

Innovative Parking Guidelines & Access Management



Innovative Parking Practices
for Stormwater Management

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Innovative Parking Practices

The latest innovation in parking practices involves “permeable pavements”, which allow rainwater to pass through the paved surface to the ground below.

This reduces the amount of stormwater run-off that is generated by roadways and parking lots, which in turn, reduces erosion and sedimentation.

Permeable Pavement may also reduce the size of the stormwater management facilities such as detention basins.

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There are several types of permeable pavements:

1. Porous Pavements.

- Porous Asphalt
- Porous Concrete

2. Permeable Pavers.

- Cast Concrete Pavers
- Fired Brick Pavers

3. Structural Lawn.

- Grass Pavers
- Reinforced Turf

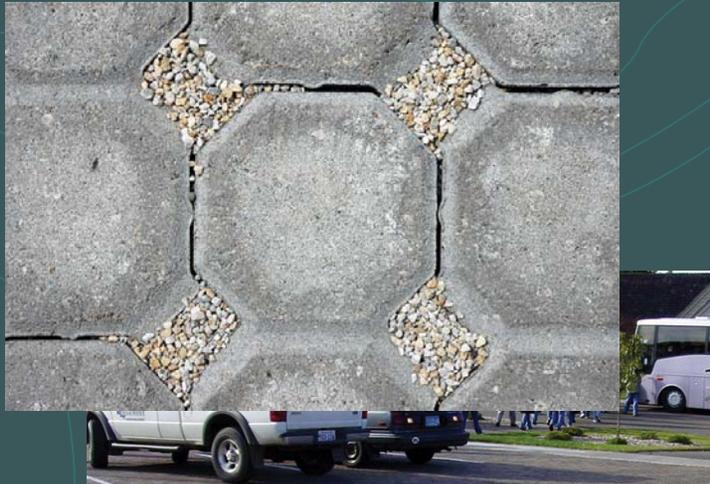
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Porous Asphalt & Concrete Pavements



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Permeable Pavers



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Structural Lawn



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When you couple other “Best Management Practices”, or “BMP’s” with permeable parking surfaces, you greatly reduce stormwater runoff. BMP’s such as rain gardens, bio-swales and bio-basins slow the rate at which stormwater runoff leaves a site. Water that used to run off of a site, can now infiltrate the soil, recharging the ground water.

