Permeable Paving	Description/ Design Considerations	Limitations	Maintenance	Cost[1]
Porous Concrete 	Porous Concrete is similar to standard pavement in aesthetics and load-bearing capacity, but the fine material (sand and finer) has been reduced or eliminated in the mix. As a result, channels form between the aggregate in the pavement surface to allow water to infiltrate. Acceptable porous concrete materials have a minimum of 15% voids and a minimum design infiltration rate of 200 inches/hour. Properly installed and maintained porous concrete is expected to have a service life that is longer than conventional asphalt, but shorter than conventional concrete.	• Application must be large enough to be cost effective for supplier to mix material. • System must be designed with an overflow or lateral release from the storage bed.	• Annual Vacuum sweeping or high pressure hosing required to maintain function.	$3- $5 per square foot. Costs are comparable to conventional concrete.
Porous Asphalt 	Porous Asphalt looks like conventional asphalt and it provides a load-bearing surface for low-traffic areas and pedestrians. The elimination of fines and the mix of stone aggregate and asphalt binder results in voids that allow water to infiltrate. Acceptable porous asphalt materials have a minimum of 15% voids and a minimum design infiltration rate of 200 inches/hour. Properly installed and maintained porous asphalt has a service life that is comparable or longer than conventional asphalt.	• Application must be large enough to be cost effective for supplier to mix material. • System must be designed with an overflow or lateral release from the storage bed.	• Annual Vacuum sweeping or high pressure hosing required to maintain function.	Approximately $1 - per square foot. Application needs to be minimum size due to manufacturing requirements.
Grid/Lattice Systems Image 	Plastic Grid Systems are rigid, plastic cells that are filled with gravel or soil and grass. The cells allow water to infiltrate. The grid sections interlock and are pinned in place. Acceptable grid/lattice systems (filled with soil or sand medium) materials have a design infiltration rate of 10 inches/hour. Properly installed and maintained, plastic lattice systems have an expected service life of approximately 20 years.	• Typical uses include alleys, driveways, utility access, loading areas, trails, and parking lots with relatively low traffic speeds (15-20 mph maximum).	Vegetated Systems: • May need occasional reseeding • Requires mowing and irrigation. Non-Vegetated Systems: • May need occasional refilling of crushed rock or gravel.	$3 to $4 per square foot.
Interlocking Pavers 	Interlocking Pavers are cast-in-place systems or modular pre-cast blocks that have wide joints or openings that are filled with gravel or soil and grass. They are available in a variety of materials, colors, and shapes. Acceptable interlocking pavers have a minimuim of 12% open space, and a minimum design infiltration rate of 10 inches/hour (when filled with soil or sand medium).	• System must be designed with an overflow or lateral release from the storage bed.	• Periodically add joint material (sand) to replace material that has been moved/worn by traffic or weather. • Easy to repair, since units are easily lifted and reset.	Approximately $2.50 to $4.50 per square foot.

[1.] Cost for aggregate base/storage bed varies with depth and are not included in cost estimate. Costs and the majority of the design guidance in this document has been obtained from the Puget Sound Low Impact Design Manual; See http: http://www.psat.wa.gov/Publications/LID_tech_manual05/lid_index.htm for full document[3.]

Figure 6-11 September 2005

Permeable Pavement Comparison Guide

SEATTLE RIGHT-OF-WAY manual