



TR4: Technical Report
Soil Investigation

Must be typewritten.



1 Location Information Required for all applications.

House No(s) 66 Street Name McLaughlin Street

Borough Staten Island Block 3412 Lot 37 BIN 5050437 CB No.

Work on Floor(s) na Apt/Condo No(s)

2 Applicant Information Required for all applications.

Last Name Serper First Name Allen Middle Initial M

Business Name Tri- State Drilling Technologies, Inc Business Telephone 516-294-6400

Business Address 55 Hilton Avenue Business Fax 516-746-4432

City Garden City State NY Zip 11530 Mobile Telephone

E-Mail nrecchia@tristatedrillingtech.com License Number NY-52795

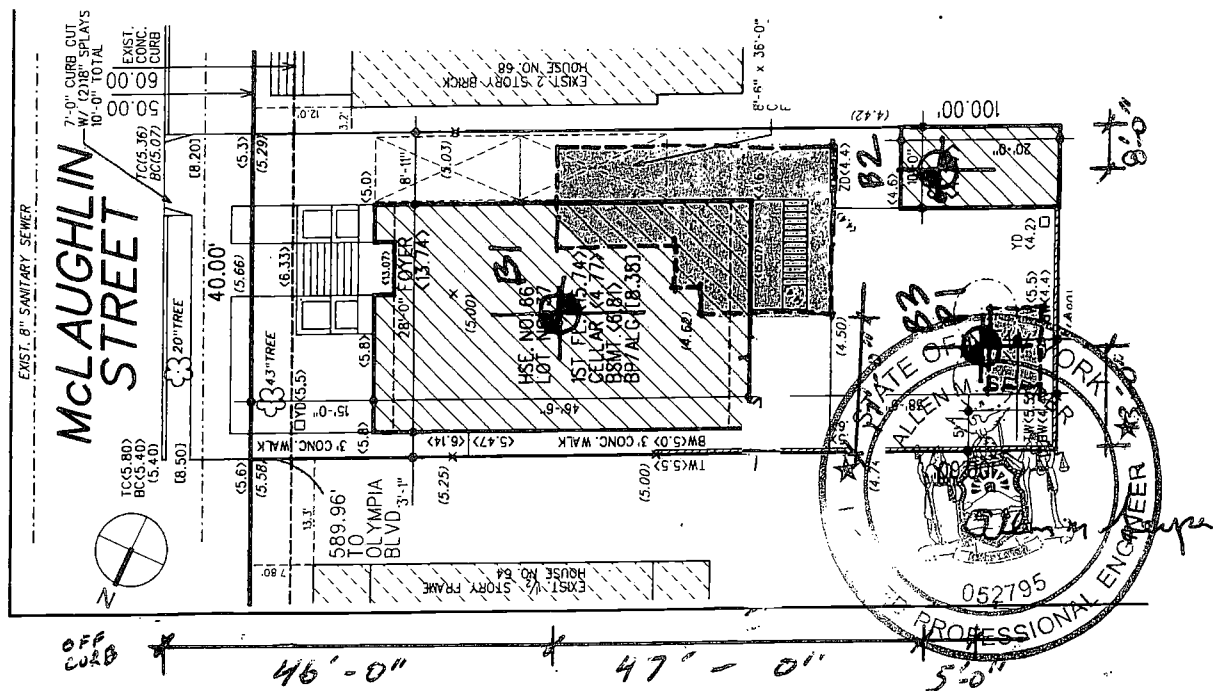
☒ P.E. ☐ R.A.

3 Required Borings / Test Pits Required for all applications.

Number of Test Pits as Required as per NYC Construction Codes: 3

4 Plot Diagram Required for all applications.

Draw in ink to indicate scale. Show building outline or extension and location of all borings and/or test pits by dimensions. Borings and/or test pits shall be distributed according to the NYC Construction Codes.



