StormTree®

Where stormwater is a precious resource not to be wasted

Tree systems for stormwater management and healthy tree growth

Why Integrate Trees with Stormwater?

- Stormwater is not wastewater; it's a resource
- Cost effective stormwater management tool
- Complete streets design compliment: new infrastructure/retrofit
- Potentially reduce the number of catch basins and/or other collection points
- Increase infiltration and replicates predevelopment conditions
- Healthier tree growth and maturity due to less soil compaction
- Can be designed for stormwater harvesting and reuse

- Multiple applications:

Urban/Suburban Residential/Commercial

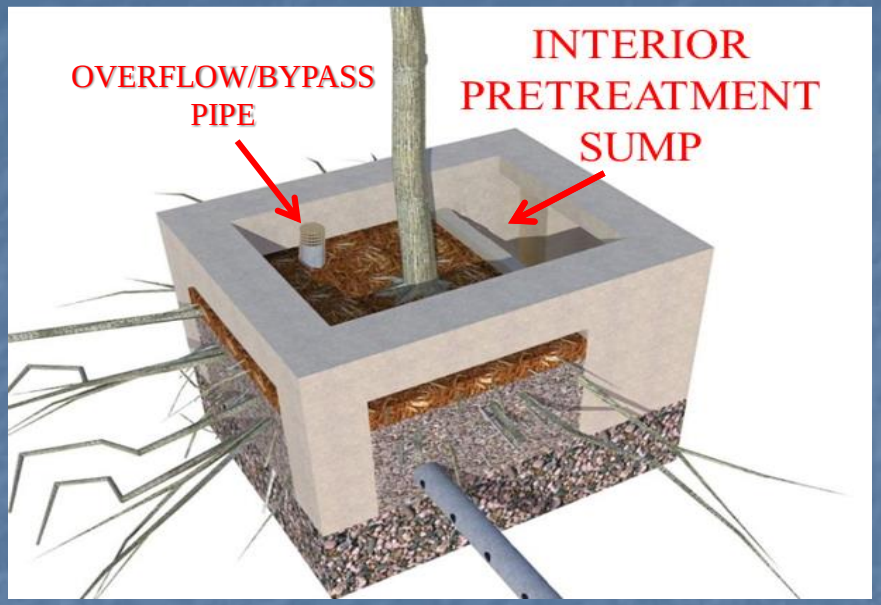
- Streetscapes, sidewalk retrofits
- Shopping Malls, Small "Package Lots"
- Parking Lots (Islands, Buffer Strips)
- Mixed Use Lifestyle Communities
- Municipal property

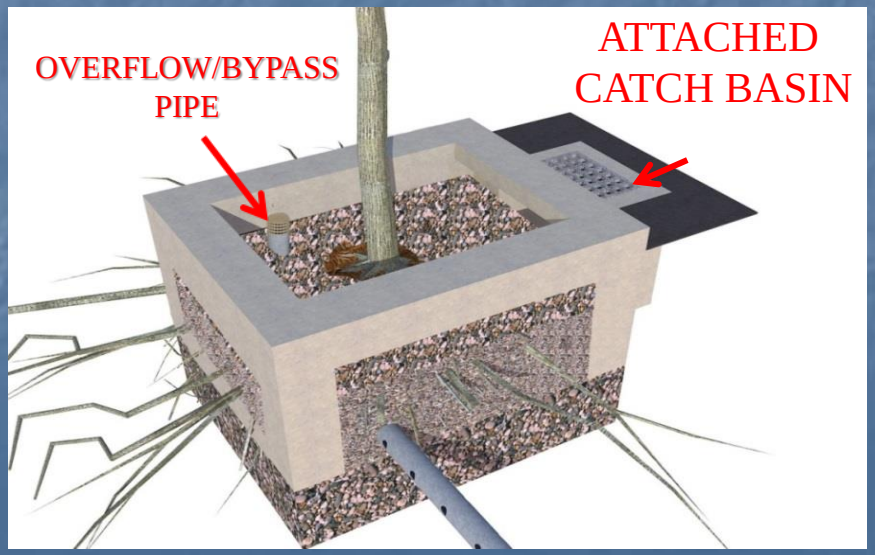
"The hardest working tree on the street™"

