

PROJECT NAME:

101 LINCOLN AVENUE
BRONX, NEW YORK

CLIENT NAME:

NY DEVELOPERS & MANAGEMENT
1825 65TH STREET
BROOKLYN, NEW YORK

GEOTECHNICAL ENGINEER:

 **PILLORI ASSOCIATES, P.A.**
Geotechnical Engineering

71 Route 95
Laurens Harbor, New Jersey 08079
Tel. 732.335.0059 Fax. 732.335.8515
333 Meadowslands Parkway, Suite 102
Secaucus, New Jersey 07096
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No. DRAWINGS/REVISIONS DATE

DRILL RIG TYPE: TRUCK MOUNTED
DRILLING METHOD: ROTARY
SAMPLE HAMMER WEIGHT: 140 LBS.
CASING HAMMER WEIGHT: 300 LBS.
CASING DIAMETER: 4"
SAMPLER DIAMETER: 2"

DRAWING TITLE:
**BORING B-17W PAGES 2 AND 3
BORING B-18
BORING B-19 PAGES 1 AND 2**

DRAWN: JG CHECKED: ERK REVIEWED: GP

DATE: 10/20/2015

SCALE: AS NOTED

JOB NO: 150303

DRAWING No: **B-008.00**

SHEET 8 OF 12

Project: **101 Lincoln Avenue** Boring No.: **B-17W**
Bronx, New York 10454 Sheet: 2 of 3
Date: 08/04/2015 Ground El: 7.7
Contractor: Warren George, Inc. Groundwater Depth: 7'-0"

Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification Depth Elevation
	Number	Blows / 6"	Strata		
55	S-11	14-15-17-15	GA	Gray to brown fine Sand, trace Silt	SP (3a)
58	S-12	10-16-16-16			
60	S-13	12-12-12-13			
63	S-14	11-12-11-17			
65	S-15	9-9-12-13			
68	S-16	22-27-35-37			
70	S-17	24-27-29-30			
73	S-18	12-18-19-26			
75	S-19	32-34-28-32			
78	S-20	7-13-12-14			
80	S-21	11-11-18-24		Gray to brown Clayey Silt	ML (5a)
83					
85					
88					
90					
93					
95					
98					
100					

PILLORI ASSOCIATES, P.A. Geotechnical Engineering Project No.: 150303

Project: **101 Lincoln Avenue** Boring No.: **B-17W**
Bronx, New York 10454 Sheet: 3 of 3
Date: 08/04/2015 Ground El: 7.7
Contractor: Warren George, Inc. Groundwater Depth: 7'-0"

Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification Depth Elevation
	Number	Blows / 6"	Strata		
105	S-21	11-11-18-24	GA	Gray to brown Clayey Silt	ML (5a)
108	S-22	18-20-20-22			
110	S-23	18-20-17-17	DR	White Decomposed Inwood Marble	(1d)
115	S-24	45-45-56-59			
120	S-25	35-32-29-100/5"			
125					
130					
135			R	Inwood Marble: Hard, fresh, widely jointed	(1a)
138					
140				End of Boring	
145					
150					

PILLORI ASSOCIATES, P.A. Geotechnical Engineering Project No.: 150303

Project: **101 Lincoln Avenue** Boring No.: **B-18**
Bronx, New York 10454 Sheet: 1 of 2
Date: 08/07/2015 Ground El: 7.5
Contractor: Warren George, Inc. Groundwater Depth: NA

Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification Depth Elevation		
	Number	Blows / 6"	Strata				
5	S-1	11-7-8-12	F	Concrete	FILL (7)		
5	S-2	4-3-3-3		FILL: Black coarse to fine Sand, trace Silt, trace fine Gravel			
10	S-3	2-1-0-0		FILL: Black coarse to fine Sand, little Silt with wood fragments			
15	S-4	2-2-3-2		Possible Fill: Black fine Gravel, little fine Sand, trace Silt			
20	S-5	WOH-0-0-0		Dark gray Silt and Clay			
25	S-6	9-5-4-3		Dark gray coarse to fine Sand, trace Silt			
28	S-7	6-5-6-5		Tan fine Sand, trace Silt			
30	S-8	6-5-6-5		Red-brown medium to fine Sand, trace Silt			
35	S-9	6-10-17-17		Brown Silt, and fine Sand			
40	S-10	8-9-11-12		GA		Gray fine Sand, trace Silt	SP (3b)
45	S-11	8-8-8-10					
50				Brown Silt and Clay	MH (5b)		

