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PAVER TRAY *Specification*

Ideal for use with Bison Pedestals, the Bison Paver Tray offers a simple and lightweight paver backing to enhance the impact resistance and provide additional strength to paver surface materials for outdoor areas. The Bison Paver Tray can be adhered to the desired surface pavers on site before or during installation. Recommended for use with Bison Pedestals ranging from 1/8" to 36" in height, the Bison Paver Tray attaches to Bison Pedestals 1/2" in height or taller using the Bison FS-12 Fastening Spline.

Bison Paver Tray System Specification
SECTION 073214 Ceramic and Porcelain Roof Tiles

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Bison Paver Tray for use with ceramic or porcelain roof pavers on pedestal systems.

1.2 RELATED SECTIONS

*** NOTE TO SPECIFIER ** Delete any sections below not relevant to this project; add others as required.*

A. Section 042000 – Unit Masonry and Accessories
B. Section 044000 – Stone Assemblies
C. Section 044100 – Dry-Placed Stone
D. Section 075000 – Membrane Roofing
E. Section 077246 – Roof Walkways
F. Section 077600 – Roof Pavers
G. Section 077616 – Roof Decking Pavers
H. Section 093000 – Tiling
I. Section 096900 – Access Flooring
J. Section 321400 – Unit Paving

1.3 REFERENCES

*** NOTE TO SPECIFIER ** Delete references from the list below that are not actually required by the text of the edited section.*

Bison Paver Tray and 2CM Paver System Testing:

A. ASTM C297 – Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions
B. ASTM D905 – Standard Test Method for Strength Properties of Adhesive Bonds in Shear by Compressive Loading
C. ASTM D1183 – Standard Practice for Resistance of Adhesives to Cyclic Laboratory Aging Conditions
D. ASTM E108 – Standard Test Methods for Fire Tests of Roof Coverings
E. ASTM E136 – Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750°C
F. ASTM E661 – Standard Test Method for Performance of Wood and Wood-Based Floor and Roof Sheathing Under Concentrated Static and Impact Loads
G. ASTM E2322 – Standard Test Method for Conducting Transverse and Concentrated Load Tests on Panels used in Floor and Roof Construction
H. CISCA Association Recommended Test Procedures for Access Floors - Section 7 Uniform Load Test
I. LARR 26041 – Versadjust FR Pedestal System up to 36", Bison Paver Tray and 2CM Paver
J. LARR 26198 – ScrewJack FR Pedestal System up to 24", Bison Paver Tray and 2CM Paver
K. UL TGFU R38623 – UL Exterior Fire Classifications

1.4 SUBMITTALS

A. Submit under provisions of Section 013300.
B. Product Data: Manufacturer's data sheets on each product to be used, including:
    1. Preparation instructions and recommendations.
    2. Storage/Handling requirements and recommendations.
    3. Installation methods.
C. Shop Drawings: Submit shop drawings detailing the installation methods. Coordinate placement with locations noted on the Contract Drawings.
D. Fire Resistance Ratings: As required for exterior pedestal supported deck systems by the presiding jurisdiction.
E. Wind Uplift Ratings: As required for exterior air permeable pedestal supported deck systems by the presiding jurisdiction.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: All primary products specified in this section will be supplied by a single Manufacturer with five (5) years of experience minimum.
B. Installer Qualifications: Bison recommends the Installer have a minimum of two (2) years proven construction experience, be capable of estimating and building from blueprint plans and details, determining elevations, and properly handling materials. All work must comply with the Bison installation procedures for pedestals specified herein.
C. Special Considerations: The Contractor assumes the responsibility for and must take into consideration the structural capability and adequacy of the structure to carry the dead and live load weight(s) involved, and when appropriate, make sure that the density of any insulation is satisfactory to resist crushing and damaging the waterproofing membrane.
D. The Bison Pedestal System is not intended to be part of a ballasted roofing system and does not shield the underlying roofing system from wind or other loads. The underlying roofing system must be capable of resisting the full design wind or other loads appropriate for a specific project.

*** NOTE TO SPECIFIER ** Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.*

E. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
    1. Finish areas designated by Architect.

2. Do not proceed with remaining work until workmanship is approved by Architect (if applicable).
3. Refinish mock-up area as required to produce acceptable work.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store Bison Paver Trays and system components with labels intact and legible.
B. Immediately upon receipt inspect all delivered materials to ensure they are undamaged and in good condition. Claims for damages must be made to the Driver/Carrier *prior* to accepting delivery. Note any visual damage to containers or packaging material on the bill of lading *before* the Driver leaves. Any damage should be noted on the bill of lading, photographed, and then reported to Bison immediately.
C. Store Bison Paver Trays out of direct sunlight in a dry area and/or cover with tarp.
D. Store adhesive in a cool dry place between 40° and 75°F (4° and 24°C). Store and dispose of solvent-based materials such as construction adhesives or paint thinners in accordance with requirements of local authorities having jurisdiction.
E. In each Order include an additional 5-10% in spare Paver Tray material to have on hand for damage replacement; depending on the size of the job and as directed by the Architect.