[illegible]

Signature: 9/15/16

Examined and Recommended for Approval		Approved	
Examiner Name		Borough Commissioner Signature	Date
Signature	Date		

B-1

SURFACE ELEVATION: NA				SURFACE CONDITIONS: Soil			
WATER LEVEL (IN OPEN BOREHOLE): 3.3 Feet							
DEPTH	SAMPLE	BLOW COUNTS	CLASS OF MATERIAL	MOISTURE	STRATA	SOIL - ROCK DESCRIPTION - CLASSIFICATION	
1	S-1	9 5 7		Dry		Dark Brown SILTY-SAND & Concrete-Red Brick fill (SM) (11-65)	
2	S-2	2 3 3				Brown SILTY-SAND & CLAY fill (SM) (11-65)	
3	S-3	2 2 2		Wet		Brown-Red f-m SAND & GRAVEL some Silt (SM) (7-65)	
4	S-4	4 4 3				Brown-Red f-m SAND & GRAVEL trace Silt (SP) (7-65)	
5	S-5	3 5 5				Brown-Red f-m SAND & GRAVEL (SP) (7-65)	
6	S-6	7 6 7				Brown-Red f-m SAND & GRAVEL (SP) (7-65)	
7	S-7	7 10 10				Brown-Red f-m SAND & GRAVEL (SP) (7-65)	
8	S-8	11 10 11				Brown-Red f-m SAND some Gravel-Silt (SM) (7-65)	
9	S-9	13 11 13				Brown-Red f-m SAND some Gravel-Silt (SM) (7-65)	
10	S-10	15 9 12				Brown-Red f-m SAND some Gravel-Silt (SM) (7-65)	
11	S-11	8 12 12				End of Boring @ 25 Feet	

B-2

SURFACE ELEVATION: NA				SURFACE CONDITIONS: Soil			
WATER LEVEL (IN OPEN BOREHOLE): 2.6 Feet							
DEPTH	SAMPLE	BLOW COUNTS	CLASS OF MATERIAL	MOISTURE	STRATA	SOIL - ROCK DESCRIPTION - CLASSIFICATION	
1	S-1	4 2 7		Dry		Dark Brown loose SILTY-SAND & Organic fill (SM) to 4 feet (11-65)	
2	S-2	1 2 1		Wet		Brown-Red f-m SAND some Gravel trace Silt (SP) (7-65)	
3	S-3	6 5 3				Brown-Red f-m SAND some Gravel (SP) (7-65)	
4	S-4	7 5 3				Brown-Red f-m SAND some Gravel (SP) (7-65)	
5	S-5	7 7 6				Brown-Red f-m SAND some Gravel (SP) (7-65)	
6	S-6	12 10 11				Brown-Red f-m SAND & GRAVEL (SP) (7-65)	
7	S-7	9 12 10				Brown-Red f-m SAND some Gravel-Silt (SM) (7-65)	
8	S-8	13 15 12				Brown-Red f-m SAND some Gravel-Silt (SM) (7-65)	
9	S-9	18 12 12				End of Boring @ 25 Feet	

B-3

SURFACE ELEVATION: NA				SURFACE CONDITIONS: Soil			
WATER LEVEL (IN OPEN BOREHOLE): 2.8 Feet							
DEPTH	SAMPLE	BLOW COUNTS	CLASS OF MATERIAL	MOISTURE	STRATA	SOIL - ROCK DESCRIPTION - CLASSIFICATION	
1	S-1	2 1 7		Dry		Dark Brown loose SILTY-SAND & Organic fill (SM) to 4 feet (11-65)	
2	S-2	2 1 3		Wet		Brown-Red f-m SAND some Gravel (SP) (7-65)	
3	S-3	4 4 3				Brown-Red f-m SAND & GRAVEL (SP) (7-65)	
4	S-4	5 6 7				Brown-Red f-m SAND & GRAVEL (SP) (7-65)	
5	S-5	6 5 7				Brown-Red f-m SAND & GRAVEL (SP) (7-65)	
6	S-6	7 9 9				Brown-Red f-m SAND some Gravel trace Silt (SP) (7-65)	
7	S-7	10 13 12				Brown-Red f-m SAND some Gravel-Silt (SM) (7-65)	
8	S-8	9 12 14				End of Boring @ 25 Feet	

TYPICAL NAMES		MAJOR DIVISIONS	
1	2	3	4
COARSE-GRAINED SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 20 SIEVE SIZE	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 MIXTURES.	
	GC	CLAYEY GRAVELS, GRAVEL-SAND MIXTURES.	
FINE-GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 20 SIEVE SIZE	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.	
FINE-GRAINED SOILS LESS THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY.	
	CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS.	
	OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY.	
	OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS.	
HIGHLY ORGANIC SOILS		PI	PEAT AND OTHER HIGHLY ORGANIC SOILS.

