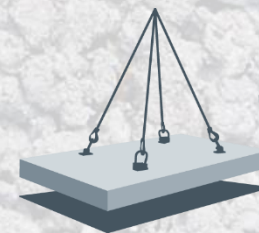


Bates College – Lewiston Maine

Success with the Stormcrete® Precast Porous Concrete System used as a Gravel Filter Inlet

2017 North Country Stormwater Tradeshow and Conference



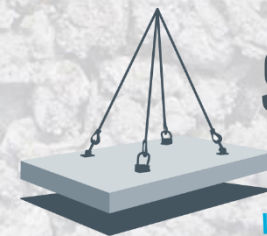
**STORM
CRETE®**

When it Rains...it's Porous™

www.stormcrete.com

Benefits of Porous Pavement

- Lessens the impact on existing storms or combined sewers
- Greater base-flow in streams and rivers
- Provides natural filtration through soils of TSS: Nutrients, Heavy Metals and other pollutants.
- Higher coefficient of friction means safer stopping
- More closely mimicking the natural hydrologic responses to a rainfall events
- Reduces the Heat Island effect common to conventional pavement



**STORM
CRETE®**

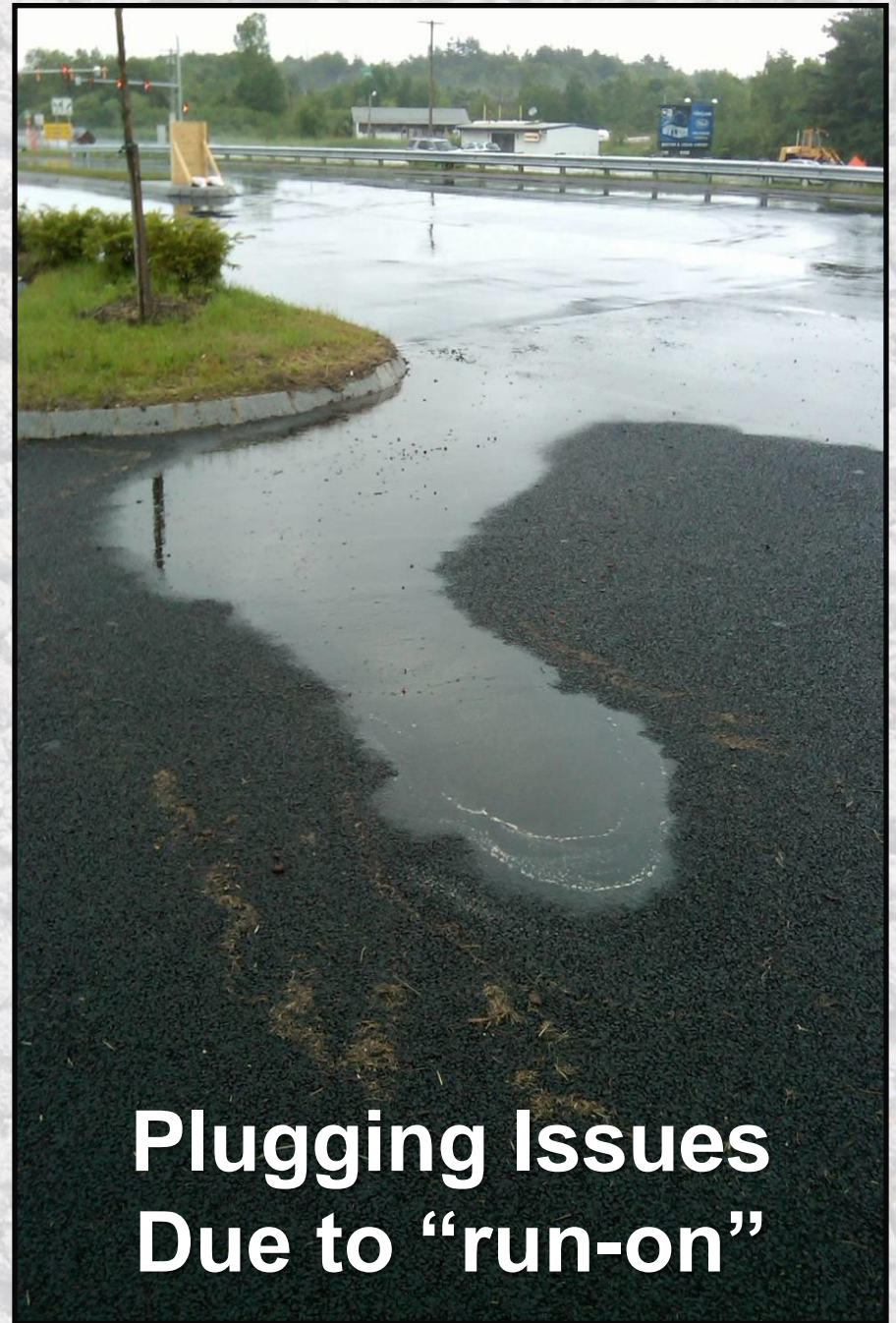
When it Rains...it's Porous™

www.stormcrete.com



The Pre-Stormcrete® Porous Pavement Market





Durability Issues

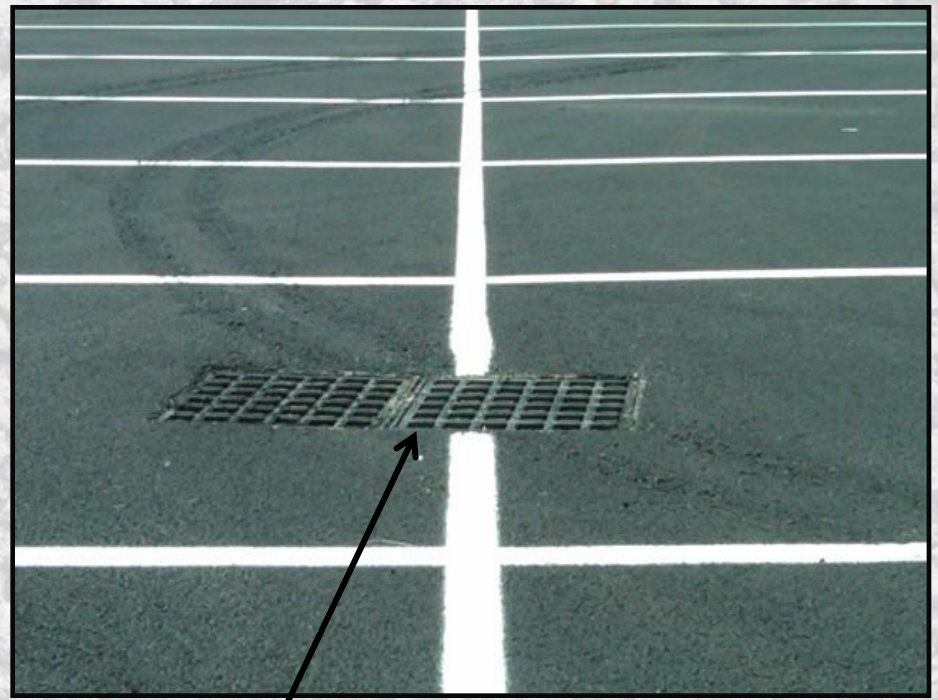




**Bad
Batch**



tick tick tick....



**Vote of no
confidence
shown by the
engineer**

Negative **Perceptions** of Porous Pavement in the Marketplace

Durability

Installation is labor intensive

Inconsistency in mix from batch to batch

Difficult to produce

Weather dependent (can't install when too cold/hot)

Difficult to maintain and repair

No access to subgrade (utilities)

