Project Multiply Integrits Project #1 100.71 101	SUMMIT						S	OIL BORI	NG LOG	Boring #:	B-1
Control Cont											13067.1
Common Style			00111								1 of 1
Deference										Chkd by:	
Mark Start R. Petersinin P.F. Date started: 970/2013 State Completed: 970/2013 State DRILLING STARTED Canophr SAMPLE Date Depth Elevation None Observed		o:			vices, Inc.		·				
DRILLING NETHOD	Driller:										
Methods Foreback Georghe Geo							Date started:	9/26/2013			
Marthous Problem Description Marthous Problem Description Marthous Marth								ı			
Seminary Style Mammar Ma								Depth	Elevation		eference
						ID	9/26/2013			None Observed	
Depth (II)							.				
Mos		Style:	Auto	Methoa:	ASTM D15	86			_	0 1 1 1/	
### A ** Advix brown Sandy Sill*, trace Crawel, humid, losse, SM Fill. ### A ** Advix brown Silly SAND, trace Grawel, humid, losse, SM Fill. ### A ** Advix brown Silly SAND, trace Grawel, humid, losse, SM Fill. ### A ** Advix brown Silly SAND, trace Grawel, humid, losse, SM Fill. ### A ** Advix brown Silly SAND, trace Grawel, humid, losse, SM Fill. ### A ** Advix brown Silly SAND, trace Grawel, humid, losse, SM Fill. ### A ** Advix brown Silly SAND, trace Grawel, humid, losse, SM Fill. ### A ** Advix brown Silly SAND, trace Grawel, humid, losse, SM Fill. ### A ** Advix brown Silly SAND, trace Grawel, humid, losse, SM Fill. ### A ** Advix brown Silly SAND, trace Grawel, humid, losse, SM Fill. ### A ** Advix brown Silly SAND, trace Grawel, humid, losse, SM Fill. ### A ** Advix brown Silly SAND, trace Grawel, humid, losse, SM Fill. ### A ** Advix brown Silly SAND, trace Grawel, humid, losse, SM Fill. ### A ** Advix brown Silly SAND, trace Grawel, humid, losse, SM Fill. ### A ** Advix brown Silly SAND, trace Grawel, humid, losse, SM Fill. ### A ** Advix brown Silly SAND, trace Grawel, humid, losse, SM Fill. ### A ** Advix brown Silly SAND, trace Grawel, humid, losse, SM Fill. ### A ** Advix brown Silly Sand,	-				1	L	1				
FILL	(ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N ₆₀				Test Data	
FILL Compared Soils Compared Soils							4" dark brown S	andy SILT, trac	e rootlets, moist, ML		TOPSOIL
GLACIAL TILL GL	'-						Provin Cilty CANI	D trace Cravel	humid loose SM		EIII
Signature Solit Same S	2						DIOWIT SILLY SAIN	D, trace Graver,	Humlu, loose, sivi		FILL
GLACIAL TILL S							†				
GLACIAL TILL S	3						†				
Standard Clay Standard Cla	I -										
Same as above Firm Same as above Same as above Firm Same as above	4						Ι				
Gray Sandy SILT, trace Gravel and Clay, damp, 6	_						1				GLACIAL TILL
Fig.	5_						1				
10	,	S-1	24/24	5 to 7				, trace Gravel a	and Clay, damp,		
The compact of the compact of the composition South Mosture Condition Compact of the compa	6_						Stiff, ML				
Same as above, firm	7				1		1				
Size	· -				3		†				
Size	8						†				
Same as above, firm 10	_						†				
See as above, firm 11	9						1				
See as above, firm 11	· <u>-</u> -						[
11	10						<u> </u>				
12		S-2	24/24	10 to 12			Same as above,	firm			
12	11_						1				
13	10				1		1				
14	12 _						+				
14	13						†				
S-3							†				
