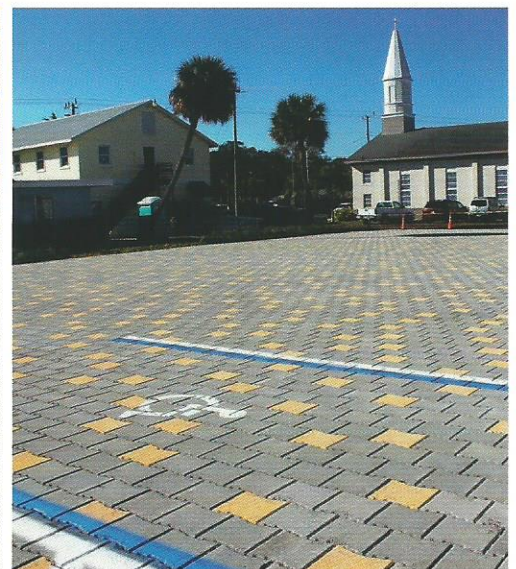


PAVE DRAIN

STORMWATER'S ARCH ENEMY

Sustainable Stormwater Solutions



Structural and Environmental Benefits

The PaveDrain® system combines modern-day functionality with a structural concept used for centuries to create *the* revolutionary permeable paving solution. This system incorporates a patented arch design in the middle of an articulating concrete block to create an internal storage chamber that can be used as a reservoir for stormwater runoff, while simultaneously providing strength for heavy vehicular loads. The PaveDrain System is designed to be a critical component of Low Impact Development (LID) allowing for the infiltration of stormwater runoff.

The PaveDrain system is an aesthetically pleasing Permeable Articulating Concrete Block/ Mat (P-ACB/M)¹ that provides installation ease and flexibility to meet current and future stormwater management regulations. The PaveDrain system provides infiltration, storage, detention, conveyance and a paving surface all in one. When combined, these features allow for a reduction or elimination in stormwater infrastructure costs while minimizing environmental impact. The PaveDrain system works.

¹P-ACB/M is a registered certification mark of ECS Solutions, LLC

ASTM Standards & ADA Compliance

The PaveDrain system meets the requirements of ASTM D6684-04 and is recognized by the USEPA as a structural Best Management Practice (BMP) for stormwater infiltration. The Americans with Disabilities Act (ADA) Design Guidelines require that surface openings shall not exceed 1/2" and shall be firm, stable, and slip resistant. The PaveDrain System easily exceeds all these requirements by incorporating a 1/4" gap between individual PaveDrain blocks.

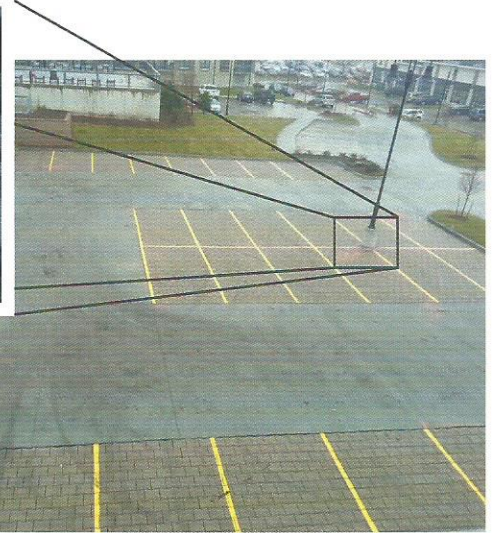
Applications

- Parking Lots
- Alley Ways
- Intersections
- Low Speed Roadways
- Emergency Access Lanes
- Residential Driveways



Why the PaveDrain System?

As part of the Clean Water Act, the EPA developed the National Pollution Discharge Elimination System (NPDES) to improve water quality by regulating point sources and non-point sources that discharge pollutants into waters of the U.S. PaveDrain captures and treats 100% of the surface water and allows you to route stormwater and control peak flows.