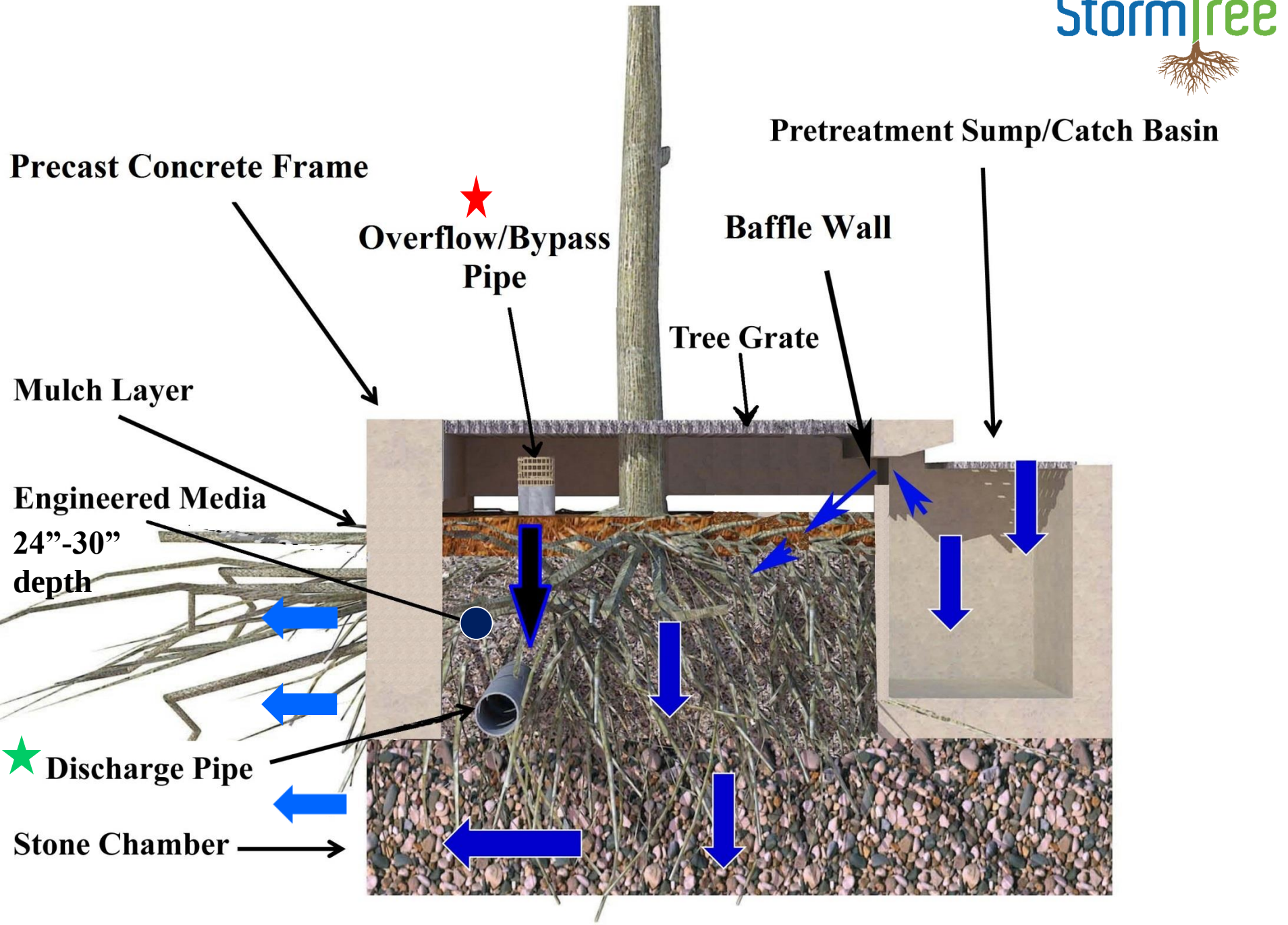
Stormwater mgt. & pollutant reduction

Tree pit for healthy tree growth

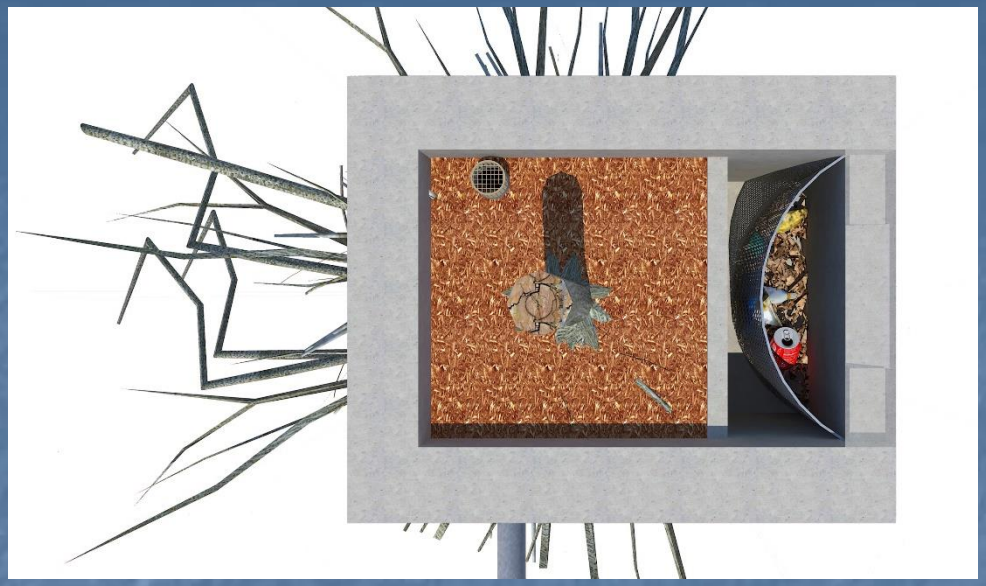
StormTree® "OPEN" TREE FILTER SYSTEMS

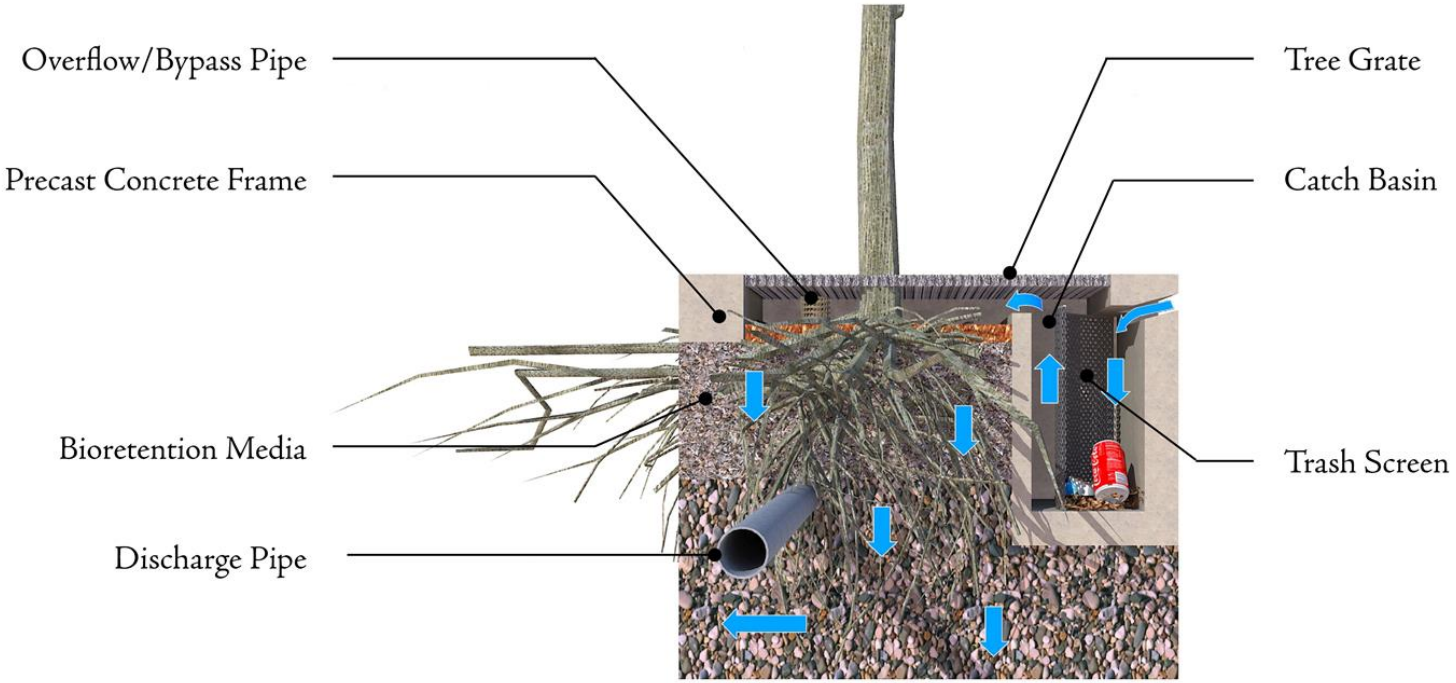