ALLOWABLE SOIL BEARING PRESSURES N.Y.C. BUILDING CODE 27-67B

CLASS OF MATERIAL	DESCRIPTION	ALLOWABLE BEARING TONS/SQ. FT.
1A	HARD SOUND ROCK	80
1B	MEDIUM HARD ROCK	40
1C	INTERMEDIATE ROCK	20
2	SOFT ROCK	10
3	HAZARDOUS GRAVEL AND SOILS (SOIL GROUPS GW, GP, GM & GC AND GROUPS ON GP & GM CONTAINING MORE THAN 10% GRAVEL) SANDS OTHER THAN FINE SANDS (SOIL GROUPS SW, SP & SM) BUT CONTAINING NOT MORE THAN 10% GRAVEL	4-10
4	FINE SAND, CLAY AND CLAY SOILS (SOIL GROUPS SC, CL & OH)	3-8
5	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	2-4
6	POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES	1-2
7	CLAYEY SANDS, SAND-CLAY MIXTURES	1-2
	NOMINALLY UNSATISFACTORY BEARING MATERIALS	BY TEST

COMPACTION RELATED TO SPOON BLOWS PER FOOT		
GRAVEL & SAND		SILT & CLAY
VERY LOOSE	0 TO 4	SOFT
LOOSE	5 TO 10	MEDIUM
MEDIUM	11 TO 30	STIFF
DENSE	31 TO 60	VERY STIFF
VERY DENSE	OVER 60	HARD

SOIL DESCRIPTIONS ARE BY VISUAL EXAMINATION OF SOIL SAMPLES RECOVERED DURING DRILLING OPERATIONS
SOIL DESCRIPTIONS ARE IN ACCORD WITH THE UNIFIED SOILS CLASSIFICATION SYSTEM AND NYC BUILDING CODE SUBCHAPTER 11 ARTICLE 4.
ALL BORING ELEVATIONS ARE REFERENCED TO EXISTING GROUND LEVEL AS ZERO ELEVATION.

"N" STANDARD PENETRATION TEST (OF SPOON, 140 LB HAMMER, 30" FALL)	
N = 21 BLOW PER FOOT	SPOON BLOW COUNT IS GENERALLY SHOWN IN 1" INCREMENTS FOR 1" DRIVE TO OBTAIN BLOW PER FOOT (N) USE THE 3rd & 4th INCREMENTS

