

## Post-Construction Soil Quality and Depth

This checklist is intended to highlight items critical to the performance of post-construction soil quality and depth that need to be addressed in the design plans and verified by a City of Seattle (COS) Seattle Public Utilities (SPU) plan reviewer or a designated representative.

Some items have detailed requirements that may not be explicitly stated; refer to the Stormwater Flow Control and Water Quality Treatment Technical Requirements Manual (Manual) for specifics. Resources and their links are listed at the bottom of this checklist.

<b>Technology Description</b>
Post-construction quality and depth provides improved onsite management of stormwater flow and water quality. It involves amending the disturbed soils with compost in the post development landscape to help re-establish a healthy soil ecosystem. This BMP is required for all sites.

### Design Requirements (Manual Volume 3, Section 4.4.3)

	<b>Review Item</b>
<input type="checkbox"/>	1. Plans indicate that areas of vegetation and soil that will be left undisturbed are protected from compaction and materials storage during construction
<input type="checkbox"/>	2. For all areas where soil and vegetation will be disturbed, plans indicate that at least one of the following will be implemented:
	<ul style="list-style-type: none"> <li>▪ Site topsoil or subsoils will be amended either at default “pre-approved” rates or at custom calculated rates to meet the soil quality guidelines (described below) based on engineers’ tests of the soil and amendment. The amendment rates are submitted. The default pre-approved rates are:                             <ul style="list-style-type: none"> <li>□ In planting beds, 3 inches of compost is tilled in to an 8 inch depth</li> <li>□ In turf areas, 1.75 inches of compost is tilled in to an 8 inch depth</li> </ul> </li> <li>▪ Existing topsoil will be stockpiled during grading and replaced prior to planting. It must be demonstrated that stockpiled soil meets organic matter or depth requirements, otherwise it will require amendment, which shall be stated on the plans.</li> <li>▪ Topsoil is imported and the following specifications are provided on the plans                             <ul style="list-style-type: none"> <li>□ For planting beds, a mix by volume of 35 percent compost with 65 percent mineral soil is pre-approved to achieve the requirement of a minimum 8 percent organic matter by loss-on-ignition test</li> <li>□ For turf areas, a mix by volume of 20 percent compost with 80 percent mineral soil is pre-approved to achieve the requirement of a minimum 4 percent organic matter by loss-on-ignition test</li> <li>□ Subsoil shall be scarified 4 inches below amended layer to produce 12-inch depth of un-compacted soil</li> </ul> </li> <li>▪ For all areas where soil and vegetation will be disturbed, plans require the following:                             <ul style="list-style-type: none"> <li>□ Subsoil shall be scarified 4 inches below amended layer to produce 12-inch depth of un-compacted soil</li> <li>□ After planting, 2 to 4 inches of arborist wood chip or compost mulch shall be applied to planting beds.</li> </ul> </li> <li>▪ Soil quality guidelines</li> </ul>

	<ul style="list-style-type: none"> <li>□ Topsoil shall have an organic matter content by the loss-on-ignition test of a minimum 8 percent dry weight in planting beds, and a minimum 4 percent organic matter content in turf areas, and a pH from 6.0 to 8.0 or matching the pH of the original undisturbed soil</li> </ul>
	<ul style="list-style-type: none"> <li>□ Topsoil layer shall have a minimum depth of 8 inches</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Plans indicate that the compost must meet the definition of “Composted Materials” in WAC 173-350 section 220</li> </ul>
□	3. A soil management plan is submitted that includes:
	<ul style="list-style-type: none"> <li>▪ A site map showing areas to be fenced and left undisturbed during construction, and areas that will be amended at the turf or planting bed rates</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Calculations of the amounts of compost, compost amended topsoil, and mulch to be used on the site</li> </ul>

**Resources:**

- Green Stormwater Infrastructure (GSI) website (specifications, CADD drawings, plant lists, links to other resources)  
<http://www.seattle.gov/util/greeninfrastructure>
- Seattle Right-of-Way Improvements Manual  
<http://www.seattle.gov/transportation/rowmanual/manual/>
- Stormwater Code, Director’s Rules (Manual and GSI to MEF), Client Assistance Memos (CAMs), GSI and flow control calculators for pre-sized facilities  
<http://www.seattle.gov/dpd/Codes/StormwaterCode/Overview/default.asp>