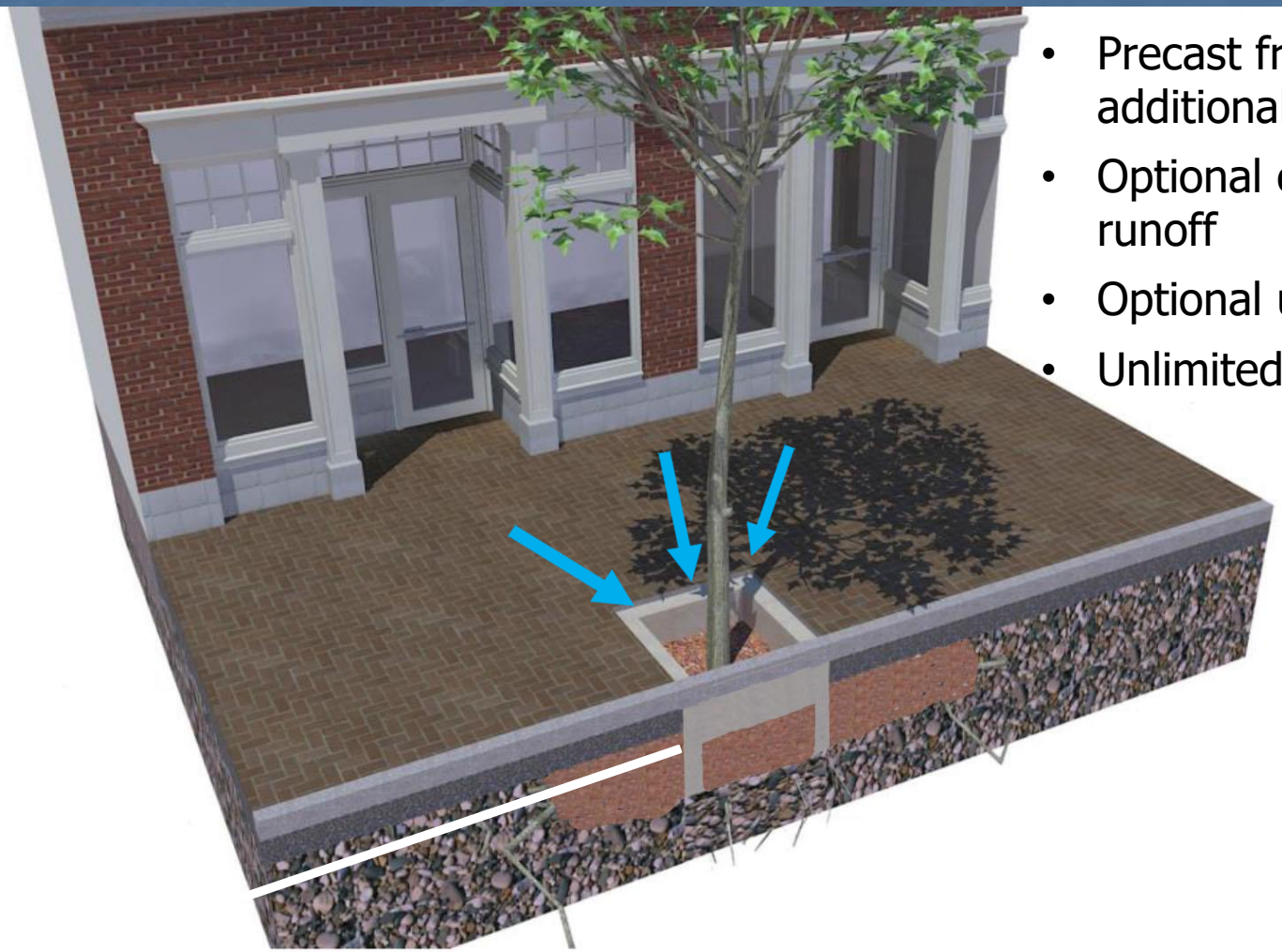



StormTree
Pretreatment Sump/Catch Basin
Precast Concrete Frame
Overflow/Bypass Pipe
Baffle Wall
Tree Grate
Mulch Layer
Engineered Media 24”-30” depth
Discharge Pipe
Stone Chamber

