Uni-Just™ & Stak-Cap™ Pedestal System

- Single Model Design
- PVC Pipe Adjustable
- Screw Adjustable
- Self-Leveling
- Stackable

Pat. # 8,453,391 & Pat. Pen

HYBRID PEDESTAL SYSTEM - TECHNICAL DETAILS
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</tr>
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<td>STAK-CAP™</td>
</tr>
<tr>
<td></td>
<td>UNI-CAP™</td>
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<td>UNI-INSERT™ -75 (3/4”)</td>
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<tr>
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<td>UNI-INSERT™ -150 (1-1/2”)</td>
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<td></td>
<td>UNI-COLLAR™</td>
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<td></td>
<td>UNI-BASE™</td>
</tr>
<tr>
<td></td>
<td>BASE SLOPE PLATE (BSP)</td>
</tr>
<tr>
<td></td>
<td>BUFFER PAD</td>
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</table>

GENERAL NOTES: APPLY TO ALL OF THE ABOVE PRODUCTS
1. INSTALLATION MUST BE COMPLETED IN ACCORDANCE WITH TILE TECH PAVERS PRODUCT SPECIFICATIONS.
2. DRAWING NOT TO SCALE.
3. USE OF BUFFER PADS IS MANDATORY.
4. CONTRACTOR’S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.TILETECHPAVERS.com
STAK-CAP™ PEDESTAL SYSTEM

COMPONENT ASSEMBLY INSTRUCTIONS.
HEIGHT ADJUSTMENT FROM 1/2” TO 12” & SLOPE ADJUSTMENT FROM 0% TO 5%

PRODUCT CHARACTERISTICS:
EACH CAP WILL COMPENSATE FOR UP TO 1/8” PER FOOT SLOPE (1%) & ADD 3/8” TO THE OVERALL HEIGHT OF A PEDESTAL. PVC PIPE CAN BE USED TO GAIN ADDITIONAL HEIGHT OF 12” MAX. ROTATE ONE CAP RELATIVE TO ANOTHER BY ALIGNING THE ALPHABETS TO CHANGE SLOPE. A & A WILL REACH MAXIMUM SLOPE AND A & E WILL CANCEL SLOPE. A MAXIMUM OF 5 CAPS CAN BE STACKED WITH TOTAL SLOPE OF 5/8” PER FOOT (5%) & WITH TOTAL HEIGHT OF 2-1/4” INCLUDING THE USE OF BUFFER PADS.

CONFIGURATION CHART:

<table>
<thead>
<tr>
<th>1 CAP</th>
<th>5/8”</th>
<th>1/8” PER FOOT</th>
<th>1% MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 CAPS</td>
<td>1”</td>
<td>1/4” PER FOOT</td>
<td>2% MAX (A+A)</td>
</tr>
<tr>
<td>3 CAPS</td>
<td>1-3/8”</td>
<td>3/8” PER FOOT</td>
<td>3% MAX (A+A+A)</td>
</tr>
<tr>
<td>4 CAPS</td>
<td>1-7/8”</td>
<td>1/2” PER FOOT</td>
<td>4% MAX (A+A+A+A)</td>
</tr>
<tr>
<td>5 CAPS</td>
<td>2-1/4”</td>
<td>5/8” PER FOOT</td>
<td>5% MAX (A+A+A+A+A)</td>
</tr>
</tbody>
</table>

PVC + 2 CAPS = VARIABLE HEIGHT  0% MAX
PVC + 3 CAPS = VARIABLE HEIGHT  1% MAX
PVC + 4 CAPS = VARIABLE HEIGHT  2% MAX
PVC + 5 CAPS = VARIABLE HEIGHT  3% MAX

GENERAL NOTES: APPLY TO ALL OF THE ABOVE PRODUCTS
1. INSTALLATION MUST BE COMPLETED IN ACCORDANCE WITH TILE TECH PAVERS PRODUCT SPECIFICATIONS.
2. DRAWING NOT TO SCALE.
3. USE OF BUFFER PADS IS MANDATORY.
4. CONTRACTOR’S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.TILETECHPAVERS.com
1. Chalk grid lines starting from door threshold based on paver size plus 1/8" gap.

2. Using a laser determine final height of pedestals. From ½" to 1½" high no PVC pipe required. Measure & mark PVC pipe to be cut & deduct ¼" for base & cap assembly.

3. Cut PVC pipe to required height with a 12" chop saw. Using sand paper remove any burrs from cut ends.

4. Assemble by inserting Stak-Cap™ on to one end of cut PVC pipe and another Stak-Cap™ on to other end of PVC pipe. The Stak-Cap™ is designed to compression fit with PVC pipe.