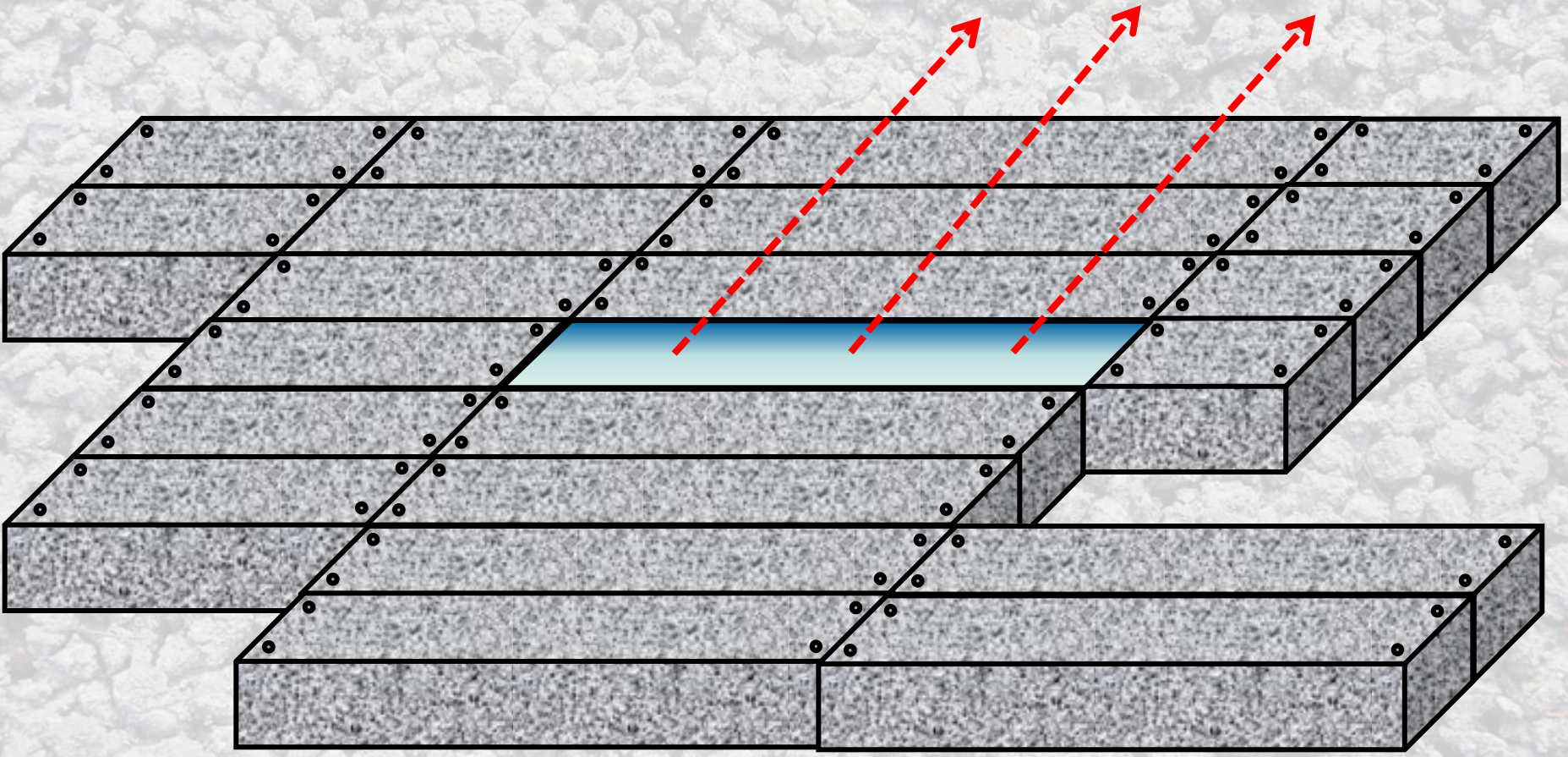
**HIGH
RISK!!!**

Introducing Stormcrete®

Modular Precast Porous Concrete Stormwater System



Each precast porous
segment is **REMOVABLE**
and **REUSABLE**



**Modular Precast Porous Concrete
Stormwater System**

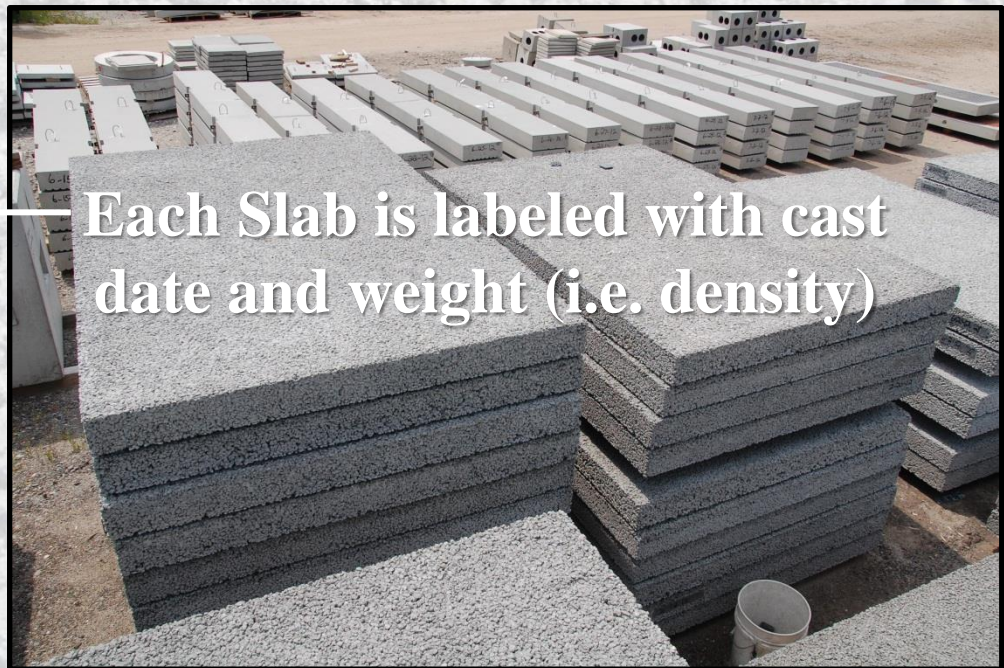