1.7 PROJECT CONDITIONS

A. Bison Paver Trays listed in this section are for use with pedestrian traffic only. Bison Paver Trays are not designed for supporting decks that carry vehicular traffic or equipment, including but not limited to motorized snow removal equipment, window washing, scaffolding structures, ATV's, forklifts, or any motorized vehicles.
B. The recommended minimum installation temperature is 40°F (5°C) and rising. IMPORTANT: Ceramic and porcelain pavers can both become brittle in extremely cold conditions. Use additional caution when working with pavers in temperatures colder than 40°F (5°C). If breakage occurs, replace the paver and Paver Tray immediately.
C. It is recommended that the Bison Paver Trays sit above the waterproofing, integral flashing, and/or counter flashing. In situations where the perimeter of the deck contacts the flashing material, protective wall covering should be specified if deemed necessary.
D. Bison Paver Trays are made of G90 galvanized steel which provides resistance to but will not completely prevent corrosion. Any cut edges should be sealed with primer or cold galvanizing spray to readminister the galvanizing layer. Bison Paver Trays should NOT be installed fully submerged in any type of water. Accelerated corrosion can occur when Bison Paver Trays are used in tidal areas or in direct contact with highly chlorinated or salt water which reduces the normal lifespan of the product.
E. IMPORTANT: It is the responsibility of the installer to make sure the installation of the Bison Paver Tray System meets all local and national codes, including but not limited to the National Electrical Code, regarding installations around swimming pools or other water features, which may require grounding and/or bonding. Failure to do this may void warranties or cause the risk of shock or serious injury for which Bison is not responsible.
F. Bison recommends designating zones in each project that provide for heavier features with additional pedestal supports and/or different deck materials under the finished feature. Refer to pedestal specifications and details for additional information on weight capacities and supports. Any feature that creates vibration, cell phone towers, heavy planters, and other similar features require their own separate support designed by an Architect or Engineer of Record. Any deck features that provide a concentrated load must have extra supports in addition to the primary pedestal grid that supports the walk deck. Features supported by legs or feet are not advised and are considered unacceptable because of the consequences of point loading. Bison does not recommend point loading pavers as likelihood for damage is greatly increased. Permanent features and items greater than 250 lbs (113 kg) should be installed directly on pedestals in lieu of installing over surface pavers. Features weighing less than 250 lbs. (113 kg) may be installed on top of pavers as long as weight is evenly dispersed. Bison recommends designating zones in each project that provide for heavier features with additional pedestal supports and/or reinforced deck materials under the finished pavers.

1.8 WARRANTY

A. At project closeout and upon request, Bison can provide to the Owner or Owner's Representative an executed copy of the Manufacturer's standard document outlining the terms, conditions, and limitations of their limited warranty against manufacturing defects for a period of five (5) years. Bison must approve all warranty related repairs, and unauthorized repairs void this limited warranty.
B. The Contractor warrants that his work will remain free from defects of labor and materials used in conjunction with his work in accordance with the General Conditions for this project or a minimum of five (5) years.
C. It is the responsibility of the Contractor installing the product listed in this section to coordinate warranty requirements with any related sections or adjacent work. Notify the Architect immediately of any potential lapses or limitations in warranty coverage.
D. Bison Paver Trays are covered by a limited five (5) year warranty. Bison Paver Trays are warrantied to the original Owner to be free of defects in material and workmanship for the period of five (5) years from the date of purchase. Damage to the Bison Paver Tray resulting from impact or broken surface material is not covered by the warranty. Bison is not responsible or liable for the cost of any Bison Paver Tray that breaks unless such breakage is caused by a defect in material or workmanship. This warranty applies to conditions of normal use, as defined herein, and does not apply to damage resulting from abuse, excess weight, impact, or acts of nature. Bison's sole and exclusive liability under this warranty is limited to the replacement cost of any defective Bison Paver Tray. This warranty does not cover shipping damage. Shipping damage must be reported directly to Bison immediately upon receipt of products. Please save all product packaging for a short period of time in case return shipping is required. Bison makes no other warranties, either express or implied, with respect to the use of the Bison Paver Tray, including warranties of merchantability or fitness for a particular purpose.