Same as above Same as above	14						†				
Same as above Same as above	_						1				
16	15						<u> </u>				
17		S-3	24/24	15 to 17			Same as above				
17	16_						1				
18	17						1				
19	''-				4		†				
19	18						†				
19	I						Hard drilling			-1	
S-4	19]				
S-4	_]				
21	20						1_		_		
12	0.1	S-4	24/24	20 to 22			Same as above,	damp, very stif	t		
22	21_						1				
End of Boring at 22 ft 23	າາ			1			1				
23					10		+	End of Boring	at 22 ft		
24	23						†	or borning			
Granular Soils Cohesive Soils % Composition Blows/ft. Density Blows/ft. Consistency ASTM D2487 0-4 V. Loose	I						1				
Granular Soils Cohesive Soils % Composition Blows/ft. Density Blows/ft. Consistency ASTM D2487 0-4 V. Loose	24						1				
Granular Soils Cohesive Soils % Composition NOTES: PP = Pocket Penetrometer, MC = Moisture Content Soil Moisture Condition Blows/ft. Density Blows/ft. Consistency ASTM D2487 LL = Liquid Limit, PI = Plastic Index Dry: S = 0% 0-4 V. Loose <2	_]				
Blows/ft. Density Blows/ft. Consistency ASTM D2487 LL = Liquid Limit, PI = Plastic Index Dry: S = 0% 0-4 V. Loose <2	25						1				
Blows/ft. Density Blows/ft. Consistency ASTM D2487 LL = Liquid Limit, PI = Plastic Index Dry: S = 0% 0-4 V. Loose <2				<u> </u>	0:	<u> </u>	Notes	DD - : -		1	
0-4 V. Loose <2 V. soft Bedrock Joints Humid: S = 1 to 25% 5-10 Loose 2-4 Soft < 5% Trace					1		NOTES:			ontent	
5-10 Loose 2-4 Soft < 5% Trace Shallow = 0 to 35 degrees Damp: S = 26 to 50% 11-30 Compact 5-8 Firm 5-15% Little Dipping = 35 to 55 degrees Moist: S = 51 to 75% 31-50 Dense 9-15 Stiff 15-30% Some Steep = 55 to 90 degrees Wet: S = 76 to 99% >50 V. Dense 16-30 V. Stiff > 30% With Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches Saturated: S = 100%					ASIM D	1248/	Podroek leists	LL = Liquid Limit	I, PI = Plastic Index		•
11-30 Compact 5-8 Firm 5-15% Little Dipping = 35 to 55 degrees Moist: S = 51 to 75% 31-50 Dense 9-15 Stiff 15-30% Some Steep = 55 to 90 degrees Wet: S = 76 to 99% >50 V. Dense 16-30 V. Stiff > 30% With Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches Saturated: S = 100%					. 50/ 3	Franc		dogrado			
31-50 Dense								-			·
>50 V. Dense 16-30 V. Stiff > 30% With Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches								_			
>30 Hard Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches							31eeh = 33 10 40 0	iegiees			
	>50	v. Dense			> 30%	VVILII	Roulders - diamet	er > 10 inches C	ohhles = diameter < 12 inch	es and > 3 inches	Saturateu: S = 100%
			>30	пагu							

						S	OIL BORII	Boring #:	B-2			
l		SUM	MAIT				Munjoy Height		Project #:	13067.1		
l						Location:	Sheridan St Ex	Sheet:	1 of 1			
<u></u>		GEOENGINEERI	NG SERVICES			City, State:	Portland, Main		Chkd by:			
Drilling (Drilling Co: Summit Geoengineering Services, Inc.							86 ft +/-	•			
Driller:	Driller: C. Coolidge, P.E.							sion Control Plan by A				
	Summit Staff: B. Peterlein, P.E.							Date Completed:	9/26/2013			
	DRILLING METHOD SAMPLER					Date		ESTIMATED GROUND) WATER DEPTH			
	Vehicle: Tracked Length: 24" SS						Depth	Elevation		eference		
		wer Probe	Diameter:	2"OD/1.5"	ID	9/26/2013	15 ft	71 ft +/-	Observed in sample	S		