Stormcrete[®] Manufacturing

Mixed / Placed / Covered

+/- 20 minutes in controlled conditions





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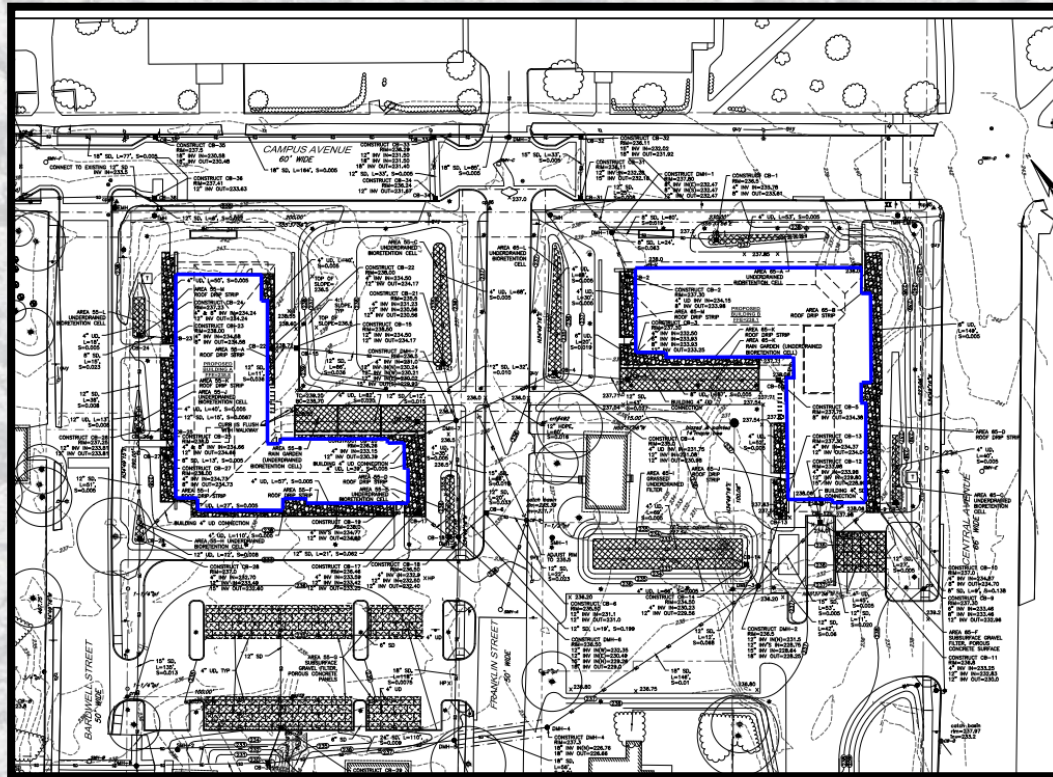
Success with the Stormcrete® Precast Porous Concrete System used as a Gravel Filter Inlet