Optional trash screen within the sump





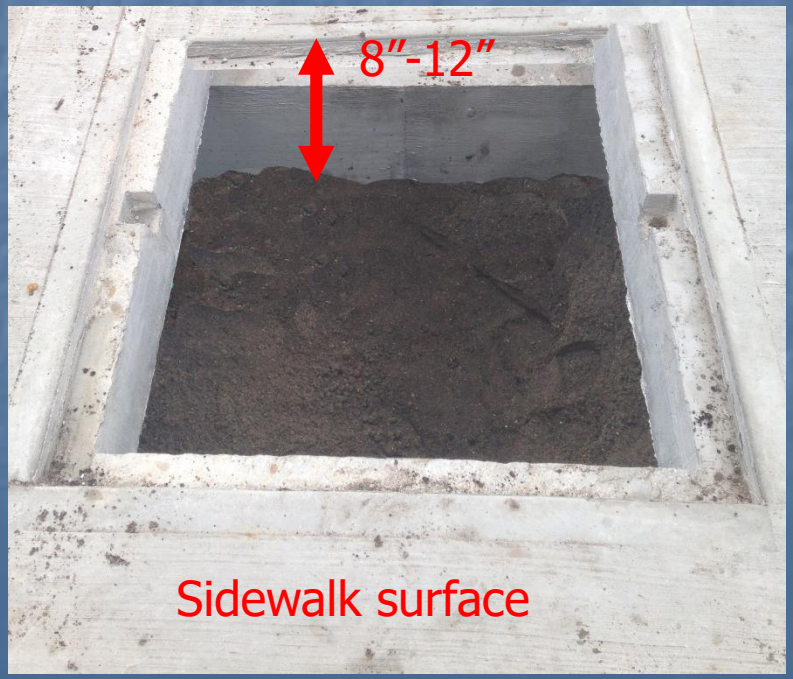


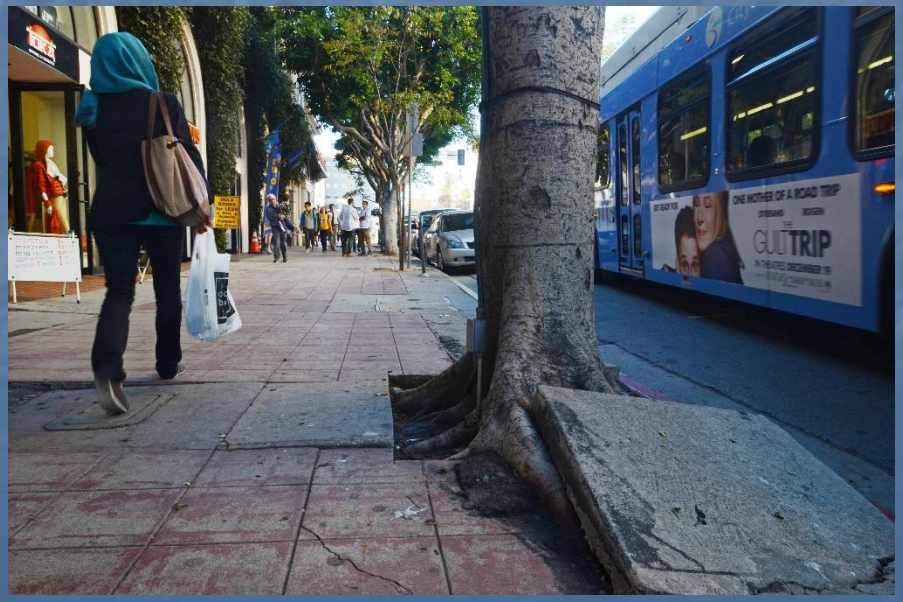
- Precast frame with well to collect additional rainwater
- Optional curb inlet to collect street runoff
- Optional underdrain pipe
- Unlimited tree and grate selection

