## PERMEABLE PAVEMENT SERVICES

Providing Services For Commercial, Municipal & Residential Paving

Impervious surfaces such as parking lots, driveways and paved roads are often cited as a leading creator of stormwater runoff. Water from rainstorms quickly runs off these impervious surfaces into storm drains and water ways, carrying dirt, debris, and pollutants from these surfaces. Detention basins are often used to collect and slow the rate of runoff from impervious surfaces. While detention basins are effective, they require additional land.

With proper design and installation, permeable asphalt can provide cost effective, attractive pavement surfaces with a life span of 20 years or more. At the same time, they provide stormwater management systems that promote infiltration, improve water quality, and eliminate the need for a detention basin.

#### WHAT DOES IT DO?

Permeable pavement provides a method to reduce runoff over impervious surfaces that allows for the management and treatment of stormwater on-site, while creating a usable area.

#### HOW DOES IT FUNCTION?

The storage capacity of the permeable pavement system can act as a retention pond with a surface that can be used for auto parking. As with earthen stormwater management ponds, collected water is treated, allowed to infiltrate, and the excess is discharged off-site.



(Engineers evaluation of the design is necessary)

#### PERMEABLE PAVEMENT ALSO:

- Reduces impervious surface area to offset permit requirements for increased stormwater management facilities associated with greater amounts of impervious surface.
- Works most effectively with subgrade soils that possess an infiltration rate that can drain the quantity of stormwater introduced.

### WHAT IS THE GENERAL DESIGN?

The stone reservoir base varies in depth based on the quantity of stormwater to be controlled. It consists of typical open graded aggregates. Wolf Paving recommends the top eight inches of the reservoir base consists of WDOT OGBC material to allow for paver mobility for construction. The reservoir base is typically set atop a SAS geotextile on an uncompacted soil subgrade.

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#### **BENEFITS OF THE SYSTEM**

Permeable pavement systems have been constructed since the late 1970's<sup>\*</sup>. Some of the benefits created by the successful installation include:

- Runoff control and retention with control discharge as needed.
- Aquifer recharge.
- Reduction of drainage structures needed to comply with stormwater regulations.
- Increased pavement skid resistance.
- Stormwater runoff creates temperature equalization. Runoff traveling over an impervious pavement absorbs heat from the impervious surface. Absorbed heat is dissipated as the runoff filters through the permeable pavement system before the runoff enters the stormwater management system.
- Incorporation in the site development as a substitute for an earthen stormwater management pond is value engineering. By providing usable surface spaces, typical stormwater management feature costs are off set.
- Removal of pollutants from runoffs as the permeable pavement system filters undesolved solids from the runoff water.

\*Continuous research and development has resulted in improved mix durability and efficiency of the system.

#### MAINTENANCE

Inspections should be conducted after large storms to check for surface ponding that might indicate possible clogging.

- In design, perimeter berms and permeable borders can be situated to inhibit off-site runoff to the permeable pavement to reduce potential clogging. The permeable border can be used as an alternative method of water entry into the aggregate reservoir.
- Landscape design can reduce potential clogging debris sources by limiting deciduous trees and bushes.
- Clean with jet spray/power wash and dry vacuum regularly to clear pores. A maintenance program may be required for permitting.

Damage to the permeable pavement can be repaired using conventional, non-porous patching mixes, as long as the cumulative area repaired does not exceed 10% of the paved area.



# FREE ESTIMATES



Hours of Operation: Monday-Friday: 8am - 4:30pm Sat-Sun: closed

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