Bates College – Lewiston Maine

2014-16 Expansion of Residential Living Areas

- Existing dwellings removed to make room for two new residence halls



Bates College – Lewiston Maine

- ME DEP Site Location Permit Required
- City of Lewiston and Maine DEP required no net increase in runoff.
- 95% treatment on all new impervious areas
- 80% treatment on all developed areas (imp. and pervious areas)

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Treatment must consist of:

- Pollutant Removal
- Mitigation for increased frequency and duration of channel erosive flows
- Mitigation for any potential temperature impacts

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Attenuation/Storage Requirement:

- The system must detain, retain, or result in the infiltration of stormwater from 24-hour storms of the 2-year, 10-year, and 25-year frequencies such that the peak flows of stormwater from the project site do not exceed the peak flows of stormwater prior to undertaking the project;

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Stormwater Quality and Quantity Measures Proposed and Employed to remove pollutants and slow the rate of stormwater discharge from the project site:

- Underdrain Bioretention Cells
- Bioswale/Raingarden
- Subsurface Gravel Filter

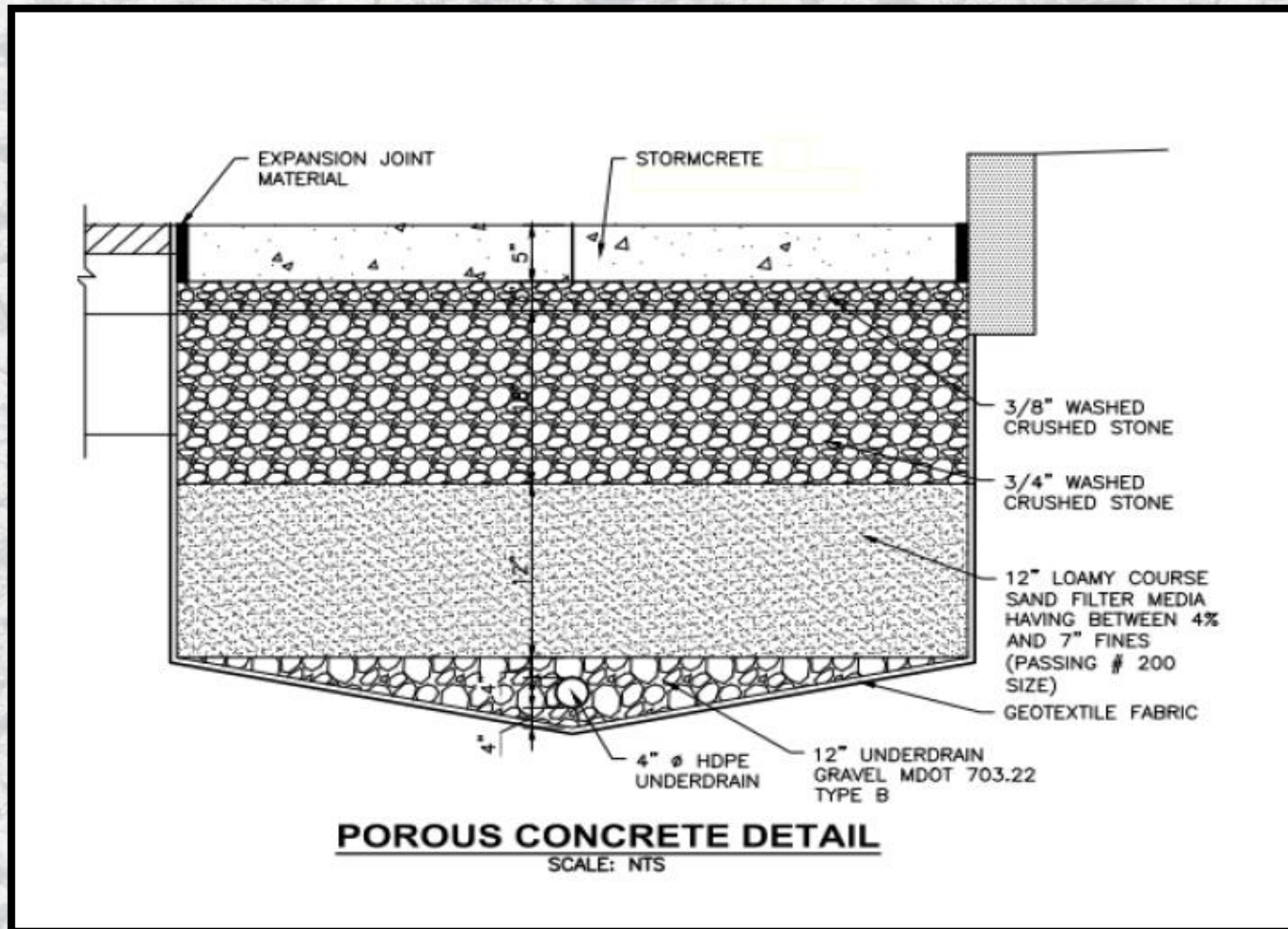
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Subsurface Gravel Filter

