

March 27, 2017
Summit #16030

BD Sheridan LLC
1266 Furnace Brook Parkway
Suite 300
Quincy, MA 02169
Attn: Rich and Bernie

Reference: Geotechnical Letter – Proposed Apartment Building
155 Sheridan Street, Portland, Maine

Dear Sirs;

Summit Geoengineering Services (SGS) performed a geotechnical exploration at the above referenced site on March 10, 2016. The explorations consisted of 3 borings drilled at the top, mid-height, and toe of the existing slope. Laboratory testing was performed on soil samples collected during the exploration. Additionally, a monitoring well was installed in the boring at the top of the slope. Attached to this letter are the boring logs, the laboratory testing results, and a soil cross section.

We understand that the new apartment building will be constructed as a slab-on-grade with a finish floor elevation (FFE) of 111.50 feet and a soldier pile and lagging wall will be constructed on the north end of the site to retain the cut slope. Based on the proposed layout and the soil conditions encountered in our explorations, we do not anticipate any major geotechnical concerns with the new development. Further geotechnical analyses are required for us to provide final geotechnical recommendations for the design and construction of the building foundation and the retaining wall. We will submit the final geotechnical report within two weeks.

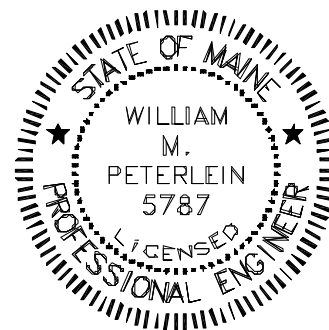
If there are any questions, please feel free to contact me.

Sincerely,

Summit Geoengineering Services



William M. Peterlein, P.E.
President & Principal Engineer



Attachments:

Boring Location Plan

Boring Logs

Soil Cross Section

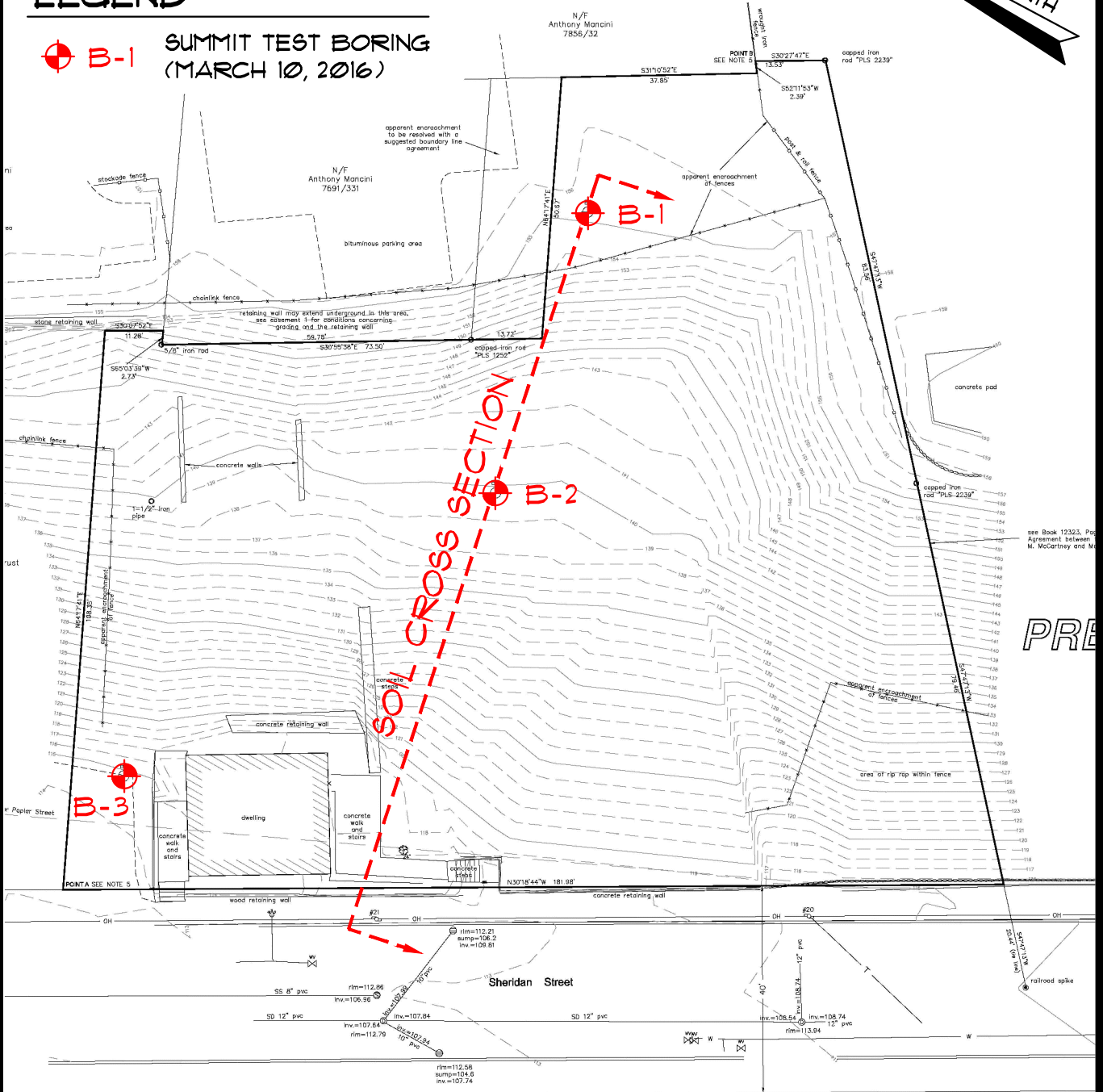
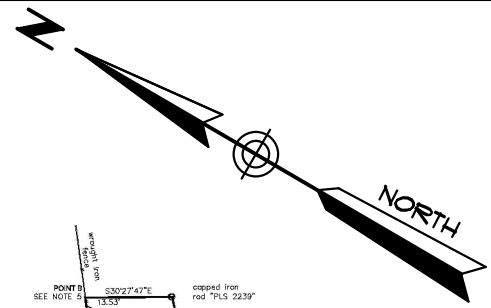
Laboratory Test Results