PILLORI ASSOCIATES, P.A. Geotechnical Engineering Project No.: 150303

Project: **101 Lincoln Avenue** Boring No.: **B-18**
Bronx, New York 10454 Sheet: 2 of 2
Date: 08/07/2015 Ground El: 7.5
Contractor: Warren George, Inc. Groundwater Depth: NA

Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification Depth Elevation
	Number	Blows / 6"	Strata		
55	S-11	9-9-10-12	GA	Brown Silt and Clay	MH (5b)
58	S-12	8-15-15-13		Gray fine Sand, little Silt	SM (3a)
60	S-13	7-10-10-13		Gray to brown Clayey Silt	ML (5b)
63	S-14	7-10-18-13		Gray medium to fine Sand, trace Silt	SP (3b)
65	S-15	9-13-15-15		Tan coarse to fine Sand, trace Silt	SP (3a)
68	S-16	18-24-25-30		Gray to brown Clayey Silt	ML (5a)
70	S-17	18-20-18-17		End of Boring	
73					
75					
78					

PILLORI ASSOCIATES, P.A. Geotechnical Engineering Project No.: 150303

Project: **101 Lincoln Avenue** Boring No.: **B-19**
Bronx, New York 10454 Sheet: 1 of 3
Date: 08/06/2015 to 08/07/2015 Ground El: 7.3
Contractor: Warren George, Inc. Groundwater Depth: NA

Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification Depth Elevation
	Number	Blows / 6"	Strata		
5	S-1	1-6-6-9	F	Concrete	FILL (7)
5	S-2	6-6-3-3		FILL: Black coarse to fine Sand, trace Silt, little fine Gravel with wood fragments	
10	S-3	2-1-1-1	ES	Black coarse to fine Sand, trace Silt	SP (6)
15	S-4	WOH-0-0-0		Gray medium to fine Sand, little Silt, trace fine Gravel	SM (6)
20	S-5	8-5-4-5		Tan medium to fine Sand, trace Silt, trace fine Gravel	SP (3b)
25	S-6	5-7-9-8		Tan medium to fine Sand, trace Silt, trace fine Gravel	SP (3b)
30	S-7	8-7-8-9			
35	S-8	14-8-7-9	GA	Brown fine Sand, little Silt	SM (3b)
40	S-6	9-12-15-18		Brown fine Sand, little Silt	SM (3a)
45	S-7	16-22-20-20		Gray to brown Clayey Silt	ML (5b)
50	S-8	11-12-13-14		Gray to brown Clayey Silt	ML (5b)

PILLORI ASSOCIATES, P.A. Geotechnical Engineering Project No.: 150303

Project: **101 Lincoln Avenue** Boring No.: **B-19**
Bronx, New York 10454 Sheet: 2 of 3
Date: 08/06/2015 to 08/07/2015 Ground El: 7.3
Contractor: Warren George, Inc. Groundwater Depth: NA

Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification Depth Elevation
	Number	Blows / 6"	Strata		
55	S-8	11-12-13-14	GA	Gray to brown Clayey Silt	ML (5b)
58	S-9	9-11-13-18		Gray to brown fine Sand, trace Silt	SP (3b)
60	S-10	12-14-15-14		Tan medium to fine Sand, trace Silt	SM (3a)
63	S-11	17-25-28-31		Gray fine Sand, some Silt	SM (6)
65	S-12	8-10-21-22		Gray to brown Clayey Silt	ML (5a)
68	S-13	18-22-23-25		Gray to brown Clayey Silt	ML (5a)
70	S-14	15-16-19-25		Gray to brown Clayey Silt	ML (5a)
73	S-15	WOR-0-9-14		Gray to brown Clayey Silt	ML (5a)
75	S-16	10-15-16-19		Gray to brown Clayey Silt	ML (5a)
78	S-17	10-13-16-13		Gray to brown Clayey Silt	ML (5a)
80	S-18	13-14-18-19		Gray to brown Clayey Silt	ML (5a)