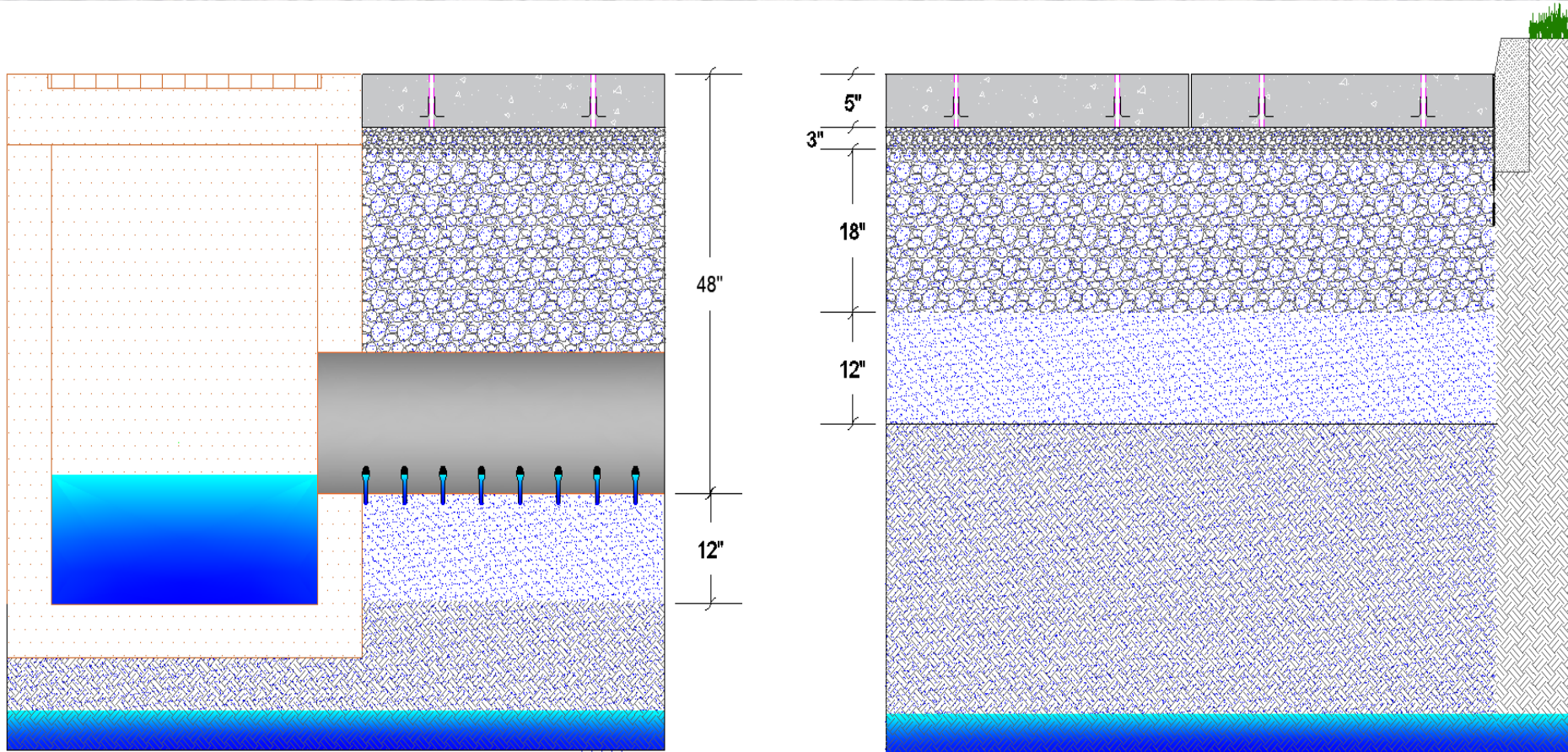
- Utilizing a conventional manhole for a subsurface filter dictates that the invert level to the filter be about 4' deep.
- This pushes the bottom of the filter potentially deeper than desired.
- Using the Stormcrete® Precast Porous Pavement System allows for an inlet at grade.
- Eliminating the need to excavate deeper than necessary – potentially too close to groundwater or ledge.

