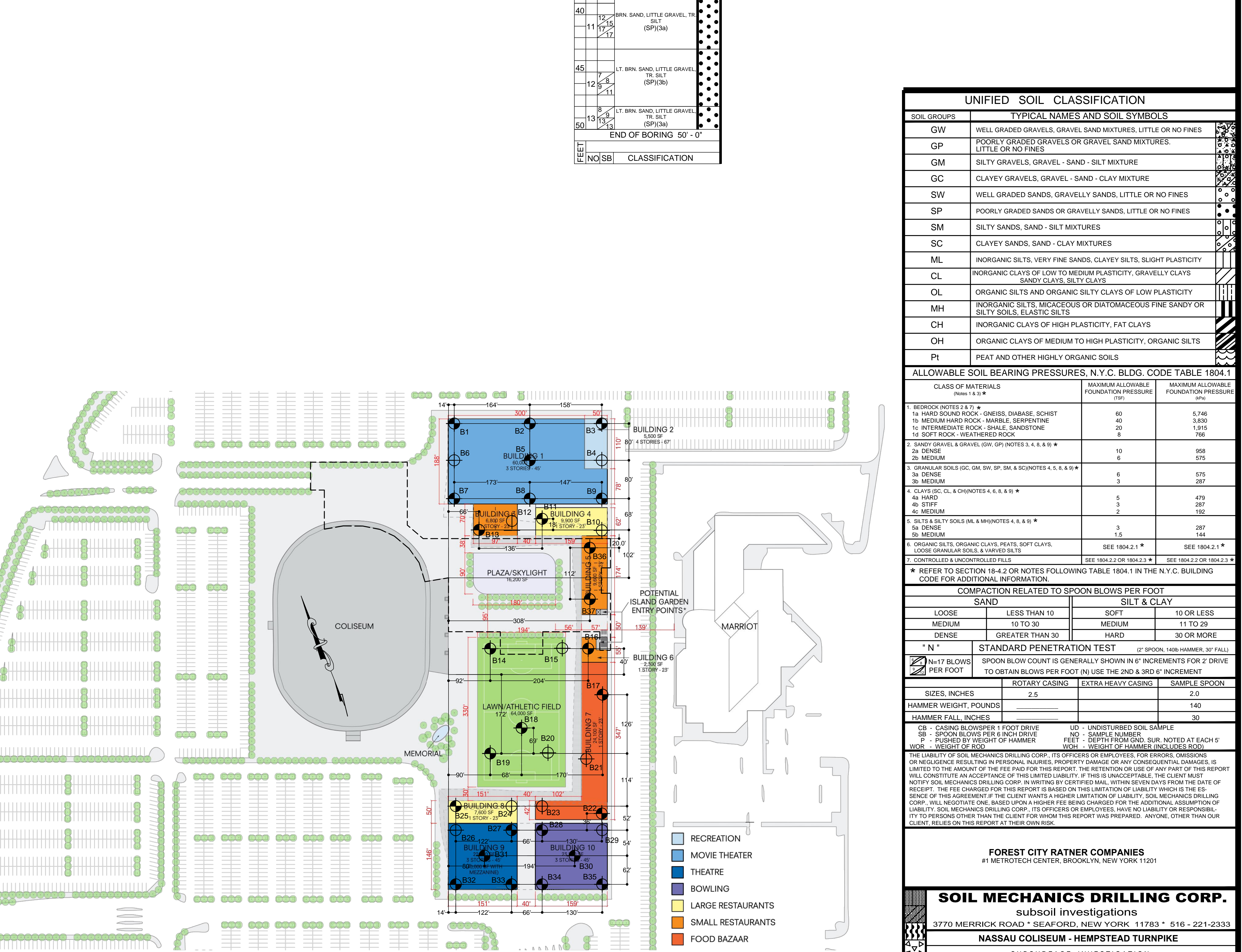
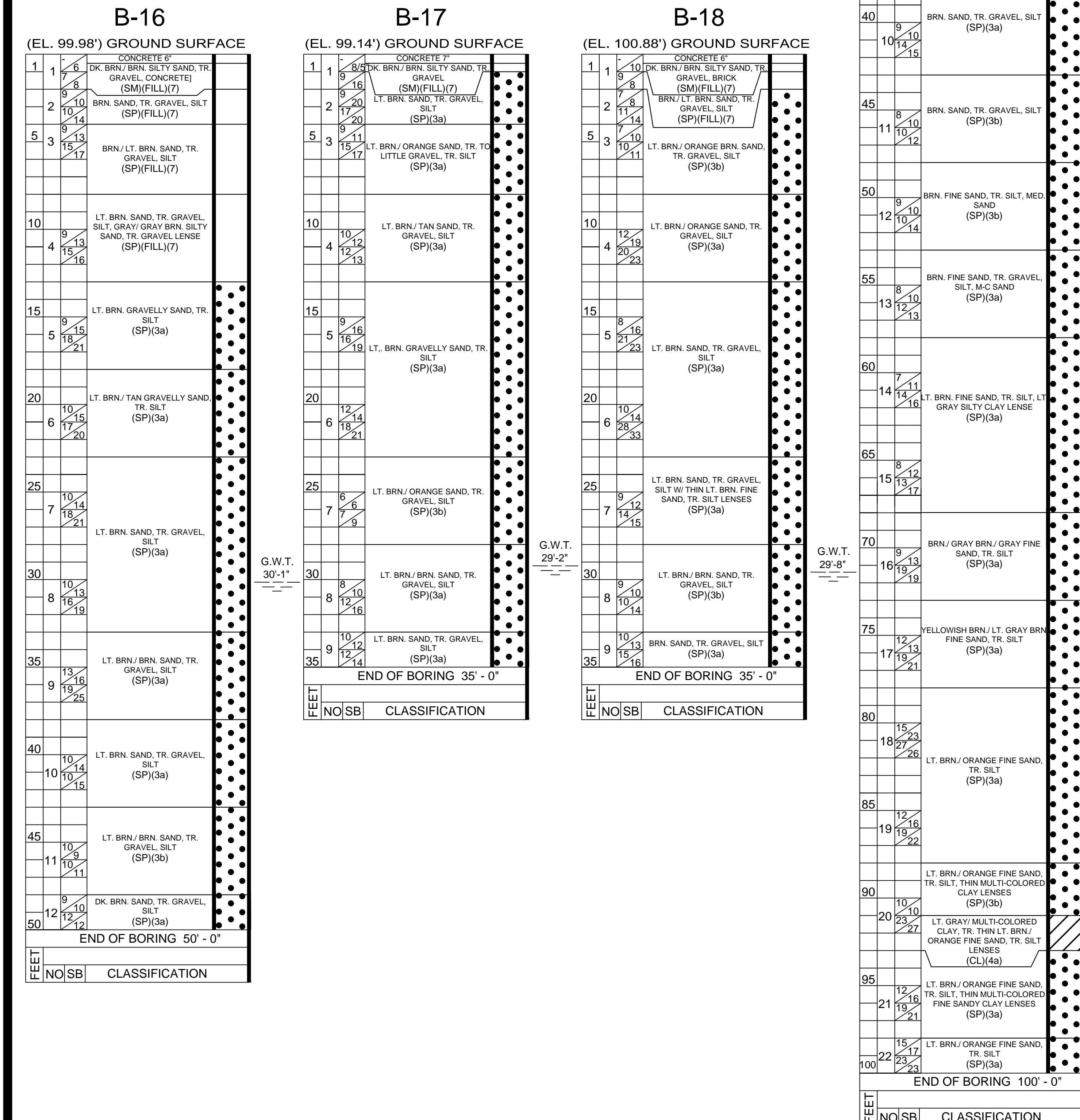
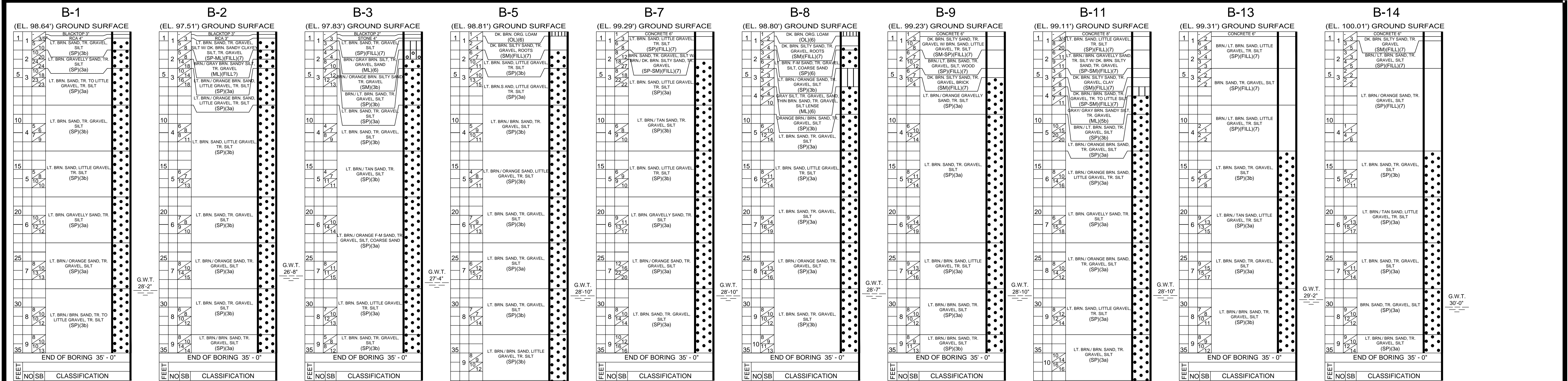