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email - office@pilloriassociates.com

No. DRAWINGS/REVISIONS DATE

DRILL RIG TYPE: TRUCK MOUNTED
DRILLING METHOD: ROTARY
SAMPLE HAMMER WEIGHT: 140 LBS.
CASING HAMMER WEIGHT: 300 LBS.
CASING DIAMETER: 4"
SAMPLER DIAMETER: 2"

DRAWING TITLE:

**BORING B-19 PAGE 3
BORINGS B-20 AND B-21**

DRAWN: JG CHECKED: ERK REVIEWED: GP

DATE: 10/20/2015

SCALE: AS NOTED

JOB NO: 150303

DRAWING No: **B-009.00**

SHEET 9 OF 12

Project: **101 Lincoln Avenue** Boring No.: **B-19**
Bronx, New York 10454 Sheet: 3 of 3
Date: 08/06/2015 to 08/07/2015 Ground El: 7.3
Contractor: Warren George, Inc. Groundwater Depth: NA

Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification Depth Elevation
	Number	Blows / 6"	Strata		
105	S-18	13-14-18-19	GA	Gray to brown Clayey Silt	ML (5a)
110	S-19	12-19-24-27			
115	S-20	14-16-23-29			
120	S-20	100/1"	DR	White decomposed Inwood Marble	116'-0" -108.7
125		RUN = 60" 122'-127" REC = 65% RQD = 35%		R	White Inwood Marble: Hard, moderately weathered, thinly jointed
130				End of Boring	127'-0" -119.7

PILLORI ASSOCIATES, P.A. Geotechnical Engineering Project No.: 150303

Project: **101 Lincoln Avenue** Boring No.: **B-20**
Bronx, New York 10454 Sheet: 1 of 2
Date: 08/25/2015 Ground El: 7.4
Contractor: Warren George, Inc. Groundwater Depth: NA

Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification Depth Elevation
	Number	Blows / 6"	Strata		
5	S-1	9-7-9-6	F	Concrete	FILL (7)
10	S-2	5-3-3-5		FILL: Black coarse to fine Sand, little Silt, little medium to fine Gravel with cinders and miscellaneous debris	
15	S-3	4-3-4-2		FILL: Gray Silt and Clay, little medium to fine Gravel with wood and glass fragments	
20	S-4	2-2-2-3	ES	Gray Silt and Clay with plant fibers and shells	13'-0" -5.6
25	S-5	1-2-1-1			
30	S-6	9-7-6-11	GA	Tan coarse to fine Sand, trace Silt, some fine Gravel	MH (6)
35	S-7	9-7-6-11		Tan medium to fine Sand, trace Silt	
40	S-8	5-7-4-4		Tan coarse to fine Sand, trace Silt	
45	S-9	8-8-9-11	GA	Tan coarse to fine Sand, trace Silt, little fine Gravel	SW (3b)
50	S-10	8-10-9-11		Tan coarse to fine Sand, trace Silt, trace Silt	
55	S-11	8-11-12-14		Gray fine Sand, and Silt	

PILLORI ASSOCIATES, P.A. Geotechnical Engineering Project No.: 150303

Project: **101 Lincoln Avenue** Boring No.: **B-20**
Bronx, New York 10454 Sheet: 2 of 2
Date: 08/25/2015 Ground El: 7.4
Contractor: Warren George, Inc. Groundwater Depth: NA

Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification Depth Elevation
	Number	Blows / 6"	Strata		
55	S-11	8-11-12-14	GA	Gray fine Sand, and Silt	53'-0" -45.6
60	S-12	6-9-12-16		Gray fine Sand, trace Silt	
65	S-13	4-9-9-10		Brown medium to fine Sand, trace Silt	
70	S-14	5-13-10-8	GA	Brown coarse to fine Sand, trace Silt	68'-0" -60.6
75	S-15	15-18-15-14		Gray to Brown Clayey Silt	
80	S-16	13-19-17-20		Gray to Brown Clayey Silt	
85	S-17	13-11-11-11			78'-0" -70.6
90					82'-0" -74.6

PILLORI ASSOCIATES, P.A. Geotechnical Engineering Project No.: 150303

Project: **101 Lincoln Avenue** Boring No.: **B-21**
Bronx, New York 10454 Sheet: 1 of 3
Date: 08/10/2015 to 08/12/2015 Ground El: 7.5
Contractor: Warren George, Inc. Groundwater Depth: NA

Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification Depth Elevation
	Number	Blows / 6"	Strata		
5	S-1	8-23-21-9	F	Concrete	FILL (7)
10	S-2	3-2-2-1		FILL: Brown fine Sand, little Silt, little fine Gravel with miscellaneous debris	
15	S-3	10-5-13-15		Boulders & cobbles	
20	S-4	8-9-3-7	GA	Tan coarse to fine Sand, trace fine Gravel	13'-0" -5.5
25	S-5	6-6-8-7		Tan fine Sand, trace Silt	
30	S-6	3-6-9-70		Gray to brown Clayey Silt	
35	S-7	4-5-4-6	GA	Gray to brown Clayey Silt	18'-0" -10.5
40	S-8	9-10-11-15		Gray to brown Clayey Silt	
45	S-9	9-16-18-22		Gray to brown Clayey Silt	
50	S-10	10-13-13-15	GA	Grayish brown fine Sand, trace Silt	33'-0" -25.5
55	S-11	12-16-17-18		Grayish brown fine Sand, trace Silt	

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Project: **101 Lincoln Avenue** Boring No.: **B-21**
Bronx, New York 10454 Sheet: 2 of 3
Date: 08/10/2015 to 08/12/2015 Ground El: 7.5
Contractor: Warren George, Inc. Groundwater Depth: NA

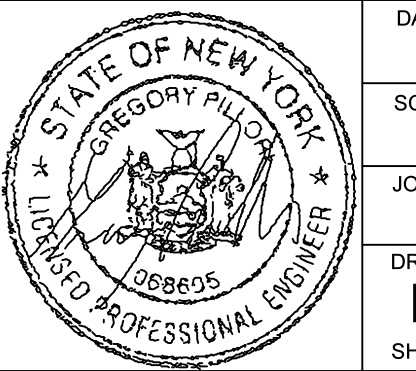
Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification Depth Elevation
	Number	Blows / 6"	Strata		
55	S-11	12-16-17-18	GA	Grayish brown fine Sand, trace Silt	53'-0" -45.5
60	S-12	9-12-16-16		Gray to brown Clayey Silt	
65	S-13	14-15-17-19		Gray fine Sand, trace Silt	
70	S-14	19-16-12-10	GA	Gray to brown Clayey Silt	63'-0" -55.5
75	S-15	6-8-12-10		Gray to brown Clayey Silt	
80	S-16	22-26-27-41		Gray to brown medium to fine Sand, trace Silt	
85	S-17	19-18-15-15	GA	Gray to brown Clayey Silt	83'-0" -75.5
90	S-18	15-17-26-23		Gray to brown Clayey Silt	
95	S-19	8-9-12-14		Gray to brown Clayey Silt	
100	S-20	6-8-9-11	GA	Gray to brown Clayey Silt	93'-0" -85.5
105	S-21	5-6-6-7		White Inwood Marble	

PILLORI ASSOCIATES, P.A. Geotechnical Engineering Project No.: 150303

Project: **101 Lincoln Avenue** Boring No.: **B-21**
Bronx, New York 10454 Sheet: 3 of 3
Date: 08/10/2015 to 08/12/2015 Ground El: 7.5
Contractor: Warren George, Inc. Groundwater Depth: NA

Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification Depth Elevation
	Number	Blows / 6"	Strata		
105	S-21	5-6-6-7	GA	Alternating layers of Gray fine Sand and Brown Clayey Silt	103'-0" -95.5
110	S-22	15-17-18-23		Tan medium to fine Sand, trace Silt	
115	S-23	50/0"		Decomposed Rock	
120			DR	Decomposed Rock	108'-0" -100.5
125					
130					
135			R	Decomposed Rock	83'-0" -75.5
140					
145					
150				White Inwood Marble	145'-0" -137.5
155				End of Boring	150'-0" -142.5

PILLORI ASSOCIATES, P.A. Geotechnical Engineering Project No.: 150303



SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			GROUP SYMBOLS (ASTM D2487)	TYPICAL DESCRIPTIONS	
COARSE-GRAINED SOIL MORE THAN 50% RETAINED ON NO.200 SIEVE*	GRAVEL 50% OR MORE OF COARSE FRACTION RETAINED ON NO.4 SIEVE	CLEAN GRAVEL	GW	WELL- GRADED GRAVEL & GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	
		GRAVEL WITH FINES	GP	POORLY GRADED GRAVEL & GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	
		SANDS MORE THAN 50% OF COARSE FRACTION PASSES NO. 4 SIEVE	CLEAN SAND	GM	SILTY GRAVEL, GRAVEL SAND CLAY MIXTURES
			SAND WITH FINES	GC	CLAYEY GRAVEL, GRAVEL SAND CLAY MIXTURES
	FINE-GRAINED SOIL 50% OR MORE PASSING NO.200 SIEVE*	SILT & CLAY LIQUID LIMIT LESS THAN 50%	CLEAN SAND	SW	WELL-GRADED SAND & GRAVELLY SAND, LITTLE OR NO FINES
			SAND WITH FINES	SP	POORLY GRADED SAND & GRAVELLY SAND, LITTLE OR NO FINES
			SAND WITH FINES	SM	SILTY SAND, SAND-SILT MIXTURES
		SILT & CLAY LIQUID LIMIT GREATER THAN 50%	SAND WITH FINES	SC	CLAYEY SAND, SAND-CLAY MIXTURES
			SILT & CLAY	ML	INORGANIC SILT, VERY FINE SAND, ROCK FLOUR, SILTY OR CLAYEY FINE SAND
			SILT & CLAY	CL	INORGANIC CLAY OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAY, SANDY CLAY, SILTY CLAY, LEAN CLAY
		OL	ORGANIC SILT & ORGANIC SILTY CLAY OF LOW PLASTICITY		
		MH	INORGANIC SILT, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILT, ELASTIC		
		CH	INORGANIC CLAY OF HIGH PLASTICITY, FAT CLAY		
		OH	ORGANIC CLAY OF MEDIUM TO HIGH PLASTICITY		
HIGHLY ORGANIC SOIL			PT	PEAT, MUCK & OTHER HIGHLY ORGANIC SOIL	

* BASED ON MATERIAL PASSING THE 3" (75MM) SIEVE

GRADATION**

COMPACTNESS**
(SAND AND/OR GRAVEL)

CONSISTENCY**
(CLAY AND/OR SILT)

<u>TERM</u>	<u>% BY WEIGHT</u>	<u>TERM</u>	<u>% RELATIVE DENSITY</u>	<u>SHEAR STRENGTH TERM</u>	<u>TONS/SQ.FT.</u>
TRACE	1 TO 10	LOOSE	0 TO 40	SOFT	LESS THAN 0.25
LITTLE	10 TO 20	MEDIUM DENSE	41 TO 70	FIRM	0.25 TO 0.5
SOME	20 TO 35	DENSE	71 TO 90	STIFF	0.5 TO 1.0
AND	35 TO 50	VERY DENSE	91 TO 100	VERY STIFF	1.0 TO 2.0
				HARD	OVER 2.0

** VALUES ARE FROM LABORATORY OR FIELD TEST DATA, WHERE APPLICABLE, WHEN NO TESTING WAS PERFORMED VALUES ARE ESTIMATED.