



Stormwater Facility
Permitting, Inspection and
Maintenance
Portland Update



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The latest on...

1. Permit Process
2. Inspection Procedures
3. 2010 Greenstreet Details
4. Maintenance of Public Facilities



1. Changes in the Permit Process

- Public Works Co-Location process is complete
- Bureau of Development Services (BDS) no longer making decisions about on site infiltration



Public Works Permitting

- One point for Public Works permit intake
- Updated submittal and review process
 - 30% (concept review)
 - 60% (design review)
 - 90% (plans review)



Private Facility Permitting

- BDS went through massive downsizing and reorganization. Relinquished responsibility for stormwater on private property.
- BES now looking more closely at liability and infrastructure deficiency issues

2. Inspection Procedures

- BES staff now responsible for private stormwater inspections
- Public facility inspections continue to evolve and improve



Private Facility Inspections

- BDS no longer inspecting private stormwater facilities
- BES staff developing new relations with the plumbing and building code inspectors as well as trying to secure resources for inspection of vegetation



Public Works Inspections

- Portland's Soil Spec
- Utility relocates and repairs
- Risk Management/Safety Issues



3. 2010 Greenstreet Details

- New organization
- Updated and integrated landscape information
- New check dam and inlet details

RECOMMENDED STREET TREES

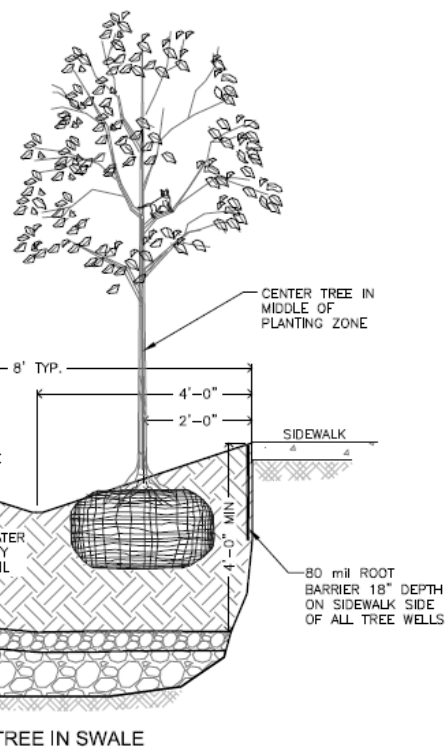
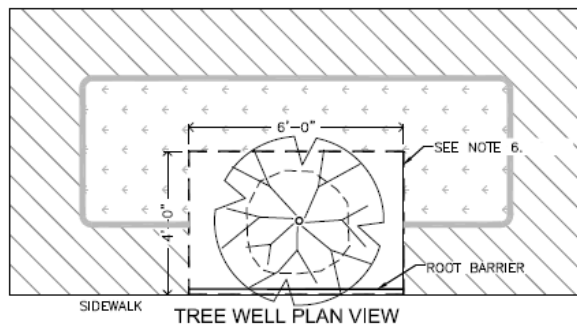
Botanical Name	Common Name
WITH power lines	
<i>Carpinus caroliniana</i>	American Hornbeam
<i>Fraxinus pennsylvanica</i> 'Johnson'	Leprechaun Ash
<i>Gleditsia triacanthos</i> 'Imperial'	Imperial Honeylocust
<i>Koeleruteria paniculata</i>	Goldenrain Tree
<i>Prunus virginiana</i> 'Canada Red'	Canada Red Chokecherry
WITHOUT power lines	
<i>Nyssa sylvatica</i>	Black Tupelo
<i>Celtis occidentalis</i>	Hackberry
<i>Quercus shumardii</i>	Shumard Oak
<i>Betula jacquemontii</i>	Jacquemontii Birch
<i>Acer campestre</i> 'Evelyn'	Queen Elizabeth Hedge Maple
<i>Gleditsia triacanthos</i> 'Skycole'	Skyline Honeylocust

TABLE 1

NOTES:

1. Contact Urban Forestry for tree installation assistance at (503) 823-4489.
2. Remove wire and burlap from root ball prior to backfilling.
3. Set top of root ball a minimum of 1"-2" above topsoil surface.
4. Distance between trees varies: 20ft-30ft on center.
5. Deepened soil section min: 4ft wide, 6ft long, 4ft deep.
6. See Appendix F.3 of the SWMM for stormwater facility topsoil requirements.

STREET
CURB & GUTTER



IMPORTANT: Location of trees must meet clearance requirements established by the City of Portland. Utility conflicts and existing conditions can effect tree placement. Locate utilities prior to installing trees.