Method:		" H.S.A.	Hammer:	140 lb								
Hammer	Style:	Auto	Method:	ASTM D15	86							
Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N ₆₀	<u> </u> 	SAMPL DESCRIP		Geological/ Test Data	Geological Stratum		
						4" dark brown Sa	andy SILT, trace	e rootlets, moist, ML		TOPSOIL		
1_												
i						Brown Gravelly S	SAND, trace Silt	, humid, loose, SP		FILL		
2_						1						
3_	-					1						
4				1		+				MARINE NEAR		
4_	1			-		+				SHORE		
5						†				SHOKE		
	S-1	24/20	5 to 7	4		Brown Gravelly S	SAND, trace Silt	, dry, compact				
6	<u> </u>	21/20	0 10 7	7		SP	witte, trace out	, ary, compact,				
_				7		1						
7				7		†						
_												
8						1						
_]						
9_						<u> </u>						
						1_						
10_	S-2	24/12	10 to 12	4		Same as above						
11				6		1						
11_				5 3		+						
12				3		+						
12_						†						
13						†						
						†						
14						†						
_												
15						[
	S-3	24/16	15 to 17	8		Brown Gravelly S	SAND, little Silt,	wet, compact, SM				
16_				4		1						
				6		1						
17 _	-			9		1						
10				1		1						
18_	1					+				+		
19				 		†				GLACIAL TILL		
17_				†		†				SENSINE TILL		
20						†						
	S-4	24/24	20 to 22	10		Gray Sandy SILT	, trace Gravel a	nd Clay, wet,				
21				16		hard, ML		-				
·				17		[
22_				18								
						1	End of Boring	at 22 ft				
23 _	1					4						
						<u> </u>						
24_	-					1						
)E				1		+						
25 _	-					1						
	ar Soile	Cobosin	L o Soils	% Comp	osition	NOTES:	DD - Docket Des	etrometer, MC = Moisture	Content	Soil Moisture Condition		
Granula	Granular Soils Cohesive Soils % Composition Blows/ft, Density Blows/ft, Consistency ASTM D2487				NOTES.			, content	Dry: S = 0%			
		Blows/ft. Density Blows/ft. Consistency ASTM D2487				Podrock loints	LL = Liquid Lilliit	, FI = Flastic Illuex				
Blows/ft.	Density			0-4 V. Loose <2 V. soft				LL = Liquid Limit, PI = Plastic Index Dry: S = 0% Bedrock Joints Humid: S = 1 to 3				
Blows/ft. 0-4	Density V. Loose	<2	V. soft	, E0/ 7	- Traco		dogroos					
Blows/ft. 0-4 5-10	Density V. Loose Loose	<2 2-4	V. soft Soft	< 5% T		Shallow = 0 to 35	•			Damp: S = 26 to 50%		
0-4 5-10 11-30	V. Loose Loose Compact	<2 2-4 5-8	V. soft Soft Firm	5-15%	Little	Shallow = 0 to 35 of Dipping = 35 to 55	degrees			Damp: S = 26 to 50% Moist: S = 51 to 75%		
0-4 5-10 11-30 31-50	Density V. Loose Loose Compact Dense	<2 2-4 5-8 9-15	V. soft Soft Firm Stiff	5-15% 15-30%	Little Some	Shallow = 0 to 35	degrees			Damp: S = 26 to 50% Moist: S = 51 to 75% Wet: S = 76 to 99%		
0-4 5-10 11-30 31-50	V. Loose Loose Compact	<2 2-4 5-8	V. soft Soft Firm	5-15%	Little Some	Shallow = 0 to 35 of Dipping = 35 to 55 Steep = 55 to 90 d	degrees legrees	obbles = diameter < 12 ir	ochos and > 3 inchos	Damp: S = 26 to 50% Moist: S = 51 to 75%		

						S	OIL BORI	Boring #:	B-3	
		CILA	AALT			Project:	Munjoy Height		Project #:	13067.1
		SUIVI	VIIV			Location:	Sheridan St Ex		Sheet:	1 of 2
		GÉOENGINEERI	NG SERVICES			City, State:	Portland, Main		Chkd by:	1 01 2
Drilling C	o:	Summit Gener	ngineerina Sei	vices. Inc		Boring Elevation:		138 ft +/-	<i>,</i> .	