Infiltration Report

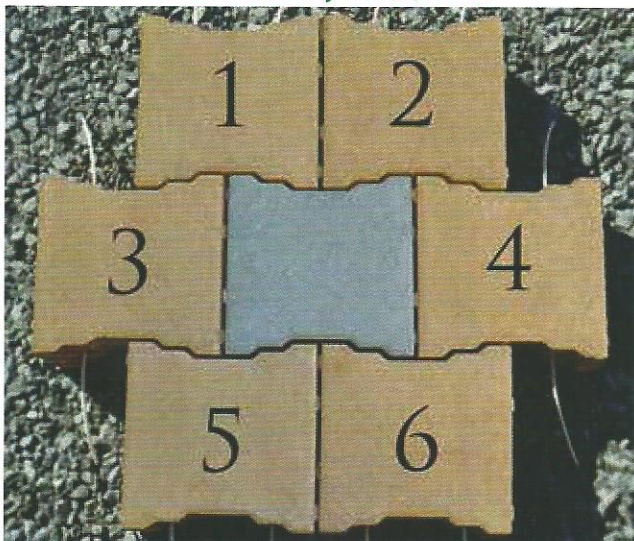
The PaveDrain® system was tested in accordance with ASTM C1701/ C1701M-09 by an independent third party engineering firm. The tests were conducted on different PaveDrain installations that had not been maintained on an average of more than 2 years and still infiltrated in excess of 1,500 inches/hour per one foot diameter.

	Test #1	Test #2
Inside Dia. of Infiltration Ring (in)	12.19	12.19
Elapsed Time of Test (sec)	20.9	21.95
Infiltration Rate (in/hr) ($I=KM/(D^2 \cdot tr)$)	1,630	1,560
Avg. Infiltration Rate (in/hr)	1,595	

PaveDrain® System Properties

Thickness.....	5.65" (+ 1/8")
Unit Dimensions.....	12.00" x 12.00"
Unit Weight.....	45-49 lbs
Unit.....	1 Sq. Ft. Nominal
Percentage Open Space: 7% Surface, 20% Storage Area	