5. Complete assemble by rotating & aligning alphabets of 3rd Stak-Cap™ with the top Stak-Cap™ for slope compensation. Align & attach Buffer Pad to the bottom Stak-Cap™.

6. Position pedestal under laser line and align Buffer Pad notch with chalk line. Orient the pedestal assembly so that the top Stak-Cap™ pair high side points towards decline of slope.

7. Adjust final pedestal height by using Uni-Shims™ whole or in segments at the top or bottom of pedestal assembly.

8. Use a spirit level to check level and use additional half or quarter Uni-Shims™ for fine tuning of individual corners.

9. Use a spirit level to check level and use additional half or quarter Uni-Shims™ for fine tuning of individual corners.

GENERAL NOTES: APPLY TO ALL OF THE ABOVE PRODUCTS
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2. DRAWING NOT TO SCALE.
3. CONTRACTOR’S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.TILETECHPAVERS.com
UNI-JUST™ PEDESTAL SYSTEM

COMPONENT ASSEMBLY INSTRUCTIONS.
HEIGHT ADJUSTMENT FROM 2-1/4” TO 22” & SLOPE ADJUSTMENT FROM 0% TO 4%

GENERAL NOTES: APPLY TO ALL OF THE ABOVE PRODUCTS

1. INSTALLATION MUST BE COMPLETED IN ACCORDANCE WITH TILE TECH PAVERS PRODUCT SPECIFICATIONS.
2. DRAWING NOT TO SCALE.
3. USE OF BUFFER PADS IS MANDATORY.
4. CONTRACTOR’S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.TILETECHPAVERS.com

PRODUCT CHARACTERISTICS:
ADJUSTABLE HEIGHT FROM 2-1/4” TO 22” WITH USE OF 4”ø SDR35 PVC PIPE.
SELF-LEVELING CAP AUTOMATICALLY ADJUST SLOPE FROM 0% TO 4%.
SCREW ADJUSTABLE WHILE PEDESTALS ARE LOADED FOR FINAL HEIGHT ADJUSTMENT OF 1-1/2”
RESISTANT & IMPERVIOUS TO FREEZE-THAW, WATER, MOLD, ACID & ULTRAVIOLET DETERIORATION.
RESISTANT TO TEMPERATURES BETWEEN -22°F AND +250°F.
LARGE FOOT PRINT SPREADS WEIGHT OVER ROOFING MEMBRANE AND SUBSTRATE
BUFFER PADS PROVIDE NOISE DAMPENING, SLIP RESISTANCE AND PROTECTION TO ROOFING MEMBRANE AND
SUBSTRATE.
MAXIMUM DESIGN CAPACITY OF 2,000 LBS PER PEDESTAL.

GENERAL NOTES: APPLY TO ALL OF THE ABOVE PRODUCTS
1. INSTALLATION MUST BE COMPLETED IN ACCORDANCE WITH TILE TECH PAVERS PRODUCT SPECIFICATIONS.
2. DRAWING NOT TO SCALE.
3. USE OF BUFFER PADS IS MANDATORY.
4. CONTRACTOR’S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.TILETECHPAVERS.com
1. Chalk grid lines starting from door threshold based on paver size plus 1/8" gap.


3. Cut PVC pipe to required height with a 12" chop saw. Using sand paper remove any burrs from cut ends.

4. Assemble by inserting cut PVC pipe into Uni-Base™ and Uni-Collar™ in to other end of PVC pipe. Screw Uni-Insert™ in to Uni-Collar™ minimum of 2 threads.


6. Position pedestal under laser line and align Buffer Pad notch with chalk line.

7. Adjust final pedestal height by using Allen Key from top to screw up or down Uni-Insert™.

8. Use a spirit level to level Uni-Cap in any direction.

9. Use Allen Key to fine tune loaded pedestal for a perfect level & height.

GENERAL NOTES: APPLY TO ALL OF THE ABOVE PRODUCTS
1. INSTALLATION MUST BE COMPLETED IN ACCORDANCE WITH TILE TECH PAVERS PRODUCT SPECIFICATIONS.
2. DRAWING NOT TO SCALE.
3. CONTRACTOR’S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.TILETECHPAVERS.com
UNI-SHIM™ 1/8” & 1/16”

A UNI-SHIM 1/8” OR 1/16” MAY BE PLACED ON TOP OF EACH PEDESTAL. UNIQUE INTERLOCKING FEATURE ALLOWS SHIMS LOCK TO EACH OTHER AND TO PEDESTAL TOPS, NO GLUING REQUIRED. SHIMS MAY BE USED WHOLE OR BROKEN INTO SEGMENTS FOR FINE TUNING & LEVELING.

