Permeable Paving Systems Maintenance and Operating Procedures

Segmental permeable pavement systems typically will require periodic visual inspections (preferably after a major rainstorm) to determine that the stormwater is infiltrating into the system. Areas that have pooled water standing on the surface need to be addressed as a remedial repair as opposed to normal maintenance.

Normal Maintenance:

Permeable paver surfaces and adjoining pavement surfaces will require standard structural BMP practices for pavement maintenance regarding sweeping procedures. A dry vacuum type sweeper may be used during dry periods to remove encrusted sediment, leaves, grass clippings, etc. Vacuum and sweeper settings may require adjustments to prevent uptake of aggregate from the paver voids and joints. Once a year sweeping is normal unless excessive silts and fines are present, which will require additional monitoring of surface to determine silt build-up and then adjust sweeping schedule to remove accumulated debris. Additional void materials may be added by mechanically or manually sweeping into joints and void areas if necessary. Refer to specifications for type and grade. Closed joint permeable pavement systems may be pressure washed if desired. Care should be exercised to keep wand at an angle and away from surface to prevent abrading of surface and blasting of void material from joints and void openings. It is not recommended to utilize pressure washer on open-jointed systems.

Adjacent properties, pavements, landscaped areas and grasses should be monitored periodically to ensure that run-off from these sources is not depositing silts and debris on the permeable surface. Construction traffic, agricultural areas (no ground cover), beach area, areas subject to high winds that will carry these fine particles, will require more frequent sweeping than urban areas.

It is recommended that a monitoring well be installed with the system and will provide for access to bottom of system for observation for rate of ex-filtration. In addition, water samples may be removed to permit water quality to be analyzed. This should be done once on an annual basis.

Settlements in pavement surface, access for utility repair, removal of broken or damaged pavers may be performed by an experienced paver installer. Pavers will be removed, setting bed and void materials will be salvaged and kept separate. Base materials are to be removed if access for utilities is required, Settlement repair depending on depth will be restored with additional base materials if settlement exceeds ½". Setting bed will be made level and pavers re-instated with void materials replaced in joints and voids with compaction bringing the pavers to flush condition and ready to use.

Remedial Maintenance:

Application of a commercial vacuum sweeper with water jets, sweeper and vacuum bar attachment will cause evacuation of clogged void materials from joint and void openings. This material may be recycled at a wash site or new aggregate materials may be utilized. (Refer to specifications for size and grade) Jointing materials are to be swept into joints and void openings until full, typically the bottom of chamfer is full.

Winter Maintenance:

Snow Removal:

A four season parking surface, street or plaza my be plowed with truck-mounted blades, power brooms, snow-blowers or manually shoveled, however bladed vehicles will require snow plows with shoes.

Salt may be used to melt ice, but will affect the quality and pH of water leaving the system and will require additional monitoring and analysis. Sand should not be used as will accelerate rate of clogging in voids and will require increased frequency of sweeping. Open-graded chips may used for traction when ice is present, but more than likely will require sweeping and removal in the spring.