SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Munjoy Heights	Boring #:	**B-1**
Location:	Sheridan St Extension	Project #:	13067.1
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services, Inc.	Boring Elevation:	74 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Drainage & Erosion Control Plan by Acorn Engineering
Summit Staff:	B. Peterlein, P.E.	Date started: 9/26/2013	Date Completed: 9/26/2013

DRILLING METHOD		SAMPLER	
Vehicle:	Tracked	Length:	24" SS
Model:	AMS Power Probe	Diameter:	2"OD/1.5"ID
Method:	2-1/2" H.S.A.	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
9/26/2013			None Observed

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
						4" dark brown Sandy SILT, trace rootlets, moist, ML		TOPSOIL
1						Brown Silty SAND, trace Gravel, humid, loose, SM		FILL
2								
3								
4								GLACIAL TILL
5								
	S-1	24/24	5 to 7	4		Gray Sandy SILT, trace Gravel and Clay, damp,		
6				7		stiff, ML		
				4				
7				5				
8								
9								
10								
	S-2	24/24	10 to 12	3		Same as above, firm		
11				3				
				5				
12				7				
13								
14								
15								
	S-3	24/24	15 to 17	2		Same as above		
16				3				
				3				
17				4				
18								
						Hard drilling		
19								
20								
	S-4	24/24	20 to 22	14		Same as above, damp, very stiff		
21				14				
				12				
22				15				
						End of Boring at 22 ft		
23								
24								
25								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Munjoy Heights	Boring #:	B-2
Location:	Sheridan St Extension	Project #:	13067.1
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services, Inc.	Boring Elevation:	86 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Drainage & Erosion Control Plan by Acorn Engineering
Summit Staff:	B. Peterlein, P.E.	Date started: 9/26/2013	Date Completed: 9/26/2013

DRILLING METHOD		SAMPLER	
Vehicle:	Tracked	Length:	24" SS
Model:	AMS Power Probe	Diameter:	2"OD/1.5"ID
Method:	2-1/2" H.S.A.	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
9/26/2013	15 ft	71 ft +/-	Observed in samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
						4" dark brown Sandy SILT, trace rootlets, moist, ML		TOPSOIL
1						Brown Gravelly SAND, trace Silt, humid, loose, SP		FILL
2								
3								
4								MARINE NEAR SHORE
5								
	S-1	24/20	5 to 7	4		Brown Gravelly SAND, trace Silt, dry, compact,		
6				7		SP		
				7				
7				7				
8								
9								
10	S-2	24/12	10 to 12	4		Same as above		
				6				
11				5				
				3				
12								
13								
14								
15								
	S-3	24/16	15 to 17	8		Brown Gravelly SAND, little Silt, wet, compact, SM		
16				4				
				6				
17				9				
18								
19								GLACIAL TILL
20								
	S-4	24/24	20 to 22	10		Gray Sandy SILT, trace Gravel and Clay, wet,		
21				16		hard, ML		
				17				
22				18				
						End of Boring at 22 ft		
23								
24								
25								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Munjoy Heights	Boring #:	B-3
Location:	Sheridan St Extension	Project #:	13067.1
City, State:	Portland, Maine	Sheet:	1 of 2
		Chkd by:	

Drilling Co:	Summit Geoengineering Services, Inc.	Boring Elevation:	138 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Drainage & Erosion Control Plan by Acorn Engineering
Summit Staff:	B. Peterlein, P.E.	Date started: 9/26/2013	Date Completed: 9/26/2013

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
9/26/2013	24 ft	114 ft +/-	Observed on drill rods