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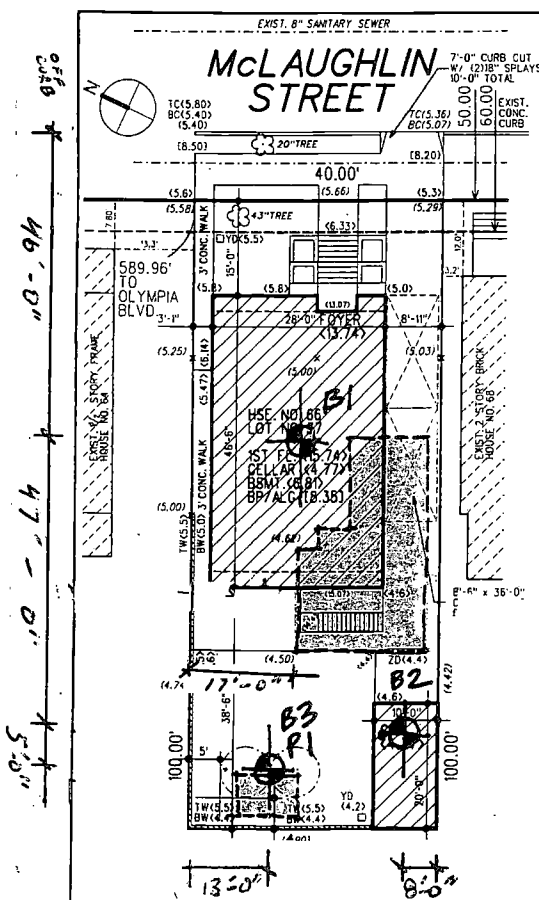
BORING CONTRACTORS CERTIFICATIONS		
TRUSTEE DRILLING TECHNOLOGIES, INC., CERTIFIES AS TO THE ACCURACY OF THE SPOON AND CASING BLOW AND ELEVATION AND METHOD OF BORING.		
THE FOLLOWING EQUIPMENT WAS USED:	TYPE OF CORE BARRELS AND DIAMETER:	WEIGHT OF HAMMERS:
EQUIPMENT:	SIZE:	140 LBS. ON 1-1/2" DROP
SPRAGUE & HENKHOOD MODEL B-D	AX 1-7/8"	140 LBS. ON 1-1/2" DROP
40 CLD JACKER MODEL ROT	AX 2-3/8"	140 LBS. ON 1-1/2" DROP
40 CLD JACKER MODEL ROT	AX 2-1/8"	140 LBS. ON 1-1/2" DROP
40 CLD JACKER MODEL ROT	AX 1-7/8"	140 LBS. ON 1-1/2" DROP
40 CLD JACKER MODEL ROT	AX 2-1/8"	140 LBS. ON 1-1/2" DROP
40 CLD JACKER MODEL ROT	AX 2-1/8"	140 LBS. ON 1-1/2" DROP
40 CLD JACKER MODEL ROT	AX 2-1/8"	140 LBS. ON 1-1/2" DROP

NOTE: WATER NOTED ON PRINT IS ONLY FIRST INDICATION OF WATER. FOR EXACT RESULTS CALL OUR WELL POINT TEST

DATE: 9-15-11
PROJECT No. 11258

DRAWING BY: PR
CHK BY: NR

LAD FILE # B-258.00
SHEET 1 OF 1



P-1

PERCOLATION TEST WORK SHEET

Project Name/Location: 66 McLaughlin Street, Staten Island, N.Y. Date: 9-15-11

Boring Identification Number: B-3

TEST SPECIFICATIONS Falling head method

Inside diameter of casing: 4-INCH

Height of casing above ground surface: TEST 1: 0 ft TEST 2: 0 ft TEST 3: 0 ft

Length of casing in ground: TEST 1: 5 ft TEST 2: 10 ft TEST 3: 15 ft

Diameter of bore hole (if open hole): TEST 1: na TEST 2: na TEST 3: na

Depth to bottom of boring from top of casing: TEST 1: 5 ft TEST 2: 10 ft TEST 3: 15 ft

Depth to test water level from top of casing: TEST 1: .5 ft TEST 2: .5 ft TEST 3: .5 ft

Description of exposed material tested: Sand-Gravel Sand-gravel Sand-gravel

TIME IN MINUTES			DEPTH TO WATER SURFACE IN FEET		
TEST 1	TEST 2	TEST 3	TEST 1	TEST 2	TEST 3
0	0	0	.50	.50	.5
1	1	1	.50	.50	.50
2	2	2	.51	.50	.50
5	5	5	.51	.50	.50
10	10	10	.52	.50	.50
15	15	15	.52	.51	.50
20	20	20	.53	.51	.50
25	25	25	.53	.51	.50
30	30	30	.54	.51	.50

OBSERVATIONS AND COMMENTS:

PERCOLATION RATE: @ 5 FEET = .96 INCH / HR
@ 10 FEET = .24 INCH / HR
@ 15 FEET = 0 INCH / HR



TRI-STATE DRILLING TECHNOLOGIES, INC.
TEL: (516) 294-6400 FAX: (516) 746-4432

SB# B1-B3/P1
PROJECT # 11258
BORING-LOCATION PLAN
66 McLAUGHLIN ST.
STATEN ISLAND, N.Y.