Each individual block is interlocked by six (6) units

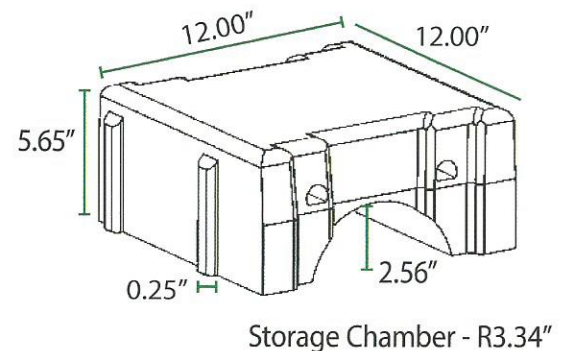


PaveDrain® System Blocks
End View Cross Section



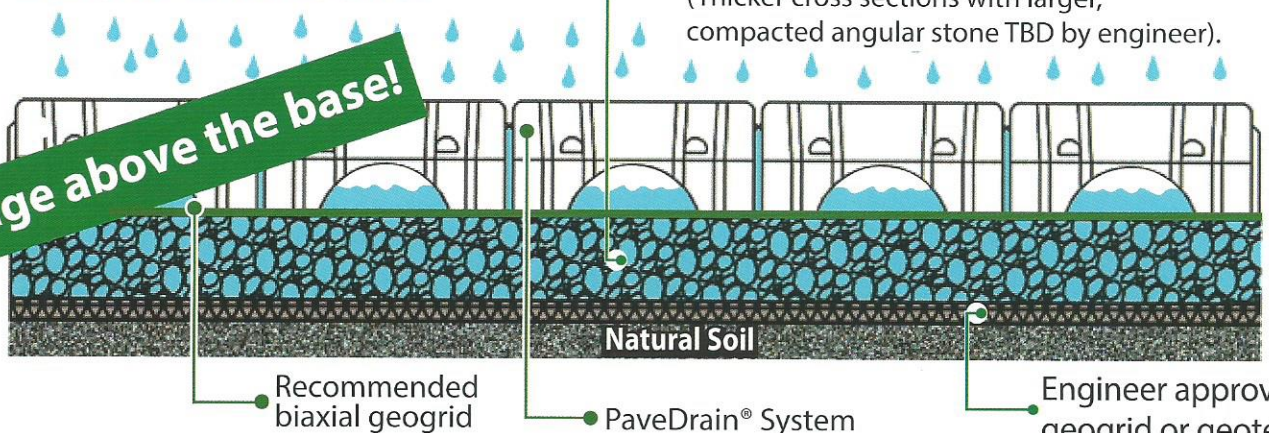
Passes AASHTO HS-25 Truck Loading

Measurements



4" - 8" Minimum bedding stone compacted to no movement. Stone to be 3/4" - 1" dia. clean, angular. No fines.
(Thicker cross sections with larger, compacted angular stone TBD by engineer).

Storage above the base!



Engineer approved geogrid or geotextile

Maintenance and Repair

The PaveDrain system is designed as an open joint concept between the blocks. Existing installations have required little, if any maintenance over multiple years. If the joints become filled or obstructed, maintenance is accomplished by using a conventional combination sewer vacuum truck and the PaveDrain Vac Head. If a significant amount of sediment accumulates in the aggregate bedding stone, PaveDrain can be removed allowing the subgrade to be cleaned and then the same product re-installed. Repair of individual PaveDrain blocks can be accomplished without removing the (mat) cables. For more detailed information on these topics go to www.pavedrain.com and select Installation & MAINTENANCE and then click *REPAIR*.



PaveDrain Vac Head



Additional Benefits

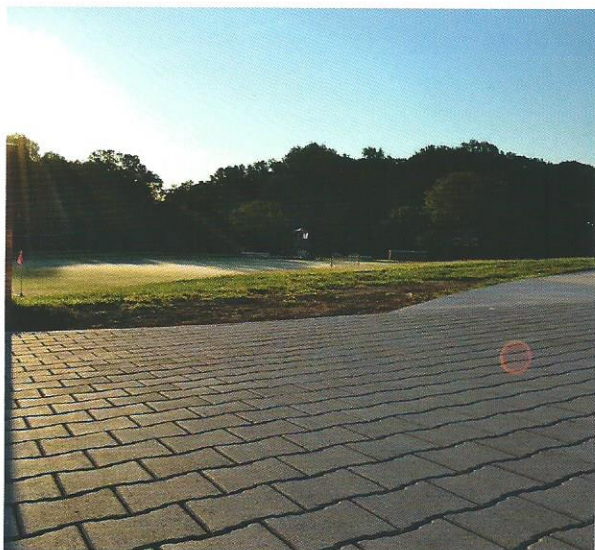
- Up to 5 LEED Credits: Sustainable Sites; Credit 6.1, 6.2, 5.1, 5.7 & Materials & Resources: Credit 5.1.
- Initial installations show a drastic reduction in the use of deicing salts over traditional asphalt and concrete surfaces.
- Installed by hand or with conventional construction equipment in all types of weather for fast, economical installations.
- Available in multiple mat sizes for customized applications
- Available in several color options
- No seams to catch on steel snow plow blades.
- Increased skid resistance over traditional pavements.
- Solar Reflectance Index (SRI) range of 36 – 41 for lighter colored units.
- Unlike traditional catch basins, varmints cannot enter drainage system.
- Regional manufacturing supporting local economies.
- Adaptable to small areas (retrofits) where retention ponds are outdated or not practical.