PLAN REFERENCE

"PLAN OF EXISTING CONDITIONS SURVEY", DATED MARCH 4, 2016, PREPARED BY TITCOMB ASSOCIATES.

LEGEND

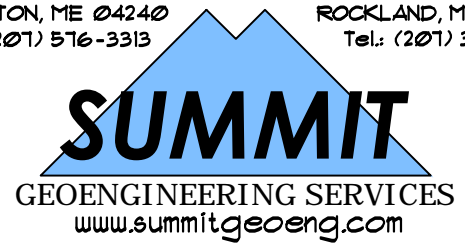
 **B-1** SUMMIT TEST BORING (MARCH 10, 2016)



**TEST BORING LOCATION PLAN
PROPOSED RESIDENTIAL BUILDING**
153 - 165 SHERIDAN STREET - PORTLAND, MAINE
PREPARED FOR
BD SHERIDAN LLC

145 LISBON ST. - SUITE 601
LEWISTON, ME 04240
Tel.: (207) 576-3313

173 PLEASANT STREET
ROCKLAND, ME 04841
Tel.: (207) 318-1161



DATE: 3-18-2016	DRAWN BY: KRF	CHECKED BY: UMP
JOB: 16030	SCALE: 1" = 30'	FILE: 16030 BOR



SOIL BORING LOG

Boring #: **B-1 (OW)**

Project: New Apartment Building
 Location: 153 - 165 Sheridan Street
 City, State: Portland, Maine

Project #: 16030
 Sheet: 1 of 3
 Chkd by:

Drilling Co: Northern Test Boring Boring Elevation: 155.0 ft. +/-
 Driller: Mike Nadeau Reference: "Existing Conditions Survey, 153-165 Sheridan St." by Titcomb Dated 3/4/16
 Summit Staff: M. Hardison, E.I. Date started: 3/10/2016 Date Completed: 3/10/2016

DRILLING METHOD	SAMPLER	ESTIMATED GROUND WATER DEPTH			
Vehicle: ATV	Length: 24" SS	Date	Depth	Elevation	Reference
Model: Diedrich D-50	Diameter: 2"OD/1.5"ID	3/12/2016	11.2 ft.	143.8 ft. +/-	2 days after completion of boring
Method: 3" Case Wash	Hammer: 140 lb				
Hammer Style: Auto	Method: ASTM D1586				

Depth (ft.)	SAMPLER				Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	No.	Pen/Rec (in)	Depth (ft)	blows/6"				
1	S-1	24/6	0 to 2	3	153.0'	Dark brown to black SILT, little fine Sand, trace Clay, rootlets and organics, very loose, damp, ML		TOPSOIL
				2				
				2				
2				2	147.0'	Dark tan to brown Silty SAND, wood pieces in spoon tip, very loose, humid, SM		FILL
3								
4								
5								
6	S-2	24/16	5 to 7	1				
				2				
				2				
				1				
8								
9								
10					Dense drilling encountered at 8.0' depth	PP >> 9,000 psf	GLACIAL TILL	
11	S-3	24/24	10 to 12	11				
				17				
				27				
				21				
13								
14	S-4	24/20	13 to 15	13				
				13				
				21				
				20				
16					same as above, some Cobble pieces	PP >> 9,000 psf		
17								
18								
19	S-5	24/24	18 to 20	25				
				30				
				27				
				27				
20								
21								
22								

Granular Soils		Cohesive Soils		% Composition	NOTES:	Soil Moisture Condition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487		
0-4	V. Loose	<2	V. soft		PP = Pocket Penetrometer, MC = Moisture Content	Dry: S = 0%
5-10	Loose	2-4	Soft	< 5% Trace	LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test	Humid: S = 1 to 25%
11-30	Compact	5-8	Firm	5-15% Little	Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength	Damp: S = 26 to 50%
31-50	Dense	9-15	Stiff	15-30% Some	Shallow = 0 to 35 degrees	Moist: S = 51 to 75%
>50	V. Dense	16-30	V. Stiff	> 30% With	Dipping = 35 to 55 degrees	Wet: S = 76 to 99%
		>30	Hard		Steep = 55 to 90 degrees	Saturated: S = 100%

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 BORING LOG

Boring #: **B-1 (OW)**

Project: New Apartment Building
 Location: 153 - 165 Sheridan Street
 City, State: Portland, Maine