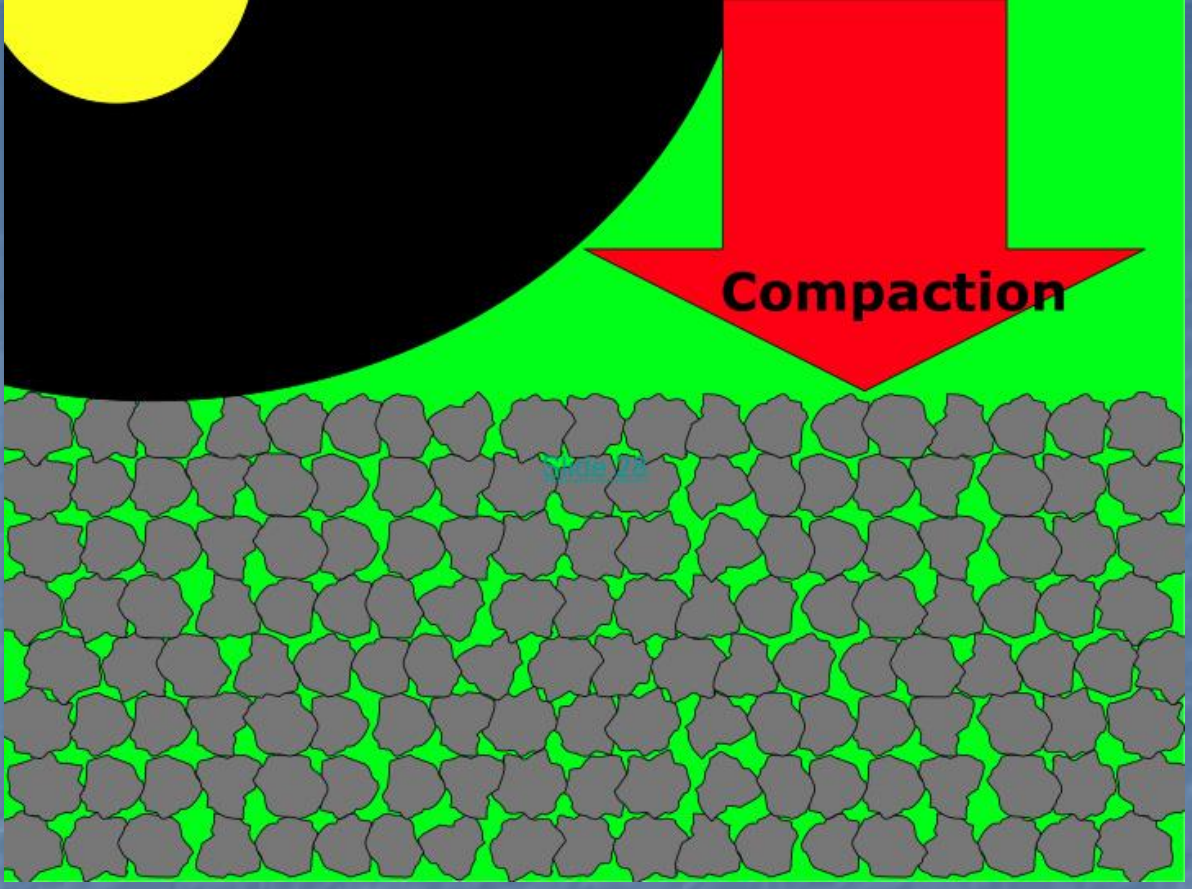




Sunken soil surface and root flare prevents sidewalk upheaval



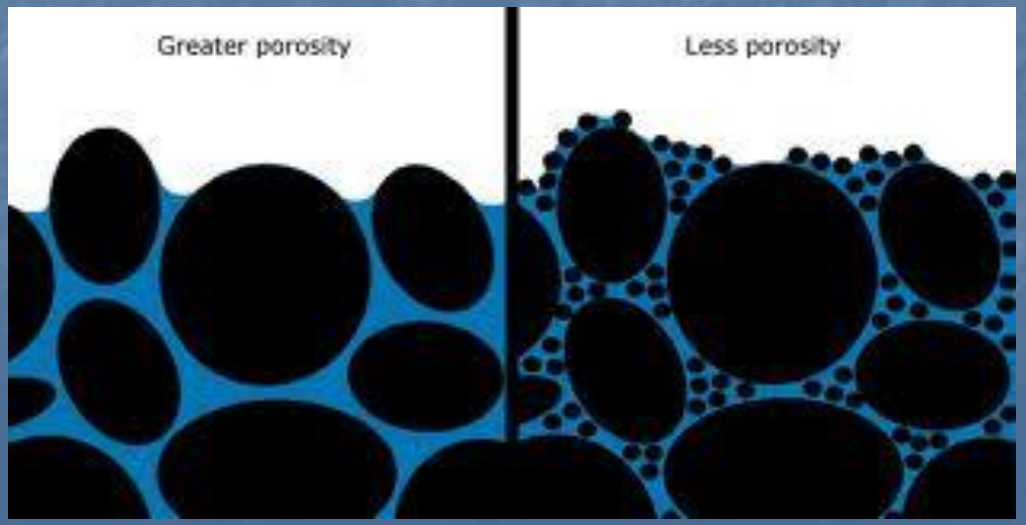




We amend existing soil

Or

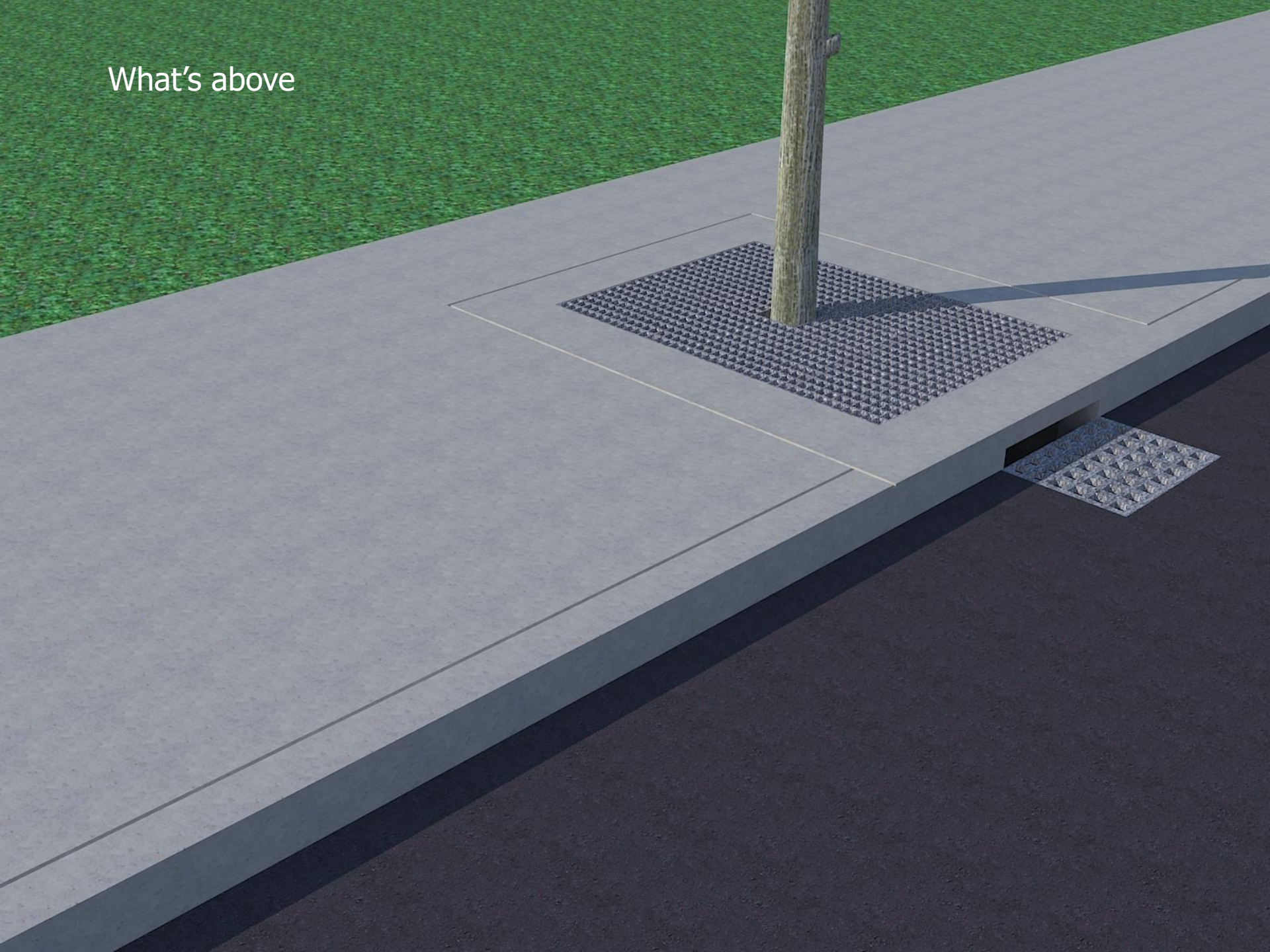
We engineer a soil mix that resists compaction, supports sidewalks, and allows for greater oxygen and water storage with additional amendments