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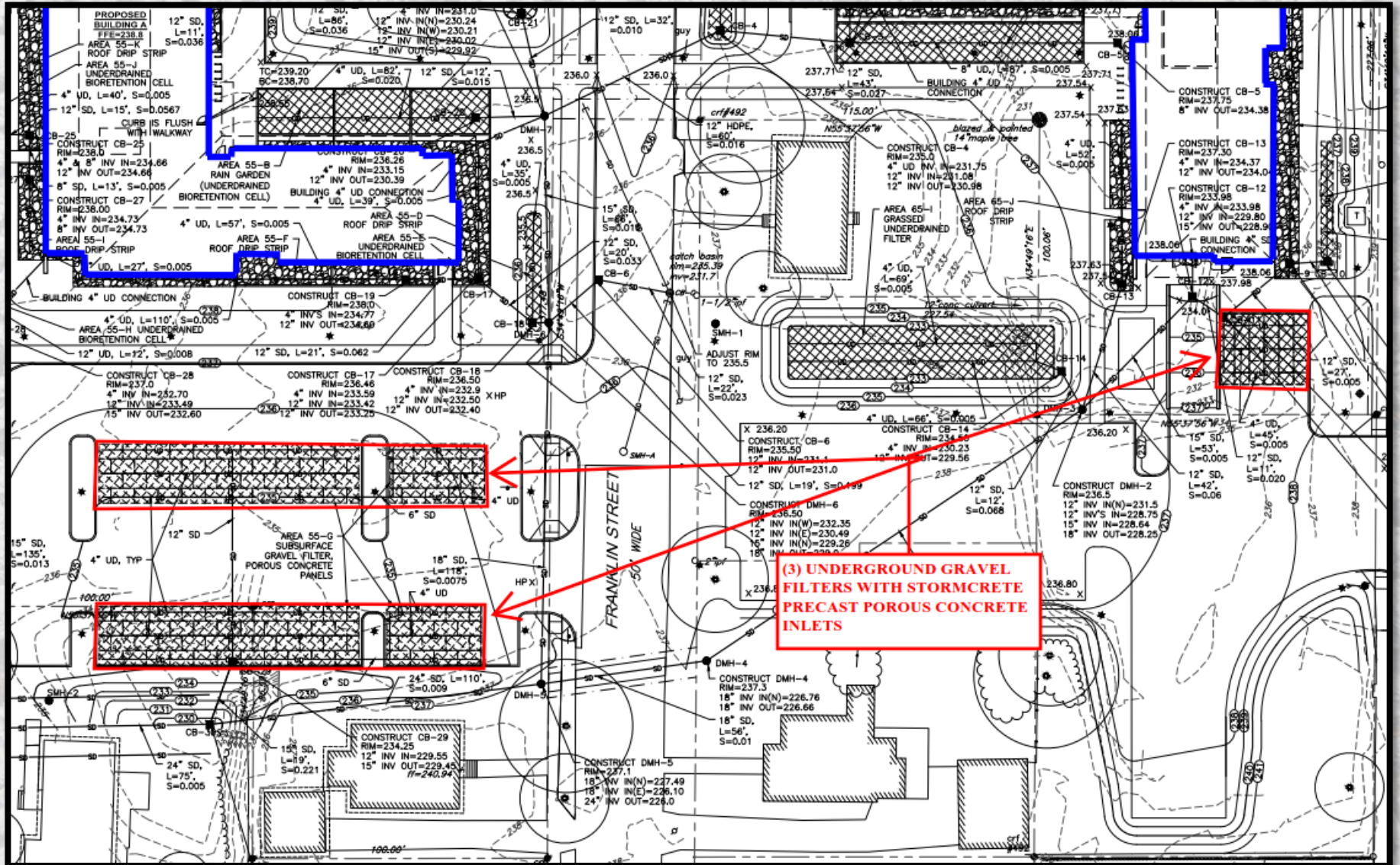
Subsurface “Gravel” Filter with Stormcrete® System Inlet