Appendix 3.1-1

Soil Mechanics Drilling Corp. Soil Borings



UNIFIED SOIL CLASSIFICATION	
SOIL GROUPS	TYPICAL NAMES AND SOIL SYMBOLS
GW	WELL GRADED GRAVELS, GRAVEL SAND MIXTURES, LITTLE OR NO FINES
GP	POORLY GRADED GRAVELS OR GRAVEL SAND MIXTURES, LITTLE OR NO FINES
GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURE
GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURE
SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
SP	POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES
SM	SILTY SANDS, SAND - SILT MIXTURES
SC	CLAYEY SANDS, SAND - CLAY MIXTURES
ML	INORGANIC SILTS, VERY FINE SANDS, CLAYEY SILTS, SLIGHT PLASTICITY
CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS SANDY CLAYS, SILTY CLAYS
OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SILTS, ELASTIC SILTS
CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS

ALLOWABLE SOIL BEARING PRESSURES, N.Y.C. BLDG. CODE TABLE 1804.1		
CLASS OF MATERIALS (Notes 1 & 3) *	MAXIMUM ALLOWABLE FOUNDATION PRESSURE (PSF)	MAXIMUM ALLOWABLE FOUNDATION PRESSURE (KIP)
1 BEDROCK (NOTES 2 & 7) *	60	5,746
1a HARD SOUND ROCK - GNEISS, DIABASE, SCHIST	20	3,930
1b MEDIUM HARD ROCK - MARBLE, SERPENTINE	40	3,915
1c INTERMEDIATE ROCK - SHALE, SANDSTONE	8	768
1d SOFT ROCK - WEATHERED ROCK	8	768
2 SANDY GRAVEL & GRAVEL (GV, GP) (NOTES 3, 4, 8 & 9) *	10	958
2a DENSE	6	575
2b MEDIUM	6	575
3 GRANULAR SOILS (GC, GM, SW, SP, SM & SC) (NOTES 4, 5, 8 & 9) *	6	575
3a DENSE	3	287
3b MEDIUM	3	287
4 CLAYS (SC, CL & CH) (NOTES 4, 6, 8 & 9) *	5	479
4a HARD	3	287
4b STIFF	2	192
4c MEDIUM	2	192
5 SILTS & SILTY SOILS (ML & MH) (NOTES 4, 8 & 9) *	3	287
5a DENSE	3	144
5b MEDIUM	1.5	144
6 ORGANIC SILTS, ORGANIC CLAYS, PEATS, SOFT CLAYS, LOOSE GRANULAR SOILS & VARIED SILTS	SEE 1804.2.1 *	SEE 1804.2.1 *
7 CONTROLS & LENSES	SEE 1804.2.2 OR 1804.2.3 *	SEE 1804.2.2 OR 1804.2.3 *

* REFER TO SECTION 18-4.2 OR NOTES FOLLOWING TABLE 1804.1 IN THE N.Y.C. BUILDING CODE FOR ADDITIONAL INFORMATION.

COMPACTION RELATED TO SPOON BLOWS PER FOOT		
SAND	SILT & CLAY	
LOOSE	LESS THAN 10	SOFT 10 OR LESS
MEDIUM	10 TO 30	MEDIUM 11 TO 29
DENSE	GREATER THAN 30	HARD 30 OR MORE

"N" STANDARD PENETRATION TEST (2" SPOON, 140LB HAMMER, 30" FALL)
 N=17 BLOWS PER FOOT SPOON BLOW COUNT IS GENERALLY SHOWN IN 6" INCREMENTS FOR 2' DRIVE TO OBTAIN BLOWS PER FOOT (N) USE THE 2ND & 3RD 6" INCREMENT

SIZES, INCHES	ROTARY CASING	EXTRA HEAVY CASING	SAMPLE SPOON
2.5			2.0
HAMMER WEIGHT, POUNDS			140
HAMMER FALL, INCHES			30

CB - CASING BLOWSPER 1 FOOT DRIVE
 SB - SPOON BLOWS PER 6 INCH DRIVE
 P - PUSHED BY WEIGHT OF HAMMER
 UD - UNDISTURBED SOIL SAMPLE
 NO - SAMPLE NUMBER
 FEET - DEPTH FROM GND. SUR. NOTED AT EACH 6" W/O - WEIGHT OF ROD
 W/OH - WEIGHT OF HAMMER (INCLUDES ROD)

FOREST CITY RATNER COMPANIES
 #1 METROTECH CENTER, BROOKLYN, NEW YORK 11201

SOIL MECHANICS DRILLING CORP.
 subsurface investigations
 3770 MERRICK ROAD * SEAFORD, NEW YORK 11783 * 516 - 221-2333