1.9 MANUFACTURERS

***NOTE TO SPECIFIER** Retain one of the following paragraphs 1.9 A-C; to coordinate with requirements of Division 1 section on product options and substitutions.*

A. Acceptable Bison Paver Tray Manufacturer: Bison Innovative Products; 701 Osage Street, Unit 120, Denver, CO 80204.
Toll Free 800-333-4234. Phone 303-892-0400. Fax 303-825-5988. Email: info@bisonip.com. Web: www.bisonip.com.
B. Substitutions: Not Permitted.
C. Requests for substitutions will be considered in accordance with provisions of Section 012500.

PART 2 PRODUCTS

The Bison Paver Tray will not prevent any surface material from cracking, chipping, or breaking. In the event the surface material cracks, chips, or breaks, the Bison Paver Tray is designed to help prevent an individual from falling through the paver surface to the subsurface below. The Bison Paver Tray is intended to support the surface material after absorbing impact for a limited time. To avoid further damage or injury, the customer MUST REPLACE any cracked, chipped, or broken surface materials and the accompanying Bison Paver Trays as soon as possible. The Bison Paver Tray is not intended to be a reusable product and must be replaced with the

surface paver. When using Bison Paver Trays with customer supplied surface materials, including but not limited to concrete, stone, porcelain, and/or ceramic pavers not sold by Bison, the customer MUST independently verify surface material product strength, span, weight bearing capacity, material compatibility, and suitability for the intended use. IMPORTANT: Wind Uplift Systems must be installed precisely according to separate Wind Uplift Engineering documents not included herein.

2.1 BISON PAVER TRAYS

Confirm your paver sizes in metric units (mm) prior to specifying Bison Paver Trays. Bison Paver Trays can be combined to accommodate larger format pavers. See the Bison Paver Tray Assembly and Installation Guide for recommended configurations. Weight of Paver Trays represents a maximum weight, based on the recommended 1/8" DIA. bead of provided adhesive.

A. Model PT-TRAY-2424
   1. Dimensions: 23.43"L x 23.43"W x 0.35"H (595 x 595 x 9 mm)
   2. Paver Size: Fits 595-603 x 595-603 mm pavers
   3. Weight: 6.02 lbs (2.73 kg)
   4. Component Materials:
      a. G90 Galvanized 20 ga Sheet Steel – LEED Information--contains approximately: 55.2% Scrap Steel; 41.3% Alloys and other Iron Units; 37.2% Post-Consumer Recycled Content; 18.0% Pre-Consumer Recycled Content
      b. Polyurethane Adhesive Sealant – VOC Content: 29.0 g/l; Service Temperature: -40°F-194°F; Specific Gravity: 1.17 g/cm^3; Tack-Free Time @73°F and 50% Relative Humidity: 50-90 minutes; Rate of Cure @ 73°F and 50% Relative Humidity: 3/16 in per 24hrs; Shore A Hardness ASTM C661: 45; Tensile Strength ASTM D412: 450 psi; 100% Modulus ASTM D412: 150 psi; Weight: 0.12 lbs

B. Model PT-TRAY-1818
   1. Dimensions: 17.52"L x 17.52"W x 0.35"H (445 x 445 x 9 mm)
   2. Paver Size: Fits 445-453 x 445-453 mm pavers
   3. Weight: 3.38 lbs (1.53 kg)
   4. Component Materials:
      a. G90 Galvanized 20 ga Sheet Steel – LEED Information--contains approximately: 55.2% Scrap Steel; 41.3% Alloys and other Iron Units; 37.2% Post-Consumer Recycled Content; 18.0% Pre-Consumer Recycled Content
      b. Polyurethane Adhesive Sealant – VOC Content: 29.0 g/l; Service Temperature: -40°F-194°F; Specific Gravity: 1.17 g/cm3; Tack-Free Time @73°F and 50% Relative Humidity: 50-90 minutes; Rate of Cure @ 73°F and 50% Relative Humidity: 3/16 in per 24hrs; Shore A Hardness ASTM C661: 45; Tensile Strength ASTM D412: 450 psi; 100% Modulus ASTM D412: 150 psi; Weight: 0.07 lbs

C. Model PT-TRAY-2020
   1. Dimensions: 19.49"L x 19.49"W x 0.35"H (495 x 495 x 9 mm)
   2. Paver Size: Fits 495-503 x 495-503 mm pavers
   3. Weight: 4.18 lbs (1.90 kg)
   4. Component Materials:
      a. G90 Galvanized 20 ga Sheet Steel – LEED Information--contains approximately: 55.2% Scrap Steel; 41.3% Alloys and other Iron Units; 37.2% Post-Consumer Recycled Content; 18.0% Pre-Consumer Recycled Content
      b. Polyurethane Adhesive Sealant – VOC Content: 29.0 g/l; Service Temperature: -40°F-194°F; Specific Gravity: 1.17 g/cm3; Tack-Free Time @73°F and 50% Relative Humidity: 50-90 minutes; Rate of Cure @ 73°F and 50% Relative Humidity: 3/16 in per 24hrs; Shore A Hardness ASTM C661: 45; Tensile Strength ASTM D412: 450 psi; 100% Modulus ASTM D412: 150 psi; Weight: 0.09 lbs