Drilling Co: Summit Geoengineering Services, Inc. Driller: C. Coolidge, P.E.						Reference:		osion Control Plan by Ac	orn Engineerina	
Summit Staff: B. Peterlein, P.E.						Date started:	9/26/2013	Date Completed:	9/26/2013	
	DRILLING METHOD SAMPLER							ESTIMATED GROUND		
Vehicle:	Tracked	i	Length:	24" SS		Date	Depth	Elevation		eference
Model:	AMS Pov	wer Probe	Diameter:	2"OD/1.5"	'ID	9/26/2013	24 ft	114 ft +/-	Observed on drill ro	ds
Method:		" H.S.A.	Hammer:	140 lb						
Hammer	Style:	Auto	Method:	ASTM D15	86					
Depth							SAMPI		Geological/	Geological
(ft.)	No. Pen/Rec (in) Depth (ft) blows/6" N_{6}						DESCRIP		Test Data	Stratum
						7	dy SILT, trace r	ootlets, moist, loose,		TOPSOIL
1_						ML				
2						Drown Crovelly	Cilty CAND mai	at Jacob CM		FILL
2_						Brown Gravelly S	SIILY SAIND, MOI	St, loose, Sivi		FILL
3						+				
Ŭ_						1				
4						1				
_]				
5_						1_				
	S-1	24/12	5 to 7	3		Brown Silty SANI	D, little Gravel,	moist, loose, SM		
6_				3		+				
7				2		+				
′ –						†				
8						†				
_										
9_						1				
						1				
10_	S-2	24/10	10 to 12	1		Crayleh ash min	ad with a trans	of Silt, dry, loose,		
11	5-2	24/10	10 10 12	2		Grayish ash mixe	ed with a trace	or Siit, ary, loose,		
''-				3						
12				2		Brown SAND, tra	ace to little Grav	vel and Silt,		MARINE NEAR
_						dry, loose, SP				SHORE
13 _						<u> </u>				
	-					1				
14_						-				
15						1				
	S-3	24/18	15 to 17	6		Same as above				
16				17						
' <u>-</u>				14		<u>.</u>	dy SILT, little G	Gravel, moist, very,		GLACIAL TILL
17_				17		stiff, ML				
10						1				
18_						+				
19						†				
						1				
20		_				T		. —	1	
_	S-4	24/20	20 to 22	7		-	Clay and fine Sa	and, trace Gravel,		
21 _				12		stiff, ML				
າາ				23 24		Olive brown Son	dy SILT little C	Gravel, trace Clay,		
22 _				24		humid, hard, ML		oraver, trace Clay,		
23						,a, mara, ME				
_						1				
24_						1				
· <u> </u>						1				
25 _						1				
Crossil	r Colle	C-F	ro Soile	0/ 0	ocition	NOTES:	DD = Dools = + D	notromotor MC M-:-t-	Content	Soil Moisture Caraditi
Granular Soils Cohesive Soils % Composition					NOTES:		netrometer, MC = Moisture	Content	Soil Moisture Condition Dry: S = 0%	
Blows/ft. Density Blows/ft. Consistency ASTM D2487 0-4 V. Loose <2 V. soft			· 40 /	Bedrock Joints	LL – LIQUIU LIMI	t, PI = Plastic Index		Dry: S = 0% Humid: S = 1 to 25%		
5-10	Loose	2-4	Soft	< 5% 1	Ггасе	Shallow = 0 to 35	dearees			Damp: S = 26 to 50%
	Compact	5-8	Firm	5-15%		Dipping = 35 to 55	•			Moist: $S = 51 \text{ to } 75\%$
31-50	Dense	9-15	Stiff	15-30%		Steep = 55 to 90 d	-			Wet: S = 76 to 99%
	V. Dense	16-30	V. Stiff	> 30%			-			Saturated: S = 100%
		>30	Hard			Boulders = diamet	er > 12 inches, C	obbles = diameter < 12 inc	ches and > 3 inches	
						Gravel = < 3 inch	and > No 4, Sand	d = < No 4 and >No 200, S	Silt/Clay = < No 200	

Project Munipy Helphts Project #: Location: Shertan St Extension Sheet Carly Helphts Project #: Location: Shertan St Extension Sheet Carly State: Portland, Maine Child by: Port	Reference rill rods I/ Geological
Cocontinuestring Services	Reference rill rods // Geological a Stratum
City State Portland, Maine Chkd by:	Reference rill rods I/ Geological a Stratum
Defiling Co: Summit Geoengineering Services, Inc. Boring Elevation:	Reference rill rods I/ Geological a Stratum