UNI-SHIM™ TOP OF PEDESTAL

UNI-SHIMS MAY BE PLACED ON TOP OF PEDESTALS FOR MINOR LEVELING OF PAVERS WITH THICKNESS VARIATIONS. USE NO MORE THAN 3 SHIMS STACKED PER CORNER.

UNI-SHIM™ UNDER PEDESTAL

PLACE UNI-SHIMS, WHOLE OR IN SEGMENTS, UNDER EACH PEDESTAL IN A STAIR STEP FASHION TO COMPENSATE FOR SLOPING SUBSTRATES. USE NO MORE THAN 2 SHIMS, AND ADHERE THEM TO EACH OTHER WITH CONSTRUCTION ADHESIVE.

GENERAL NOTES: APPLY TO ALL OF THE ABOVE PRODUCTS
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4. CONTRACTOR’S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.TILETECHPAVERS.com
STAK-CAP™ & UNI-JUST™ PEDESTALS

SAMPLE PEDESTAL CONFIGURATION & COMBINATION
COMPENSATION FROM 1/2” TO 22” HIGH & 0% TO 4% SLOPE

GENERAL NOTES: APPLY TO ALL OF THE ABOVE PRODUCTS
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3. USE OF BUFFER PADS IS MANDATORY.
4. CONTRACTOR’S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.TILETECHPAVERS.com
SEE ENLARGED SECTION PLANS:

1. DOOR THRESHOLD PEDESTAL PLACEMENT
2. RADIUS PERIMETER PEDESTAL PLACEMENT
3. CORNER PERIMETER PEDESTAL PLACEMENT
4. DIAGONAL PERIMETER PEDESTAL PLACEMENT

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4. CONTRACTOR’S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.TILETECHPAVERS.com
SAMPLE INITIAL INSTALLATION USING “T” SHAPED PATTERN

MAXIMUM 1/8” GAP AT PERIMETER

REMOVE SPACER TABS FROM PERIMETER PEDESTALS AS NECESSARY

START PAVER AND PEDESTAL INSTALLATION FROM HIGH POINT OR THRESHOLD USING WHOLE PAVER

START PAVER AND PEDESTAL INSTALLATION IN “T” SHAPED PATTERN

LP - LOW POINT  HP - HIGH POINT  RD - ROOF DRAIN


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4. CONTRACTOR’S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.TILETECHPAVERS.COM
ENLARGED PLAN VIEW

TILE TECH PAVERS

UNI-JUST™ PEDESTALS
ADJUSTABLE HEIGHT
2-1/4" TO 22"
0% TO 4% SLOPE

STAK-CAPS™ PEDESTALS
1/2" TO 2-1/4" HIGH
0% TO 5% SLOPE
5 UNITS MAX

OVER DRAIN PAVERS
OR STEEL PLATE (1/4" MIN)
USE ADDITIONAL PEDESTAL

DRAIN PEDESTAL APPLICATION - SECTION DETAILS

A1

TILE TECH PAVERS

OVER DRAIN PAVERS
OR STEEL PLATE (1/4" MIN)
USE ADDITIONAL PEDESTAL

ROOF WALL JUNCTURE

USE UNI-SHIMS™ ON TOP
OR UNDER PEDESTAL FOR
FINE HEIGHT & SLOPE ADJ.

STAK-CAPS™ PEDESTALS
1/2" TO 2-1/4" HIGH

UNI-JUST™ PEDESTALS
2-1/4" TO 22" HIGH

CLAUKLING

METAL COUNTERFLASHING

WATERPROOF MEMBRANE

60psi MIN INSULATION

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METAL FLASHING CONTAINMENT

TILE TECH PAVERS

TWO PIECE EDGE METAL

LEDGER BOARD

DECK SCREWS

PRE-FINISH METAL 22GA. GALV.

METAL FLASHING MUST FULLY CONTAIN PAVER AND TIE BACK INTO BUILDING WALL OR PARAPET. BOTTOM OF METAL FLASHING CAN BE BENT OR CUT ABOVE SUBSTRATE TO ALLOW WATER TO DRAIN.

WOOD FASCIA CONTAINMENT

TILE TECH PAVERS

FASCIA BOARD FLUSH WITH TOP OF PAVER

LEDGER BOARD

DECK SCREWS

FASCIA BOARD MUST FULLY CONTAIN PAVER AND TIE BACK INTO BUILDING WALL OR PARAPET. BOTTOM OF FASCIA BOARD CAN BE CUT ABOVE SUBSTRATE TO ALLOW WATER TO DRAIN.