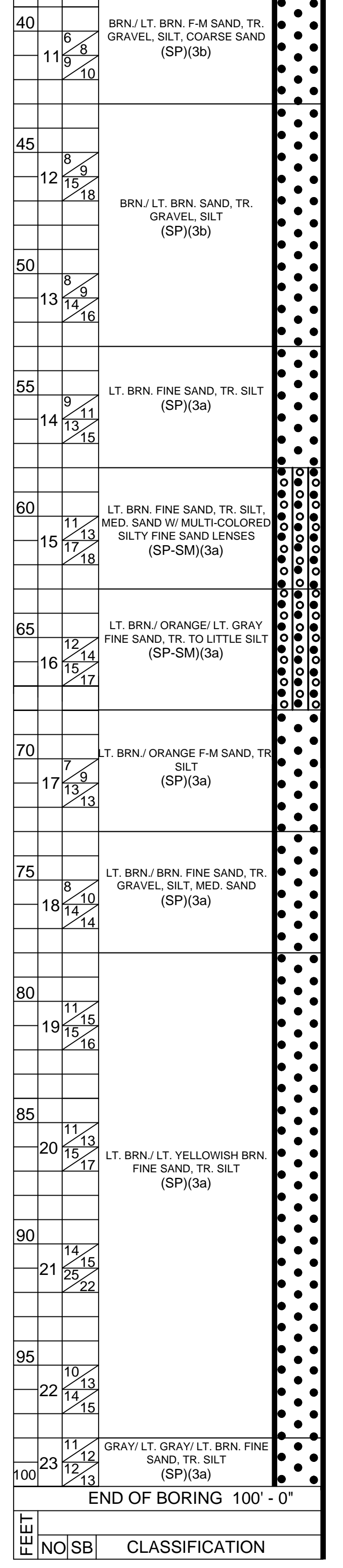
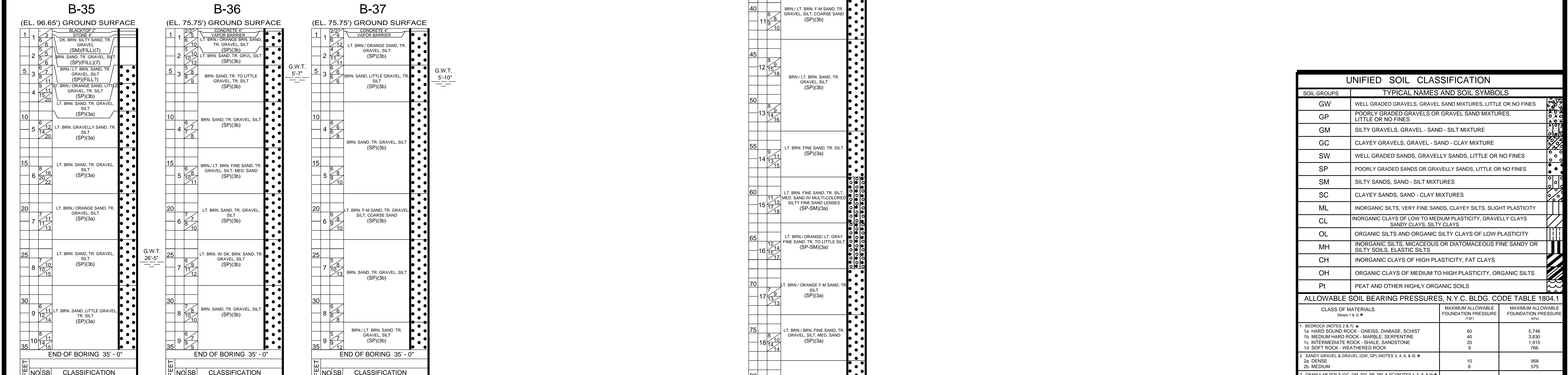
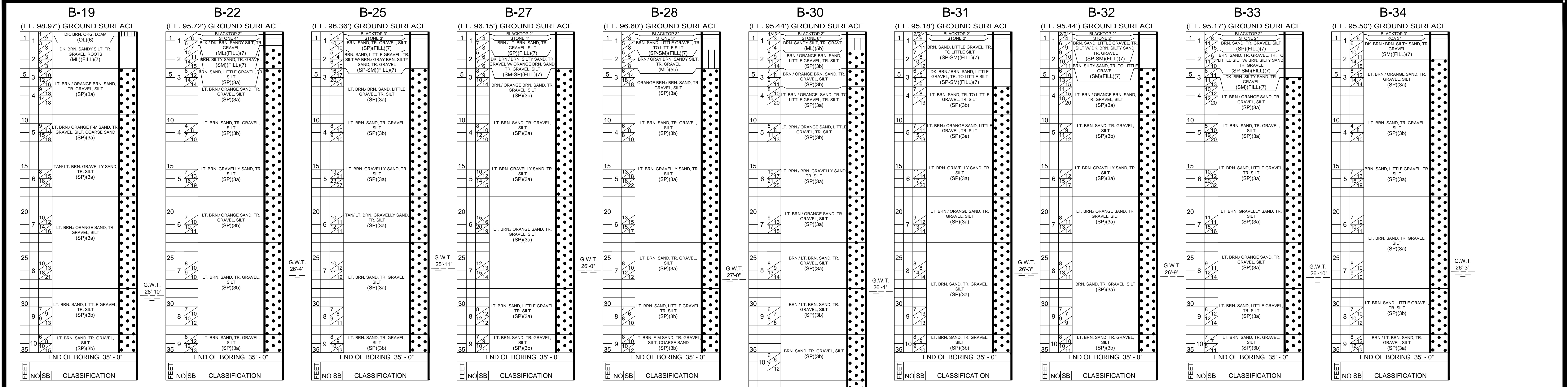
NASSAU COLISEUM - HEMPSTEAD TURNPIKE
 SUBSURFACE INVESTIGATION

UNIONDALE, NEW YORK

NOTES:
 1. - SOIL DESCRIPTIONS ARE BY VISUAL EXAMINATION OF SOIL SAMPLES RECOVERED DURING DRILLING OPERATIONS.
 2. - SOIL DESCRIPTIONS ARE IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.
 3. - GROUND WATER WAS MEASURED INSIDE THE DRILL CASING AT THE COMPLETION OF EACH BOREHOLE.
 4. - SOIL STRATIFICATIONS ARE ACCURATE TO WITHIN TWO FEET VERTICALLY.
 5. - ELEVATIONS WERE REFERENCED TO B.M. - AT FINISHED FLOOR OF EXISTING COLISEUM STRUCTURE, AS SHOWN. ASSUMED ELEVATION AT 100.0'.
 6. - SOIL SAMPLES WERE OBTAINED USING A CENTRAL MINE EQUIPMENT (CME) AUTOMATIC TRIP HAMMER.

BORING LOCATION PLAN
 SCALE: N.T.S.

⊕ BORINGS DRILLED
 ⊕ BORINGS OMITTED BY CLIENT



UNIFIED SOIL CLASSIFICATION	
SOIL GROUPS	TYPICAL NAMES AND SOIL SYMBOLS
GW	WELL GRADED GRAVELS, GRAVEL SAND MIXTURES, LITTLE OR NO FINES
GP	POORLY GRADED GRAVELS OR GRAVEL SAND MIXTURES, LITTLE OR NO FINES
GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURE
GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURE
SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
SP	POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES
SM	SILTY SANDS, SAND - SILT MIXTURES
SC	CLAYEY SANDS, SAND - CLAY MIXTURES
ML	INORGANIC SILTS, VERY FINE SANDS, CLAYEY SILTS, SLIGHT PLASTICITY
CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS SANDY CLAYS, SILTY CLAYS
OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SILTS, ELASTIC SILTS
CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS

ALLOWABLE SOIL BEARING PRESSURES, N.Y.C. BLDG. CODE TABLE 1804.1		
CLASS OF MATERIALS	MAXIMUM ALLOWABLE FOUNDATION PRESSURE (PSF)	MAXIMUM ALLOWABLE FOUNDATION PRESSURE (KIP)
1. BEDROCK (NOTES 2 & 7) *		
1a HARD SOUND ROCK - GNEISS, DIABASE, SCHIST	60	5,746
1b MEDIUM HARD ROCK - MARBLE, SERPENTINE	40	3,830
1c INTERMEDIATE ROCK - SHALE, SANDSTONE	20	1,915
1d SOFT ROCK - WEATHERED ROCK	8	768
2. SANDY GRAVEL & GRAVEL (GV, GP) (NOTES 3, 4, 8, 9) *		
2a DENSE	10	958
2b MEDIUM	6	575
3. GRANULAR SOILS (GC, GM, SW, SP, SM, & SC) (NOTES 4, 5, 8, 9) *		
3a DENSE	6	575
3b MEDIUM	3	287
4. CLAYS (SC, CL, & CH) (NOTES 4, 6, 8, 9) *		
4a HARD	5	479
4b STIFF	3	287
4c MEDIUM	2	192
5. SILTS & SILTY SOILS (ML & MH) (NOTES 4, 8, 9) *		
5a DENSE	3	287
5b MEDIUM	1.5	144
6. ORGANIC SILTS, ORGANIC CLAYS, PEATS, SOFT CLAYS, LOOSE GRANULAR SOILS & VARIED SILTS	SEE 1804.2.1 *	SEE 1804.2.1 *
7. CONTROLS & UNCLASSIFIED SOILS	SEE 1804.2.2 OR 1804.2.3 *	SEE 1804.2.2 OR 1804.2.3 *

* REFER TO SECTION 18-4.2 OR NOTES FOLLOWING TABLE 1804.1 IN THE N.Y.C. BUILDING CODE FOR ADDITIONAL INFORMATION.