D. Model PT-TRAY-2412
   1. Dimensions: 23.43"L x 11.61"W x 0.35"H (595 x 295 x 9 mm)
   2. Paver Size: Fits 595-603 x 295-303 mm pavers
   3. Weight: 3.01 lbs (1.36 kg)
   4. Component Materials:
      a. G90 Galvanized 20 ga Sheet Steel – LEED Information--contains approximately: 55.2% Scrap Steel; 41.3% Alloys and other Iron Units; 37.2% Post-Consumer Recycled Content; 18.0% Pre-Consumer Recycled Content
      b. Polyurethane Adhesive Sealant – VOC Content: 29.0 g/l; Service Temperature: -40°F-194°F; Specific Gravity: 1.17 g/cm3; Tack-Free Time @73°F and 50% Relative Humidity: 50-90 minutes; Rate of Cure @ 73°F and 50% Relative Humidity: 3/16 in per 24hrs; Shore A Hardness ASTM C661: 45; Tensile Strength ASTM D412: 450 psi; 100% Modulus ASTM D412: 150 psi; Weight: 0.05 lbs

E. Model PT-TRAY-2416
   1. Dimensions: 23.43"L x 15.55"W x 0.35"H (595 x 395 x 9 mm)
   2. Paver Size: Fits 595-603 x 395-403 mm pavers
   3. Weight: 4.00 lbs (1.81 kg)
   4. Component Materials:
      a. G90 Galvanized 20 ga Sheet Steel – LEED Information--contains approximately: 55.2% Scrap Steel; 41.3% Alloys and other Iron Units; 37.2% Post-Consumer Recycled Content; 18.0% Pre-Consumer Recycled Content
      b. Polyurethane Adhesive Sealant – VOC Content: 29.0 g/l; Service Temperature: -40°F-194°F; Specific Gravity: 1.17 g/cm3; Tack-Free Time @73°F and 50% Relative Humidity: 50-90 minutes; Rate of Cure @ 73°F and 50% Relative Humidity: 3/16 in per 24hrs; Shore A Hardness ASTM C661: 45; Tensile Strength ASTM D412: 450 psi; 100% Modulus ASTM D412: 150 psi; Weight: 0.08 lbs

F. Model PT-TRAY-2418
   1. Dimensions: 23.43"L x 17.52"W x 0.35"H (595 x 445 x 9 mm)
   2. Paver Size: Fits 595-603 x 445-453 mm pavers
   3. Weight: 4.51 lbs (2.05 kg)
   4. Component Materials:
      a. G90 Galvanized 20 ga Sheet Steel – LEED Information--contains approximately: 55.2% Scrap Steel; 41.3% Alloys and other Iron Units; 37.2% Post-Consumer Recycled Content; 18.0% Pre-Consumer Recycled Content
      b. Polyurethane Adhesive Sealant – VOC Content: 29.0 g/l; Service Temperature: -40°F-194°F; Specific Gravity: 1.17 g/cm3; Tack-Free Time @73°F and 50% Relative Humidity: 50-90 minutes; Rate of Cure @ 73°F and 50% Relative Humidity: 3/16 in per 24hrs; Shore A Hardness ASTM C661: 45; Tensile Strength ASTM D412: 450 psi; 100% Modulus ASTM D412: 150 psi; Weight: 0.09 lbs

2.2 BISON PAVER TRAY FASTENER

A. Model: FS-12 Spline – Secures Bison Paver Tray Assemblies to Bison Pedestals
   1. Strongly recommended for use with Bison Pedestals and Paver Tray Assemblies.

2. Components: Spline, long screw, and short screw – long screw for use with Bison Adjustable Pedestals; short screw for use with Bison HD50 and HD75 Fixed Height Pedestals.
3. Tab: 3/16” (4.5 mm).
4. Length: 12” (305 mm).
5. Weight: 1.41 oz (40 g).
6. Material: Mineral Filled High Density Copolymer Polypropylene (Bison #B-PP-2025).
7. Contains 20% post-industrial recycled material.