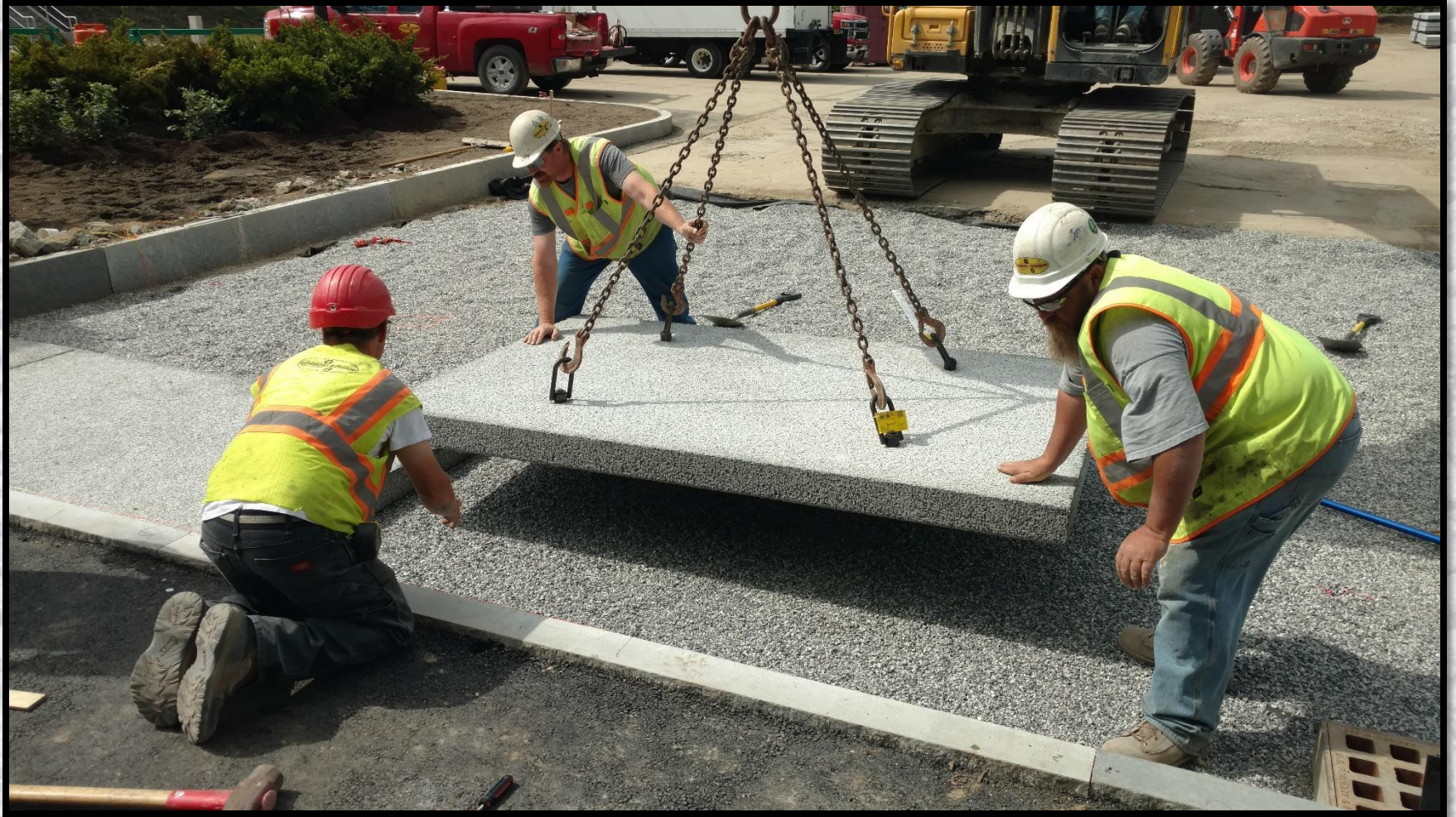


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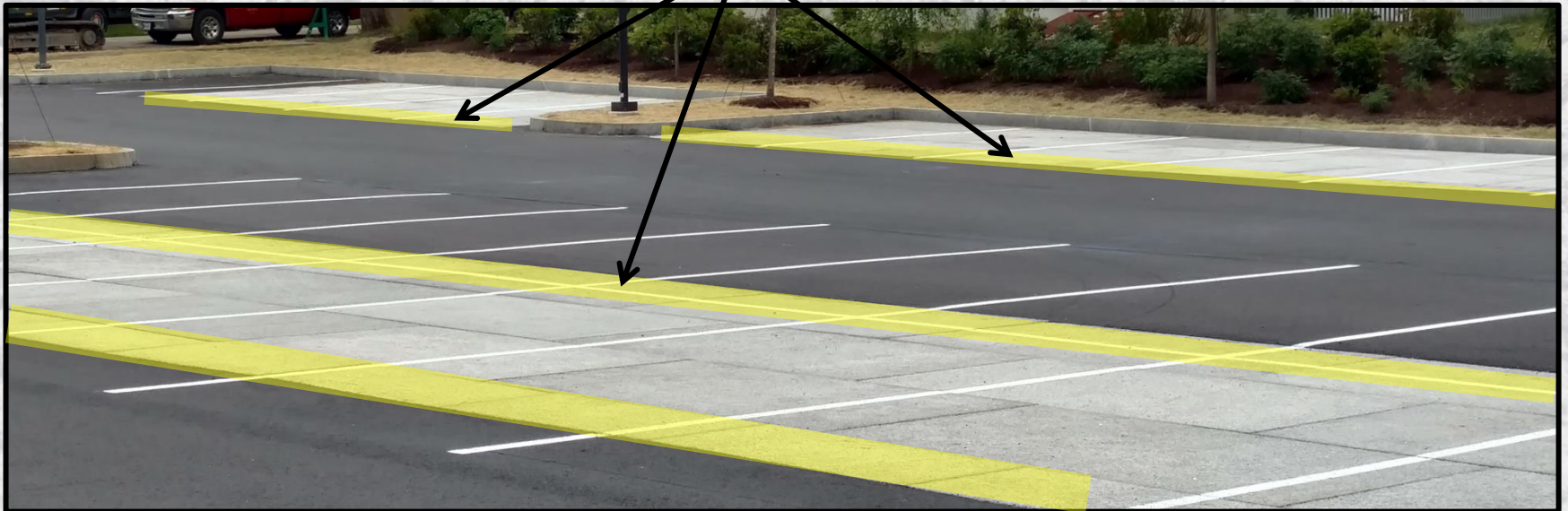