Represented Locally By:

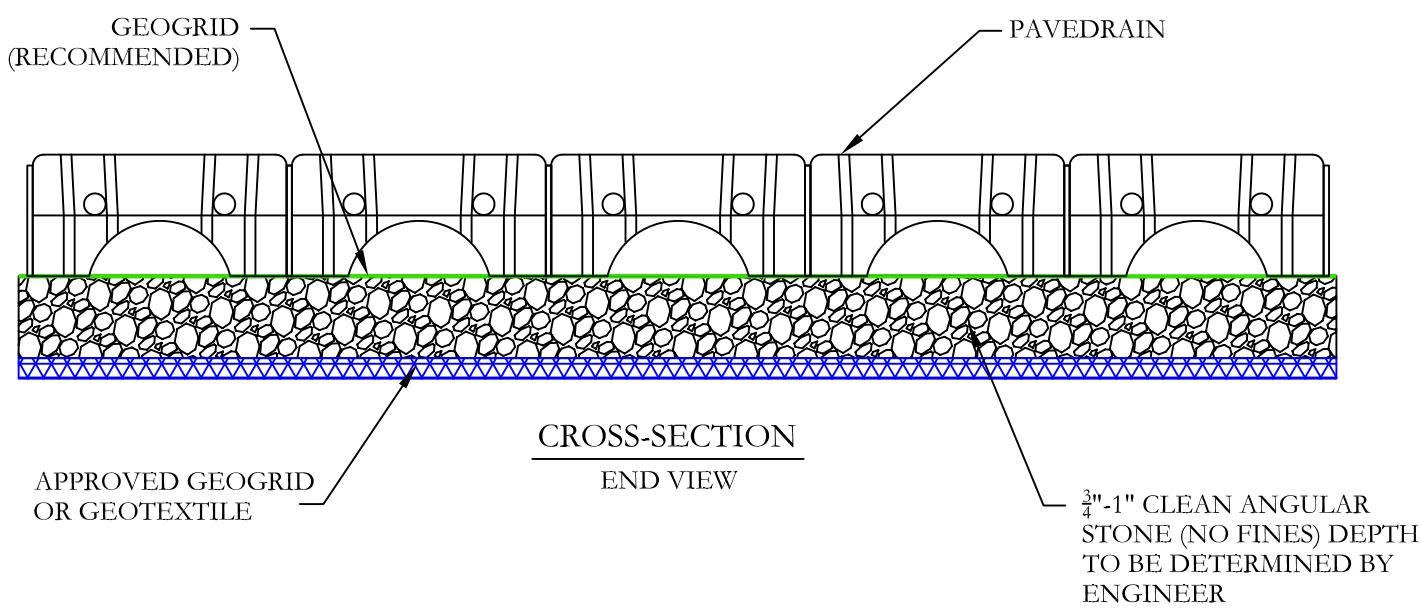
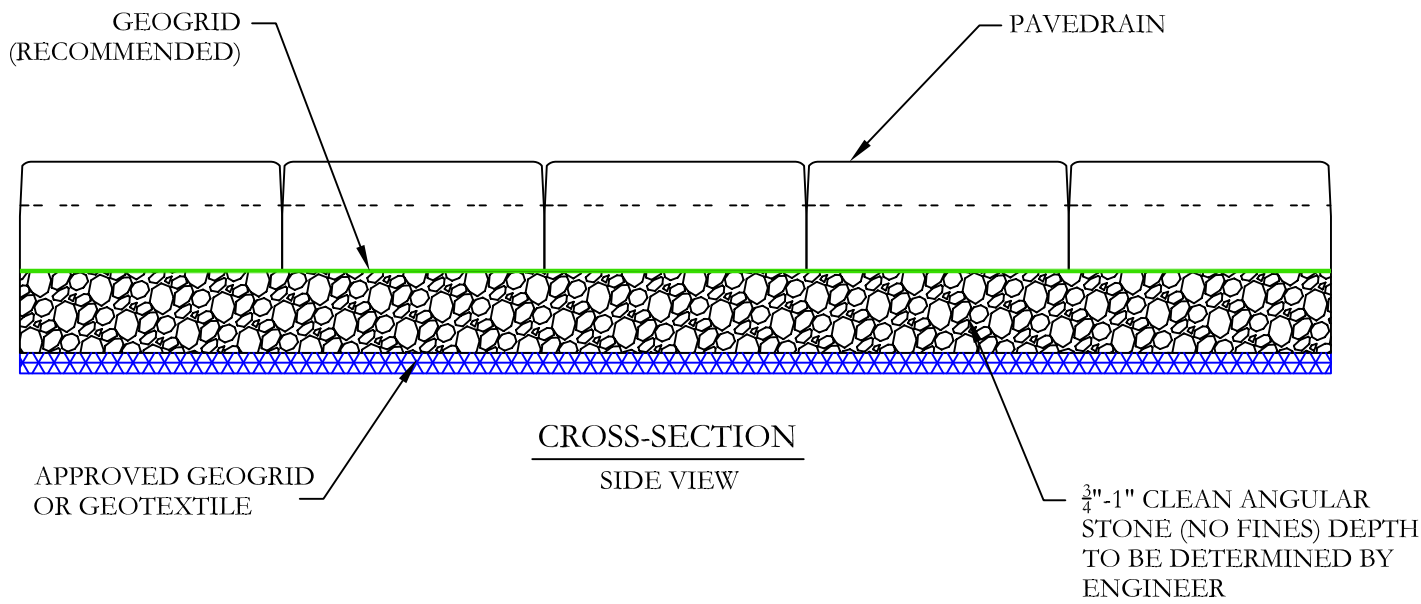
PaveDrain, LLC