GENERAL NOTES: APPLY TO ALL OF THE ABOVE PRODUCTS

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**STEP-DOWN CONTAINMENT**

FASCIA BOARD FLUSH WITH TOP OF PAVER

LEDGER BOARD

VARIABLE RISER HEIGHT (PER CODE)

TILE TECH PAVERS

UNI-JUST™ PEDESTALS 2-1/4” TO 22” HIGH

LEDGER BOARD IS FASTENED TO VERTICAL PVC PIPE OF PEDESTAL WITH DECK SCREWS. THE FASCIA BOARD IS FASTENED TO THE LEDGER BOARD WITH FINISH SCREWS AND FUNCTIONS AS CONTAINMENT TO PREVENT LATERAL MOVEMENT OF PAVERS.

**GREEN ROOF CONTAINMENT**

TILE TECH PAVERS

ENGINEERED GREEN ROOF SOIL

FILTER FABRIC

L-CHANNEL WITH DRAIN HOLES

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3. CONTRACTOR’S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.TILETECHPAVERS.COM
IPE WOOD TILES DETAILS

24" x 24" x 1-5/8"

GENERAL NOTES: APPLY TO ALL OF THE ABOVE PRODUCTS

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3. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.TILETECHPAVERS.COM
JOIST DECK & PEDESTAL APPLICATION

JOIST DECK INSTALLATION DETAILS & SPANNING CHART

GENERAL NOTES: APPLY TO ALL OF THE ABOVE PRODUCTS
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2. DRAWING NOT TO SCALE.
3. USE OF BUFFER PADS IS MANDATORY.
4. CONTRACTOR’S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.TILETECHPAVERS.com

NOTE:
THIS DIAGRAM AND CHART ARE FOR CONVENIENCE ONLY. COMPATIBILITY OF DECKING MATERIAL AND JOIST SPANNING WILL VARY DEPENDING ON THE TYPE / SIZE OF CONCRETE PAVERS, WOOD OR COMPOSITE MATERIALS BEING USED. ADDITIONALLY CODE REQUIREMENTS VARY PER LOCATION AND IT IS THE INSTALLERS RESPONSIBILITY TO ENSURE DECK MEETS CODE REQUIREMENTS.

<table>
<thead>
<tr>
<th>JOIST SIZE</th>
<th>JOIST SPAN</th>
<th>BEAM SIZE</th>
<th>PEDESTAL SPACING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2x6</td>
<td>10' - 0&quot;</td>
<td>4x6 OR (2) 2x6</td>
<td>24&quot; O.C.</td>
</tr>
<tr>
<td>2x8</td>
<td>13' - 2&quot;</td>
<td>4x8 OR (2) 2x8</td>
<td>24&quot; O.C.</td>
</tr>
<tr>
<td>2x10</td>
<td>16' - 10&quot;</td>
<td>4x10 OR (2) 2x10</td>
<td>24&quot; O.C.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<th>BEAM SIZE</th>
<th>PEDESTAL SPACING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2x6</td>
<td>9' - 1&quot;</td>
<td>4x6 OR (2) 2x6</td>
<td>24&quot; O.C.</td>
</tr>
<tr>
<td>2x8</td>
<td>12' - 0&quot;</td>
<td>4x8 OR (2) 2x8</td>
<td>24&quot; O.C.</td>
</tr>
<tr>
<td>2x10</td>
<td>15' - 2&quot;</td>
<td>4x10 OR (2) 2x10</td>
<td>24&quot; O.C.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JOIST SIZE</th>
<th>JOIST SPAN</th>
<th>BEAM SIZE</th>
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<tbody>
<tr>
<td>2x6</td>
<td>7' - 11&quot;</td>
<td>4x6 OR (2) 2x6</td>
<td>24&quot; O.C.</td>
</tr>
<tr>
<td>2x8</td>
<td>10' - 2&quot;</td>
<td>4x8 OR (2) 2x8</td>
<td>24&quot; O.C.</td>
</tr>
<tr>
<td>2x10</td>
<td>12' - 5&quot;</td>
<td>4x10 OR (2) 2x10</td>
<td>24&quot; O.C.</td>
</tr>
</tbody>
</table>

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WIND-LOC™ PAVER & PEDESTAL APPLICATION

PAVER LOCK DOWN SYSTEM DETAILS. PLAN AND PROFILE VIEW

GENERAL NOTES: APPLY TO ALL OF THE ABOVE PRODUCTS

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3. USE OF BUFFER PADS IS MANDATORY.
4. CONTRACTOR’S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.TILETECHPAVERS.com

WIND-LOC™ PEDESTAL IS MADE OF HIGH IMPACT POLYPROPYLENE & ABS AND IS MADE TO LOCK THE PAVER SYSTEM TOGETHER AND PREVENT WIND UPLIFT. POSITION AND LEVEL HYBRID PEDESTAL SYSTEM ON GRID LINES. SET THE WIND-LOC™ BASE ON TOP OF THE PEDESTAL SYSTEM AND SET WIND-LOC™ PAVERS ON TO WIND-LOC™ BASE. BE SURE TO ALIGN RECESS ON BACK SIDE OF PAVER WITH THE DOMES ON THE WIND-LOC™ BASE. POSITION & ALIGN WIND-LOC™ PLATE ON TO WIND-LOC™ PAVERS IN A DIAMOND CONFIGURATION. INSTALL WIND-LOC™ SCREW IN TO WIND-LOC™ BASE WITH A HEX BIT. TIGHTEN DOWN TO 80 PSI. DO NOT OVER TIGHTEN.

