



**GeoPave® System**

**Rolled Product Systems**

**Flexible Mat Systems**

<b>Base Depth (Overflow Parking, CBR&gt;4)</b>	0"	6"	
<b>Base Depth (Fire Truck Access, CBR 2-4)</b>	4-6"	12"	6-12"
<b>Base Material</b>	Accepts a wide variety of open graded base courses	Specifically graded sandy gravel material	Gravel/Sandy mix (60/40%)
<b>Infill Material</b>	Accepts a wide variety of infill material between ¾" and ¾"	Requires fine decorative gravel (#10 mesh)	¾" or less gravel
<b>SIGNIFICANCE</b>	Reduced base depth leads to reduced excavation and backfill and therefore reduced overall project cost. The ability to use a variety of base and infill materials can also reduce costs.		
<b>Flexural Strength</b>	<b>High</b> Rigid Product	<b>None</b> Rolled Product	<b>Low</b> Flexible Product
<b>Significance</b>	Stiffer paver units provide better support; distributing loads across entire installation, limiting contact pressure to the base.		
<b>Bottom of Unit</b>	High-strength polyethylene grid structure integrally molded into the unit	Lightweight geotextile attached to bottom of unit	No continuous bottom to the product.
<b>% of aggregate confined within cells</b>	100%	33%	~30%
<b>SIGNIFICANCE</b>	Lateral confinement of infill prevents lateral movement and washouts. Vertical confinement through integrally molded grid prevents infill from dropping through bottom of unit (can cause entire system to lift). Geotextile clogs more easily than 33% open area polyethylene mesh.		
<b>Load Transfer Mechanism</b>	97.0 in <sup>2</sup> /ft <sup>2</sup> contact at base, 13.7in <sup>2</sup> /ft <sup>2</sup> at surface reduces contact pressure by 700%	29.05 in <sup>2</sup> /ft <sup>2</sup> contact at base, 7.3 in <sup>2</sup> /ft <sup>2</sup> at surface for 398% reduction in contact pressure	Not published
<b>Significance</b>	Paver units with significantly more surface area at the bottom of the unit than on the top ("snowshoe" effect) reduce unit area contact pressure to the base allowing a shallower cross sectional depth of base in design.		
<b>Unit Area</b>	5.38 ft <sup>2</sup>	2.78 ft <sup>2</sup>	4 ft <sup>2</sup>
<b>Joint Type/Shear Transfer between units</b>	U-clip connections 4 per long side, 2 per short side <b>Moderate Shear Transfer</b>	Peg and Hole Tiny Clasps <b>Minimal Shear Transfer</b>	Peg and Hole Tiny Clasps <b>Minimal Shear Transfer</b>
<b>SIGNIFICANCE</b>	The larger the paver unit, the less connection points. In all systems, especially those with little shear transfer from the connection mechanism, the connections will be the weakest part of the entire system. Fewer connections are better. Peg and Hole connections often do not line up causing significant installation problems.		
<b>Cell-to-Cell Relationship</b>	Common cell walls	No common cell walls	Intermittent common cell walls
<b>Significance</b>	Common cell walls are needed in order to resist torsional loading. Lack of common cell walls increases the propensity for the pavers to buckle when vehicles turn.		
<b>Cell Size</b>	3.25" x 3.25" and 3.25" x 6.5"	2.15" ID rings	
<b>Cell Depth</b>	2"	1.0"	1.0"
<b>Wall Thickness</b>	0.25"	0.08"	Not published
<b>SIGNIFICANCE</b>	Deeper cells allow more aggregate to be confined and resistant to washout. 2" walls interconnected allow "beam" effect for GeoPave. Thicker cell walls....stronger material.		
<b>Weight/ft<sup>2</sup></b>	1.4 lb/ft <sup>2</sup>	0.42 lb/ft <sup>2</sup>	0.63 lb/ft <sup>2</sup>
<b>Significance</b>	Typically, more plastic per unit weight means a stronger product. When evaluating price, consider cost per unit weight.		
<b>Anchors</b>	None required except on steep grades	Utilizes 8" long nails to counteract propensity to lift (230 anchors per 431 sq ft section)- <b>more than one anchor per 2 sq ft</b>	None required except on steep grades
<b>Construction Limitations</b>	Empty units have inherent strength No covering of units required prior to placement or filling	Cannot traverse over unfilled units. Must be tarped if on site more than 1 week prior to installation/infilling	Cannot traverse over unfilled units.
<b>SIGNIFICANCE</b>	Placement of anchors and lack of ability to drive on units prior to infilling can lead to unforeseen increases in installation costs. Propensity for peg and hole connections to not line up between rolls can also lead to increased installation time.		