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						Dark brown Sandy SILT, trace rootlets, moist, loose, ML		TOPSOIL
2						Brown Gravelly Silty SAND, moist, loose, SM		FILL
3								
4								
5								
	S-1	24/12	5 to 7	3		Brown Silty SAND, little Gravel, moist, loose, SM		
6				2				
				3				
7				2				
8								
9								
10								
	S-2	24/10	10 to 12	1		Grayish ash mixed with a trace of Silt, dry, loose,		
11				2				
				3				
12				2		Brown SAND, trace to little Gravel and Silt, dry, loose, SP		MARINE NEAR SHORE
13								
14								
15								
	S-3	24/18	15 to 17	6		Same as above		
16				17				
				14		Olive-brown Sandy SILT, little Gravel, moist, very, stiff, ML		GLACIAL TILL
17				17				
18								
19								
20								
	S-4	24/20	20 to 22	7		Gray SILT, little Clay and fine Sand, trace Gravel,		
21				12		stiff, ML		
				23				
22				24		Olive-brown Sandy SILT, little Gravel, trace Clay, humid, hard, ML		
23								
24								
25								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Munjoy Heights	Boring #:	B-3
Location:	Sheridan St Extension	Project #:	13067.1
City, State:	Portland, Maine	Sheet:	2 of 2
		Chkd by:	

Drilling Co:	Summit Geoengineering Services, Inc.	Boring Elevation:	138 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Drainage & Erosion Control Plan by Acorn Engineering
Summit Staff:	B. Peterlein, P.E.	Date started: 9/26/2013	Date Completed: 9/26/2013

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
9/26/2013	24 ft	114 ft +/-	Observed on drill rods

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-5	24/24	25 to 27	4		Gray Sandy SILT, little Gravel, trace Clay, very		
26				13		wet, stiff, ML		GLACIAL TILL
				10				
27				11				
28								
29								
30								
	S-6	24/24	30 to 32	14		Same as above		
31				17				
				25				
32				37				
						Auger to 50 ft, very hard drilling		
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
						End of Boring at 50 ft		

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Munjoy Heights	Boring #:	B-4
Location:	Sheridan St Extension	Project #:	13067.1
City, State:	Portland, Maine	Sheet:	1 of 2
		Chkd by:	

Drilling Co:	Summit Geoengineering Services, Inc.	Boring Elevation:	140 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Drainage & Erosion Control Plan by Acorn Engineering
Summit Staff:	B. Peterlein, P.E.	Date started: 9/26/2013	Date Completed: 9/26/2013

DRILLING METHOD		SAMPLER	
Vehicle:	Tracked	Length:	24" SS
Model:	AMS Power Probe	Diameter:	2"OD/1.5"ID
Method:	2-1/2" H.S.A.	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
9/26/2013			Caved at 22.6 ft (117 ft +/-) Dry

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						Grass and leaf litter mixed with Silty SAND, dry, loose, SM		FILL
2								
3								
4								
5								
6	S-1	24/12	5 to 7	3		Dark brown Sandy SILT, trace Gravel, trace rootlets, dry, loose, ML		
				3				
				2				
7				3				
8								
9								
10								
11	S-2	24/18	10 to 12	5		Brown Gravelly SAND, trace Silt, dry, compact, SP		MARINE NEAR SHORE
				11				
				17				
12				17				
13								
14								
15						Harder drilling at 15 ft		
16	S-3	8/8	15 to 15.6	29		Brown Gravelly SAND, little Silt, dry, dense, SM		
				50 for 2"				
17								GLACIAL TILL
18								
19								
20								
21	S-4	24/24	20 to 22	25		Gray Sandy SILT, little Gravel, humid, very dense, ML		
				14				
				13				
22				14				
23								
24								
25								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Munjoy Heights	Boring #:	B-4
Location:	Sheridan St Extension	Project #:	13067.1
City, State:	Portland, Maine	Sheet:	2 of 2
		Chkd by:	

Drilling Co:	Summit Geoengineering Services, Inc.	Boring Elevation:	140 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Drainage & Erosion Control Plan by Acorn Engineering
Summit Staff:	B. Peterlein, P.E.	Date started: 9/26/2013	Date Completed: 9/26/2013