PART 3 EXECUTION

3.1 EXAMINATION

*** NOTE TO SPECIFIER ** Revise the next paragraph to accommodate method of installation on the project.*

The Bison Paver Tray System is not designed for supporting decks that carry vehicular traffic or equipment including but not limited to snow removal equipment, window washing or other scaffolding, ATV’s, forklifts, or any motorized vehicles. Decks must be restrained by perimeter blocking or walls on all sides. Lateral movement greater than 3/16” inch (4.5 mm) is unacceptable and will be rejected.

A. Consult the Manufacturer and/or an Engineer regarding the following:
   1. When design requires spacing between pavers other than the standard spacing required by the manufacturer.
   2. When load capacity exceeds the maximums listed.
   3. When using pavers over pedestals on grade (soil).
   4. When using features with point loads greater than 100 lbs (45.36 kg).
   5. When installing a deck using pedestals over 36” (914 mm) in height.
   6. When installing over a joist system.
   7. When installing the Bison Paver Tray with surface materials other than 2cm pavers.
B. Prior to Bison Paver Tray and paver assembly and/or installation verify the following:
   1. All elevations and deck dimensions are consistent with information submitted to Bison for quoting and/or take-off.
   2. Special features and anticipated live/dead loads on the Paver Tray Assemblies are compatible with the deck system.
   3. Substrates have been properly prepared, and the project is set to proceed. If substrate preparation is the responsibility of another Installer, notify Architect of unsatisfactory preparation before proceeding. Verify all elevations, potential obstructions, and deck dimensions before commencing work.

3.2 PREPARATION

A. The substrate surface that will receive the Bison Pedestals and Paver Trays must be:
   1. Well compacted if on-grade.
   2. Structurally capable of carrying all anticipated live and static loads.
   3. Clean and free of debris that could impair the performance of the Bison Pedestals.
B. Prior to assembling the Bison Paver Tray and 2cm paver, Bison recommends that the installer verify the as built conditions of the job and inventory materials.
C. Be aware that stone, ceramic, or porcelain tiles/pavers tend to be brittle and fragile. Take time to determine how you will handle and install the pavers to ensure they are not damaged during the installation process. Wear puncture resistant work gloves when handling to protect hands from pinching, cuts, or other possible hand injuries.
D. The Bison Paver Tray can be adhered to the desired surface pavers on site PRIOR TO or DURING INSTALLATION. Determine a method for assembling the paver to the Bison Paver Tray which:
   1. Prevents damage to the paver surface.
   2. Ensures the Bison Paver Tray is adhered to the paver properly (i.e. square/flush).
E. Paver Tray Pre-Installation Assembly – Adhering a 2cm Paver to the Paver Tray PRIOR TO INSTALLATION:
   1. During assembly, limit exposure to moisture, direct sunlight, and temperatures outside of 40°F to 100°F (5°C to 37°C). CAUTION: Use gloves when handling trays.
   2. Squarely place a paver finish face down over four (4x) pedestals. Pull pavers from different pallets and/or boxes in order to achieve an even color distribution.
   3. Run a 1/8” DIA. bead of provided adhesive, offset 1/4” from the top outer edge of the tray, and a 1/8” DIA. bead alongside each line of holes. IMPORTANT: For proper adhesion and performance, adhesive must be applied exactly as described. To prevent moisture from entering between paver and tray, a continuous perimeter bead of adhesive must be installed along the edge of the tray.
   4. Place the adhesive side of the tray squarely onto the paver, carefully aligning by hand to make sure that the tray does not extend beyond any edge of the paver.
   5. Repeating the first four steps, gently lay each new paver on top of the previous tray, rotating placement as assembly continues. Stacking no more than ten (10x) paver tray assemblies high, let sit for 2 to 4 hours, or until the adhesive has cured, before handling.
F. Once the Paver Tray Assemblies are stacked, establish the deck layout and arrange pedestals for the initial layout (e.g. T-Method). It is easier to set the preliminary height of the pedestals before installing the pavers. Establish accurate lines, levels, pattern, and perimeter containment. Use a laser level to determine even and level paver height across the desired deck surface.

3.3 INSTALLATION

A. Reference the current version of Bison Paver Tray Assembly & Installation Guide and CAD Details for recommended installation procedures. NOTE: Additional Bison Installation Details are available online at www.bisonip.com. If a scenario is encountered during installation which is not covered in the Guide or Details, please contact Bison.
B. Paver Tray & 2cm Installation Assembly – Adhering a 2cm Paver to the Paver Tray DURING INSTALLATION:
   1. During installation assembly, limit exposure to moisture, direct sunlight, and temperatures outside of 40°F to 100°F (5°C to 37°C). CAUTION: Use gloves when handling trays.
   2. Place a paver tray on four (4x) pedestals and remove tabs as needed for perimeter placement and also along the path of the FS-12 fasteners.
   3. Run a 1/8” DIA. bead of provided adhesive, offset 1/4” from the top outer edge of the tray, and a 1/8” DIA. bead alongside each line of holes. IMPORTANT: For proper adhesion and performance, adhesive must be applied exactly as described. To prevent moisture from entering between paver and tray, a continuous perimeter bead of adhesive must be installed along the edge of the tray.
   4. Place the 2cm paver squarely onto the tray, carefully aligning by hand to make sure that the tray does not extend beyond any edge of the