COMPACTION RELATED TO SPOON BLOWS PER FOOT		
SAND		SILT & CLAY
LOOSE	LESS THAN 10	SOFT
MEDIUM	10 TO 30	10 OR LESS
DENSE	GREATER THAN 30	11 TO 29
		HARD
		30 OR MORE

"N" STANDARD PENETRATION TEST (2" SPOON, 140LB HAMMER, 30" FALL)
 N=17 BLOWS PER FOOT SPOON BLOW COUNT IS GENERALLY SHOWN IN 6" INCREMENTS FOR 2' DRIVE TO OBTAIN BLOWS PER FOOT (N) USE THE 2ND & 3RD 6" INCREMENT

SIZES, INCHES	ROTARY CASING	EXTRA HEAVY CASING	SAMPLE SPOON
2.5			2.0
HAMMER WEIGHT, POUNDS			140
HAMMER FALL, INCHES			30

CB - CASING BLOWSPER 1 FOOT DRIVE
 SB - SPOON BLOWS PER 6 INCH DRIVE
 P - PUSHED BY WEIGHT OF HAMMER
 WGR - WEIGHT OF ROD
 UD - UNDISTURBED SOIL SAMPLE
 NO - SAMPLE NUMBER
 FEET - DEPTH FROM GND. SUR. NOTED AT EACH 6"
 WOH - WEIGHT OF HAMMER (INCLUDES ROD)

THE LIABILITY OF SOIL MECHANICS DRILLING CORP., ITS OFFICERS OR EMPLOYEES, FOR ERRORS, OMISSIONS OR NEGLIGENCE RESULTING IN PERSONAL INJURIES, PROPERTY DAMAGE OR ANY CONSEQUENTIAL DAMAGES, IS LIMITED TO THE AMOUNT OF THE FEE PAID FOR THIS REPORT. THE RETENTION OR USE OF ANY PART OF THIS REPORT WILL CONSTITUTE AN ACCEPTANCE OF THIS LIMITED LIABILITY. IF THIS IS UNACCEPTABLE, THE CLIENT MUST NOTIFY SOIL MECHANICS DRILLING CORP. IN WRITING BY CERTIFIED MAIL, WITHIN SEVEN DAYS FROM THE DATE OF RECEIPT. THE FEE CHARGED FOR THIS REPORT IS BASED ON THIS LIMITATION OF LIABILITY WHICH IS THE ESSENCE OF THIS AGREEMENT. IF THE CLIENT WANTS A HIGHER LIMITATION OF LIABILITY, SOIL MECHANICS DRILLING CORP. WILL NEGOTIATE ONE, BASED UPON A HIGHER FEE BEING CHARGED FOR THE ADDITIONAL ASSUMPTION OF LIABILITY. SOIL MECHANICS DRILLING CORP., ITS OFFICERS OR EMPLOYEES, HAVE NO LIABILITY OR RESPONSIBILITY TO PERSONS OTHER THAN THE CLIENT FOR WHOM THIS REPORT WAS PREPARED. ANYONE OTHER THAN OUR CLIENT, RELIES ON THIS REPORT AT THEIR OWN RISK.

FOREST CITY RATNER COMPANIES
 #1 METROTECH CENTER, BROOKLYN, NEW YORK 11201

SOIL MECHANICS DRILLING CORP.
 subsoil investigations
 3770 MERRICK ROAD * SEAFORD, NEW YORK 11783 * 516 - 221-2333
NASSAU COLISEUM - HEMPSTEAD TURNPIKE
 SUBSURFACE INVESTIGATION
 UNIONDALE, NEW YORK

VERTICAL BORING SCALE: 1"=1'-0"	DRAWING DATE: JUNE 26, 2014	DRAWING NUMBER: 14L145-37
DATES OF BORING: JUNE 16-23, 2014	DWN. BY: JMR	CHK. BY: CV

- NOTES:
- SOIL DESCRIPTIONS ARE BY VISUAL EXAMINATION OF SOIL SAMPLES RECOVERED DURING DRILLING OPERATIONS.
 - SOIL DESCRIPTIONS ARE IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.
 - GROUND WATER WAS MEASURED INSIDE THE DRILL CASING AT THE COMPLETION OF EACH BOREHOLE.
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 - ELEVATIONS WERE REFERENCED TO B.M. - AT FINISHED FLOOR OF EXISTING COLISEUM STRUCTURE, AS SHOWN. ASSUMED ELEVATION AT 100.0'.
 - SOIL SAMPLES WERE OBTAINED USING A CENTRAL MINE EQUIPMENT (CME) AUTOMATIC TRIP HAMMER.

LEGEND

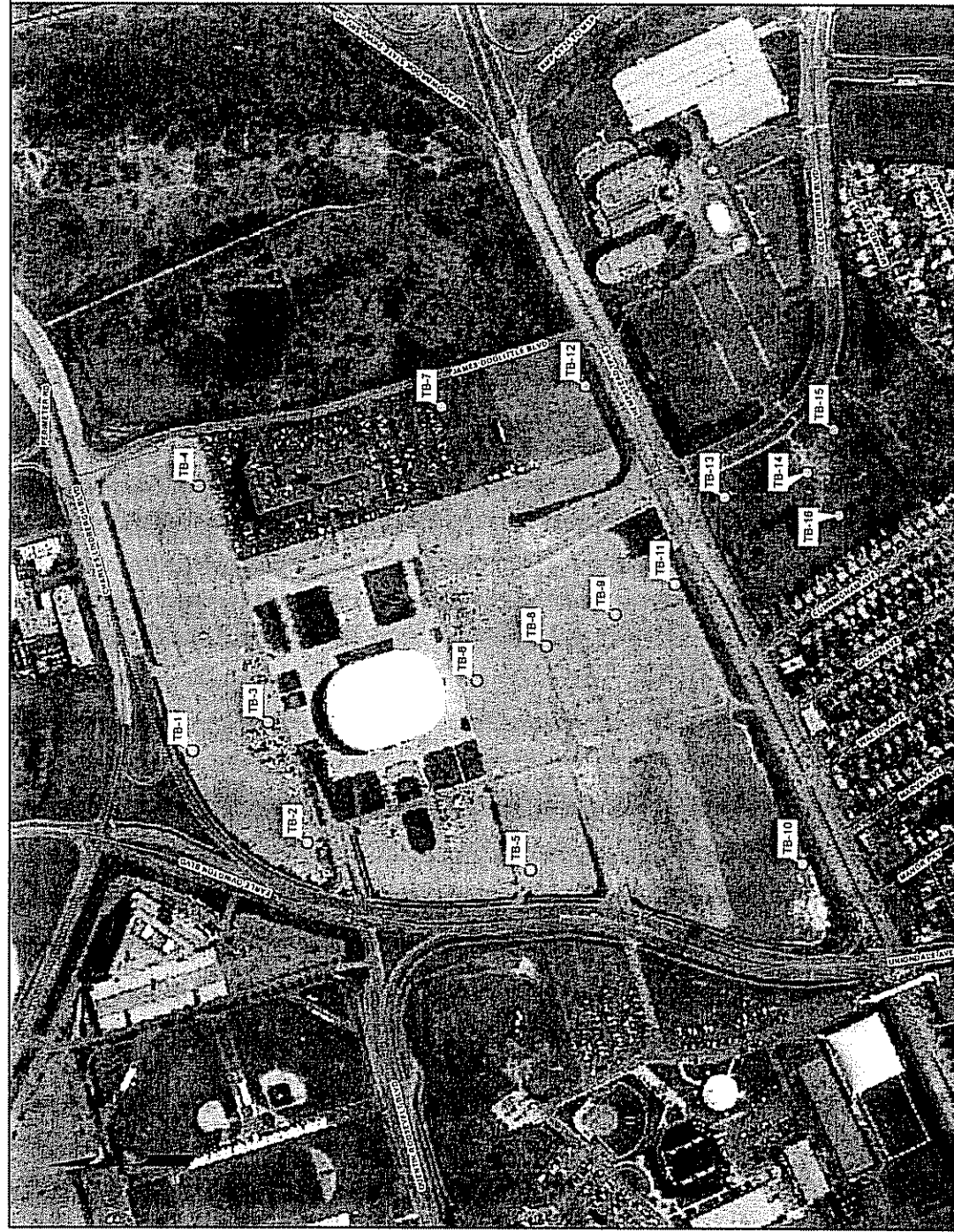
○ GEOTECHNICAL SOIL BORING LOCATION



PLATE
2

GEOTECHNICAL SOIL BORING LOCATION MAP

THE LIGHTHOUSE AT LONG ISLAND
NASSAU COLLEGE
UNIONDALE, NEW YORK



PROJECT NO. 05506
DRAWN: 08/26/2005 J.R.
CHECKED BY: R.S.
FILE NAME: LIGHTHOUSE



NOTE:
1. GEOTECHNICAL SOIL BORING TB-5 WAS INACCESSIBLE AND THEREFORE WAS NOT GPS SURVEYED OR ADJUSTED. THIS BORING IS APPROXIMATE AND BASED ON FIELD MEASUREMENT.
2. SOIL BORINGS AND MEASUREMENTS WERE 1.0 METER DEEP OR GPS MEASUREMENTS AT 1.0 METER DEPTH.