Stormcrete® Run-on Row™







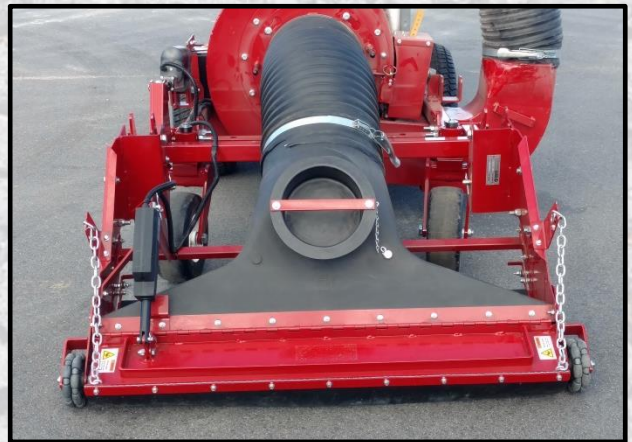




Stormwater SUV
(**S**temwater **U**tility **V**acuum)

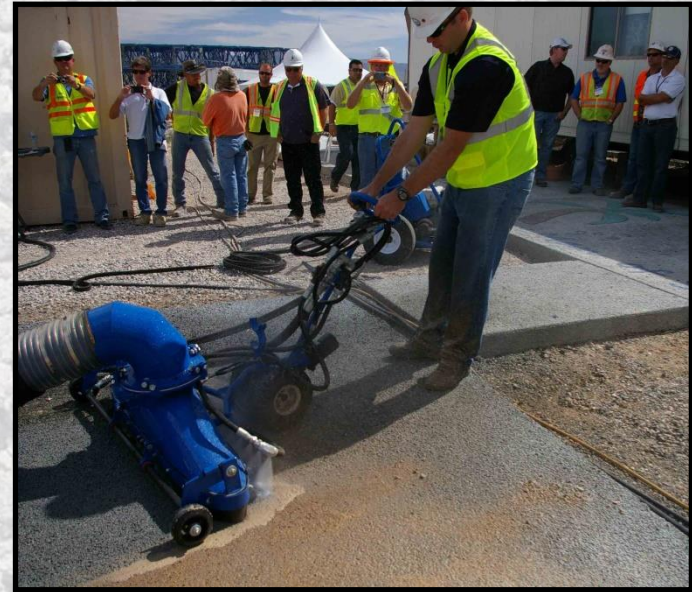


**Stormcrete® Precast
Porous Concrete Gutter**



B.I.R.D.

Bunyan Infiltration Restoration Device



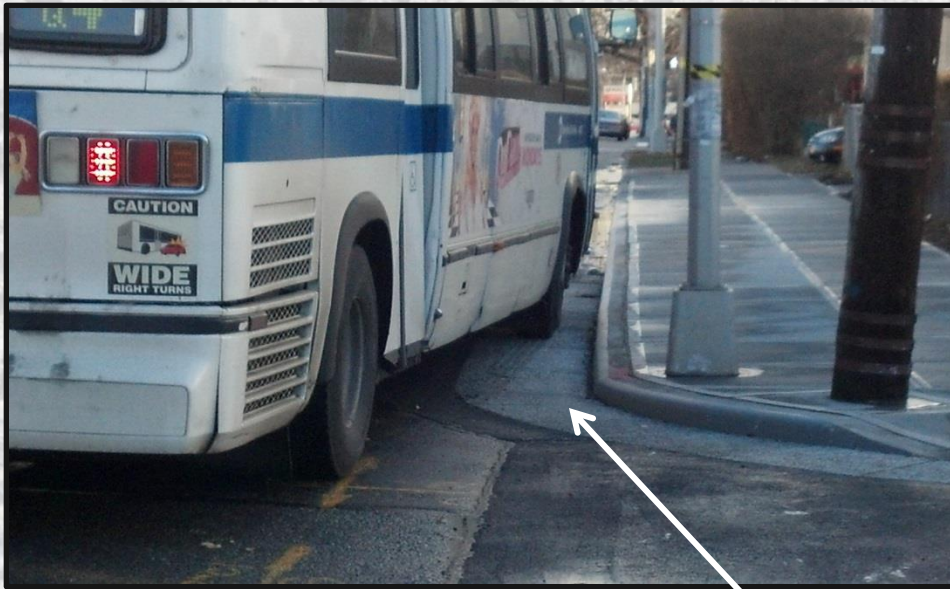
Stormcrete® - Modular Precast Porous Concrete StormWater System

Green Infrastructure Benefits:

- Controls stormwater quality and quantity
- Slabs are manufactured, cured and stored in a controlled environment
- Porous section is removable / maintainable / reusable
- Provides access to sub-base – utilities, spills, etc.
- Reduces life cycle costs
- Can be installed year round in almost any type of weather conditions
- Ready to use immediately – pre-cured



Localized Flooding at Corners



**Stormcrete®
Modular Porous
Concrete**