

Section II-iii-J

Soil Features

This table gives estimates of several important soil features which are used in land use planning that involves engineering considerations. Soil features which are covered include bedrock depth and hardness, cemented pan depth and hardness, subsidence, potential frost action, and risk of corrosion for uncoated steel or for concrete.

Depth to Bedrock

This value is given if bedrock is within a depth of 60 inches. The depth is based on many soil borings and observations made during soil mapping. The rock is specified as either soft or hard. If the rock is soft, excavations can be made with trenching machines, backhoes, or small rippers. If the rock is hard or massive, blasting or special equipment generally is needed for excavation.

Cemented Pan

Cemented pan is a nearly continuous layer of indurated or strongly cemented material having a hard, brittle consistency because the particles are held together by cementing substances such as, calcium carbonate, or oxides of silicon, iron, or aluminum. These layers are identified when they occur within a depth of 60 inches. Pans are classified as "thin" or "thick". "Thin" cemented pans are thin enough so that excavations can be made with trenching machines, backhoes, or small rippers and other equipment common to construction of pipelines, sewerlines, cemeteries, and the like. "Thick" cemented pans are sufficiently thick or massive to require blasting or special equipment beyond which is considered normal in excavating for this type of construction.

Subsidence

Subsidence potential is the maximum possible loss of surface elevation from the drainage of wet soils having organic layers or semifluid mineral layers. Estimates of the depth of subsidence (in inches) that takes place soon after drainage (initial subsidence) and after oxidation (total subsidence) are given for soils that are likely to subside.

Potential Frost Action

This is the likelihood of upward or lateral movement of soil by the formation of segregated ice lenses (frost heave) and the subsequent loss of soil strength upon thawing. The following classes are used in regions where frost action is a potential problem: (1) Low -- soils are rarely susceptible to the formation of ice lenses, (2) Moderate -- soils are susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of soil strength, and (3) High -- soils are highly susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of soil strength.

Risk of Corrosion

Various metals and other materials corrode when on or in the soil, and some metals and materials corrode more rapidly when in contact with specific soils than when in contact with others. Corrosivity ratings are given for two of the common structural materials, uncoated steel and concrete. The risk of corrosion classes are low, moderate, and high.

See the National Soil Survey Handbook, Part 618, for definitions and discussion of particular properties.

Soil Features

Knox And Lincoln Counties, Maine

Absence of an entry indicates that the feature is not a concern or that data were not estimated.

Map Symbol and Soil Name	Restrictive Layer			Subsidence		Potential for Frost Total	Risk of Corrosion		
	Kind Kind	Depth to Top In	to Top Thickness In	Thickness Hardness In	Initial In		Action Steel	Uncoated	Concrete
AdB: Adams	---	---	---	---	0	---	Low	Low	High
AdC: Adams	---	---	---	---	0	---	Low	Low	High
AdD: Adams	---	---	---	---	0	---	Low	Low	High
AgA: Allagash	---	---	---	---	0	---	Moderate	Low	High
AgB: Allagash	---	---	---	---	0	---	Moderate	Low	High
AgC: Allagash	---	---	---	---	0	---	Moderate	Low	High
Be: Beaches	---	---	---	---	0	---	Low	High	High
Bg: Biddeford	---	---	---	---	0	---	High	High	Moderate
BoB: Boothbay	---	---	---	---	0	---	High	Moderate	Moderate
BoC:									

Soil Features - Continued

Knox And Lincoln Counties, Maine

Map Symbol and Soil Name	Kind Kind	Restrictive Layer			Subsidence		Potential for Frost Total	Risk of Corrosion		
		Depth to Top	to Top Thickness	Thickness Hardness	Hardness	Initial		Action Steel	Uncoated	Concrete
		In	In		In	In				
BoC: Boothbay	---	---	---	---	0	---	High	Moderate	Moderate	
BoD2: Boothbay	---	---	---	---	0	---	High	Moderate	Moderate	
Bp: Borosaprists	---	---	---	---	0	---	High	Moderate	High	
BsB: Brayton	---	---	---	---	0	---	High	High	Moderate	
BtB: Brayton	---	---	---	---	0	---	High	High	Moderate	
BuB: Buxton	---	---	---	---	0	---	High	High	Moderate	
BuC: Buxton	---	---	---	---	0	---	High	High	Moderate	
BuD2: Buxton	---	---	---	---	0	---	High	High	Moderate	
Ch: Charles	---	---	---	---	0	---	High	High	Moderate	
Dp: Dumps	---	---	---	---	0	---	None	---	---	

Soil Features - Continued

Knox And Lincoln Counties, Maine

Map Symbol and Soil Name	Restrictive Layer	Restrictive Layer		Subsidence		Potential for Frost Total	Risk of Corrosion		Concrete		
		Kind	Depth to Top	to Top Thickness	Thickness Hardness		Hardness	Initial		Action Steel	Uncoated
		Kind	In	In			In	In			
Dp: Pits	Bedrock (lithic)	0	---	---	0	---	None	---	---		
EgB: Eldridge	---	---	---	---	0	---	Moderate	Moderate	High		
HeB: Hermon	---	---	---	---	0	---	Low	Low	High		
HeC: Hermon	---	---	---	---	0	---	Low	Low	High		
HtB: Hermon	---	---	---	---	0	---	Low	Low	High		
HtC: Hermon	---	---	---	---	0	---	Low	Low	High		
HtD: Hermon	---	---	---	---	0	---	Low	Low	High		
HxB: Hermon	---	---	---	---	0	---	Low	Low	High		
HxC: Hermon	---	---	---	---	0	---	Low	Low	High		
Le: Lovewell	---	---	---	---	0	---	High	Moderate	Moderate		