WIND-LOC™ PAVERS

WIND-LOC™ SCREW

WIND-LOC™ PLATE

WIND-LOC™ BASE

Pat. # 8,453,391 & Pat. Pend

Patent Pending

WIND-LOC™ - PROFILE VIEW

WIND-LOC™ SCREW

WIND-LOC™ PLATE

WIND-LOC™ BASE

UNI-JUST™ PEDESTAL

WIND-LOC™ PAVERS

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HEX-TRAY™ SNOW MELT SYSTEM

HEX-TRAY™ SNOW MELT SYSTEM COMPONENTS INCLUDES A HONEYCOMB STRUCTURAL TRAY WITH PEX TUBING CHANNELS, A FOAM INSULATION PANEL, ALUMINUM HEAT TRANSFER PLATE AND USER SUPPLIED ½" PEX TUBING. PRE ASSEMBLE THE FOAM INSULATION PANEL TO THE BACK OR BOTTOM SIDE OF THE HEX-TRAY™ AND SECURE WITH SUPPLIED CORK-SCREW. POSITION AND LEVEL HYBRID PEDESTAL SYSTEM ON TO GRID LINES. PLACE SEMI ASSEMBLED HEX-TRAY™ ON TO PEDESTAL SYSTEM. LEVEL & SECURE FOUR ADJACENT CORNERS TO PEDESTAL SYSTEM USING PERFORATED LOCK DISK AND SECURE WITH SCREW. POSITION AND ALIGN HEAT TRANSFER PLATE TO TOP OF HEX-TRAY™ AT TERMINATION POINTS AND WALLS, CUT BACK HEAT TRANSFER PLATE TO EXPOSE THE "U" SHAPED CHANNELS IN ORDER TO LOOP BACK PEX TUBING. INSTALL PEX TUBING AND TEST FOR LEAKS. INSTALL PAVERS.

GENERAL NOTES: APPLY TO ALL OF THE ABOVE PRODUCTS
1. INSTALLATION MUST BE COMPLETED IN ACCORDANCE WITH TILE TECH PAVERS PRODUCT SPECIFICATIONS.
2. DRAWING NOT TO SCALE.
3. USE OF BUFFER PADS IS MANDATORY.
4. CONTRACTOR’S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.TILETECHPAVERS.com
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 Summary
A. Furnish and install a complete Architectural Pavers and Adjustable Pedestals deck support system with a maximum cavity height of up to 22 inches.
B. Related Sections include the following:
1. Division 02 - Section 02780 Unit Pavers
2. Division 03 - Section 03300 Cast-in-Place Concrete.
3. Division 06 - Section 06100 Rough Carpentry.
4. Division 07 - Section 07760 Roof Pavers.
5. Division 07 - Section 07620 Roof related Metal Work.
6. Division 07 - Section 07540 Fluid Applied Waterproofing.
7. Division 07 - Section 07540 Bituminous Sheet Waterproofing.
8. Division 07 - Section 07760 Roof Pavers.

1.3 REFERENCES
A. American Society for Testing and Materials (ASTM)
1. ASTM D 638 - Tensile Properties of Plastics
2. ASTM D 790 - Flexural Properties of Unreinforced and Reinforced Plastics Insulating
3. ASTM D 1525 - Vicat Softening Temperature of Plastics

1.4 SUBMITTALS
A. Submit under provisions of Section 01300.
B. Samples:
1. Architectural Pavers: Submit samples for type, color and texture required.
2. Pedestals: Submit sample of each pedestal component.
3. PVC Pipe: Submit 12-inch long sample of PVC pipe.

B. Shop Drawings: Submitted by contractor showing all components required for the paver & pedestal requirements. Shop drawings shall include plan drawings showing layout of all paver areas and detail drawings showing how the various components of the system fit together. Include manufacturer's literature completely describing all components of the paver pedestal systems and giving detailed installation recommendations and instructions. Also included detailed installation drawings for all precast pavers.

1.5 QUALITY ASSURANCE
A. Manufacturer Qualifications: All products covered under this Section shall be produced by a single manufacturer unless otherwise specified with a minimum of fifteen (15) years proven production experience.
B. **Installer Qualifications:** Installer shall have a minimum of three (3) years proven construction experience and be capable of estimating & building from blueprint plans and details, determining elevations, in addition to proper material handling. All Work must comply with Tile Tech Pavers installation application procedures for pedestal mounted pavers as specified herein.

