

INFILTRATION TESTING REQUIREMENTS

SOIL SURVEY CONSIDERATIONS for ENVIRONMENTAL SITE DESIGN

by

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4/21/2010

TABLE D.1.1 INFILTRATION TESTING SUMMARY TABLE

Type of Facility	Initial Feasibility Testing	Concept Design Testing (initial testing yields a rate greater than 0.52"/hr)	Concept Design Testing (initial testing yields a rate lower than 0.52"/hr)
I-1 (trench)	1 field perc. test, test pit not required	1 infiltration test and 1 test pit per 50' of trench	Not acceptable practice
I-2 (basin)	1 field perc. test, test pit not required	1 infiltration test and 1 test pit per 200 sq. ft. of basin area	Not acceptable practice
F-1 (surface sand filter)	1 field perc. test, test pit not required	1 infiltration test and 1 test pit per 200 sq. ft. of filter area (no underdrains required)*	Underdrains required
F-6 (bioretention)	1 field perc. test, test pit not required	1 infiltration test and 1 test pit per 200 sq. ft. of filter area (no underdrains required)*	Underdrains required
Micro-scale practices	Web Soil Survey, HSG determination	1 test pit/soil, on HSG=A or B use mean Ksat, on HSG=C run 1 perc. test/soil	

*underdrain installation is still strongly recommended

WEB SOIL SURVEY EVALUATION CHECKLIST

SOURCE

- **Map Unit Symbol:** - **Most Reports**
- **Map Unit Name:**
- **Hydrologic Soil Group:** - **Water Features**
- **Depth to Seasonal High Water Table:** - **Water Features**
(upper limit range, month)
- **Depth to Restrictive Layer, Kind:** - **Soil Features**
- **Horizons and Depths:** - **Physical Soil Properties**
(Particle size & co. frag.)
- **Permeability (Ksat)** - **Physical Soil Properties**
(in/hr = um/sec. x 0.1417)

Potential “inclusion soils”

- **check stream and/or drainageway overlay**
- **check 2' contour maps for concave/convex, irregularities**

