PERMEABLE PAVEMENTS

DESCRIPTION

Permeable pavements refer to a variety of pavements that replace traditional pavement and allow for the infiltration of stormwater into the subsoil by placing a pervious pavement surface over a stone aggregate. Examples include permeable interlocking concrete pavements (PICP) and pervious concrete. Permeable pavements can be used as a stand alone product or incorporated with impermeable pavements to capture and treat runoff from adjacent impervious surfaces. Permeable pavements are well suited in areas with low traffic volumes and are most effective when combined with other pretreatment BMPs such as a vegetated filter strip or grass swale.

DESIGN AND INSTALLATION

• Infiltration capacities of the subgrade soil, the infiltration capacity of the paver surface, and the storage capacity of the stone base are key design parameters.
• When permeable pavements are used near a structure consult with geotechnical engineer to determine suitability.
• Underdrain systems should be used when subgrade soils do not allow for infiltration, to divert water away from structures, and in areas with expansive soils.
• Divert runoff and install sediment and erosion control measures to prevent sediment from clogging system during construction.

MAINTENANCE

• Dependent on traffic volumes periodic cleaning with street sweeper/vacuum is required. Typically once or twice a year to maintain high infiltration rates.
• Periodic inspections for ponding.
• Do not apply sand for snow or ice conditions as sand will clog the system.
• Plowed snow piles should not be left to melt on top of permeable pavements due to possible high sediment loads.
• Deicer use can often be reduced with permeable pavements.

For More Information
SEMSWA www.semswa.org

Benefits:
Removes pollutants from runoff
Decrease stormwater runoff volume, flow rate, and temperature
Minimizes directly connected impervious areas
Attractive and durable

Target Pollutants:
Total Suspended Solids
Nitrogen
Phosphorus
Metals

Uses:
Areas with low traffic volumes such as parking lots, fire access lanes, entrance drives, and pedestrian areas.

Limitations:
Watersheds with high sediment yields
High speed roadways

Resources:
Urban Drainage and Flood Control District; Volume 3, Permeable Pavement Systems
EPA NPDES Post-Construction Menu of Stormwater BMPs; Permeable Interlocking Concrete Pavement