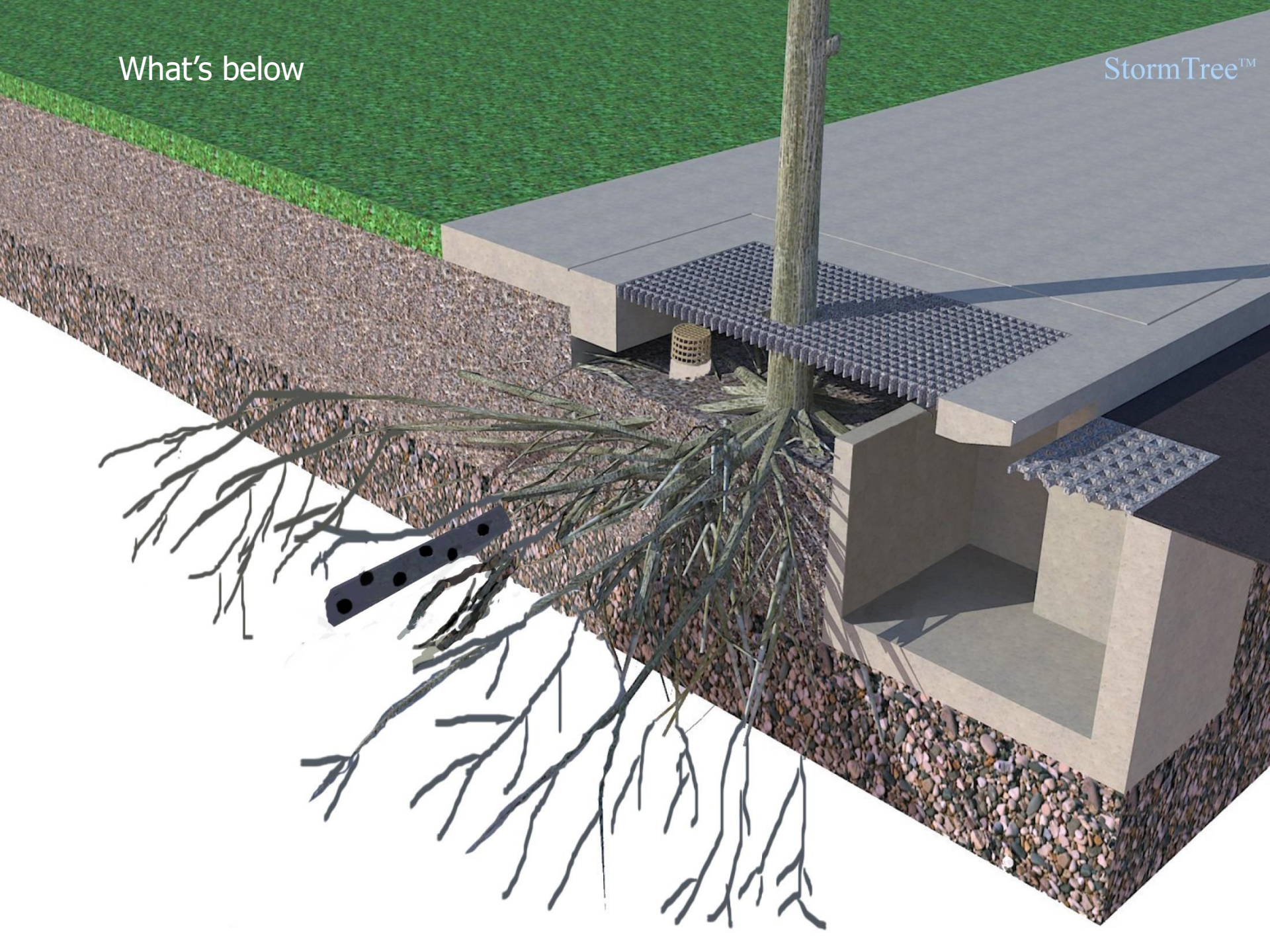


Trees have shallow root systems

Over 80% of a mature tree's root system are in the top 24" of soil layer

Roots are **opportunistic** and follow the path of least resistance both horizontally and vertically in search of water AND oxygen…..

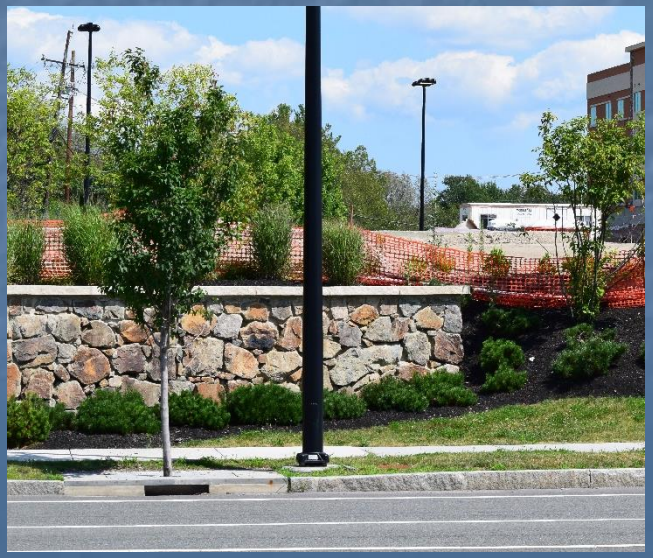

What's above


What's below
StormTree™

- Residential
- Commercial
- Streetscapes

Colleges & Universities

- Can be used as a teaching tool

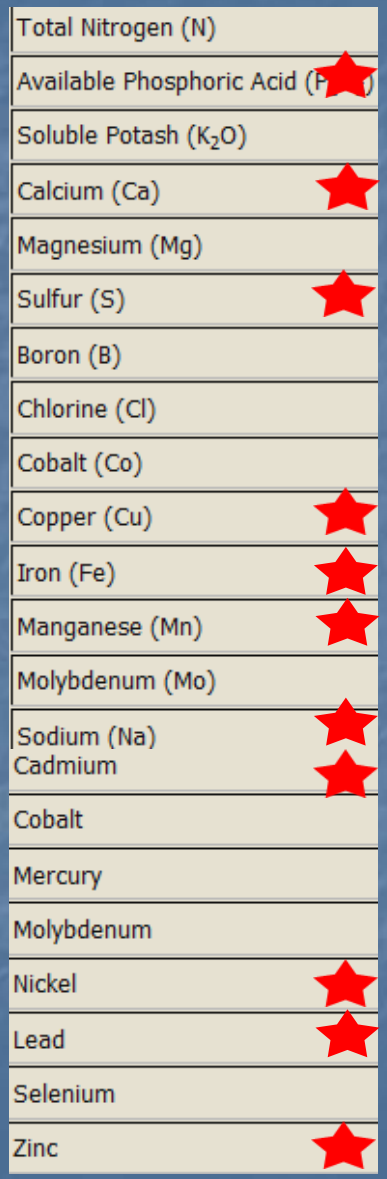


Can be integrated with any style of grate and pavers

Typical Stormwater Pollutants

- Nitrogen
- Phosphorus
- Lead
- Zinc
- Copper
- Cadmium
- Chromium
- Nickel
- Manganese
- Cyanide
- Sodium/Calcium chlorides
- Petroleum