Project #: 16030
 Sheet: 2 of 3
 Chkd by:

Drilling Co: Northern Test Boring Boring Elevation: 155.0 ft. +/-
 Driller: Mike Nadeau Reference: "Existing Conditions Survey, 153-165 Sheridan St." by Titcomb Dated 3/4/16
 Summit Staff: M. Hardison, E.I. Date started: 3/10/2016 Date Completed: 3/10/2016

DRILLING METHOD		SAMPLER		ESTIMATED GROUND WATER DEPTH			
Vehicle:	ATV	Length:	24" SS	Date	Depth	Elevation	Reference
Model:	Diedrich D-50	Diameter:	2"OD/1.5"ID	3/12/2016	11.2 ft.	143.8 ft. +/-	2 days after completion of boring
Method:	3" Case Wash	Hammer:	140 lb				
Hammer Style:	Auto	Method:	ASTM D1586				

Depth (ft.)					Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	No.	Pen/Rec (in)	Depth (ft)	blows/6"				
23	S-6	24/28	23 to 25	13		Gray Gravelly SAND, little Silt, trace Clay, very dense, humid to moist, SP-SM	GLACIAL TILL	
24				22				
				39				
25				29				
26								
27								
28								
29								
29	S-7	24/20	29 to 31	40	same as above, little Clay, some Silt			
30				34				
				48				
31				47				
32								
33	S-8	24/20	33 to 35	33	Gray SILT, little Sand and Clay, trace Gravel, very dense, humid to moist, ML			
34				37				
				50/4"				
35								
36								
37								
38								
38	S-9	24/18	38 to 40	27			same as above	
39				31				
				42				
40				43				
41								
42								
43	S-10	24/24	43 to 45	15	same as above			
44				30				
				32				
				40				

Granular Soils		Cohesive Soils		% Composition ASTM D2487	NOTES: PP = Pocket Penetrometer, MC = Moisture Content LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength 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%
Blows/ft.	Density	Blows/ft.	Consistency			
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			



SOIL BORING LOG

Boring #: **B-1 (OW)**

Project: New Apartment Building
 Location: 153 - 165 Sheridan Street
 City, State: Portland, Maine

Project #: 16030
 Sheet: 3 of 3
 Chkd by: _____

Drilling Co: Northern Test Boring Boring Elevation: 155.0 ft. +/-
 Driller: Mike Nadeau Reference: "Existing Conditions Survey, 153-165 Sheridan St." by Titcomb Dated 3/4/16
 Summit Staff: M. Hardison, E.I. Date started: 3/10/2016 Date Completed: 3/10/2016

DRILLING METHOD		SAMPLER		ESTIMATED GROUND WATER DEPTH			
Vehicle: <u>ATV</u>	Length: <u>24" SS</u>	Date	Depth	Elevation	Reference		
Model: <u>Diedrich D-50</u>	Diameter: <u>2"OD/1.5"ID</u>	<u>3/12/2016</u>	<u>11.2 ft.</u>	<u>143.8 ft. +/-</u>	<u>2 days after completion of boring</u>		
Method: <u>3" Case Wash</u>	Hammer: <u>140 lb</u>						
Hammer Style: <u>Auto</u>	Method: <u>ASTM D1586</u>						

Depth (ft.)	SAMPLER				Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	No.	Pen/Rec (in)	Depth (ft)	blows/6"				
46						Gray SILT, little Sand and Clay, trace Gravel, very dense, humid to moist, ML	GLACIAL TILL	
47								
48								
49	<u>S-11</u>	<u>24/24</u>	<u>48 to 50</u>	<u>56</u>				
				<u>38</u>				
				<u>34</u>				
50				<u>44</u>	<u>105.0'</u>	End of Boring at 50.0', no refusal Monitoring Well Installed: 2" PVC Well Screen from 41.5' to 31.5' 2" PVC Riser Pipe from 31.5' to ground surface		
51								
52								
53								
54								
55								
56								
57								
58								
59								
60								
61								
62								
63								
64								
65								
66								
67								

Granular Soils		Cohesive Soils		% Composition ASTM D2487	NOTES: PP = Pocket Penetrometer, MC = Moisture Content LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength 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%
Blows/ft.	Density	Blows/ft.	Consistency			
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			



SOIL BORING LOG

Boring #: **B-2**

Project: New Apartment Building
 Location: 153 - 165 Sheridan Street
 City, State: Portland, Maine

Project #: 16030
 Sheet: 1 of 2
 Chkd by:

Drilling Co: Northern Test Boring Boring Elevation: 139.5 ft. +/-
 Driller: Mike Nadeau Reference: "Existing Conditions Survey, 153-165 Sheridan St." by Titcomb Dated 3/4/16
 Summit Staff: M. Hardison, E.I. Date started: 3/10/2016 Date Completed: 3/10/2016

DRILLING METHOD		SAMPLER		ESTIMATED GROUND WATER DEPTH			
Vehicle: <u>ATV</u>	Length: <u>24" SS</u>	Date	Depth	Elevation	Reference		
Model: <u>Diedrich D-50</u>	Diameter: <u>2"OD/1.5"ID</u>	<u>3/10/2016</u>	<u>20.0 ft.</u>	<u>119.5 ft. +/-</u>	<u>observed on samples</u>		
Method: <u>2.25" ID H.S.A.</u>	Hammer: <u>140 lb</u>						
Hammer Style: <u>Auto</u>	Method: <u>ASTM D1586</u>						

