manufacturer of the affected construction.
- D. Do not sweep sand into paver joints.

END OF SECTION