C. **Special Consideration:** The installer and or subcontractor must assume the responsibility for and take into consideration (1) the structural capability and adequacy of the structure to carry the dead and live load weight(s) involved, and (2) that the density of any insulation is satisfactory to resist crushing and damaging the waterproofing membrane.

1.6 **DELIVERY, STORAGE, AND HANDLING**

A. In accordance with provisions of Section 01300.

B. Protect Concrete Pavers and Pedestal System during shipment, storage and construction against damage. Store a minimum of 4 inches off the ground in a dry location and cover with polyethylene to protect from contact with materials which would cause staining or discoloration.

1.7 **PROJECT CONDITIONS**

A. Tile Tech Pedestal System specified are to be used with pedestrian traffic only & all four (4) sides of a deck system must restrain and contain the decking panels with perimeter blocking or walls. Decking panels must not be allowed to move laterally.

B. All membrane waterproofing and protection board surfaces to receive pedestals must be broom clean, frost free, and free of dirt, oil or any rough foreign matter, which may impair the waterproofing / roofing manufacturers guarantee or protection requirements.

C. The substrate that is to receive pedestals must have slope and provide positive and adequate drainage in accordance with good building practice and applicable building codes.

D. **Decks over Roofing and Waterproofing;**

1. If high density closed cell extruded 60psi polystyrene insulation is installed on top of the membrane in a protected membrane system, Tile Tech Pedestals may be installed directly on top of this type of insulation.

2. Do not use Tile Tech Pedestals over any insulation less than 60psi or with low density polystyrene (bead board) insulation.

E. **Decks on Grade:**

1. Any substrate soil that is to receive pedestals shall be adequately compacted and have positive drainage slope. A “walkway gravel” base ie: ¼” Minus should be installed and compacted at pedestal locations.

2. A wall or perimeter containment on all open sides is required. Install structural perimeter containment that restrains the entire decking system.
F. Installation or anticipated installation of additional items on top of the deck such as planters, hot tubs, sculptures, or industrial equipment must be supported directly by additional pedestals that are in addition to the main deck paver/tile pedestal system. Failure to adequately support the additional weight of any such features or items may cause significant damage to the deck, underlying structure, or waterproofing.

1.8 WARRANTIES / GUARANTEES
A. Tile Tech Pedestal System (pavers and pedestals) shall remain free from defects for a period of ten (10) years. The contractor shall warrant 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 maximum of three (3) years.

PART 2 – PRODUCTS

2.1 MANUFACTURERS
A. The Paver Pedestal Systems specified herein are based upon products manufactured by:
Tile Tech Pavers Inc, 888-380-5575   Phone: (213) 380-5560   Fax: (213) 380-5561
E-mail: sales@tiletechpavers.com   Website: www.tiletechpavers.com

B. Paver Pedestal Systems equal in appearance and function and meeting these specifications, will be acceptable when the specified submittals are approved in writing by the Architect prior to bid.

2.2 MATERIALS
A. PAVERS:
1. Type: Granite-Tech™, Stamp-Tech™, Cool-Roof™, Recycled Glass and Win-Lok™.
2. Color: Standard and custom range manufactured by Tile Tech Pavers Inc.
3. Size: 20”x20”x2”, 16”x16”x1-1/2”, 12”x12”x1”, 12”x24”x1-1/2”, 16”x24”x2” nominal
4. Finish: Shot-blasted with 3/16” bevel on all four (4) sides of finished surface.
5. Weight: 11 to 22 lbs per square foot depending on paver size & thickness.

B. PEDESTALS:
1. Stak-Cap™ Pedestals: PVC Pipe & Stack Adjustable
   a. Stack or use SDR35 PVC pipe to accommodate various HEIGHT adjustments of ½” to 8”.
   b. Each cap provides maximum of ½” of HEIGHT and 1% SLOPE. Rotate and stack one cap relative to another to accommodate SLOPE adjustments from 0% to 5%.
   c. Base diameter of 6-inch and top diameter of 5-¼-inch and is ½-inch high.
   d. Made of high impact and flame resistant ABS plastic.
   e. Use of Buffer Pads under Stak-Cap™ Pedestals is MANDATORY.

2. Uni-Just™ Pedestals: PVC Pipe & Screw Adjustable
   b. Use SDR35 PVC pipe to accommodate various HEIGHT adjustments from 2-½” to 22”. Additional precise height adjustment of up to 1-½” with the use of Uni-Insert™ which can screw up or down while loaded.
   c. Self-leveling and can tilt in any direction to a level plane to accommodate SLOPE adjustments from 0% to 6%.


d. Base diameter of 7-inch with bearing surface area of thirty eight (38) square inches.

e. Made of 100% recycled and flame resistant High Density Polypropylene.

f. Use of Buffer Pads under Uni-Just™ Pedestals is MANDATORY.