paver. Pull pavers from different pallets and/or boxes in order to achieve an even color distribution.
5. Repeat the first four steps, moving out from the perimeter wall.
6. Following the Bison T-Method, as installation progresses out from the perimeter wall, work can also begin along the length of the wall. Place FS-12 fasteners in the channel created between the bottom of the paver and the tray as installation continues outward. These will help to maintain spacing and will be screwed into the pedestals to lock the system together. Once all pavers are installed and adhesive has had time to cure, carefully remove the FS-12 posts with pliers to avoid chipping. DO NOT attempt to hammer the spline posts.

C. General Safety Precautions: Wear safety glasses with side shields (or a safety visor which protects one's face and eyes) when cutting this product, or during any process which may generate excessive dusts and burrs. Respirators must be worn if the ambient concentration of airborne contaminants exceeds prescribed exposure limits (see OSHA Guidelines). Dust masks may be worn to avoid the inhalation of nuisance dust, but dust masks are not adequate protection in environments above the occupational exposure limit. Any cutting or grinding process which could generate airborne particulates should be done outdoors or in a well-ventilated area. Refer to product SDS for more information. If installing Bison Paver Trays near Bison Wood Tiles take EXTREME CAUTION to cover the Wood Tiles and prevent grinding dusts from settling on them, as the galvanized dust reacting with the acetic acid in the wood can lead to black spotting on the Wood Tiles as the iron in the dust begins to oxidize into a black-colored rust.

D. The recommended minimum installation temperature is 40°F (5°C) and rising. IMPORTANT: Pavers can become brittle in extremely cold conditions. Use additional caution when handling, working with, or working on top of pavers in temperatures colder than 40°F (5°C).

E. The Bison Paver Tray System can be installed over Bison Pedestals ranging from 1/8" (3.2 mm) to 36" (914 mm) in height. The Bison Paver Tray attaches to Bison Pedestals 1/2" (13 mm) in height or taller using the Bison FS-12 Fastening Spline. Additional bracing is required for pedestal heights between 24" (610 mm) and 36" (914 mm). Please refer to the Bison Pedestal Specifications and Installation Details for more information.

F. Cutting:
1. Bison Paver Trays and 2cm pavers may be cut pre- or post-assembly. It is important to select the appropriate tools and blades before cutting the tray and paver materials.
2. For extended lifespan of the cutting blade, consider using a diamond etched porcelain/ceramic blade for cutting 2cm pavers. When cutting Paver Trays, use either a jigsaw or a steel cutting abrasive wheel. If cutting the Paver Tray before adhering, a sheet metal shear may be used.
3. If cuts are to be radial or curved, score the 2cm paver along the desired cut line, and then cut through with a smaller diameter circular blade. Scoring the paver (by itself or adhered to the Paver Tray) before cutting helps to prevent fracturing. Consider creating incremental relief cuts up to the score line if the curve causes too much stress for the blade.
4. If cutting the paver BEFORE ADHERING to the tray:
    a. Measure and cut the paver along the desired cut line.
    b. Place the cut paver atop the tray, aligning finish paver sides with the finish sides of the tray. Trace your cut line onto the tray, and then proceed to cut the tray by itself.
    c. Once cut to desired shape and size, use a metal file or angle grinder to smooth any sharp edges or burrs created along the cut line. DO NOT run your fingers along the cut line or any visible burrs.
    d. IMPORTANT: Follow Bison's recommended assembly instructions to adhere the cut tray to the cut paver including the adhesive perimeter seal between tray and paver. Remove any surface debris, and if using a wet cutting technique, dry materials prior to applying adhesive.
5. If cutting the paver and tray AFTER ADHERING:
    a. Measure and cut the paver tray assembly along the desired cut line.
    b. Once cut to desired shape and size, use a metal file or angle grinder to smooth any sharp edges or burrs created along the cut line. DO NOT run your fingers along the cut line or any visible burrs.
    c. Use a small amount cleaner to remove any adhesive from the paver or saw blade, if needed. Wash with a clean rag and mild soap to remove any slippery residue.
    d. IMPORTANT: It is necessary to apply a bead of the provided adhesive along any cut edges to maintain a continuous perimeter seal between the tray and paver. Remove any surface debris, and if using a wet cutting technique, dry materials prior to applying adhesive.
6. Paint cut edges of the tray with a primer or cold galvanizing spray to readminister the galvanizing layer removed by cutting (exposure to heat, grinding, and/or water) to prevent rusting damage.