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APPENDIX A

TEST BORING LOGS

Location: Nassau Coliseum, Uniondale, NY
 Groundwater (ft): Initial (2): 33.0 feet while drilling.
 Drilling Company: ADT Equipment: CME-85
 Hole Diameter (in): 3.25 Drilling Method: HSA
 Hammer Type: Automatic

Date Started: 8/14/2008
 Date Completed: 8/14/2008
 Logged By: Mark Gelband
 Total Depth (ft): 35.0

Elevation (feet)	Depth (feet)	Graphical Log	DESCRIPTION	FIELD		LABORATORY					
				Sample Interval	Blow Counts per 6" Interval	Sample Type	Moisture Content (%)	Liquid Limit	Plasticity Index	Passing #200 Sieve (%)	Additional Remarks
			Appx Surface Elevation (ft): Not Provided Surface Condition: Pavement								
			FILL: Poorly graded SAND w/silt and gravel (SP-SM). brown to yellow-brown. moist		Pre-cleared	GRAB					
					Pre-cleared	GRAB					
	5				14 13 11 12	SPT					Recovery = 22"
			Silty SAND w/gravel (SM). orange-brown. moist. dense		31 17 15 14	SPT	3			24	Recovery = 20"
	10		Well graded SAND w/gravel (SW). orange-brown. moist. med dense		18 14 13 15	SPT					Recovery = 13"
					6 11 11 13	SPT					Recovery = 19"
	15				13 15 13 18	SPT					Recovery = 20"
	20		Well graded GRAVEL w/sand (GW). light brown to brown, moist. med dense		22 12 9 9	SPT					Recovery = 24"
	25		Poorly graded SAND (SP). brown. moist to wet. med dense		24 12 16 18	SPT					Recovery = 24"
					5 9 10 7	SPT					
	35		Boring Terminated at 35.0 ft.								

DENVER, GEO 95908 BORING LOGS.GPJ slawriss@kleinfelder.com 8/29/2008

KLEINFELDER

BORING LOG

The Lighthouse at Long Island

BORING

TB- 1

Drafted By: NRW
Date: August 21

Project Number: 95908

Sheet 1 of 1

Location: Nassau Coliseum, Uniondale, NY
 Groundwater (ft): Initial (Z): 33.0 feet while drilling.
 Drilling Company: ADT Equipment: CME-85
 Hole Diameter (in): 3.25 Drilling Method: HSA
 Hammer Type: Automatic

Date Started: 8/14/2008
 Date Completed: 8/14/2008
 Logged By: Mark Gelband
 Total Depth (ft): 35.0

Elevation (feet)	Depth (feet)	Graphical Log	DESCRIPTION	FIELD		LABORATORY					
				Sample Interval	Blow Counts per 6" Interval	Sample Type	Moisture Content (%)	Liquid Limit	Plasticity Index	Passing #200 Sieve (%)	Additional Remarks
			Appx Surface Elevation (ft): Not Provided Surface Condition: Pavement								
			FILL: Poorly graded SAND w/gravel (SP-SM), brown to yellow-brown. moist		Pre-cleared	GRAB					
					Pre-cleared	GRAB					
	5		Well graded GRAVEL w/sand (GW). brown. moist. med. dense		14 8 7 9	SPT				4	Recovery = 20"
			Well graded SAND w/gravel (SW). orange-brown to brown, moist. dense to med. dense		15 18 12 14	SPT					Recovery = 18"
	10				11 9 7 10	SPT					Recovery = 24"
					6 8 9 11	SPT					Recovery = 20"
	15				11 12 13 13	SPT					Recovery = 18"
	20				8 7 9 11	SPT					Recovery = 24"
	25		Well graded GRAVEL w/sand (GW). light brown, moist. med. dense		12 13 20 17	SPT					Recovery = 19"
			Poorly graded SAND w/silt (SP-SM). orange-brown. moist. med. dense		4 3 5 7	SPT					Recovery = 19"
	30										
			Poorly graded SAND w/ gravel (SP). brown. wet. loose								
	35		Boring Terminated at 35.0 ft.								

DENVER, GEO 95908 BORING LOGS.GPJ slawless@kleinfelder.com 8/29/2008

KLEINFELDER

BORING LOG

The Lighthouse at Long Island

BORING

TB- 2

Drafted By: NRW Project Number: 95908
 Date: August 21

Sheet 1 of 1

Location: Nassau Coliseum, Uniondale, NY
 Groundwater (ft): Initial (2): 33.0 feet while drilling.
 Drilling Company: ADT Equipment: CME-85
 Hole Diameter (in): 3.25 Drilling Method: HSA
 Hammer Type: Automatic

Date Started: 8/14/2008
 Date Completed: 8/14/2008
 Logged By: Mark Gelband
 Total Depth (ft): 35.0

Elevation (feet)	Depth (feet)	Graphical Log	DESCRIPTION	FIELD		LABORATORY					
				Sample Interval	Blow Counts per 6" Interval	Sample Type	Moisture Content (%)	Liquid Limit	Plasticity Index	Passing #200 Sieve (%)	Additional Remarks
			FILL: Silty SAND w/gravel (SM), dark brown to yellow-brown. moist		Pre-cleared	GRAB					
					Pre-cleared	GRAB					
	5		Well graded SAND w/gravel (SW), brown. moist. med dense		12 8 9 11	SPT					Recovery = 18"
			Poorly graded SAND w/gravel (SP), brown. moist. med dense to dense		8 7 5 5	SPT					Recovery = 23"
	10				20 15 14 14	SPT					Recovery = 20"
					13 15 17 14	SPT					Recovery = 15"
	15										
	20		Well graded SAND w/gravel (SW), black to brown. moist. med dense, fine gravel		48 11 14 17	SPT					Recovery = 16"
			Poorly graded GRAVEL w/sand (GP), brown. moist. med dense		23 10 10 13	SPT					Recovery = 17"
	25										
			Poorly graded SAND (SP), brown, moist. med dense		19 10 10 15	SPT					Recovery = 20"
	30										
			Well graded SAND w/gravel (SW), brown. wet. med dense		WOH 7 6 9	SPT					Recovery = 24"
	35		Boring Terminated at 35.0 ft.								

DENVER, GEO 95908 BORING LOGS.GPJ slinwloss@kleinfelder.com 8/29/2008

KLEINFELDER

BORING LOG

BORING

The Lighthouse at Long Island

TB-3

Drafted By: NRW Project Number: 95908
 Date: August 21

Location: Nassau Coliseum, Uniondale, NY
 Groundwater (ft): Initial (3): 28.0 feet while drilling.
 Drilling Company: ADT Equipment: CME-85
 Hole Diameter (in): 3.25 Drilling Method: HSA
 Hammer Type: Automatic

Date Started: 8/14/2008
 Date Completed: 8/14/2008
 Logged By: Mark Gelband
 Total Depth (ft): 35.0

Elevation (feet)	Depth (feet)	Graphical Log	DESCRIPTION	FIELD		LABORATORY					
				Sample Interval	Blow Counts per 6" Interval	Sample Type	Moisture Content (%)	Liquid Limit	Plasticity Index	Passing #200 Sieve (%)	Additional Remarks
			Appx Surface Elevation (ft): Not Provided Surface Condition: Pavement								
			Well graded SAND w/silt and gravel (SW-SM), light brown, moist		Pre-cleared	GRAB					
					Pre-cleared	GRAB					
	5		Poorly graded SAND (SP), brown, moist, med dense		15 12 11 13	SPT					Recovery = 23"
			Poorly graded SAND w/gravel (SP), orange-brown, moist, dense		17 18 16 17	SPT					Recovery = 24"
	10				21 17 17 17	SPT					Recovery = 18"
			Well graded SAND w/gravel (SW), brown, moist, med dense		23 11 15 22	SPT					Recovery = 17"
	15				25 27 23 21	SPT					Recovery = 20"
	20		Well graded GRAVEL w/sand (GW), brown, moist, dense		11 11 14 12	SPT					Recovery = 15"
	25				9 7 5 6	SPT					Recovery = 16"
	30		Well graded SAND w/gravel (SW), brown, moist to wet, med dense		WOH 3 4 5	SPT					
	35		Well graded GRAVEL w/sand (GW), brown, wet, loose								

Boring Terminated at 35.0 ft.