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Bio-Basin/Bio-Swale



Rain Garden

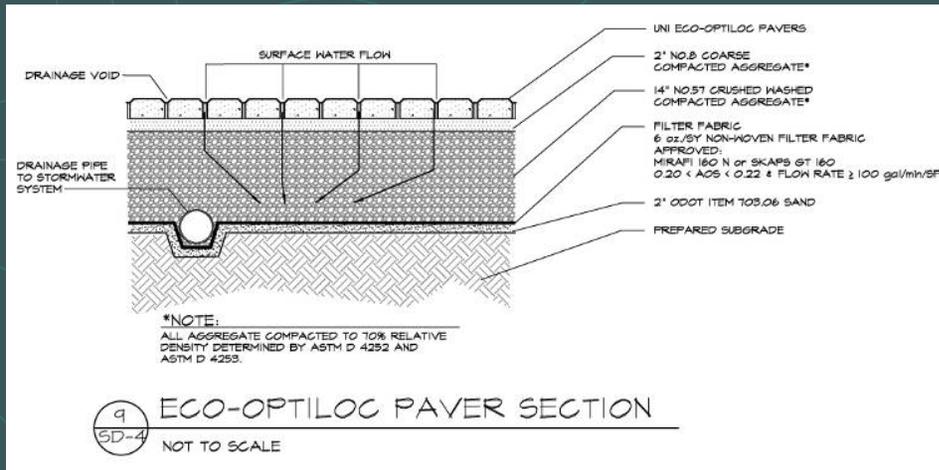


Permeable Pavers



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Pavement Section



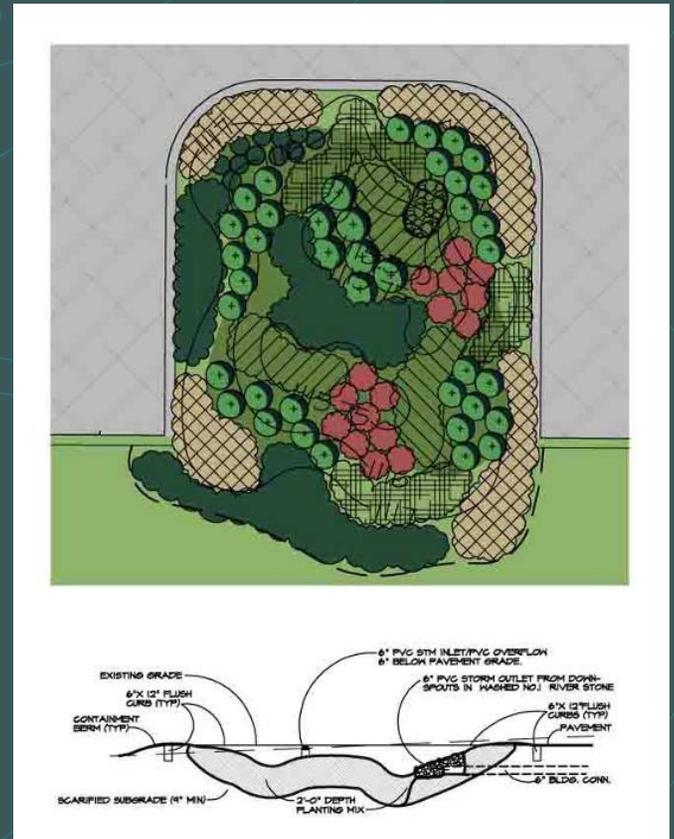
Permeable Concrete Pavers

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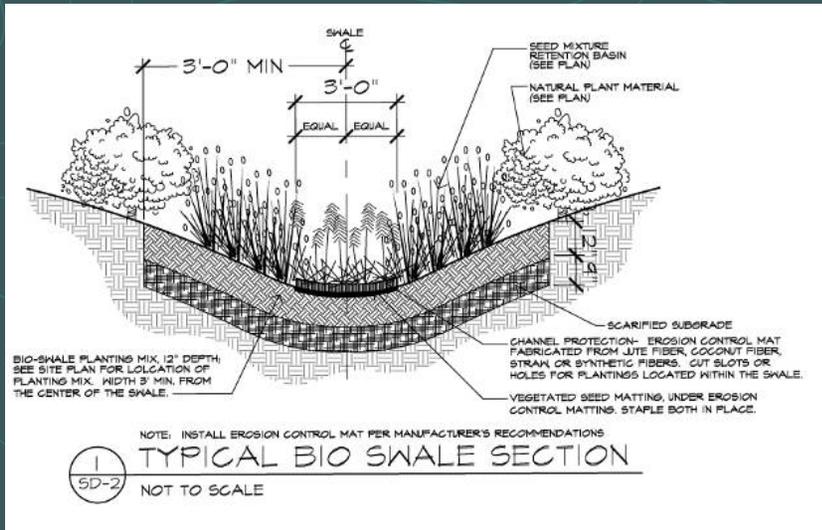
Rain Garden



Planting Plan & Section

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Bio-Swale Section



Bio-Swale

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Bio-Basin (Retention)



Bio-Basin Grades



Data Summary

March 30 to November 5, 2009

- 5 of 30 rain events less than 0.2 in.
 - 63% average reduction of runoff
 - 40 minutes delay from the beginning of rain event to discharge
- 25 of 30 events of total rain between 0.31 and 1.57 in.
 - 17% average reduction of runoff
 - 10 minutes delay from the beginning of rain event to discharge
 - Rain events lasting about 26 hours with discharge lasting about 52 hours
- Water Quality Data: No Pollutants of Concern from Pavement