G. Fastening to Bison Pedestals:
1. Combine the Bison Paver Tray with the Bison FS-12 Spline and Pedestals for an unparalleled combination of collapse resistance, concealed stability, and future cavity accessibility.
2. Bison strongly recommends the use of Bison Pedestals and FS-12 Splines when installing Bison Paver Trays in conjunction with surface pavers. The Bison FS-12 Spline installs quickly, securely, and allows for removal later if desired/required. The FS-12 Splines, available exclusively from Bison, secure the Bison Paver Trays to Bison Pedestals while remaining out of sight without damaging the paver surfaces. A long screw is provided for use with Bison Adjustable Pedestals, and a short screw is provided for use with Bison HD50 and HD75 Fixed Height Pedestals.
3. To install the FS-12 Spline, use the spline posts to slide FS-12 Splines into the channel between two adjacent Paver Tray Assemblies.
4. Use a T-10 star bit and the included long screw to secure the FS-12 Spline to Bison Adjustable Pedestals, or use a #1 square bit and the included short screw to secure the FS-12 Spline to Bison HD50 or HD75 Fixed Height Pedestals. Bison recommends the use of a GRK extended bit from your local hardware store for easier installation.
5. Drive the screw through the center of the spline screw slot and into the center of the pedestal top. Tighten until the screw head base is flush with the top of the spline rib. Remove spline posts with pliers, taking care not to damage the pavers. A small screwdriver can be used to manipulate the spline if the posts have been prematurely removed.

3.4 FIELD QUALITY CONTROL

A. During Installation:
1. Inspect construction progress regularly to ensure that grid lines and spacing are being maintained in a straight and consistent pattern, lateral motion is restricted, and the Paver Tray Assemblies and Pedestals are level and not rocking; shim as required. Particular attention should be paid to pedestrian entrances or access points to eliminate potential trip hazards.
2. Inspect to ensure that all perimeter sides of the deck system are securely contained to restrain all sides of the deck. Surface materials must fit tightly against all pedestal spacing tabs, and the gap or space at all perimeter edges must not exceed one tab width or 3/16" (4.5 mm).
3. While pavers are durable, they can be damaged by mishandling or careless treatment. Please note that if tools or equipment are carelessly dropped on the paver surface, chips, scratches, surface damage, cracking, and breakage can occur, especially in cold temperatures. Replace cracked, chipped, or damaged Paver Tray Assemblies immediately.

B. Immediately Following Installation: The Owner, or the Owner's Agent, shall carefully inspect the deck system to be positive that:
1. The new deck system is adequately blocked on all sides to contain and prevent lateral movement of the surface decking and related

components.
2. There is no more than one tab width spacing between any pavers or from perimeter containment [not to exceed 3/16" (4.5 mm)].
3. There is no rocking of Paver Tray Assemblies as foot traffic is applied to the surface decking.
4. All required spacer tabs and fastening kits are installed and secure.
5. The installed pavers are protected from damage which may result from continued site construction. Protect installed pavers by using sheet(s) of plywood to cover work areas and protect the pavers from chipping and breakage. Use caution if using protective plastic sheeting as it may become extremely slippery as construction dust settles.

C. After Installation: The Installer and/or Architect has the responsibility of informing the Owner about performing routine maintenance on the deck. This includes:
1. Checking for rocking pavers and properly applying shims as the substrate can settle and require pedestal adjustment.
2. Periodically checking for broken, damaged, or missing tab sets and replacing them to limit deck movement.
3. Maintaining intact and structurally sound perimeter containment.
4. IMMEDIATELY replacing cracked, chipped, broken, or damaged Bison Paver Tray Assemblies or Pedestals. If a paver requires replacement, then the Bison Paver Tray which accompanied it *also requires replacement* even if the damage to the paver appears to be only on the "surface".
5. Retaining extra pavers and Bison Paver Trays and pavers in a convenient location for future replacements.

3.5 CARE & MAINTENANCE

If available, follow surface paver Manufacturer instructions for cleaning, sealing, etc. If no information is provided by the Manufacturer, the following can serve as a general guideline. Test any cleaners in an inconspicuous area first before applying them to the installed deck to determine whether the product serves its intended purpose. In addition, always check with the roofing membrane manufacturer to ensure that any cleaning solution or product will not compromise or damage the waterproofing membrane. Remember to use safety glasses, respirators, and gloves in handling any materials that contain chemicals. Refer to product manufacturer's SDS for more information on chemical components and safe handling practices.