Soil Features - Continued

Knox And Lincoln Counties, Maine

Map Symbol and Soil Name	Restrictive Layer	Subsidence		Potential for Frost Total	Risk of Corrosion						
		Kind Kind	Depth to Top		to Top Thickness	Thickness Hardness	Hardness	Initial	Action Steel	Uncoated	Concrete
			In		In		In	In			
LmB: Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High		
Brayton Variant	Bedrock (lithic)	20-40	---	---	0	---	High	High	Moderate		
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---		
LrB: Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High		
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---		
Tunbridge	Bedrock (lithic)	20-40	---	---	0	---	Moderate	High	High		
LrC: Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High		
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---		
Tunbridge	Bedrock (lithic)	20-40	---	---	0	---	Moderate	High	High		
LrE: Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High		
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---		
Tunbridge	Bedrock (lithic)	20-40	---	---	0	---	Moderate	High	High		
MaB:											

Soil Features - Continued

Knox And Lincoln Counties, Maine

Map Symbol and Soil Name	Kind Kind	Restrictive Layer			Subsidence		Potential for Frost Total	Risk of Corrosion		
		Depth to Top	to Top Thickness	Thickness Hardness	Hardness	Initial		Action Steel	Uncoated	Concrete
		In	In		In	In				
MaB: Madawaska	---	---	---	---	0	---	Moderate	Moderate	High	
MrB: Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
MrC: Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
MrD: Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
MsB: Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
MsC: Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
MsD: Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
MtB: Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
Berkshire	---	---	---	---	0	---	Moderate	Low	High	
MtC: Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	

Soil Features - Continued

Knox And Lincoln Counties, Maine

Map Symbol and Soil Name	Kind Kind	Restrictive Layer			Subsidence		Potential for Frost Total	Risk of Corrosion		
		Depth to Top	to Top Thickness	Thickness Hardness	Hardness	Initial		Action Steel	Uncoated	Concrete
		In	In		In	In				
MtC: Berkshire	---	---	---	---	0	---	Moderate	Low	High	
MwB: Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
Berkshire	---	---	---	---	0	---	Moderate	Low	High	
MwC: Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
Berkshire	---	---	---	---	0	---	Moderate	Low	High	
MwD: Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
Berkshire	---	---	---	---	0	---	Moderate	Low	High	
MxB: Masardis	---	---	---	---	0	---	Low	Low	Moderate	
MxC: Masardis	---	---	---	---	0	---	Low	Low	Moderate	
MxD: Masardis	---	---	---	---	0	---	Low	Low	Moderate	
My: Medomak	---	---	---	---	0	---	High	High	Moderate	

Soil Features - Continued

Knox And Lincoln Counties, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost Total	Risk of Corrosion		
	Kind Kind	Depth to Top In	to Top Thickness In	Thickness Hardness ---	Hardness In	Initial In		Action Steel	Uncoated	Concrete
Na: Naumburg	---	---	---	---	0	---	Moderate	High	High	
PaB: Peru	---	---	---	---	0	---	High	Moderate	Moderate	
PaC: Peru	---	---	---	---	0	---	High	Moderate	Moderate	
PbB: Peru	---	---	---	---	0	---	High	Moderate	Moderate	
PbC: Peru	---	---	---	---	0	---	High	Moderate	Moderate	
Pg: Pits	---	---	---	---	0	---	None	---	---	
Rc: Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---	
RmC: Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---	
Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
RmE: Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---	

Soil Features - Continued

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Map Symbol and Soil Name	Restrictive Layer			Subsidence		Potential for Frost Total	Risk of Corrosion			
	Kind Kind	Depth to Top	to Top Thickness	Thickness Hardness	Hardness		Initial	Action Steel	Uncoated	Concrete
		In	In		In					
RmE: Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
Sc: Scantic	---	---	---	---	0	---	High	High	Moderate	
Sp: Searsport	---	---	---	---	0	---	Moderate	High	High	
StB: Sheepscot	---	---	---	---	0	---	Low	Low	High	
Su: Sulfihemists	---	---	---	---	0	---	None	High	High	
Sulfaquents	---	---	---	---	0	---	High	High	High	
Sw: Swanville	---	---	---	---	0	---	High	High	Low	
TrB: Tunbridge	Bedrock (lithic)	20-40	---	---	0	---	Moderate	High	High	
Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
TrC: Tunbridge	Bedrock (lithic)	20-40	---	---	0	---	Moderate	High	High	
Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	

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		Depth to Top	to Top Thickness	Thickness Hardness	Hardness	Initial		Action Steel	Uncoated	Concrete
		In	In		In	In				
TrD: Tunbridge	Bedrock (lithic)	20-40	---	---	0	---	Moderate	High	High	
Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
Ud: Udorthents	---	---	---	---	0	---	---	---	---	
Urban Land	---	---	---	---	0	---	None	---	---	