Depth (ft.)	SAMPLER				Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	No.	Pen/Rec (in)	Depth (ft)	blows/6"				
1	S-1	24/20	0 to 2	2	137.5'	Black SILT, frequent roots, rootlets, and organics, soft, damp, ML		TOPSOIL
				1				
				1				
2				1				
3								
4								
5								
6	S-2	24/10	5 to 7	9	125.5'	Olive gray Clayey SILT, little Sand and fine to medium Gravel, humid, stiff, ML	PP = 4,000 psf to 6,000 psf	FILL/REWORKED NATIVE
7				12				
8				11				
9				10				
10								
11	S-3	26/16	10 to 12	3				
12				5				
13				4				
14				5				
15								
16	S-4	24/12	15 to 17	8	125.5'	Gray SILT, little Sand and Clay, trace Gravel, very dense, humid to moist, ML	∇ Groundwater	GLACIAL TILL
17				13				
18				12				
19				9				
20								
21	S-5	24/24	20 to 22	8				
22				11				
				11				
				13				

Granular Soils		Cohesive Soils		% Composition ASTM D2487	NOTES: PP = Pocket Penetrometer, MC = Moisture Content LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test <u>Bedrock Joints</u> Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength 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%
Blows/ft.	Density	Blows/ft.	Consistency			
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			



SOIL BORING LOG

Boring #: **B-2**

Project: New Apartment Building
 Location: 153 - 165 Sheridan Street
 City, State: Portland, Maine

Project #: 16030
 Sheet: 2 of 2
 Chkd by:

Drilling Co: Northern Test Boring Boring Elevation: 139.5 ft. +/-
 Driller: Mike Nadeau Reference: "Existing Conditions Survey, 153-165 Sheridan St." by Titcomb Dated 3/4/16
 Summit Staff: M. Hardison, E.I. Date started: 3/10/2016 Date Completed: 3/10/2016

DRILLING METHOD		SAMPLER		ESTIMATED GROUND WATER DEPTH			
Vehicle: ATV		Length: 24" SS		Date	Depth	Elevation	Reference
Model: Diedrich D-50		Diameter: 2"OD/1.5"ID		3/10/2016	20.0 ft.	119.5 ft. +/-	observed on samples
Method: 2.25" ID H.S.A.		Hammer: 140 lb					
Hammer Style: Auto		Method: ASTM D1586					

Depth (ft.)					Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	No.	Pen/Rec (in)	Depth (ft)	blows/6"				
23						Dense drilling starting at 23' Gray SILT, little Sand and Clay, trace Gravel, very dense, humid to moist, ML		GLACIAL TILL
24								
25								
26	S-6	24/24	25 to 27	23				
27				27				
28				28				
29								
30								
31	S-7	24/24	30 to 32	20				
32				23				
33				25	107.5'	End of Boring at 32.0', no refusal		
34				27				
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								

Granular Soils		Cohesive Soils		% Composition ASTM D2487	NOTES: PP = Pocket Penetrometer, MC = Moisture Content LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength 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%
Blows/ft.	Density	Blows/ft.	Consistency			
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			



SOIL BORING LOG

Boring #: **B-3**

Project: New Apartment Building
 Location: 153 - 165 Sheridan Street
 City, State: Portland, Maine