KLEINFELDER

BORING LOG

The Lighthouse at Long Island

BORING

TB- 4

Drafted By: NRW Project Number: 95908
 Date: August 21

Sheet 1 of 1

DENVER, GEO 95908 BORING LOGS, G.F.J. slawless@kleinfelder.com 8/29/2008

Location: Nassau Coliseum, Uniondale, NY
 Groundwater (ft): Initial (2): 28.0 feet white drilling.
 Drilling Company: ADT Equipment: CME-85
 Hole Diameter (in): 3.25 Drilling Method: HSA
 Hammer Type: Automatic

Date Started: 8/13/2008
 Date Completed: 8/13/2008
 Logged By: Mark Gelband
 Total Depth (ft): 35.0

Elevation (feet)	Depth (feet)	Graphical Log	DESCRIPTION	FIELD		LABORATORY					
				Sample Interval	Blow Counts per 6" Interval	Sample Type	Moisture Content (%)	Liquid Limit	Plasticity Index	Passing #200 Sieve (%)	Additional Remarks
			Appx Surface Elevation (ft): Not Provided Surface Condition: Pavement								
			Well graded SAND w/gravel (SW), brown, moist, very loose		Pre-cleared	GRAB					
					Pre-cleared	GRAB					
	5				1 1 2 4	SPT					Recovery = 5"
			Poorly graded SAND w/gravel (SP), brown, moist, med dense		5 8 8 9	SPT					Recovery = 18"
	10				11 11 9 11	SPT					Recovery = 24"
					5 8 10 14	SPT					Recovery = 14"
	15				8 6 6 6	SPT					Recovery = 15"
			Poorly graded GRAVEL w/sand (GP), light brown, moist, med dense		11 13 10 17	SPT					Recovery = 18"
	20				24 9 10 12	SPT					Recovery = 22"
			Poorly graded SAND w/gravel (SP), brown, moist to wet, med dense		WOH 5 7 8	SPT					Recovery = 21"
	25										
	30										
	35		Boring Terminated at 35.0 ft.								

DENVER_GEO 95908 BORING LOGS.GPJ slawles@kleinfelder.com 8/29/2008

KLEINFELDER

BORING LOG

The Lighthouse at Long Island

BORING

TB- 5

Drafted By: NRW
Date: August 21

Project Number: 95908

Sheet 1 of 1

Location: Nassau Coliseum, Uniondale, NY
 Groundwater (ft): Initial (3): 28.0 feet while drilling.
 Drilling Company: ADT Equipment: CME-85
 Hole Diameter (in): 3.25 Drilling Method: HSA
 Hammer Type: Automatic

Date Started: 8/13/2008
 Date Completed: 8/13/2008
 Logged By: Mark Gelband
 Total Depth (ft): 35.0

Elevation (feet)	Depth (feet)	Graphical Log	DESCRIPTION	FIELD		LABORATORY				
				Sample Interval	Blow Counts per 6" Interval	Sample Type	Moisture Content (%)	Liquid Limit	Plasticity Index	Passing #200 Sieve (%)
			Appx. Surface Elevation (ft): Not Provided Surface Condition: Pavement							
			Silty GRAVEL w/sand (GM), brown. moist		Pre-cleared	GRAB				
			Poorly graded SAND w/gravel (SP). brown to light brown. moist to wet. med dense to dense		Pre-cleared	GRAB	3			16
	5				6 18 11 14	SPT				Recovery = 20"
					20 24 20 7	SPT				Recovery = 18"
	10				13 23 14 17	SPT				Recovery = 13"
					14 8 10 11	SPT				Recovery = 15"
	15				26 16 17 20	SPT				Recovery = 20"
					15 8 9 4	SPT				Recovery = 24"
	20				8 10 12 15	SPT				Recovery = 22"
	25				WOH 5 8 8	SPT				Recovery = 23"
	30									
	35		Boring Terminated at 35.0 ft.							

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BORING LOG

The Lighthouse at Long Island

BORING

TB- 6

Drafted By: NRW Project Number: 95908
 Date: August 21

Sheet 1 of 1

DENVER_GEO_95908 BORING LOGS.GPJ shawless@kleinfelder.com 8/29/2008

Location: Nassau Coliseum, Uniondale, NY
 Groundwater (ft): Initial (2): 28.0 feet while drilling.
 Drilling Company: ADT Equipment: CME-85
 Hole Diameter (in): 3.25 Drilling Method: HSA
 Hammer Type: Automatic

Date Started: 7/31/2008
 Date Completed: 7/31/2008
 Logged By: Mark Gelband
 Total Depth (ft): 35.0

Elevation (feet)	Depth (feet)	Graphical Log	DESCRIPTION	FIELD		LABORATORY				Additional Remarks
				Sample Interval	Blow Counts per 6" interval	Sample Type	Moisture Content (%)	Liquid Limit	Plasticity Index	
			Appx Surface Elevation (ft): Not Provided Surface Condition: Pavement							
			FILL: Silty SAND w/gravel (SM), dark brown to brown, moist, loose		Pre-cleared	GRAB				
					Pre-cleared	GRAB				
	5				4 2 3 2	SPT	5		30	Recovery = 7"
			Well graded SAND w/gravel (SW), brown, moist, med dense to very dense		4 8 9 11	SPT				Recovery = 21"
	10				3 9 11 15	SPT				Recovery = 16"
					25 44 24 22	SPT				Recovery = 20"
	15				30 11 12 10	SPT				Recovery = 12"
			Poorly graded SAND w/gravel (SP), light brown, moist, med dense		6 8 8 12	SPT				Recovery = 12"
	20				5 7 7 9	SPT				Recovery = 20"
			Well graded SAND w/silt and gravel (SW-SM), light brown, wet, med dense		8 6 6 7	SPT				Recovery = 18"
	25									
	30									
	35									

Boring Terminated at 35.0 ft

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BORING LOG

The Lighthouse at Long Island

BORING

TB- 7

Drafted By: NRW Project Number: 95908
 Date: August 21

Sheet 1 of 1

DENVER, GEO 95908 BORING LOGS.GPJ slawfiess@kleinfelder.com 8/29/2008

Location: Nassau Coliseum, Uniondale, NY
 Groundwater (ft): Initial (2): 28.0 feet white drilling.
 Drilling Company: ADT Equipment: CME-85
 Hole Diameter (in): 3.25 Drilling Method: HSA
 Hammer Type: Automatic

Date Started: 8/13/2008
 Date Completed: 8/13/2008
 Logged By: Mark Gelband
 Total Depth (ft): 35.0

Elevation (feet)	Depth (feet)	Graphical Log	DESCRIPTION	FIELD		LABORATORY				Additional Remarks
				Sample Interval	Blow Counts per 6" Interval	Sample Type	Moisture Content (%)	Liquid Limit	Plasticity Index	
			Appx Surface Elevation (ft): Not Provided Surface Condition: Pavement							
			FILL: Silty SAND w/gravel (SM), light gray-brown, moist		Pre-cleared	GRAB				
			Well graded SAND w/gravel (SW), orange-brown to light brown, moist, med dense to dense		Pre-cleared	GRAB				
	5				10 9 10 12	SPT				Recovery = 12"
					14 20 28 27	SPT				Recovery = 20"
	10				15 20 18 16	SPT				Recovery = 16"
					7 8 8 12	SPT				Recovery = 17"
	15				27 14 15 13	SPT				Recovery = 20"
	20									
	25		Poorly graded SAND w/gravel (SP), brown, moist to wet, med dense		12 12 14 18	SPT				Recovery = 16"
					6 6 7 12	SPT				
	30				4 8 8 8	SPT				Recovery = 22"
	35		Boring Terminated at 35.0 ft.							