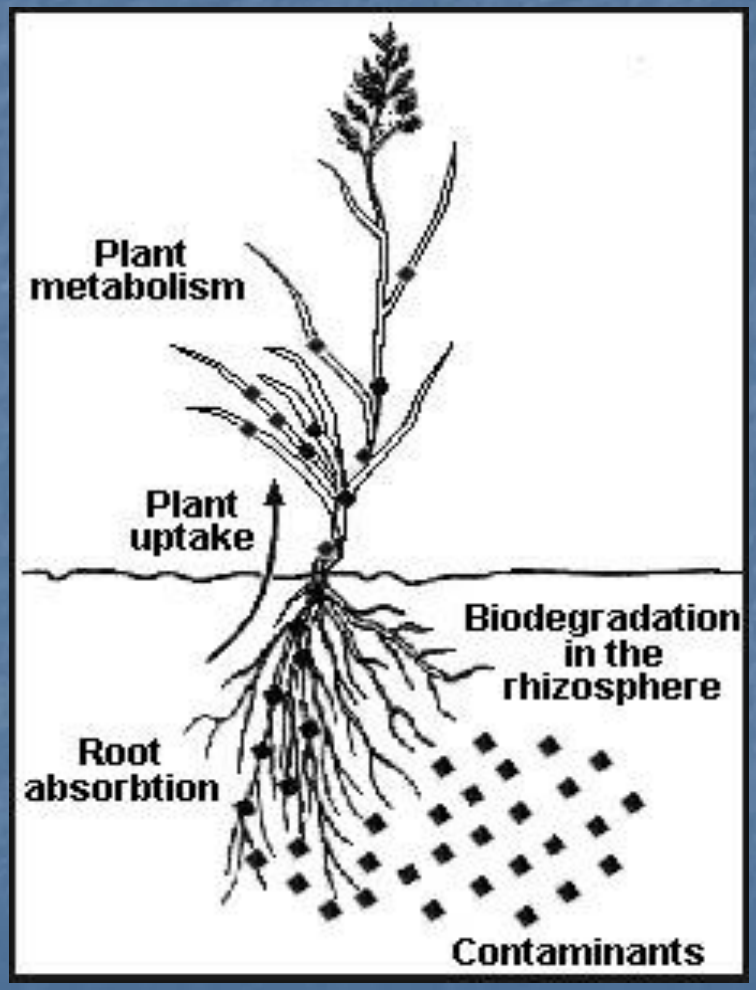
Typical Tree Fertilizer



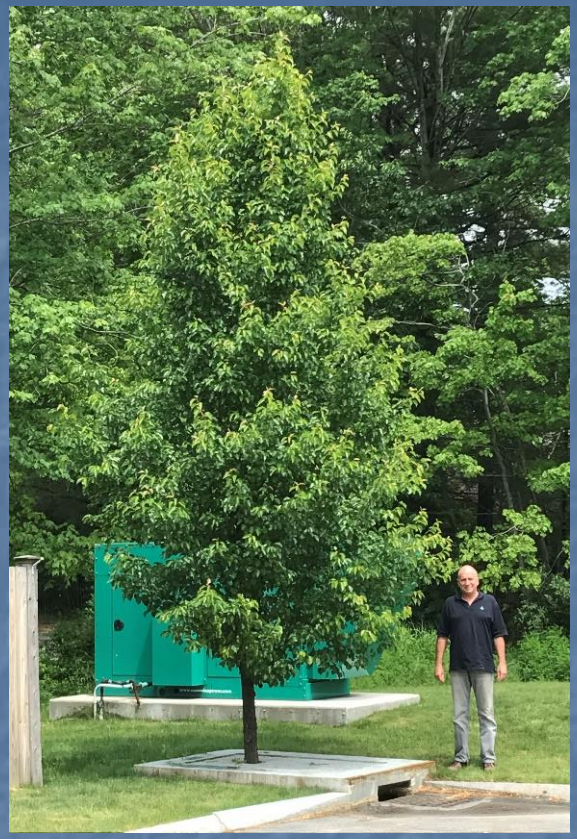
High Pollutant Removal Rates

- Total Nitrogen: >50%
- Total Phosphorus: >60%
- Heavy Metals: >50%
- Oil and Grease: >75%

Based on 3rd party testing of StormTree and other proprietary tree filter systems



Faster growth rate due to increased irrigation and nutrient (pollution) addition



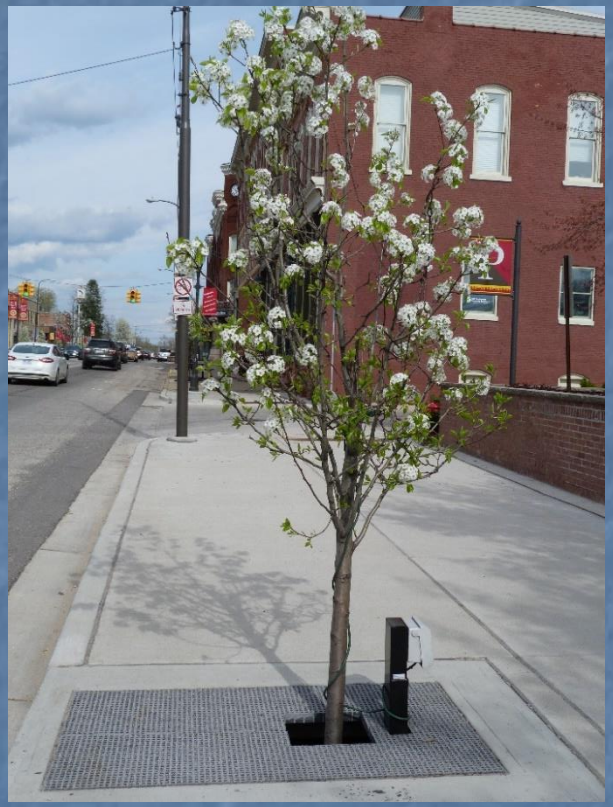
2012 **2014** **2017**

<u>Healthier tree growth</u>

- **greater porosity in engineered media**
- **direct contact with adjacent soils**
- **additional irrigation due to captured rainwater runoff**