A. Cleaning: All spills should be cleaned as quickly as possible following the cleaning procedure below.
1. Check Manufacturer's Safety Data Sheets (SDS) for recommended personal protective equipment (safety glasses, respirators, and gloves) as well as safe handling practices, and disposal considerations in accordance with applicable laws.
2. Sweep thoroughly and mop with a clean damp mop using a pH balanced mild household detergent such as diluted dish soap to gently remove dirt, debris, or light stains.
3. Pick an inconspicuous area to clean first, before cleaning the entire deck.
4. Use ZEP ALL-IN-1 Premium Pressure Wash concentration (following recommended dilution ratio) and then thoroughly rinse.

B. Deep Cleaning:
1. Check the roofing and drainage system's SDS to ensure chemical and environmental stability of materials.
2. Follow Cleaning steps 1-3 above.
3. Focus on small areas to avoid contact with underlying tray and adhesive, as they may be adversely affected by these cleaners.
4. Use the following cleaners for the corresponding stains:
a. Dirt, grease, grime, mold, mildew, and algae: 30 Seconds Outdoor Cleaner or Simple Green Concrete and Driveway Cleaner.
b. Food, drink, dyes, oils, and organic stains: FILA CLEANALL.
c. Rust or lime scale stains: FILA DETERDEK.

C. Pressure Washing:
1. Set the pressure washer to a pressure of 1200 psi or less.
2. Test an inconspicuous area first.
3. Clean the entire deck to avoid lap marks.
4. Avoid direct pressure stream on bonding adhesive.
5. Rinse thoroughly with clean water to remove any concentrate or solutions and prevent chemical build up.
6. Remove any standing water with a squeegee to help prevent dirt or chemical deposits from drying on surfaces

D. DO NOT USE:
1. Abrasives: Cleaners, brushes with hard metal bristles, scouring pads, steel wool, or sandpaper.
2. Acidic or Alkaline substances (high or low pH): Vinegar, cleaners with acids, alcohol, ammonia, or strong alkaline agents. Low pH cleaners can damage glazed surfaces of the pavers. High pH can discolor pavers and degrade adhesive bonds.
3. Strong Oxidizing Agents: Alcohol, calcium hypochlorite, methylene chloride, potassium permanganate, liquid chlorine, or others.
4. Commercial floor scrubbers or buffing machines.

E. Sealing: Applying sealer or wax to pavers is not recommended.

F. Water and Snow Removal: Always rinse pavers thoroughly after any application of ice-melt to avoid the buildup of salt crystals. After rinsing, squeegee pavers dry.

G. Visual Observation: Check for rocking pavers, and adjust or shim immediately if needed. Failure to do so could cause a tripping hazard. Periodically check spacer tabs and immediately replace broken tabs to limit deck movement. Make sure the edge restraint stays intact and structurally sound.

PROPOSITION 65

⚠**WARNING:** This product can expose you to chemicals including nickel (metallic), which are known to the State of California to cause cancer, and lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

END OF SECTION

PRODUCT LINE	MODEL NO.	DESCRIPTION	DIMENSIONS (L x W x H)
 **Confirm your paver sizes in metric units prior to purchasing Paver Trays.* **Paver Trays can be combined to accommodate larger format pavers. See the Bison Paver Tray Assembly and Installation Guide for recommended configurations.*	**PT-TRAY-2424** **PT-TRAY-1818** **PT-TRAY-2020** **PT-TRAY-2412** **PT-TRAY-2416** **PT-TRAY-2418**	Paver Support Tray with Adhesive	23.43” x 23.43” x 0.35” (595 x 595 x 9 mm) Fits 595-603 x 595-603 mm Pavers 17.52” x 17.52” x 0.35” (445 x 445 x 9 mm) Fits 445-453 x 445-453 mm Pavers 19.49” x 19.49” x 0.35” (495 x 495 x 9 mm) Fits 495-503 x 495-503 mm Pavers 23.43” x 11.61” x 0.35” (595 x 295 x 9 mm) Fits 595-603 x 295-303 mm Pavers 23.43” x 15.55” x 0.35” (595 x 395 x 9 mm) Fits 595-603 x 395-403 mm Pavers 23.43” x 17.52” x 0.35” (595 x 445 x 9 mm) Fits 595-603 x 445-453 mm Pavers
	**FS-12**	12” Fastening Spline 3/16” (4.5 mm) Tab Contains 2 Screws	Fastens Bison Paver Trays to Bison Adjustable Pedestals with long screw, and HD50 or HD75 Fixed Height Pedestals with short screw.