3. Uni-Shims™: 1/8-inch & 1/16-inch Thick

a. Can be used whole or broken into halves or quarters and can be stacked up to 2 high.
b. Used on top or under Stak-Cap™ or Uni-Just™ Pedestals for fine leveling of pedestals and or individual pavers.
c. Made of high impact and flame resistant ABS plastic.

C. OTHER COMPONENTS: INSTALLER OR USER SUPPLIED

1. Pedestal Pipe: 4-inch diameter SDR35 PVC Sewer Pipe

a. Used with either Stak-Cap™ or Uni-Just™ Pedestals and is cut to required height.

b. NOT supplied with pedestal components by Tile Tech Pavers.

2. Protection Course:

a. Protection board (required over insulated BUR systems, and when specified for use over bituminous asphalt-based waterproofing): W.R. Meadows “Vibraflex” or equal, minimum 3/8- inch thick asphaltic composition protection board.

b. Insulation (when specified): Dow Styrofoam “Highload 100” or equal, minimum compressive strength of 100psi recommended for foam plastic insulation placed beneath Pedestal System to prevent damage to the waterproofing membrane.

c. NOT supplied with pedestal components by Tile Tech Pavers.

2.3 PERIMETER CONTAINMENT AND SUPPORT

A. The complete assembly of insulation (if used), protection board (if used), drainage mat (if used), pedestals and pavers must be restrained at the perimeter of the deck area.

B. Perimeter parapet walls, concrete dividers or other perimeter restraint must be capable of resisting lateral forces (including seismic and wind). Cumulative movement in excess of 1/8 inch will void the Tile Tech Pavers Pedestal System warranty.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Prior to starting work inspect the substrate to ensure that it has been properly prepared to accept the Tile Tech Pedestal System. The substrate and or surface shall be clean and free of any projections and debris which may impair the performance of the pedestal and or the deck system. Verify all elevations, required pedestal heights and deck dimensions. Commencement of work shall imply acceptance of surfaces & deck conditions.

B. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer’s recommended installation tolerances and conditions.
3.2 PREPARATION
A. The substrate surface that will receive the Pedestal System must be well compacted (on Grade) or structurally capable of carrying the dead and live loads anticipated.
   1. Insulation OVER the membrane: (Option 1) Insulation and/or protection board (if specified) must be applied over the waterproofing substrate and/or specified drainage mat. Install the system according to the membrane manufacturer's recommendations and specifications.
   2. Insulation UNDER membrane: (Option 2) Insulation required to be installed within a roofing system below deck supports must meet the roofing membrane manufacturers' specifications and must have a minimum core density of 60psi.
   3. Protection Board: (for asphalt type systems used over waterproofing) Full coverage 1/8-inch asphaltic composition protection board is recommended. When protection is specified only under the pedestal cut protection board pads to extend beyond the outside perimeter of the pedestal system base or buffer pad by a minimum of TWO (2) inch.
   4. Drainage Mat: (when desired or specified) Install drainage mat according to the manufacturers recommendations to avoid crushing.

3.3 INSTALLATION
A. Install in accordance with Tile Tech Pavers and other contributing manufacturer's instructions. Installation requirements vary for each individual project site. Decking paver or tile used, pattern, grid layout, starting point, and finished elevation should be shown on plan view shop drawings, which have been prepared and approved by the designer, installing contractor and/or owner.

B. GRID LAYOUT AND ELEVATIONS:
   1. Once the starting point and the finished elevation of the deck surface have been determined, the "Top of Pedestal Elevation" (finished elevation less decking paver or tile thickness) is established and marked around the perimeter using a transit water level or laser leveling device.
   2. Precise measurements should be taken and deck area should be accurately defined. Mark off and 'square up' all outside edges with control lines using "snapped" chalk lines. Mark two (2) lines that are perpendicular to each other across the deck area. Continue to mark a grid of lines in both directions marking the location of each pedestal. Use the control lines as references to periodically check and assure a square layout during installation.
   3. Next, a pedestal must be placed where each measured grid line meets the perimeter. Remove two (2) spacer tabs in line with one another atop each pedestal system placed around the perimeter. Remove all four (4) spacer tabs at corners.
   4. Adjust each pedestal height to the "Top of Pedestal Elevation" marked on the perimeter. Position the pedestal as close to the edge of the perimeter as possible, with the two remaining spacer tabs aligned with the grid line. Using the elevation marked on the perimeter, stretch a mason's line along and slightly ahead of the second row of pedestals. A laser leveling device may also be used for this purpose.
   5. On larger decks, it is recommended that Tile Tech Pedestal System be pre-assembled and pre-set to the proper elevation and placed in position prior to the installation of decking paver or tile.
6. As the pedestals located along the grid lines are loaded with pavers or tiles, fine vertical height adjustment can be made by inserting and rotating, from the top, a T-handle Hex Key in to the Uni-Insert™ of the Pedestal assembly. Clockwise rotation of the Uni-Insert™ will raise the bearing surface and the deck. Counter-clockwise rotation will lower the top bearing surface and deck.