DRILLING METHOD		SAMPLER	
Vehicle:	Tracked	Length:	24" SS
Model:	AMS Power Probe	Diameter:	2"OD/1.5"ID
Method:	2-1/2" H.S.A.	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
9/26/2013			Caved at 22.6 ft (117 ft +/-) Dry

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	S-5	24/24	25 to 27	8		Gray fine Sandy SILT, little Gravel, trace Clay, humid,		
26				14		hard, ML		GLACIAL TILL
				17				
27				15				
28								
29								
30								
	S-6	24/24	30 to 32	6		Same as above		
31				8				
				18				
32				20				
						Auger probe to 42 ft		
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
						End of Boring at 42 ft		
43								
44								
45								
46								
47								
48								
49								
50								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Munjoy Heights	Boring #:	B-5
Location:	Sheridan St Extension	Project #:	13067.1
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services, Inc.	Boring Elevation:	119 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Drainage & Erosion Control Plan by Acorn Engineering
Summit Staff:	B. Peterlein, P.E.	Date started: 9/26/2013	Date Completed: 9/26/2013

DRILLING METHOD		SAMPLER	
Vehicle:	Tracked	Length:	24" SS
Model:	AMS Power Probe	Diameter:	2"OD/1.5"ID
Method:	2-1/2" H.S.A.	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
9/26/2013			

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
						4" dark brown Sandy SILT, trace rootlets, moist, ML		TOPSOIL
1								
						Olive-brown Clayey SILT, little fine SAND, moist,		FILL
2						firm, ML		
3								
4								
5								
	S-1	22/22	5 to 6.9	8		Gray Sandy SILT, trace Gravel and Clay, moist to		
6				7		damp, stiff, ML		
				7				
7				8 for 4" then REF				
8						Boulder at 7 ft, refusal, move 5 feet and re-drill		
								GLACIAL TILL
9								
10								
	S-2	24/24	10 to 12	7		Gray Sandy SILT, little Gravel, trace Clay, damp,		
11				23		hard, ML		
				14				
12				14				
13								
14								
15								
	S-3	24/18	15 to 17	14		Same as above, damp		
16				31				
				35				
17				26				
18								
19								
20								
	S-4	24/24	20 to 22	8		Same as above, wet		
21				18				
				21				
22				24				
						End of Boring at 22 ft		
23								
24								
25								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Munjoy Heights	Boring #:	B-6
Location:	Sheridan St Extension	Project #:	13067.1
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services, Inc.	Boring Elevation:	117 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Drainage & Erosion Control Plan by Acorn Engineering
Summit Staff:	B. Peterlein, P.E.	Date started: 9/26/2013	Date Completed: 9/26/2013

DRILLING METHOD		SAMPLER	
Vehicle:	Tracked	Length:	24" SS
Model:	AMS Power Probe	Diameter:	2"OD/1.5"ID
Method:	2-1/2" H.S.A.	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
9/26/2013			

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						Dark brown Sandy SILT, trace Gravel, trace rootlets, humid, loose, ML		TOPSOIL
2						Brown Gravelly SAND, trace Silt, dry, compact, SP		MARINE NEAR SHORE
3								
4								
5								
	S-1	24/24	5 to 7	11		Brown Gravelly SAND, trace Silt, dry, compact, SP		
6				14				
				12				
7				13				
8								
9								
10								
	S-2	24/24	10 to 12	2		Brown Gravelly SAND, trace Silt, trace Gravel and		
11				3		Clay, damp, firm, SM		GLACIAL TILL
				3				
12				2				
13								
14								
15								
	S-3	24/24	15 to 17	3		Same as above, stiff		
16				4				
				10				
17				5				
18								
19						Becomes harder at 19 ft		
20								
	S-4	24/24	20 to 22	4		Same as above, very stiff		
21				15				
				13				
22				14				
23								
24								
25								
	S-5	24/24	25 to 27	10		Same as above, very stiff		
26				15				
				14				
27				17				
						End of Boring at 22 ft		

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees
Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%