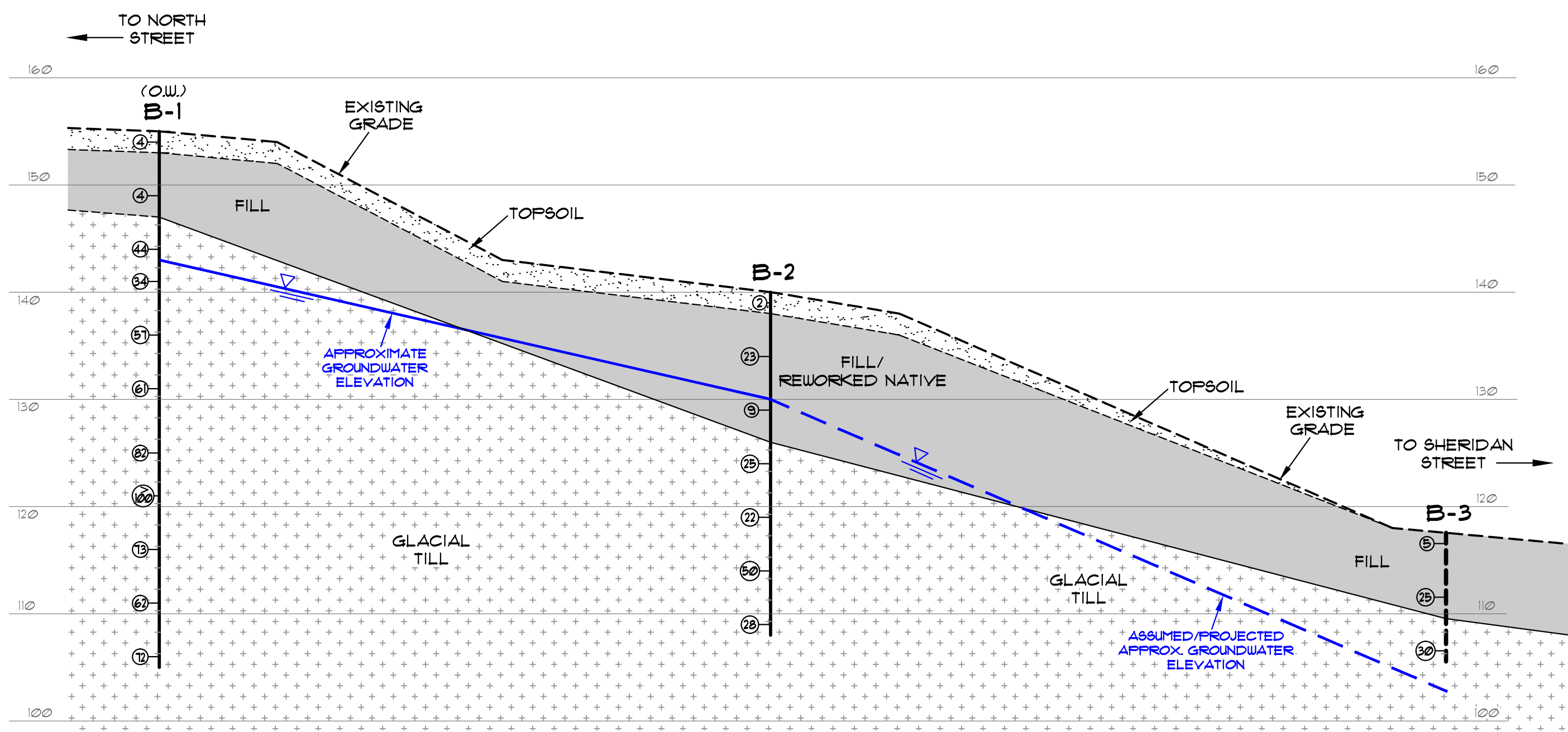
Project #: 16030
 Sheet: 1 of 1
 Chkd by:

Drilling Co: Northern Test Boring Boring Elevation: 114.5 ft. +/-
 Driller: Mike Nadeau Reference: "Existing Conditions Survey, 153-165 Sheridan St." by Titcomb Dated 3/4/16
 Summit Staff: M. Hardison, E.I. Date started: 3/10/2016 Date Completed: 3/10/2016

DRILLING METHOD		SAMPLER		ESTIMATED GROUND WATER DEPTH			
Vehicle: <u>ATV</u>	Length: <u>24" SS</u>	Date	Depth	Elevation	Reference		
Model: <u>Diedrich D-50</u>	Diameter: <u>2"OD/1.5"ID</u>	<u>3/10/2016</u>	<u>-</u>	<u>-</u>	<u>none encountered</u>		
Method: <u>2.25" ID H.S.A.</u>	Hammer: <u>140 lb</u>						
Hammer Style: <u>Auto</u>	Method: <u>ASTM D1586</u>						

Depth (ft.)	SAMPLER				Elev. (ft.)	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
	No.	Pen/Rec (in)	Depth (ft)	blows/6"				
1	S-1	24/10	0 to 2	3	106.5'	Dark brown - black Silty SAND, few glass pieces, little to trace Clay, rootlets, moist, loose, SM		FILL
				2				
				3				
2				3				
3								
4								
5								
6	S-2	24/1	5 to 7	7	106.5'	no recovery, Sandy SILT in tip		
				15				
				10				
7				10				
8								
9								
10	S-3	24/24	10 to 12	10	102.5'	Gray Clayey SILT, little Gravel and Sand, humid, very stiff, ML	PP > 9,000 psf	GLACIAL TILL
				15				
				15				
11				15				
12				18				
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								

Granular Soils		Cohesive Soils		% Composition ASTM D2487	NOTES: PP = Pocket Penetrometer, MC = Moisture Content LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength 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%
Blows/ft.	Density	Blows/ft.	Consistency			
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			