Driller: C. Coolidge, P.E. Reference: Drainage & Erosion Control Plan by Acorn Engineering	Reference rill rods I/ Geological a Stratum
Depth Company Compan	Reference rill rods I/ Geological a Stratum
Vehicle: Tracked Length: 24" SS Date Depth Elevation Model: AMS Power Probe Diameter: 2"OD/1.5"ID 9/26/2013 24 ft 114 ft +/- Observed on d Method: 2.1/2" H.S.A. Hammer: 140 ib	rill rods I/ Geological a Stratum
Model: AMS Power Probe Diameter: 2"OD/15"ID 9/26/2013 24 ft 114 ft +/- Observed on diameter Method: 2-1/2" H.S.A. Hammer: 140 lb — <t< td=""><td>rill rods I/ Geological a Stratum</td></t<>	rill rods I/ Geological a Stratum
Method: 2-1/2" H.S.A. Hammers Style: Auto Method: ASTM D1586 Geologica Test Dat: Mathod: ASTM D1586 SAMPLE Geologica Test Dat: Section 1	I/ Geological a Stratum
Hammer Style Auto	a Stratum
Depth (ft.) No. Pen/Rec (in) Depth (ft) blows/6" N ₈₀ SAMPLE DESCRIPTION Test Date Test Date Description Test Date Test Date Description Test Date Test Dat	a Stratum
(ft.) No. Pen/Rec (in) Depth (ft) blows/6" No. S-5 24/24 25 to 27 4 Gray Sandy SILT, little Gravel, trace Clay, very wet, stiff, ML 27	a Stratum
S-5 24/24 25 to 27 4 Gray Sandy SILT, little Gravel, trace Clay, very 13 wet, stiff, ML	
26	GLACIAL TILL
27	
28	
29	
29	
30	
S-6 24/24 30 to 32 14 Same as above	
S-6 24/24 30 to 32 14 Same as above	
31	
32	
32	
33	
34 35 36 37 38 39 40 41 42 43 44	
35	
35	
36	
37	
37	
38	
38	
39 40 41 42 43 44 44 44 44 44 44 44 44 44 44 44 44	
40	
40	
41 42 43 44 44 44 44 44 44 44 44 44 44 44 44	
42 43 44 44	
42 43 44 44	
43 44 4	
43 44 4	
44	
45	
46	
47	
48	
49	
F0 //	
50 V End of Boring at 50 ft	
Granular Soils Cohesive Soils % Composition NOTES: PP = Pocket Penetrometer, MC = Moisture Content	Soil Moisture Condition
Blows/ft. Density Blows/ft. Consistency ASTM D2487 LL = Liquid Limit, PI = Plastic Index	Dry: S = 0%
0-4 V. Loose <2 V. soft <u>Bedrock Joints</u>	Humid: S = 1 to 25%
5-10 Loose 2-4 Soft < 5% Trace Shallow = 0 to 35 degrees	1
11-30 Compact 5-8 Firm 5-15% Little Dipping = 35 to 55 degrees	Damp: S = 26 to 50%
31-50 Dense 9-15 Stiff 15-30% Some Steep = 55 to 90 degrees	Damp: S = 26 to 50% Moist: S = 51 to 75%
>50 V. Dense 16-30 V. Stiff > 30% With Solution	Damp: S = 26 to 50% Moist: S = 51 to 75% Wet: S = 76 to 99%
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200	Damp: S = 26 to 50% Moist: S = 51 to 75%

\sim					9	OIL BORII	NG LOG	Roring #:	B-4			
		China					Boring #:					
		SUM	IVII		Project: Munjoy Heights Project #: 13067.1 Location: Sheridan St Extension Sheet: 1 of 2							
		GEOENGINEERI	NG SERVICES			Portland, Main		Chkd by:	1 01 2			
Drilling C	:o:	Summit Geoer	aineerina Ser	vices. Inc.	Boring Elevation:		140 ft +/-					
Driller:		C. Coolidge, P.	5									
Summit :	Staff:	B. Peterlein, P.			Date started:		Date Completed:	9/26/2013				
DR	ILLING	METHOD	Si	AMPLER			ESTIMATED GROUND W	ATER DEPTH				
Vehicle:			Length:	24" SS	Date	Depth	Elevation		ference			
		wer Probe	Diameter:	2"OD/1.5"ID	9/26/2013			Caved at 22.6 ft (11	7 ft +/-) Dry			
	lethod: 2-1/2" H.S.A. Hammer: 140 lb ammer Style: Auto Method: ASTM D1586											
Depth	Style.	Auto	wethou.	A31W D1300		SAMPL	F	Geological/	Geological			
(ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6" N ₆₀	_	DESCRIP		Test Data	Stratum			
()		1 011/1100 (111)	Doptii (it)	2.0110, 0	Grass and leaf lit			. oot Bata	ou atain.			