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BORING LOG
The Lighthouse at Long Island

BORING

TB- 8

Drafted By: NRW Project Number: 95908
 Date: August 21

Sheet 1 of 1

Location: Nassau Coliseum, Uniondale, NY
 Groundwater (ft): Initial (2): 28.0 feet while drilling
 Drilling Company: ADT Equipment: CME-85
 Hole Diameter (in): 3.25 Drilling Method: HSA
 Hammer Type: Automatic

Date Started: 8/12/2008
 Date Completed: 8/12/2008
 Logged By: Mark Gelband
 Total Depth (ft): 35.0

Elevation (feet)	Depth (feet)	Graphical Log	DESCRIPTION	FIELD		LABORATORY					
				Sample Interval	Blow Counts per 6" Interval	Sample Type	Moisture Content (%)	Liquid Limit	Plasticity Index	Passing #200 Sieve (%)	Additional Remarks
			Appx Surface Elevation (ft): Not Provided Surface Condition: Pavement								
			FILL: Silty SAND w/gravel (SM), brown to gray-brown. moist. med dense	Pre-cleared	GRAB						
				Pre-cleared	GRAB						
	5			10 7 6 12	SPT	3			23		Recovery = 12"
				4 12 15 18	SPT						Recovery = 14"
	10		Well graded SAND w/gravel (SW), brown to black-brown, moist. med dense	4 8 11 12	SPT						Recovery = 18"
				7 12 12 11	SPT						Recovery = 18"
	15			20 13 25 60	SPT						Recovery = 13"
	20		Well graded GRAVEL w/sand (GW), brown, moist. dense								
				8 9 9 11	SPT						Recovery = 14"
	25		Poorly graded SAND w/gravel (SP), brown. moist to wet. med. dense								
				4 9 13 13	SPT						Recovery = 17"
	30			5 10 15 24	SPT						Recovery = 24"
	35		Boring Terminated at 35.0 ft.								

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BORING LOG

The Lighthouse at Long Island

BORING

TB- 9

Drafted By: NRW Project Number: 95908
 Date: August 21

Sheet 1 of 1

Location: Nassau Coliseum, Uniondale, NY
 Groundwater (ft): Initial (±): 28.0 feet while drilling.
 Drilling Company: ADT Equipment: CME-85
 Hole Diameter (in): 3.25 Drilling Method: HSA
 Hammer Type: Automatic

Date Started: 8/12/2008
 Date Completed: 8/12/2008
 Logged By: Mark Gelband
 Total Depth (ft): 35.0

Elevation (feet)	Depth (feet)	Graphical Log	DESCRIPTION	FIELD		LABORATORY					
				Sample Interval	Blow Counts per 6" Interval	Sample Type	Moisture Content (%)	Liquid Limit	Plasticity Index	Passing #200 Sieve (%)	Additional Remarks
			Appx Surface Elevation (ft): Not Provided Surface Condition: Pavement								
			FILL: Silty SAND w/gravel (SM). yellow-brown. moist		Pre-cleared	GRAB					
					Pre-cleared	GRAB					
	5		Poorly graded SAND w/gravel (SP). orange-brown. moist, loose		6 3 5 13	SPT	2			32	Recovery = 15"
			Well graded SAND w/gravel (SW). orange-brown, moist, med dense		13 11 12 17	SPT					Recovery = 20"
	10		Poorly graded SAND w/gravel (SP). orange-brown, moist, med dense		8 8 10 11	SPT					Recovery = 22"
			Well graded SAND w/gravel (SW). orange-brown to brown. moist, med dense		11 9 10 11	SPT					Recovery = 17"
	15				5 8 14 22	SPT					Recovery = 15"
	20				8 5 6 7	SPT					Recovery = 13"
	25		Poorly graded SAND w/gravel (SP). light brown. moist, med dense		4 5 4 10	SPT					Recovery = 13"
			Poorly graded GRAVEL w/sand. brown. wet. loose		16 6 7 9	SPT					Recovery = 23"
	30										
	35		Well graded SAND w/gravel (SW), light brown. wet. med dense								
Boring Terminated at 35.0 ft.											

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BORING LOG
The Lighthouse at Long Island

BORING
TB-10

Drafted By: NRW Project Number: 95908
 Date: August 21

Sheet 1 of 1

Location: Nassau Coliseum, Uniondale, NY
 Groundwater (ft): Initial (3): 28.0 feet while drilling.
 Drilling Company: ADT Equipment: CME-85
 Hole Diameter (in): 3.25 Drilling Method: HSA
 Hammer Type: Automatic

Date Started: 8/12/2008
 Date Completed: 8/12/2008
 Logged By: Mark Gelband
 Total Depth (ft): 35.0

Elevation (feet)	Depth (feet)	Graphical Log	DESCRIPTION	FIELD		LABORATORY					
				Sample Interval	Blow Counts per 6" Interval	Sample Type	Moisture Content (%)	Liquid Limit	Plasticity Index	Passing #200 Sieve (%)	Additional Remarks
			Appx. Surface Elevation (ft): Not Provided Surface Condition: Pavement								
			FILL: Silty SAND w/gravel (SM), brown to light brown, moist		Pre-cleared	GRAB					
					Pre-cleared	GRAB					
	5		Well graded SAND w/gravel (SW), orange-brown to brown, moist, med dense to dense		7 4 14 17	SPT					Recovery = 14"
					15 20 20 18	SPT					Recovery = 20"
	10				12 13 11 12	SPT					Recovery = 24"
					23 14 15 14	SPT					Recovery = 14"
	15				12 14 16 15	SPT					Recovery = 14"
	20		Well graded GRAVEL w/sand (GW), light brown, moist, dense		11 10 12 11	SPT					Recovery = 18"
	25		Well graded SAND w/gravel (SW), brown, moist, med dense		12 8 8 9	SPT					Recovery = 16"
	30		Well graded GRAVEL w/sand (GW), brown, wet, med dense to loose		3 4 5 5	SPT					
	35		Boring Terminated at 35.0 ft.								

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KLEINFELDER		BORING LOG		BORING
The Lighthouse at Long Island				TB-11
Drafted By: <u>NRW</u>	Project Number: <u>95908</u>			Sheet 1 of 1
Date: <u>August 21</u>				

Location: Nassau Coliseum, Uniondale, NY
 Groundwater (ft): Initial (2): 28.0 feet while drilling.
 Drilling Company: ADT Equipment: CME-85
 Hole Diameter (in): 3.25 Drilling Method: HSA
 Hammer Type: Automatic

Date Started: 7/31/2008
 Date Completed: 7/31/2008
 Logged By: Mark Gelband
 Total Depth (ft): 35.0

Elevation (feet)	Depth (feet)	Graphical Log	DESCRIPTION	FIELD		LABORATORY					
				Sample Interval	Blow Counts per 6" Interval	Sample Type	Moisture Content (%)	Liquid Limit	Plasticity Index	Passing #200 Sieve (%)	Additional Remarks
			Appx Surface Elevation (ft): Not Provided Surface Condition: Grass								
			FILL: Topsoil and Silty SAND w/gravel (SM). dark brown to light brown. moist		Pre-cleared	GRAB					
					Pre-cleared	GRAB					
	5		Poorly graded SAND w/ gravel (SP). brown. moist. loose		12 5 4 3	SPT					Recovery = 8"
			Poorly graded SAND w/silt (SP-SM). orange-brown. moist. loose		4 6 4 7	SPT					Recovery = 14"
	10		Poorly graded SAND w/gravel (SP). orange-brown. moist. dense		7 14 17 14	SPT					Recovery = 14"
			Well graded SAND w/gravel (SW). brown. moist. med dense		30 4 10 20	SPT					Recovery = 21"
	20		Poorly graded SAND w/gravel (SP). brown to light brown. moist to wet. med dense		7 9 10 10	SPT					Recovery = 14"
					17 12 13 14	SPT					Recovery = 21"
	30				7 8 8 12	SPT					Recovery = 24"
			Well graded SAND w/gravel (SW), light brown. wet. loose		7 5 5 7	SPT					Recovery = 24"
	35		Boring Terminated at 35.0 ft								

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KLEINFELDER		BORING LOG		BORING TB-12
The Lighthouse at Long Island				
Drafted By: <u>NRW</u>	Project Number: <u>95908</u>	Date: <u>August 21</u>		Sheet 1 of 1