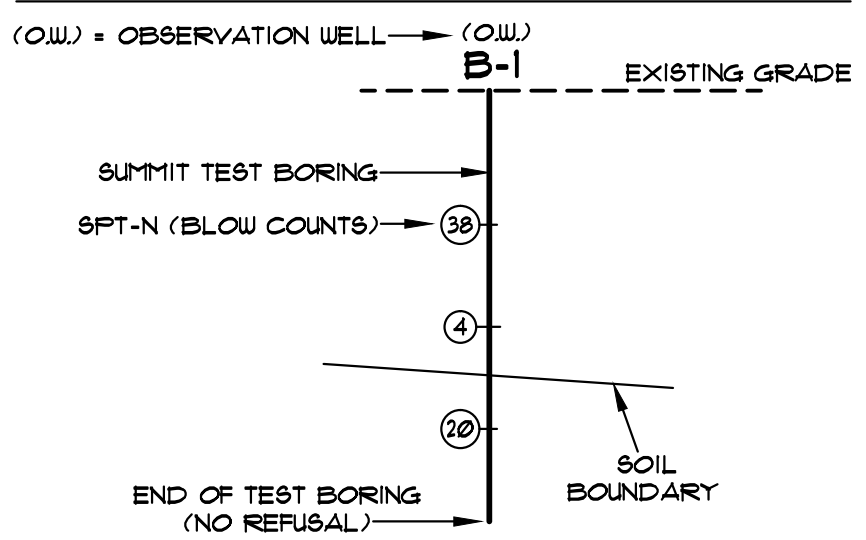


SOIL DESCRIPTION & OSHA SLOPE CLASSIFICATION

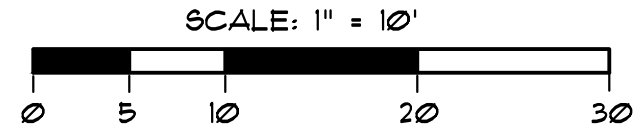
- "FILL" - DARK BROWN TO TAN, SILTY SAND OR SANDY SILT, LOOSE TO COMPACT, OCCASIONAL WOOD OR GLASS PIECES. (OSHA TYPE C, 1.5H : 1V)
- "FILL/REWORKED NATIVE" - OLIVE GRAY CLAYEY SILT, LITTLE SAND & GRAVEL, STIFF. (OSHA TYPE B, 1H : 1V)
- "GLACIAL TILL" - GRAY GRAVELLY SILT, LITTLE SAND & CLAY, COMPACT TO DENSE. (OSHA TYPE A, 0.75H : 1V)

NOTE: ALLOWABLE OSHA SLOPES SHOWN APPLY TO SOIL ABOVE THE GROUNDWATER TABLE AND ARE FOR SHORT-TERM CONSTRUCTION CONDITIONS. OSHA SLOPES BELOW GROUNDWATER ARE 1.5H : 1V. PERMANENT SLOPES MAY BE STEEPER.

LEGEND



THE ACTUAL LOCATION OF THE B-3 TEST BORING IS 40'± TO THE NORTH. DATA WAS EXTRAPOLATED TO THIS LOCATION BASED ON SIMILAR GEOLOGY



