PaveDrain® Engineering Design Checklist

The PaveDrain System is a flexible paving surface. If the base is not stable then the PaveDrain System will not perform correctly.

- ❑ All PaveDrain designs are project specific based on actual site conditions and the *FINAL* design is the responsibility of the Engineer-of-Record.
- ❑ All information on the PaveDrain website (i.e. Brochures and Standard Details) are meant to be conceptual only and not interpreted as final design for any project.
- ❑ First, obtain geotechnical data – *soil borings*, *infiltration rates*, and *CBR values.* Without a proper base design, your project is in jeopardy.
- ❑ Design the system to handle the anticipated transportation live load and size the depth of stone and geotextile requirements accordingly using AASHTO design methodology like *Tencate MiraSpec Design Solutions Software.* http://www.tencate.com/amer/geosynthetics/design/miraspec-design-software-solutions/default.aspx
  - Specify a woven ***monofilament*** or **multifilament** geotextile as needed for separation, strength and permeability. Our most frequently utilized geotextiles are listed below.

NOTE: Do NOT specify ALL listed below. Design your project around the soils that exist for your site.

  - Mirafi FW402 - http://www.tencate.com/amer/Images/TDS_FW402%20161205_tcm29-16694.pdf
  - Mirafi RS380i -http://www.tencate.com/amer/Images/TDS_RS380i%20161026_tcm29-35113.pdf
  - Mirafi RS580i - http://www.tencate.com/amer/Images/TDS_RS580i%20161026_tcm29-17792.pdf
- ❑ A rigid Geogrid is strongly recommended on top of the AASHTO #57 layer to minimize the disruption of compacted stone during construction. While foot traffic is discouraged after final stone compaction, sometimes it is unavoidable. The compacted rock can easily be dislodged from foot traffic and especially installation by machine lay, where the block is actually released 2-3 inches above the top of stone layer. Additionally, the grid helps to resist differential subgrade settlement from aggregate that was not properly compacted. The final reason is long-term for our northern climates. Salt or brine mix can remain in the #57 stone layer for a long duration. The legs of the PaveDrain block can sit on a rigid geogrid that is inert to salt. This will help with the longevity of the system.
- ❑ Stormwater storage and infiltration requirements vary around the country. The PaveDrain System and the stone reservoir can be sized with *HydroCAD Stormwater Modeling Design Software* or the *PaveDrain Infiltration Calculator*
  - HydroCAD http://www.hydrocad.net/ref/pavedrain.htm
  - *PaveDrain Infiltration Calculator.* E-mail info@pavedrain.com for assistance.
- ❑ Create a *plan view* and *profile section* for the PaveDrain System
  - http://www.pavedrain.com/pdf/specifications/PaveDrain-Cross-Section-1-Layer-of-Rock.pdf
  - http://www.pavedrain.com/pdf/specifications/PaveDrain-Cross-Section-2-Layers-of-Rock.pdf
  - *AutoCAD* is available from PaveDrain at info@pavedrain.com
- ❑ Calculate the total square-foot required for the PaveDrain System and supply quantity on plans.

- ❑ Develop written PaveDrain *performance based specification.* info@pavedrain.com for assistance.
  - http://www.pavedrain.com/pdf/specifications/PaveDrain-Spec-National-Spec-v1.7
  - http://www.pavedrain.com/pdf/specifications/PaveDrain-CSI-3-Part-National-Spec-v1.7.pdf
  - http://www.pavedrain.com/pdf/specifications/P-ACB-CSI-3-Part-National-Spec-v1.7.pdf

- ❑ Do you need an *under-drain or over drain* for poor draining soils?
  - http://www.pavedrain.com/pdf/specifications/PaveDrain-Underdrain-Detail.pdf

- ❑ Are you using PaveDrain on a *slope* greater than 7%? Consider benching the foundation and using check dams. E-mail at info@pavedrain.com

- ❑ Select a PaveDrain *color*. http://www.pavedrain.com/pdf/specifications/PaveDrain-Colors.pdf
  A 5,000 SF minimum is required when choosing a color other than Gray.

- ❑ Develop a maintenance schedule. http://www.pavedrain.com/installation-maintenance/

You're complete…congratulations.