Location: Nassau Coliseum, Uniondale, NY Date Started: 7/30/2008
 Groundwater (ft): Initial (2): 28.0 feet while drilling. Date Completed: 7/30/2008
 Drilling Company: ADT Equipment: CME-85 Logged By: Mark Gelband
 Hole Diameter (in): 3.25 Drilling Method: HSA
 Hammer Type: Automatic Total Depth (ft): 35.0

Elevation (feet)	Depth (feet)	Graphical Log	DESCRIPTION	FIELD		LABORATORY					
				Sample Interval	Blow Counts per 6" Interval	Sample Type	Moisture Content (%)	Liquid Limit	Plasticity Index	Passing #200 Sieve (%)	Additional Remarks
			Appx Surface Elevation (ft): Not Provided Surface Condition: Bare Earth								
			FILL: Poorly graded SAND w/silt and gravel (SP-SM). brown. moist		Pre-cleared	GRAB					
			FILL: Sandy SILT w/gravel (ML), yellow-gray, moist		Pre-cleared	GRAB					
	5		Well graded SAND w/silt and gravel (SW-SM). brown. moist. very loose		1 1 1 7	SPT					Recovery = 6"
			Poorly graded SAND w/gravel (SP). brown to orange-brown. moist. med dense to dense		8 9 9 12	SPT	4			1	Recovery = 19"
	10				1 23 9 13	SPT					Recovery = 16"
					18 11 15 19	SPT					Recovery = 15"
	15				19 18 18 19	SPT					Recovery = 8"
	20		Well graded GRAVEL w/sand (GW). brown. moist. dense		23 7 9 11	SPT					Recovery = 13"
	25		Well graded SAND w/gravel (SW). orange-brown to brown. moist to wet, med dense		8 8 10 9	SPT					Recovery = 2"
	30				20 6 8 7	SPT					Recovery = 22"
	35		Boring Terminated at 35.0 ft.								

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KLEINFELDER		BORING LOG		BORING
The Lighthouse at Long Island		The Lighthouse at Long Island		TB-13
Drafted By: <u>NRW</u>	Project Number: <u>95908</u>			Sheet 1 of 1
Date: <u>August 21</u>				

Location: Nassau Coliseum, Uniondale, NY Date Started: 7/31/2008
 Groundwater (ft): Initial (▽): 23.0 feet while drilling. Date Completed: 7/31/2008
 Drilling Company: ADT Equipment: CME-85 Logged By: Mark Gelband
 Hole Diameter (in): 3.25 Drilling Method: HSA
 Hammer Type: Automatic Total Depth (ft): 35.0

Elevation (feet)	Depth (feet)	Graphical Log	DESCRIPTION	FIELD		LABORATORY					
				Sample Interval	Blow Counts per 6" Interval	Sample Type	Moisture Content (%)	Liquid Limit	Plasticity Index	Passing #200 Sieve (%)	Additional Remarks
			Appx Surface Elevation (ft): Not Provided Surface Condition: Bare Earth								
			FILL: Silty SAND w/gravel (SM), brown to yellow-brown. moist		Pre-cleared	GRAB					
			FILL: Poorly graded SAND w/silt (SP-SM), red-brown. moist		Pre-cleared	GRAB					
	5		Well graded SAND w/gravel (SW), brown. moist. med dense		3 19 5 7	SPT					Recovery = 8"
			Poorly graded SAND (SP), light brown. moist. dense		13 17 20 21	SPT					Recovery = 20"
	10		Well graded SAND w/gravel (SW), light brown to brown. moist. med dense		5 12 11 12	SPT					Recovery = 15"
					20 6 13 17	SPT					Recovery = 18"
	15				9 12 12 10	SPT					Recovery = 15"
	20				18 7 9 12	SPT					Recovery = 14"
	25		Well graded SAND w/silt and gravel (SW-SM), brown. wet. med dense		5 7 8 10	SPT					Recovery = 20"
	30				10 15 7 9	SPT					
	35		Well graded SAND w/gravel (SW), brown. moist. med dense								
Boring Terminated at 35.0 ft.											

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KLEINFELDER		BORING LOG		BORING
The Lighthouse at Long Island				TB-14
Drafted By: <u>NRW</u>	Project Number: <u>95908</u>			Sheet 1 of 1
Date: <u>August 21</u>				

Location: Nassau Coliseum, Uniondale, NY
 Groundwater (ft): Initial (2): 23.0 feet while drilling.
 Drilling Company: ADT Equipment: CME-85
 Hole Diameter (in): 3.25 Drilling Method: HSA
 Hammer Type: Automatic

Date Started: 7/30/2008
 Date Completed: 7/30/2008
 Logged By: Mark Gelband
 Total Depth (ft): 35.0

Elevation (feet)	Depth (feet)	Graphical Log	DESCRIPTION	FIELD		LABORATORY					
				Sample Interval	Blow Counts per 6" Interval	Sample Type	Moisture Content (%)	Liquid Limit	Plasticity Index	Passing #200 Sieve (%)	Additional Remarks
			Appx Surface Elevation (ft): Not Provided Surface Condition: Bare Earth								
			Well graded SAND w/gravel (SW). light brown to red-brown. moist		Pre-cleared	GRAB					
					Pre-cleared	GRAB					
	5		Poorly graded SAND (SP). orange-brown. moist. med dense		3 4 8 11	SPT					Recovery = 12"
					10 12 12 12	SPT					Recovery = 18"
	10				3 5 11 10	SPT					- No Recovery -
			Well graded SAND w/gravel (SW). brown. moist, med dense		7 9 21 21	SPT					Recovery = 17"
	15				9 15 14 14	SPT					Recovery = 12"
	20				5 5 5 6	SPT					Recovery = 20"
	25		Well graded SAND w/silt and gravel (SW-SM). brown. wet. loose		4 5 5 6	SPT					Recovery = 22"
	30				9 5 5 6	SPT					Recovery = 22"
	35		Poorly graded SAND w/gravel (SP). brown. wet. loose								

Boring Terminated at 35.0 ft

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BORING LOG

The Lighthouse at Long Island

BORING

TB-15

Drafted By: NRW Project Number: 95908
 Date: August 21

Sheet 1 of 1

Location: Nassau Coliseum, Uniondale, NY
 Groundwater (ft): Initial (3): 28.0 feet while drilling.
 Drilling Company: ADT Equipment: CME-85
 Hole Diameter (in): 3.25 Drilling Method: HSA
 Hammer Type: Automatic

Date Started: 7/30/2008
 Date Completed: 7/30/2008
 Logged By: Mark Gelband
 Total Depth (ft): 35.0

Elevation (feet)	Depth (feet)	Graphical Log	DESCRIPTION	FIELD		LABORATORY					
				Sample Interval	Blow Counts per 6" Interval	Sample Type	Moisture Content (%)	Liquid Limit	Plasticity Index	Passing #200 Sieve (%)	Additional Remarks
			Appx Surface Elevation (ft): Not Provided Surface Condition: Bare Earth								
			FILL: Silty SAND w/gravel (SM), brown to red-brown, moist		Pre-cleared	GRAB					
					Pre-cleared	GRAB					
	5		Well graded GRAVEL w/sand (GW), brown, moist, very loose		1 1 2 5	SPT	7			5	Recovery = 6"
			Well graded SAND w/gravel (SW), brown, moist, med dense		9 12 12 13	SPT					Recovery = 13"
	10		Poorly graded SAND (SP), orange-brown, moist, med dense		5 10 11 10	SPT					Recovery = 14"
	15		Well graded SAND w/gravel (SW), light brown to brown, moist to wet, dense to med dense		14 19 28 20	SPT					Recovery = 18"
					9 14 13 10	SPT					Recovery = 13"
					3 5 6 9	SPT					Recovery = 14"
	25				3 9 9 14	SPT					Recovery = 15"
					12 20 5 5	SPT					Recovery = 18"
	30										
	35		Well graded SAND w/silt and gravel (SW-SM), brown, wet, med dense								

Boring Terminated at 35.0 ft.

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BORING LOG

The Lighthouse at Long Island

BORING

TB-16

Drafted By: NRW Project Number: 95908
 Date: August 21

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