

EVALUATION REPORT

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Manufacturer: **Bison Innovative Products**
701 Osage Street, Bldg 2, #120
Denver, CO 80204
T: 800-333-4234

Code: Florida Building Code - Building, 8th Edition (2023), Non-High Velocity Hurricane Zone

Product Category: Structural Components/Products Introduced as a Result of New Technology

Compliance Method: Rule 61G20-3 Method 1(d), Evaluation Report from a licensed Florida Professional Engineer.

Product Name: **Bison Paver Tray/Slab Paver Wind System**

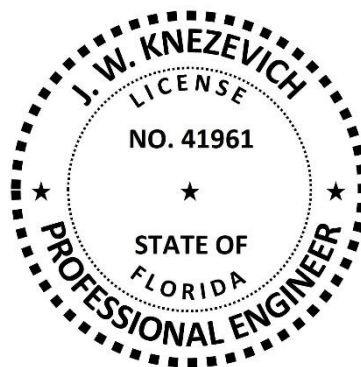
Description: Composite paver system consisting of concrete or stone pavers, adhesive and steel tray on adjustable height pedestals and FS-12 fastening kits with a perimeter ledger to provide roof top decks with a finished walkable surface, an Independent Exterior Elevated Flooring System.

Purpose: This Evaluation Report is issued in accordance with Rule 61G20-3 pertaining to Product Approvals issued by the Florida Building Commission.

Compliance: This Independent Exterior Elevated Flooring System has been evaluated in accordance with **FBC Sections 104.11 and 3115.4** and found to be in compliance with the referenced Code and is, for the purpose intended, at least equivalent to that required by the Code. This Evaluation Report is valid provided there are no changes to the product, quality assurance program, or referenced code. A re-evaluation of the product is required following any code changes in order to maintain its validity.

This item has been digitally signed and sealed by John W. Knezevich PE on the date adjacent to the seal.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



01/10/2025

Evaluation Report Prepared by:
Knezevich Consulting, LLC

John W. Knezevich, PE
President
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FL CA No. 27988
FBC Organization ID No. ANE1754

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1. Supporting Materials:

1.1. Test Reports:

1.1.1. FIU's NHERI Experimental Facility

1.1.1.1. Report Number 2020-156e-02, Configuration 1, dated 03/12/2021; ASCE 7-16, Ch. 31.

1.1.2. ICC NTA:

1.1.2.1. Report No. BIP120822-68(R0), dated March 15, 2023; CISCA-07, Level.It Pedestal Axial Load Test, Maximum Allowable Load = 1,000 lbs.

1.1.2.2. Report Number BIP052220-19(R0) dated 09/01/2020; ASTM E661-03, Foot Traffic and ASTM E2322-15, Uniform Load.

1.1.2.3. Report Number BIP011521-57B(R0) dated 06/01/2021; ASTM C297-88, Tensile Bond; ASTM D905-89, Shear Bond; and ASTM D1183-87, Cyclic Aging.

1.1.3. Smith-Emery Laboratories:

1.1.3.1. Lab No. L16-128.R1, dated March 3, 2016; CISCA-2007, Screwjack Pedestal Axial Load Test, Maximum Allowable Load = 1,250 lbs.

1.1.3.2. Lab No. L16-301, dated March 17, 2016; CISCA-2007, Versadjust Pedestal Axial Load Test, Maximum Allowable Load = 1,250 lbs.

1.1.4. PRI Construction Materials Technologies

1.1.4.1. Project No. BDS-006-02-01 dated 01/08/2014; ASTM G155-13, Accelerated Weathering; and ASTM D638-03, Tensile Properties.

1.2. Technical Research:

1.2.1. Towards Guidelines for Design of Loose-laid Roof Pavers for Wind Uplift; Wind and Structures, Vol. 22, No. 2 (2016).

1.2.2. Design Guidelines for Roof Pavers against Wind Uplift; ASCE/SEI Structures Congress, April 2015.

1.2.3. Wind Uplift of Roof Pavers; FIU International Hurricane Research Center, July 2013.

1.3. Product Evaluation Document:

1.3.1. Knezevich Consulting, LLC Drawing No. KC25-0116, dated January 9, 2025, Sheets 1 through 6. The Product Evaluation Document (PED) is an integral part of this Evaluation Report.

1.4. Structural Calculations:

1.4.1. Calculations prepared by John W. Knezevich, PE analyze the Exterior Elevated Flooring System to resist loads in accordance with FBC Section 3115.4.

1.5. Quality Assurance

1.5.1. Quality assurance inspection program conducted by UL LLC shall be maintained.

2. Impact Resistance:

2.1. This Exterior Elevated Flooring System is not part of the protective building envelope and is not resistant to large or small missile impact.

3. Wind Load Resistance:

3.1. This Exterior Elevated Flooring System is designed and tested to resist wind at specific combinations of paver size, basic wind speed, exposure category, and building height as shown in Tables 1 & 2 of the PED. Alternatively, combinations of paver size and allowable uplift pressure are provided in Tables 1 & 3 of the PED. Reference General Notes 7 & 8 of the PED for additional information.

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4. Installation:

- 4.1. Installation, including retention at perimeter parapet structure and interior discontinuous edges, shall be in accordance with the Product Evaluation Document referenced herein.
- 4.2. Concrete paver surface preparation shall be as detailed in the Adhesive Surface Preparation notes of the PED. Pavers with other concrete surface finishes and all stone pavers shall have paver to tray adhesion verified with ASTM C297 tensile bond strength testing achieving an average tensile strength of 46 psi on the actual bonding area.

5. Material Specifications:

- 5.1. Component materials, anchors, and structural substrates acceptable for use shall be in accordance with the Product Evaluation Document.

6. Limitations and Conditions of Use:

- 6.1. This is a building code evaluation report addressing the referenced sections of the Florida Building Code. Knezevich Consulting, LLC nor John W. Knezevich, PE are the Design Professional of Record for any project on which this Evaluation Report is used for permitting or design guidance unless retained specifically for that purpose.
- 6.2. This Evaluation Report is not for use in FBC HVHZ jurisdictions.
- 6.3. This evaluation report covers uses as detailed in the referenced Product Evaluation Document. Conditions outside the scope of those documents are not within the scope of this evaluation.
- 6.4. For specific applications of the system, the Product Evaluation Document shall be evaluated for compliance with project requirements by a registered Architect or licensed Engineer.
- 6.5. Fire classification is not part of this Evaluation Report. Refer to manufacturer's literature for additional information.

7. Certificate of Independence

- 7.1. Knezevich Consulting, LLC does not have, nor will it acquire, a financial interest in any company manufacturing or distributing products for which this evaluation report is issued.
- 7.2. Knezevich Consulting, LLC is not owned, operated, or controlled by any company manufacturing or distributing products evaluated in this report.
- 7.3. John W. Knezevich, PE does not have, nor will acquire, a financial interest in any company manufacturing or distributing products for which this evaluation report is issued.
- 7.4. John W. Knezevich, PE does not have, nor will acquire, a financial interest in any other entity involved in the approval process of products for which this evaluation report is issued.