1					loose, SM		, . , . , ,		FILL			
2_												
3					_							
) -					_							
4					†							
_												
5_		0.1/4.5	F : -		David C		N 1 . A					
6	S-1	24/12	5 to 7	3 3	Dark brown Sand rootlets, dry, loo		ravel, trace					
0-				2	Tootiets, dry, loo	se, IVIL						
7				3								
_												
8_												
9					_							
7_					_							
10												
	S-2	24/18	10 to 12	5	Brown Gravelly S	SAND, trace Silt	, dry, compact, SP		MARINE NEAR			
11_				11					SHORE			
12				17 17	_							
12 -				17	_							
13												
14_					Llordor drilling of	1 T ft						
15					Harder drilling at	1 15 11						
	S-3	8/8	15 to 15.6	29	Brown Gravelly S	SAND, little Silt,	dry, dense, SM					
16_				50 for 2"								
47									CLACIAL TILL			
17_					+				GLACIAL TILL			
18					+							
_												
19_												
20					4							
20_	S-4	24/24	20 to 22	25	Gray Sandy SILT	, little Gravel h	umid, very dense,					
21				14	ML ML	, 5.4.01,11	. 2, 12., 20.00,					
-				13								
22_				14	4							
23					+							
23_					+							
24					<u> </u>							
_												
25 _					4							
Granula	r Soils	Cohesiv	e Soils	% Composition	NOTES:	PP = Pocket Pen	etrometer, MC = Moisture Co	ntent	Soil Moisture Condition			
Blows/ft.		Blows/ft.	Consistency	ASTM D2487			r, PI = Plastic Index		Dry: S = 0%			
0-4	V. Loose		V. soft		Bedrock Joints				Humid: $S = 1 \text{ to } 25\%$			
5-10	Loose	2-4	Soft	< 5% Trace	Shallow = 0 to 35	degrees			Damp: S = 26 to 50%			
11-30	Compact	5-8	Firm	5-15% Little	Dipping = 35 to 55	_			Moist: S = 51 to 75%			
31-50	Dense	9-15	Stiff	15-30% Some	Steep = 55 to 90 d	legrees			Wet: S = 76 to 99%			
>50	V. Dense		V. Stiff	> 30% With	Pauldors dies d	or . 10 : 0	obbles dismeter 12 to the	on and a 2 in-t	Saturated: S = 100%			
		>30	Hard				obbles = diameter < 12 inches $1 = < No 4$ and $> No 200$, Silt.					

					_	T				-	
		\wedge				l s	OIL BORI	NG LOG	Boring #:	B-4	
		CILAR	TARAL			Project:	Munjoy Height		Project #:	13067.1	
		SUM	IVITY			Location:	Sheridan St Ex		Sheet:	2 of 2	
		GÉOENGINEERI	NG SERVICES			City, State:	Portland, Main		Chkd by:	2 0. 2	
Drilling (<u>`</u> 0.	Summit Geoer	ngineering Se	rvices Inc	\neg	Boring Elevation:		140 ft +/-	J 2.j.		
Driller:		C. Coolidge, P.		VICCO, ITIC.	\neg	Reference:		osion Control Plan by A	corn Engineering		
Summit		B. Peterlein, P.				Date started:	9/26/2013	Date Completed:	9/26/2013		
		METHOD		AMPLER	\neg			ESTIMATED GROUND			
	Tracked		Length:	24" SS		Date	Depth	Elevation		eference	
		wer Probe	Diameter:	2"OD/1.5"ID		9/26/2013	- 1		Caved at 22.6 ft (11		
Method:		" H.S.A.	Hammer:	140 lb					· ·	, ,	
Hammei	Style:		Method:	ASTM D1586							
Depth							SAMPI	.E	Geological/	Geological	
(ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6" N	N ₆₀	Ī	DESCRIP.	TION	Test Data	Stratum	
	S-5	24/24	25 to 27	8	\neg	Gray fine Sandy	SILT, little Grav	el, trace Clay, humid,			
26				14		hard, ML				GLACIAL TILL	
				17							
27				15							
20	<u> </u>	<u> </u>		↓		ļ					
28	+	 	 	├	\dashv	}					
29	—					 					
	+			+ +	\dashv	†					
30				†	\neg	†					
_	S-6	24/24	30 to 32	6		Same as above					
31				8		I					
22	<u> </u>		<u> </u>	18		ļ					
32	+		<u> </u>	20	\dashv	Auger probe to 4	10.6				
33		 	 	+ +	\dashv	Auger probe to 4	12 II				
55	+		 	+	\dashv	 					
34					\neg	†					
-	<u> </u>			<u> </u>		†					
35]					
2.4			ļ			<u> </u>					
36	+		 	 							
37			-	+	\dashv	 					
٠, -	+			 	\dashv	 					
