Design Checklist

When installing pervious pavement, the following design criteria should be considered.

- An open-graded base of crushed stone, which has 35 to 45 percent pore space, is installed below the surface pavement. The recommended base thickness is 6 inches for pedestrian use and 10 inches for driveways to provide adequate structural strength.
- Slope is flat or nearly flat (not greater than 2 percent).
- Flow directed to pervious pavement is dispersed so as not to be concentrated at a small area of pavement.
- No erodible areas drain onto the pavement.
- The subgrade is uniform and compaction is the minimum required for structural stability.
- If a subdrain is provided, its outlet elevation is a minimum of 3 inches above the bottom of the base course.

Maintenance Considerations

Once pervious pavement is installed, the following maintenance criteria should be followed:

- The use of leaf blowers on permeable pavement can force dirt and debris into pavement void spaces. Avoid blowing leaves, grass trimmings and other debris across permeable pavement.
- Remove weeds from pavement and replace missing sand or gravel between pavers as needed.
- Inspect subdrain outlets (if applicable) yearly to verify they are not blocked.
- Inspect pavement after rains for ponding or other visible problems. If there are problems with standing water, vacuum sweeping with specialized equipment may be required. Concrete grid pavers do not require sweeping.

Is Pervious Pavement Feasible for My Project?

Pervious pavement is appropriate in locations with the following characteristics:

- The location is flat or nearly flat (a maximum 2% slope).
- The location is not in a seasonally wet area.
- The location is not close to a building foundation, unless measures are taken to prevent infiltration under the structure. (See Design Checklist.)
**Typical Materials and Example Applications**

### Pervious Concrete

- Pervious Concrete
- Typ. 5 to 8 in. (125 to 200 mm) thick
- No. 57 stone subbase – thickness varies with design
- Soil subgrade
- Optional geotextile on bottom and sides of open-graded base

### Turf Block

- Topsoil
- Concrete grid
- 1/2 in. to 1 in. (13 to 25 mm) bedding sand
- Grass
- Edge restraint
- Existing compacted soil sub-grade
- Base extends 12 in. (300 mm) beyond grid perimeter

### Permeable Interlocking Concrete Pavers

- 4 in. (100 mm) thick No. 57 stone open-graded base
- No. 2 stone subbase – thickness varies with design
- Optional geotextile on bottom and sides of open graded base
- Note: ASTM No. 3 or 4 stone may be substituted for No. 2 stone. ASTM No. 89 or 9 stone may be used in the paver openings.

### Porous Asphalt

- 3 to 6 in. stone for overflow drainage
- Porous asphalt, Typ. 3 in. (75 mm) thick
- Bedding course, Typ. 2 in. (50 mm) thick (Typ. No. 57 stone)
- No. 2 stone subbase – thickness varies with design
- Optional geotextile on bottom and sides of open-graded base

Note: ASTM No. 3 or 4 stone may be substituted for No. 2 stone. ASTM No. 89 or 9 stone may be used in the paver openings.
Typical Materials and Example Applications

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- Porous asphalt, Typ. 3 in. (75 mm) thick
- Bedding course, Typ. 2 in. (50 mm) thick (Typ. No. 57 stone)
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- Optional geotextile on bottom and sides of open-graded base
- Soil subgrade

**Permeable Interlocking Concrete Pavers**

- 4 in. (100 mm) thick No. 57 stone open-graded base
- No. 2 stone subbase – thickness varies with design
- Optional geotextile on bottom and sides of open graded base
- Note: ASTM No. 3 or 4 stone may be substituted for No. 2 stone.
  ASTM No. 89 or 9 stone may be used in the paver openings.

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Pervious pavement, also referred to as permeable pavement, contains pores or separation joints that allow water to flow through and seep into a base material (typically gravel or drain rock). Types of pervious pavement include porous asphalt and concrete, open joint pavers, interlocking concrete or permeable pavers, and plastic or concrete grid systems with gravel-filled voids.

Pervious pavement systems allow infiltration of stormwater into soils, thereby reducing runoff and the amount of pollutants that enter creeks, San Francisco Bay, the Pacific Ocean, and other water bodies. This improves water quality, helps reduce creek erosion, and can facilitate groundwater recharge. Pervious pavement is available in many different types that offer environmentally-friendly and aesthetically pleasing options for driveways, walkways, parking areas, and patios.