

POROUS PAVEMENT



Benefits

Since the reservoir area underneath porous pavement stores and infiltrates surface runoff, using porous pavement will significantly reduce the amount of land needed for traditional stormwater management measures. Porous pavement increases groundwater recharge, reduces pollutants in stormwater runoff, and helps alleviate flooding and contamination to streams.



What is Porous Pavement?

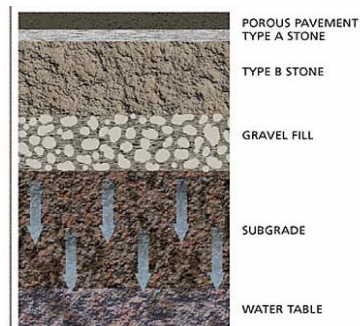
Porous pavement is permeable or perforated paving materials or pavers with spaces that allow transmission of water to aggregate bases and subsoils. Runoff is temporarily stored in the base for infiltration into subsoils and/or slow release to storm drain systems. Traditional stormwater management practices significantly reduce groundwater recharge and have led to a number of environmental concerns in recent years. As infiltration decreases, base flows in streams are decreased and previously flowing small streams now often dry up between rains. Homeowners and public water suppliers often rely on wells that tap into groundwater. Without recharge, the threat exists that these drinking water supplies could dry up rapidly.



Applications and Concerns

Before beginning any project, check homeowner association covenants, as well as local and county ordinances. Do not work in a drainage, utility, or other easement without the proper permits. The ideal location for porous pavement/pavers is in low traffic areas. In extremely dense urban areas, porous pavement/pavers have been used successfully in redevelopment projects, since they treat and store stormwater without consuming extra land. Porous pavement/pavers can also be used on individual sites where a parking lot is being resurfaced. Newer applications of porous pavement include uses on some highways to reduce hydroplaning.

Porous pavement/pavers pose some challenges in cold weather climates, but are not impossible to use in these areas. Porous pavement/pavers should be avoided where activities generate highly contaminated runoff. Areas of low soil permeability, seasonal high groundwater tables (unless overcome by a subsurface tile), and areas close to drinking water supply wells should also be avoided.



Cost and Maintenance

Costs of porous pavement/paver installation depend on the application method chosen. Material costs are often higher for porous paving applications but this expense can usually be offset by the need for less land, piping and other materials that would otherwise be required for traditional stormwater management practices. The overall maintenance goal for porous pavement/pavers is to prevent clogging of the void spaces within the surface material. The surface of porous pavements must not be sealed or repaved with non-porous materials if it is to continue to function. Areas where sand and salt are applied to roadways or parking lots, should not be considered for porous pavements. Occasional sweeping or vacuuming of debris will be required to ensure the void spaces do not clog. Educational signage should be used wherever porous pavement is installed as a teaching tool for the public and as a reminder of maintenance obligations.

To find a certified installer near you, visit the Indiana Ready Mixed Concrete Association website at www.IRMCA.com.