PROJECT: PROPOSED RESIDENTIAL BUILDING
 153 - 165 SHERIDAN STREET - PORTLAND, MAINE
 CLIENT: BD SHERIDAN LLC

TITLE: SOIL CROSS SECTION
 SCALE: 1" = 10'
 DATE: MARCH 21, 2016
 DRAWN BY: KRF
 APPR. BY: WAP

113 PLEASANT STREET
 ROCKLAND, ME 04841
 Tel: (207) 318-1161

145 LISBON ST. - SUITE 601
 LEWISTON, ME 04240
 Tel: (207) 516-3313

SUMMIT
 GEOENGINEERING SERVICES

PROJ.#: 16030
 FIGURE: 1



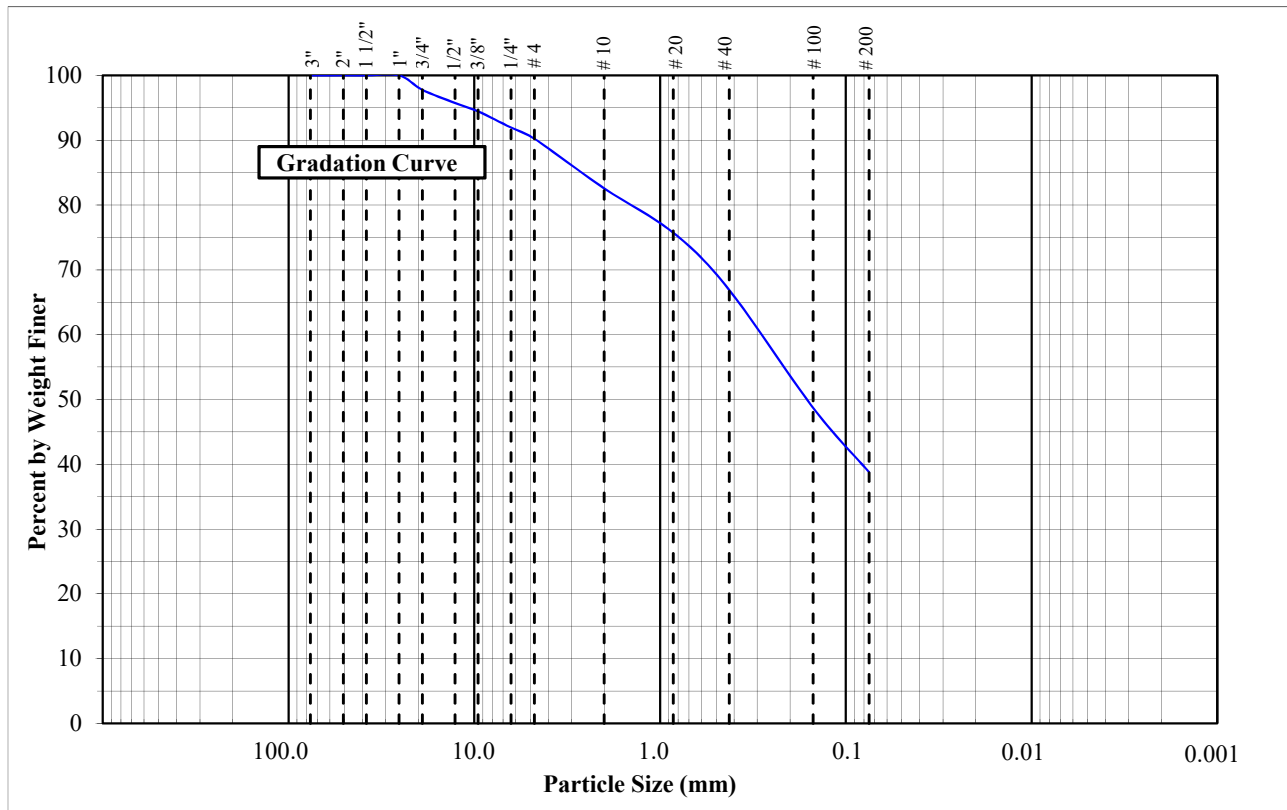
GRAIN SIZE ANALYSIS - ASTM D422

PROJECT NAME: New Apartment Building
 CLIENT: BD Sheridan, LLC
 SOURCE: Boring B-2, 5'-12'
 DATE: 3/25/2016

PROJECT NUMBER: 16030
 SAMPLE NUMBER: B-2, S-2 & S-3
 DESCRIPTION: SAND, some Silt & Clay, little Gravel, SM-SC
 TECHNICIAN: Erika Stewart, E.I.

DATA

<u>PARTICLE SIZE mm</u>	<u>% BY WT FINER</u>
76.20 (3 in)	100.0
50.80 (2 in)	100.0
38.10 (1-1/2 in)	100.0
25.40 (1 in)	100.0
19.05 (3/4 in)	97.8
12.70 (1/2 in)	95.7
9.53 (3/8 in)	94.4
6.35 (1/4 in)	92.0
4.75 (No. 4)	90.2
2.00 (No. 10)	82.6
0.85 (No. 20)	75.7
0.43 (No. 40)	66.9
0.15 (No. 100)	48.7
0.075 (No. 200)	38.8



REMARKS: Moisture Content = 11.4%



ATTERBERG LIMIT TEST - ASTM D4318

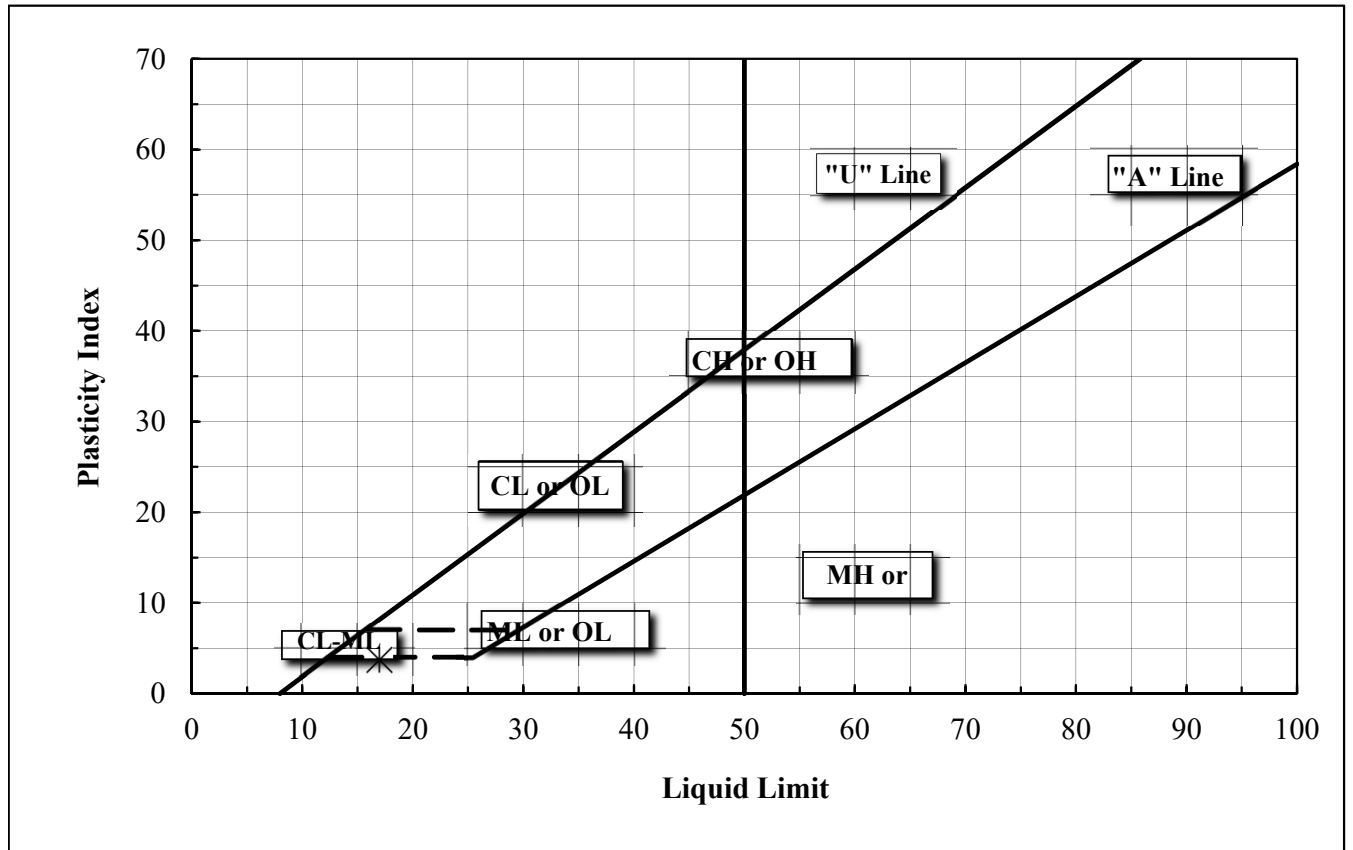
Method "A" (Multi-point)

