Installation, Operations and Maintenance Checklist for Permeable Paver Systems

Installation Guidelines: Proper installation of the permeable paver system is necessary in order for the system to function properly. Site conditions, such as soil type, slope, traffic use, need to be considered in order for a qualified engineer to create a design.

Maintenance: After installation, maintenance is relatively minimal but absolutely necessary to ensure the system functions property.

Example Maintenance Schedule

The primary maintenance requirement for permeable pavers is to clean the accumulation of sediment from the upper ¼" to ½" of the joint aggregate. Fine debris and dirt accumulate in aggregates that fill the openings between the pavers and reduce the pavement's flow capacity. It is natural for clogging to occur over time as this is how sediment is collected, but routine maintenance will renew the system. A maintenance checklist follows:

- Inspection of the site should occur monthly for the first few months after construction. Then inspections can occur on an annual basis, preferably after rain events when clogging will be obvious. Debris removal should occur as needed (ie. remove grass clippings after mowing) or at a minimum monthly.

Debris Removal:

Keep leaves/grass clippings off the surface with a hand-held bristle broom or leaf blower. Be careful not to blow the aggregate out of the joints when using a leaf blower.
Remove weeds/plant material growing between pavers by hand or carefully treat with hot water to kill the weed and remove the dead plant material at a later date.

Winter Maintenance:

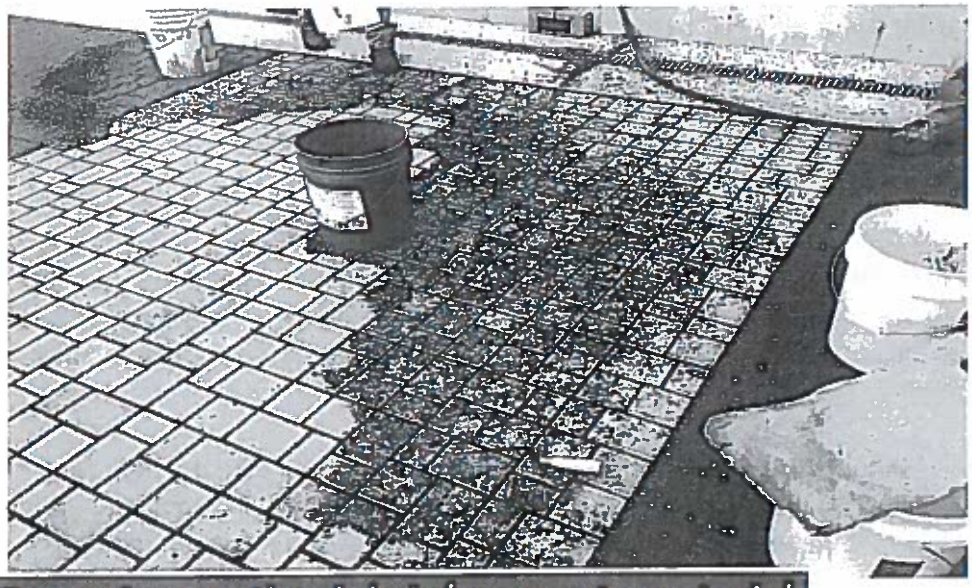
Remove snow according to manufacturer's recommendations.
Using a rubber tipped shovel/plow or keep plow tip 1 inch above the surface may prevent surface scratching.
Some snow blowers can be fitted with plastic on the scoops and gliders to prevent scratching.
Use deicer's sparingly but as needed to remove any ice accumulation. **Don't apply sand** for deicing. Follow manufacturers recommended deicers types, and follow all warnings and cautions. Typically, sodium chloride, calcium chloride and potassium chloride are acceptable. Do not use magnesium chloride as it will eventually destroy all concrete materials. Ammonium nitrate and ammonium sulfate should NOT be used since they will also erode concrete.

Semi-annual Maintenance:

- Remove loose surface debris from the pavers and accumulated sediment in the jointing aggregate between the pavers (1) after leaf-off (fall) and (2) early spring.

-A stiff broom can be used to clean the surface and remove contaminated joint material. A leaf blower may be helpful in this effort also. If one can view standing water after a rain event, use a hand tool (i.e. small

masonry trowel) to loosen the joint material ahead of the sweeping/blowing. Remove the upper ¼ to ½ inch of joint aggregate as this where sediment typically collects. Removed material can be picked up with a dust pan and disposed of.



Sweeping up the debris/aggregate material removed with hand tools.

- A wet/dry vacuum can also be used to remove surface and accumulated debris in the joints. If one can view standing water after a rain event, use a hand tool (i.e. small masonry trowel) to loosen the joint material ahead of the vacuum will improve cleaning results. Remove the upper ¼ to ½ inch of joint aggregate as this where sediment typically collects. Dispose of debris and contaminated joint aggregates.

-Replenish jointing aggregate with clean 3/8" washed, angular aggregate chips as needed to the bottom of the paver chamfers.

-Check any observation wells and outlet pipes from underdrains to confirm drain down and water outflow.

Potholes and cracks can be filled with patching mixes, and spot clogging of porous concrete may be fixed by drilling approximately 0.5-inch holes every few feet. Damaged interlocking paving blocks can be replaced. The longevity of the system is increased by following the manufacturer's maintenance schedule, restricting the area's use by heavy vehicles, limiting the use of de-icing chemicals and sand, and implementing a reasonable sediment control plan.