38					\neg	†					
-						<u> </u>					
39	<u> </u>		<u> </u>	I 		<u> </u>					
40	<u> </u>		 	 	\dashv						
40_	+		 	1	\dashv	 					
41	-			+ +	-+	 					
-	 				\neg	†					
42						₩					
40				 			End of Boring	at 42 ft			
43	+		 	 							
44	\vdash		 	1	\dashv	ł					
· · · -	+			 	\dashv	†					
45			<u></u>	<u> </u>		†					
]					
46	<u> </u>					ļ					
17	<u> </u>		<u> </u>	 	\dashv						
47_	+					 					
48	 				\neg	ł					
-						İ					
49											
				<u> </u>		ļ					
50_				<u> </u>							
Granul	ar Soils	Cohesiv	o Soils	% Compositi	ion	NOTES:	DD - Docket Don	etrometer, MC = Moisture	Contont	Soil Moisture Condition	
	Density	Blows/ft.	Consistency	ASTM D248		NOTES.		;, PI = Plastic Index	Content	Dry: S = 0%	
0-4	V. Loose		V. soft	ASTIVI DZ40	17	Bedrock Joints	LL – Liquid Lillin	., FT = Flastic Hidex		Humid: S = 1 to 25%	
5-10	Loose	2-4	Soft	< 5% Trace	.e	Shallow = 0 to 35	dearees			Damp: S = 26 to 50%	
11-30	Compact	5-8	Firm	5-15% Little		Dipping = 35 to 55	-			Moist: S = 51 to 75%	
31-50	Dense	9-15	Stiff	15-30% Son		Steep = 55 to 90 d	_			Wet: S = 76 to 99%	
>50	V. Dense		V. Stiff	> 30% With		'				Saturated: S = 100%	
	ļ	>30	Hard			Boulders = diamete	er > 12 inches, C	obbles = diameter < 12 in	iches and > 3 inches		
		i		1		Gravel - < 3 inch	and \ No.4 Sand	I = < No 4 and >No 200.	Silt/Clay = < No 200		

<u> </u>					9	OIL BORII	NG LOG	Boring #: B-5				
		CILLA	AALT			Project #:	13067.1					
		SUM	IVIII			Munjoy Heights Sheridan St Ex		Sheet:	1 of 1			
		GÉOENGINEERI	NG SERVICES			Portland, Maine		Chkd by:	1 01 1			
Drilling C	o:	Summit Geoer	gineering Ser	vices, Inc.	Boring Elevation:		119 ft +/-	,				
Driller:		C. Coolidge, P.	.E.			ÿ						
Summit :	Staff:	B. Peterlein, P.	.E.		Date started:	9/26/2013	Date Completed:	9/26/2013				
DR	ILLING	METHOD	Si	AMPLER			ESTIMATED GROUND W	ATER DEPTH				
Vehicle:			Length:	24" SS	Date	Depth	Elevation	Re	ference			
		wer Probe	Diameter:	2"OD/1.5"ID	9/26/2013							
Method:		" H.S.A.	Hammer:	140 lb								
Hammer	Style:	Auto	Method:	ASTM D1586		SAMPL		Geological/	Coological			
Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6" N ₆₀	+	DESCRIPT		Test Data	Geological Stratum			
(11.)	NO.	Tell/Rec (III)	Deptii (it)	DIOW370 1460	4" dark brown Sa		e rootlets, moist, ML	TCSt Data	TOPSOIL			
1					, dank brown of	and orzer and	o roomoto, moiot, me		10.0012			
_					Olive-brown Clay	ey SILT, little fi	ine SAND, moist,		FILL			
2_					firm, ML							
2					1							
3_					+							
4					†							
_					1							
5_			_		1_							
,	S-1	22/22	5 to 6.9	8		, trace Gravel a	nd Clay, moist to					
6_				7	damp, stiff, ML							
7				8 for 4" then REF	†							
· -				10.101.1112.	†							
8					Boulder at 7 ft, r	efusal, move 5	feet and re-drill					
					<u> </u>				GLACIAL TILL			
9_					1							
10					+							
	S-2	24/24	10 to 12	7	Gray Sandy SILT	, little Gravel, ti	race Clay, damp,					
11_				23	hard, ML		3					
				14	<u> </u>							
12_				14	1							
13					+							
					†							
14					1							
					1							
15_	S-3	24/10	15 to 17	14	Sama as abaya	domn						
16	3-3	24/18	15 (0 17	31	Same as above,	uamp						
				35	†							
17				26	1							
					4							
18_				 	+							
19				 	†							
' -					1							
20]							
0.1	S-4	24/24	20 to 22	8	Same as above,	wet						
21_				18 21	+							
22				24	†							
						End of Boring	at 22 ft					
23]	J						
<u>.</u> .					4							
24_				 	+							
25					†							