PROJECT NAME: New Apartment Building
 CLIENT: BD Sheridan, LLC
 SOURCE: Fill / Reworked Native
 DATE: 3/28/2016

PROJECT NUMBER: 16030
 SAMPLE NUMBER: B-2, S-2 & S-3
 DEPTH: 5'-12'
 TECHNICIAN: Erika Stewart, E.I.

DATA

Source	Depth	LL	PL	PI	Classification
B-2	5'-12'	17	13	4	Gray SAND, some Silt & Clay, little Gravel, SM-SC

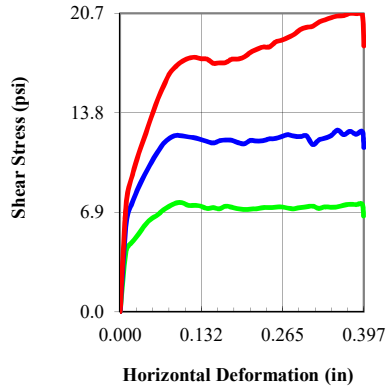
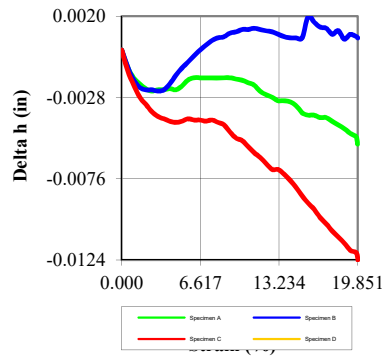
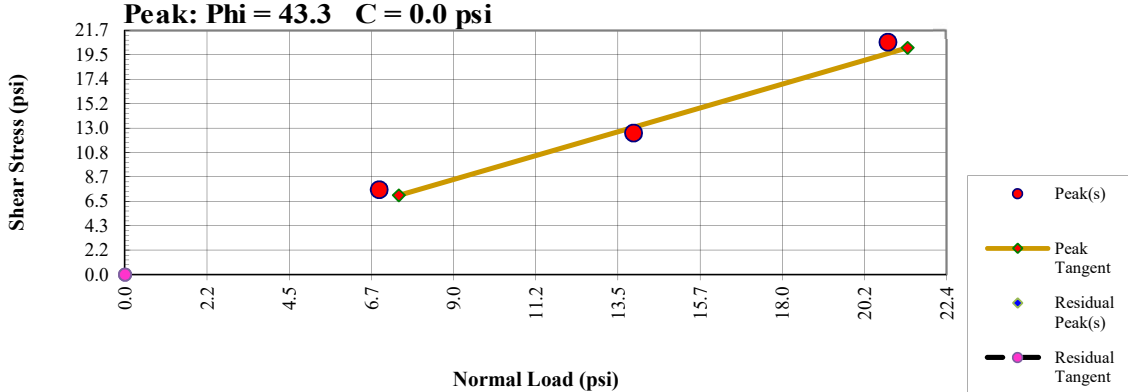


Notes: Sample was screened on the #40 sieve to remove gravel and med-coarse sand before performing Atterberg Limit test.

Summit Geoenvironmental Services
Direct Shear Test (ASTM D3080)



Checked By: Craig Coolidge, P.E. Date: 4/4/2016



	Specimen			
	A	B	C	D
Initial				
Moisture (%)	16.51	15.95	15.13	
Density (pcf)	118.01	121.21	121.10	
Void Ratio	0.428	0.391	0.392	
Saturation (%)	100.00	100.00	100.00	
Diameter (in)	2.000	2.000	2.000	
Height (in)	0.750	0.750	0.750	

	A	B	C	D
Final				
Moisture (%)	12.58	12.92	11.74	
Density (pcf)	118.01	122.23	121.10	
Void Ratio	0.428	0.379	0.392	
Saturation (%)	96.52	100.00	100.00	
Diameter (in)	2.000	2.000	2.000	
Height (in)	0.710	0.693	0.687	
Normal Stress (psi)	6.9	13.9	20.8	
Peak Stress (psi)	7.6	12.6	20.7	
Residual Stress (psi)				
Strain (%)	19.823	17.702	19.851	
Rate (in/min)	0.005	0.005	0.005	

Project Date	
Date	3/29/16

Tested By: Erika Stewart, E.I. Date: 4/4/2016

Project:	New Apartment Building				
Location:	Sheridan Street, Portland, ME				
Project Number:	16030	N/A	N/A	N/A	N/A
Boring Number:	B-2				
Sample Number:	S-2 & S-3				
Depth:	5'-12'				
Sample Type:	Remolded	Failure Photographs			
Description:	Gray SAND, some Silt & Clay, little Gravel, SM-SC				
Test Type:	Direct Shear				
Remarks:					