Restaurant District Big Rapids, MI

April 2015



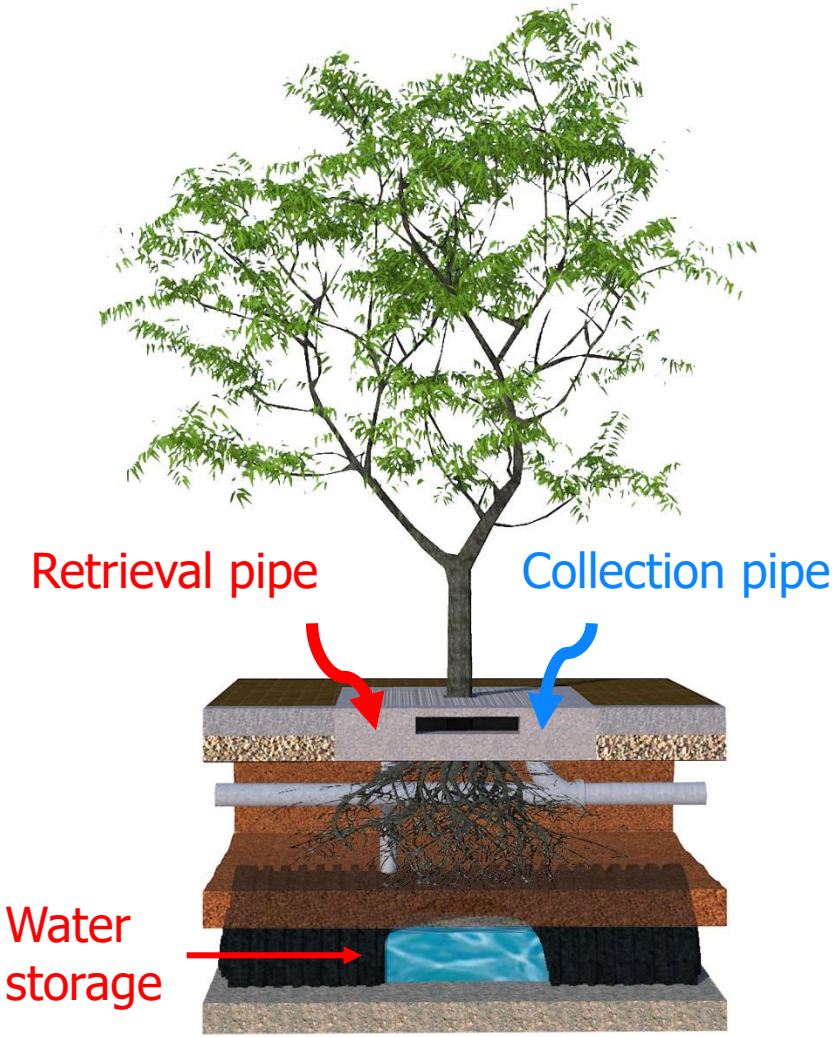
May 2015

Oct 2016

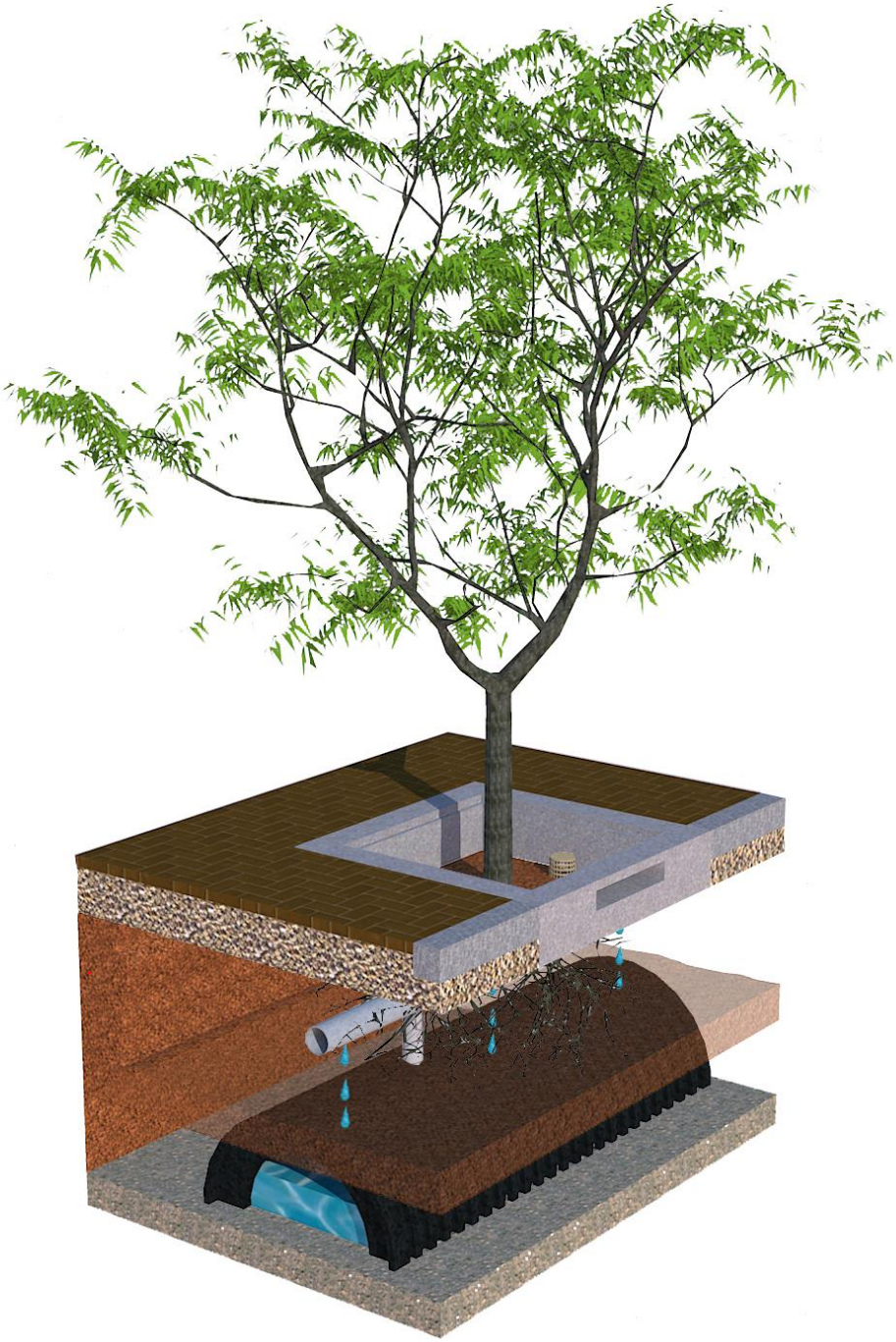
Collection pipe for supplemental irrigation in heavily impervious sidewalk applications

Supplemental Irrigation
Areas with sporadic and/or minimal precipitation or highly impervious

Water collection and dispersal



Water collection, storage, and retrieval




Quest Diagnostics

StormTree®

Tree Systems for Stormwater Management

Thank You

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