Global Water Center
247 Freshwater Way Milwaukee, WI 53204
(888) 575-5339 Office
www.pavedrain.com

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PaveDrain System is a registered trademark of PaveDrain, LLC



The PaveDrain System is protected by the following U.S. and Canadian Patents; U.S. No. 8,251,607, No. D609,369, No. 8,366,343 & Canadian No. 133082. Additional patents pending.



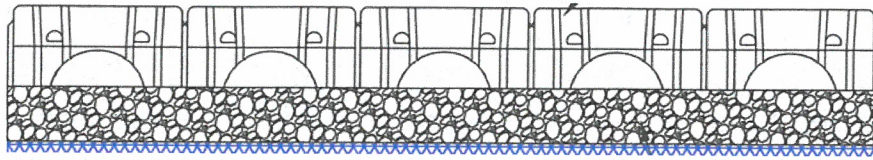
PAVEDRAIN
STANDARD DETAIL

CROSS-SECTIONS
SCALE: N.T.S.



PH: (888) 575-5339
WWW.PAVEDRAIN.COM
Email: info@pavedrain.com

Basic PaveDrain and Gravel Design



PaveDrain + Gravel System Retention Capacity

	PD/6" stone	PD/12" stone	PD/18" stone
Total System Storage (CF/SF)	.28	.48	.68
Total System Thickness (In.)	11.6"	17.6"	23.6"
Retention Volume/Thickness	29.3%	33%	34.8%

* Based on 40% void space gravel.

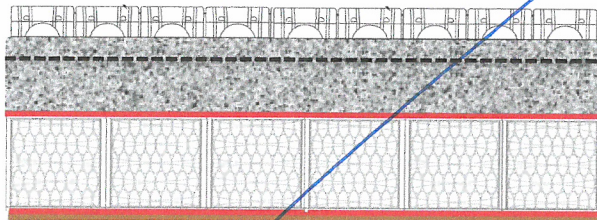


PaveDrain System Retention Capacity:
PaveDrain and Gravel

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Maximum Retention Volume Design



PaveDrain + Gravel + R-Tank^{HD} System Retention Capacity

	PD/18" stone + R-Tank ^{HD}	PD/18" stone + 2~ R-Tank ^{HD}	PD/18" stone + 3~ R-Tank ^{HD}
Total System Storage (CF/SF)	2.06	3.37	4.68
Total System Thickness (In.)	41.0"	57.5"	74.0"
Retention Volume/Thickness	60.2%	70.3%	75.8%

* Based on 40% void space gravel and 95% void space R-Tank^{HD}.



PaveDrain System Retention Capacity:
PaveDrain, Gravel and R-Tank^{HD}

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