Soil Features

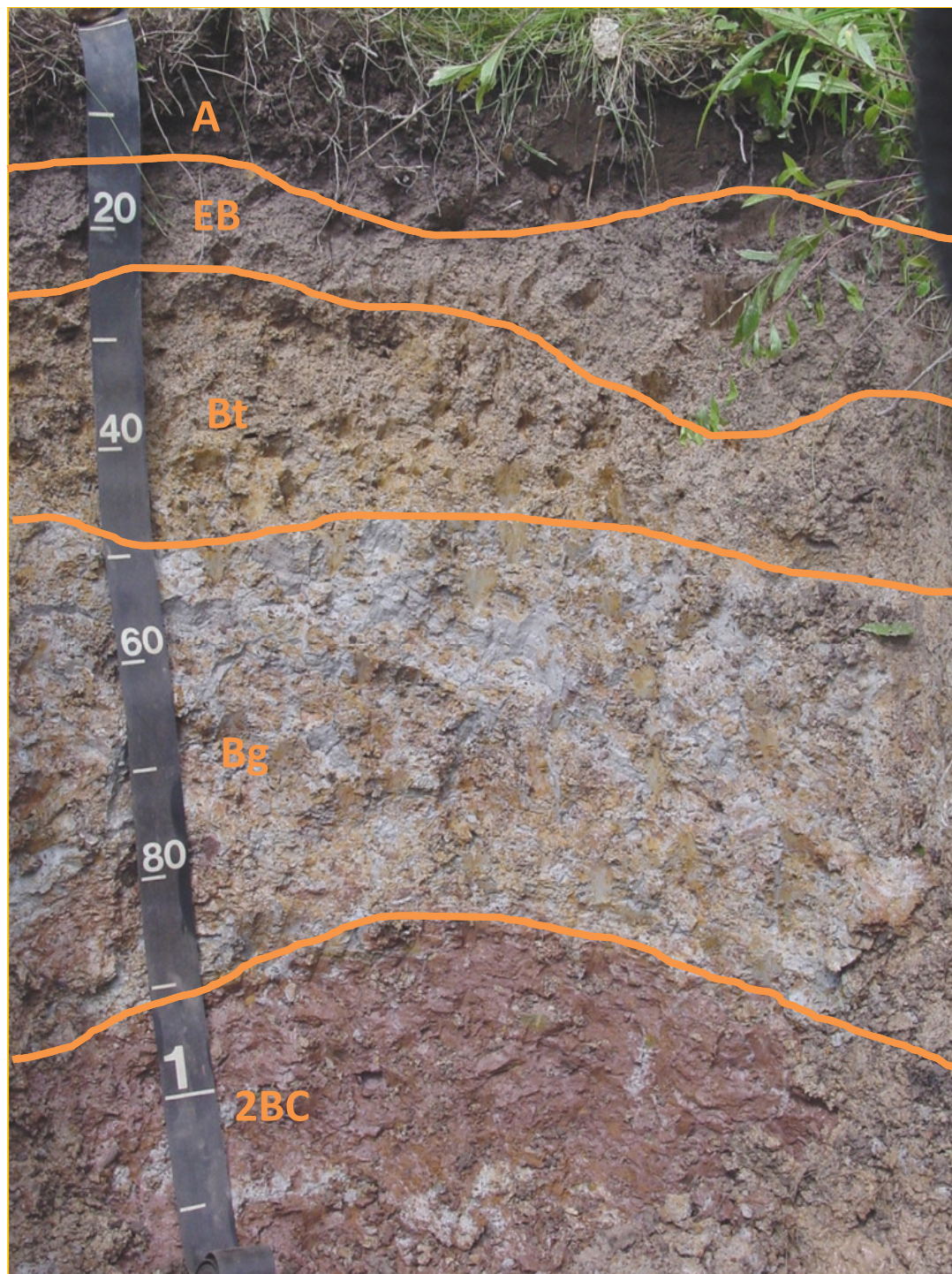
Allegheny County, Maryland

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		<i>In</i>	<i>In</i>		<i>In</i>	<i>In</i>			
CcB:									
Caneyville	Lithic bedrock	20-40	—	Indurated	0	0	Moderate	Moderate	Low
CFB:									
Cavode	Lithic bedrock	53-61	—	Strongly cemented	0	0	High	High	Moderate
CmA:									
Clymer	Lithic bedrock	35-59	—	Indurated	—	—	Moderate	Low	High
HuB:									
Hustontown	Fragipan	18-32	—	Noncemented	0	0	Moderate	Moderate	Moderate
KeC:									
Kilnesville	Lithic bedrock	10-20	—	Strongly cemented	0	0	Moderate	Low	Moderate
MnB:									
Monongahela	Fragipan	18-30	8-27	Noncemented	0	0	Moderate	Moderate	Moderate

Water Features

Allegheny County, Maryland

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
CcB:										
Caneyville	C	High	Jan-Dec			—	—	None	—	None
CtB:										
Cavode	C	Very high	January	0.8-1.6	>6.0	—	—	None	—	None
			February	0.8-1.6	>6.0	—	—	None	—	None
			March	0.8-1.6	>6.0	—	—	None	—	None
			April	0.8-1.6	>6.0	—	—	None	—	None
			May	1.6-2.0	>6.0	—	—	None	—	None
			June	3.0-4.0	>6.0	—	—	None	—	None
			October	2.5-4.0	>6.0	—	—	None	—	None
			November	2.5-4.0	>6.0	—	—	None	—	None
			December	0.8-1.6	>6.0	—	—	None	—	None
CmA:										
Clymer	B	Medium	Jan-Dec			—	—	None	—	None
HuB:										
Hustontown	C	Medium	January	1.9-2.5	>6.0	—	—	None	—	None
			February	1.9-2.5	>6.0	—	—	None	—	None
			March	1.9-2.5	>6.0	—	—	None	—	None
			April	1.9-2.5	>6.0	—	—	None	—	None
			May	1.9-2.5	>6.0	—	—	None	—	None
			June	2.3-4.0	>6.0	—	—	None	—	None
			October	2.3-4.0	>6.0	—	—	None	—	None
			November	1.9-2.5	>6.0	—	—	None	—	None
			December	1.9-2.5	>6.0	—	—	None	—	None
KeC:										
Klinesville	C	Low	Jan-Dec			—	—	None	—	None







“Helping People Understand Soils”

Web Soil Survey (WSS)

<http://websoilsurvey.nrcs.usda.gov>

Soil Data Mart (SSDM)

<http://soildatamart.nrcs.usda.gov>

Official Soil Series Descriptions (OSD's)

<http://soils.usda.gov/technical/classification/osd/index.html>

Mid-Atlantic Association of Professional Soil Scientists (MAPSS)

<http://www.sawgal.umd.edu/mapss/>

American Registry of Certified Professional in Agronomy in Crops and Soil (ARCPACS)

<http://soilsassociation.org/index.htm>