7. Always maintain adequate thread engagement. Tile Tech Pedestal Uni-Insert™ contains a locking tab that will not allow the screw to extend past its maximum extension. Never use if the locking tab is broken. If the height required goes beyond the Uni-Insert™ limit re-cut PVC pipe to the correct height and re-assemble the pedestal using the correct size pipe.

8. Slight irregularities in decking paver or tile thickness can be compensated for by using one (1) to two (2) shim segments. Place on top of the pedestal, under the corner(s) of the decking paver or tile. Use no more than two (2) shims on top of the pedestal and always adhere quartered (1/4) wedges with construction adhesive.

9. Stak-Cap™ Pedestal can be used for limited and or fixed height requirements. Complete deck and grid layout as instructed above. Stack no more than five (5) fixed height Stak-Cap™ Pedestals together and place in lieu of Uni-Just™ Pedestals where needed. Stak-Cap™ Pedestal can also be used with PVC pipe to reduce cost. Spacer tabs can be removed to accommodate perimeter and corner support locations.

C. SLOPE AND HEIGHT COMPENSATION:
1. Stak-Cap™ Pedestals can provide limited slope and height compensation to maintain a level decking surface over sloping substrates and is accomplished using a combination of the following:
   a. Rotate and stack one cap in relation to another to change slope and add height. Each cap will add ½-inch of height and provide 1% slope. Stack no more than 5 caps.
   b. Can also be used with PVC Pipe cut to required height of maximum of 6-inches.

2. Uni-Just™ Pedestals can provide both slope and height compensation to maintain a level decking surface over sloping substrates and is accomplished using a combination of the following:
   a. PVC Pipe cut to varying lengths to compensate for GENERAL height requirements.
   b. SCREW extension for PRECISE height adjustment.
   c. Self-Leveling cap that pivots and tilts in any direction for slope compensation from 0% to 6%.

3. Tile Tech Pedestals are designed to be rotated for final precise adjustment when they are fully loaded. Pedestals should be leveled in each succeeding row as the installation proceeds. Final height adjustment or maintenance is easily made by simply using a T-handle Hex Key that allows you to adjust the pedestals without removing the pavers. T-handle Hex Key is inserted between the four paver corners to engage Uni-Insert™ portion and is adjusted clockwise or counter clockwise to level as needed.

4. Uni-Shims™ may be used in multiples, whole or quarters, and placed under the pedestal base or on top the pedestal cap to level pedestals. Use a small amount of construction adhesive to adhere sections of shims and/or whole shims to each other or to the pedestal. DO NOT use construction adhesive to adhere pedestal or shims to insulation, roofing or waterproofing membrane. Additional sections of shims may be used and should be available for regular maintenance.
3.4 PERIMETER CONTAINMENT
   A. Any area of the pedestal deck that is not restrained by a parapet or foundation wall must be ‘boxed-in’ and contained. The deck panels will move if all sides are not adequately restrained. Perimeter framing and edging boards located at the outside of the deck perimeter must be installed to provide restraint. No movement should be allowed at the perimeter of the deck system greater than one tab width.

3.5 FIELD QUALITY CONTROL
   A. Inspect often during installation to assure that grid spacer lines are being maintained in a straight and consistent pattern and that deck pavers or tiles are level and not rocking. Unless otherwise specified in writing to allow for expansion, inspect to assure that all paver spacing between tiles and at perimeter walls does not exceed a tab width. Particular attention should be made to assure that all pedestrian entry or access points to the deck are level and that the deck surface tiles are not randomly raised or uneven creating a tripping or safety hazard. Confirm that deck pedestal height excess of sixteen (16) inches have been braced in accordance with Tile Tech Pavers written instructions.

3.6 ROUTINE MAINTENANCE AND CARE
   A. The deck owner must perform routine maintenance of the deck. Check for rocking pavers and adjust using T-Handle Hex Key or shim immediately. Pedestals can settle and may have to be realigned. Failure to do so can 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.

   B. Extra Materials: Deliver supply of maintenance materials to the owner. Furnish not less than 1 percent maintenance materials from same lot as materials installed, and enclosed in protective packaging with appropriate identifying labels.