

POROUS PAVEMENTS

Fact Sheet SDM-5

Also known as: Pervious pavement and permeable pavement.

DESCRIPTION

Porous Pavement is a system comprised of a load-bearing, durable surface coupled with an underlying drainage layer that temporarily stores water prior to infiltration or drainage to a controlled outlet. The surface can be porous such that water infiltrates across the entire surface of the material, or it can be constructed of impermeable blocks separated by spaces and joints, through which the water can drain. There are many types of porous pavement including pervious concrete and asphalt, modular block, reinforced grass, cobblestone block, and gravel.

Porous pavement is well-suited for low traffic roadways, parking lots, walking paths, sidewalks, playgrounds, plazas, tennis courts, and other similar uses. It has been widely applied in retrofit situations where existing standard pavements are replaced. Porous pavements should not be used in industrial and commercial applications where pavement areas are used for material storage or the potential for surface clogging is increased due to high traffic of construction vehicles.



Pervious Concrete road in North Lake Tahoe, Placer County. Source: CDM Smith

INSPECTION AND MAINTENANCE REQUIREMENTS

A maintenance plan shall be provided with the SWQP. The maintenance plan shall include recommended maintenance practices, state the parties responsible for maintenance and upkeep, specify the funding source for ongoing maintenance, and provide a site specific inspection checklist. At a minimum, maintenance shall include the following:

- Post signs identifying porous pavement areas.
- Keep landscaped areas well-maintained and prevent soil from being transported onto the pavement.
- Clean the surface using vacuum sweeping machines.
- If routine cleaning does not restore infiltration rates, then reconstruction of part of the porous pavement may be required.
- For modular and cobblestone block, periodically add joint material (sand) to replace material that has been transported or removed.
- Monitor regularly to ensure that the paving surface drains properly after storms.
- Do not seal or repave with impermeable materials.
- Inspect the surface annually for deterioration.
- Reinforced grass requires mowing and periodic reseeded to fill in bare spots.
- Clean out underdrain systems at regular intervals.
- Inspect outlets annually and maintain as needed.

If applicable, contact the proprietary product manufacturer for specific maintenance requirements.

REFERENCES

Low Impact Development Center, Inc. 2010. Low Impact Development Manual for Southern California: Technical Guidance and Site Planning Strategies. Available online at: <https://www.casqa.org/resources/lid/socal-lid-manual>

Santa Clara Valley Urban Runoff Pollution Prevention Program. 2012. Pervious Pavement, Storm water Control for Small Projects. Available online at: http://scvurppp-w2k.com/pdfs/1213/BASMAA_Pervious_Paving_Fact_Sheet_082312_APPROVED_online_ver.pdf

Urban Drainage and Flood Control District, Denver, CO, Urban Storm Drainage Criteria Manual Volume 3 – Best Management Practices, September, 1999 (Rev. June, 2002). <http://udfcd.org/criteria-manual>