					<u> </u>							
Granula		Cohesiv	e Soils	% Composition	NOTES:	PP = Pocket Pen	etrometer, MC = Moisture Cor	ntent	Soil Moisture Condition			
Blows/ft.		Blows/ft.	Consistency	ASTM D2487		LL = Liquid Limit	, PI = Plastic Index		Dry: S = 0%			
0-4	V. Loose		V. soft	F0	Bedrock Joints				Humid: S = 1 to 25%			
5-10	Loose	2-4	Soft	< 5% Trace	Shallow = 0 to 35 to	•			Damp: S = 26 to 50%			
11-30 31-50	Compact	5-8 9-15	Firm Stiff	5-15% Little 15-30% Some	Dipping = 35 to 55 Steep = 55 to 90 d	-			Moist: S = 51 to 75% Wet: S = 76 to 99%			
	V. Dense		V. Stiff	> 30% With	00 to 70 u	.091003			Saturated: S = 100%			
	_ 3.130	>30	Hard		Boulders = diamete	er > 12 inches, Co	obbles = diameter < 12 inche	s and > 3 inches				
							= < No 4 and >No 200, Silt/					

						S	OIL BORI	Boring #:	B-6	
		CILA	TALA			Project:	Munjoy Height	S	Project #:	13067.1
		SUIVI	IVIII			Location:	Sheet:	1 of 1		
		GEOENGINEERI	NG SERVICES			City, State:	Portland, Main	е	Chkd by:	
Drilling C		Summit Geoer		rvices, Inc.		Boring Elevation		117 ft +/-		
Driller: C. Coolidge, P.E.						Reference:		osion Control Plan by A		
	Summit Staff: B. Peterlein, P.E. DRILLING METHOD SAMPLER					Date started:	9/26/2013	Date Completed:	9/26/2013	
Vehicle:			Length:	AMPLER 24" SS		Date	Depth	ESTIMATED GROUND Elevation		eference
		wer Probe	Diameter:	2"OD/1.5"	'ID	9/26/2013	Берит	Lievation	N.C	referice
Method:			Hammer:	140 lb		772072010				
Hammer			Method:	ASTM D15	586					
Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N ₆₀		SAMPI DESCRIP		Geological/ Test Data	Geological Stratum
1						Dark brown Sandrootlets, humid,		Gravel, trace		TOPSOIL
_										
2_						Brown Gravelly S	SAND, trace Sil	, dry, compact, SP		MARINE NEAR SHORE
3						+				SHUKE
_						1				
4 _										
5				-		ĺ				
ິ_	S-1	24/24	5 to 7	11		Brown Gravelly S	SAND, trace Sil	, dry, compact, SP		
6_				14]				
7				12		4				
7_				13		1				
8_					L	1				
_						1				
9_	-			 	-	-				
10						†				
	S-2	24/24	10 to 12	2		Brown Gravelly S	SAND, trace Sil	, trace Gravel and		
11_				3		Clay, damp, firm	ı, SM			GLACIAL TILL
12				3 2		_				
12_						-				
13										
1.4						_				
14_						+				
15						1				
_	S-3	24/24	15 to 17	3		Same as above,	stiff			
16_				10		1				
17				5		-				
_										
18_						4				
19	<u> </u>					Becomes harder	at 19 ft			
''-										
20_		0.1/0:	00:							
21	S-4	24/24	20 to 22	4 15		Same as above,	very stiff			
_ ا _				13		†				
22_				14]				
00						4				
23_				1		1				
24						1				
-						1				
25_	S-5	24/24	25 to 27	10		Same as above,	very stiff			
26	3-0	27/24	23 10 21	15		Jame as above,	vory suit			
_				14]				
27_				17			End of Poring	1 2† 22 ft		
Granula	ar Soile	Cohesiv	l e Snils	% Comp	nsition	NOTES:	End of Boring	etrometer, MC = Moisture	Content	Soil Moisture Condition
Blows/ft.		Blows/ft.	Consistency	ASTM D				t, PI = Plastic Index	CORTOR	Dry: S = 0%
0-4	V. Loose		V. soft	7.01101 E		Bedrock Joints	- Esquite Eilli			Humid: S = 1 to 25%
5-10	Loose	2-4	Soft	< 5%	Trace	Shallow = 0 to 35	degrees			Damp: S = 26 to 50%
11-30	Compact	5-8	Firm	5-15%	Little	Dipping = 35 to 55	degrees			Moist: S = 51 to 75%
31-50	Dense	9-15	Stiff	15-30%		Steep = 55 to 90 c				Wet: S = 76 to 99%
>50	V. Dense		V. Stiff	> 30%	With			obbles = diameter < 12 in		Saturated: S = 100%
		>30	Hard			Gravel = < 3 inch	and > No 4, San	$d = \langle No 4 \text{ and } \rangle No 200,$	Silt/Clay = < No 200	