For specific clearance requirements contact:

- PBOT (503) 823-7884
- PWB (503) 823-7368
- BES (503) 823-7761
- Urban Forestry (503) 823-4489

- DRAWING NOT TO SCALE -

STORMWATER MANAGEMENT MANUAL TYPICAL DETAILS

- 2010 Green Streets -
Street Tree Detail
Swales

NUMBER

SW-302



4. Maintenance of Public Facilities

- Roles and Responsibilities
- Maintenance Protocol
- Maintenance Costs

Greenstreet Maintenance Roles and Responsibilities

- BES Operations and Maintenance
- PBOT Maintenance
- Revegetation
- Landscape Contractors

Maintenance Protocol

- Adaptive Approach
 - Cleaning inlets/outlets
 - Noxious or invasive weeds removal
 - Proper height for line-of-sight
 - Tree monitoring
- Emergency response
- Non emergency response
- Data Management



2 Yr Warranty Maintenance Costs

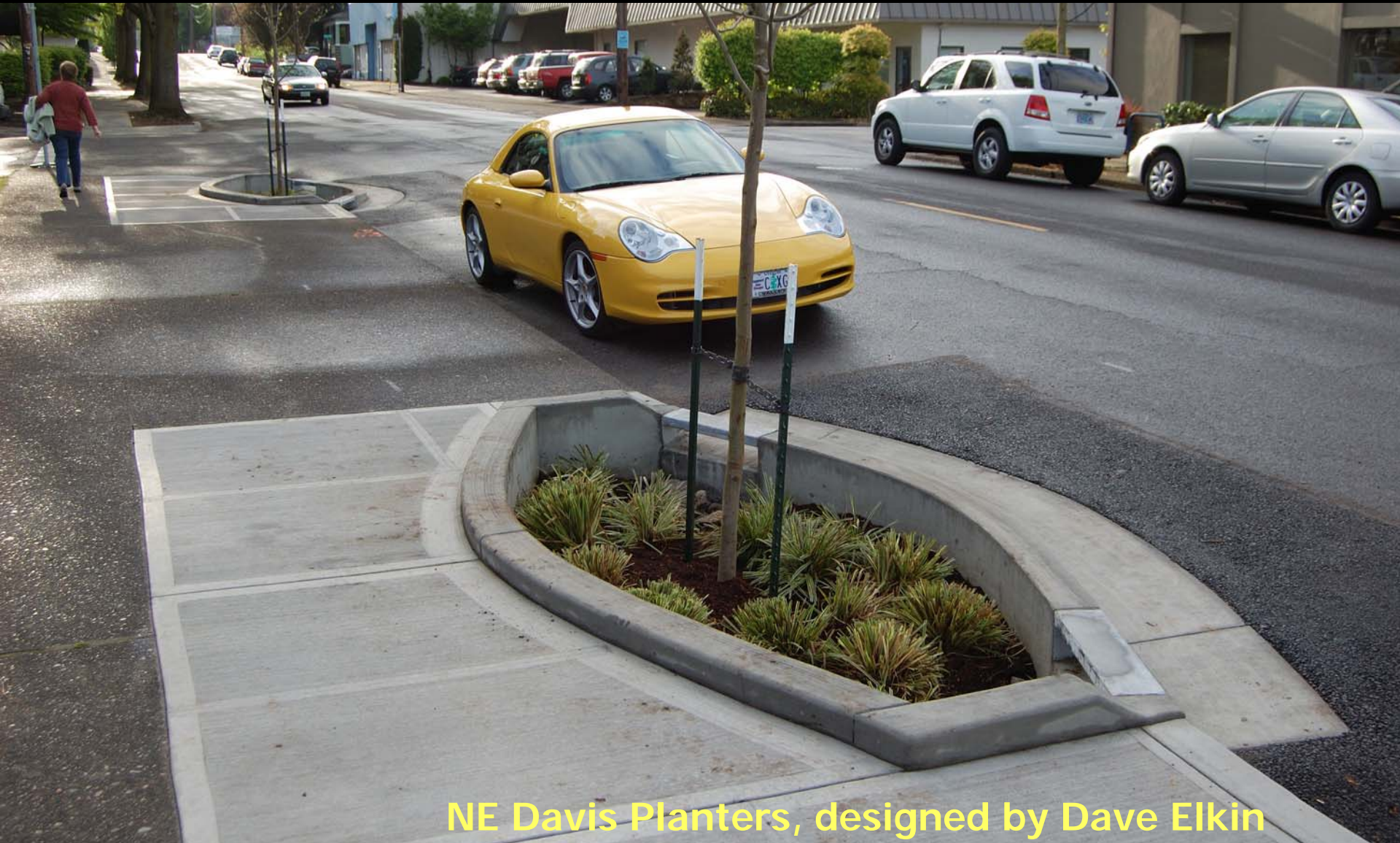
- \$16 - \$18 sq ft planting and establishment
- \$11 sq ft establishment only

Long Term Maintenance Costs

- \$2 sq ft

(Average facility size 200 sq ft)

Be prepared for constant evolution and improvement...



NE Davis Planters, designed by Dave Elkin

For more information
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City of Portland
Bureau of Environmental Services



2008 Stormwater Manual is online at
portlandonline.com/bes/2008SWMM

