



# Appendix E

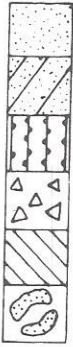
Description

---

Subsoil Investigations



**SUBSOIL  
INVESTIGATIONS**



## **SOIL MECHANICS DRILLING CORP.**

3770 MERRICK ROAD • SEAFORD, L. I., NEW YORK 11783  
(516) 221-2333 • FAX (516) 221-0254

October 31, 2019

Weiss Properties  
41 Bayard Street  
New Brunswick, NJ 08901  
Att: Robert Weiss

Re: Woodmere Country Club  
99 Meadow Drive  
Woodmere, NY  
Our Job #19-474

Gentlemen:

Forwarded herewith are the results of the test borings drilled and monitoring wells installed at the above referenced site.

A copy of the boring logs and report is being e-mailed to Angelo Laino of VHB Engineering.

The purpose of the subsurface investigation was to determine the nature and extent of the underlying soil deposits and determine the structural engineering characteristics of the soil at the site. A total of seventeen (17) test borings were drilled to a depth of 20 feet each using truck mounted drilling equipment and four (4) monitoring wells were installed at the locations shown on our Boring Location Plan. The borings were advanced using hollow stem auger casing. Sample recovery was obtained with a 2" diameter, 2'0" long split spoon sampler was advanced into the subsurface by the use of an automatic 140 lb. hammer with a 30" drop. From the drops of the hammer, blow counts required to advance the split spoon sampler over each 6" intervals were recorded and is shown on the boring logs. Continuous split spoon samples were taken for the top 6 to 12 feet then every 5 feet thereafter to the final depths of the borings. A written description of the recovered soil samples per our geologist's visual identification of same is also presented on the logs.

The CME automatic hammer operates with an efficiency of approximately 90%. The original conventional use of rope, cathead and drop weight, on the other hand, operates with an efficiency of approximately 60%. As a consequence, the standard penetration test results obtained using the CME auto-hammer are on the order of two-thirds the value that would have been obtained had the original rope and cathead method been used. This is significant if you are using design charts for soil strength parameters based on historical data associated with the rope and cathead method. If so, you should adjust our data accordingly.

TEST BORINGS • GROUND WATER DETERMINATIONS • FOUNDATION RECOMMENDATIONS • HOLLOW STEM AUGER BORINGS  
LABORATORY ANALYSES • CONTROLLED LANDFILL • DIAMOND CORE DRILLING • SAND & GRAVEL PROSPECTING  
BEARING VALUES • WELL POINT INSTALLATIONS • ENGINEERING SUPERVISION • PERCOLATION TESTS  
SANITARY INVESTIGATIONS • UNDISTURBED SAMPLING • TEST PITS • TOP SOIL ANALYSES

Weiss Properties  
Att: Robert Weiss

October 31, 2019  
Page 2

Our investigation revealed that the areas drilled are blanketed by from 2 feet to 11 feet of loam, loose soil fill, soft compressible peat and organic silt and clay, underlain, generally, by a moderately dense to dense coarse to fine sand with traces of silt and gravel extending to the deepest depth drilled.

Natural ground water was encountered within the boreholes at depths ranging from 3'1" to 15'10" below existing grade at the time the work was done.

We have not been informed of the finished floor elevations. However, we can offer the following recommendations at this time:

Some areas can support spread footings using a 2 tons per square foot bearing capacity. Other areas will need to be founded on piles installed through the fill and organic deposits into the lower natural sand.

Frost penetration in this area is 3 feet. All exterior foundations must have a minimum of 3 foot of cover.

Liquefaction is not likely and need not be a design consideration.

The soils generated by this investigation best fit that of Site Class "D" in accordance with Table 1513.5.5 of the New York State Building Code.

Four (4) monitoring wells were installed at boring B-1, B-8, B-10 and B-14.

Soil samples recovered during drilling operations will be stored in our lab for a period of 30 days after which they will be destroyed. During this period we will deliver these samples to any prescribed location upon request.

**SOIL MECHANICS DRILLING CORP.**

3770 MERRICK ROAD • SEAFORD, L. I., NEW YORK 11783  
(516) 221-2333 • FAX (516) 221-0254

Weiss Properties  
Att: Robert Weiss

October 31, 2019  
Page 3

If after you examine the enclosed you have any further questions, please feel free to call and discuss them with us.

Billing is enclosed.

Very truly yours,

SOIL MECHANICS DRILLING CORP.



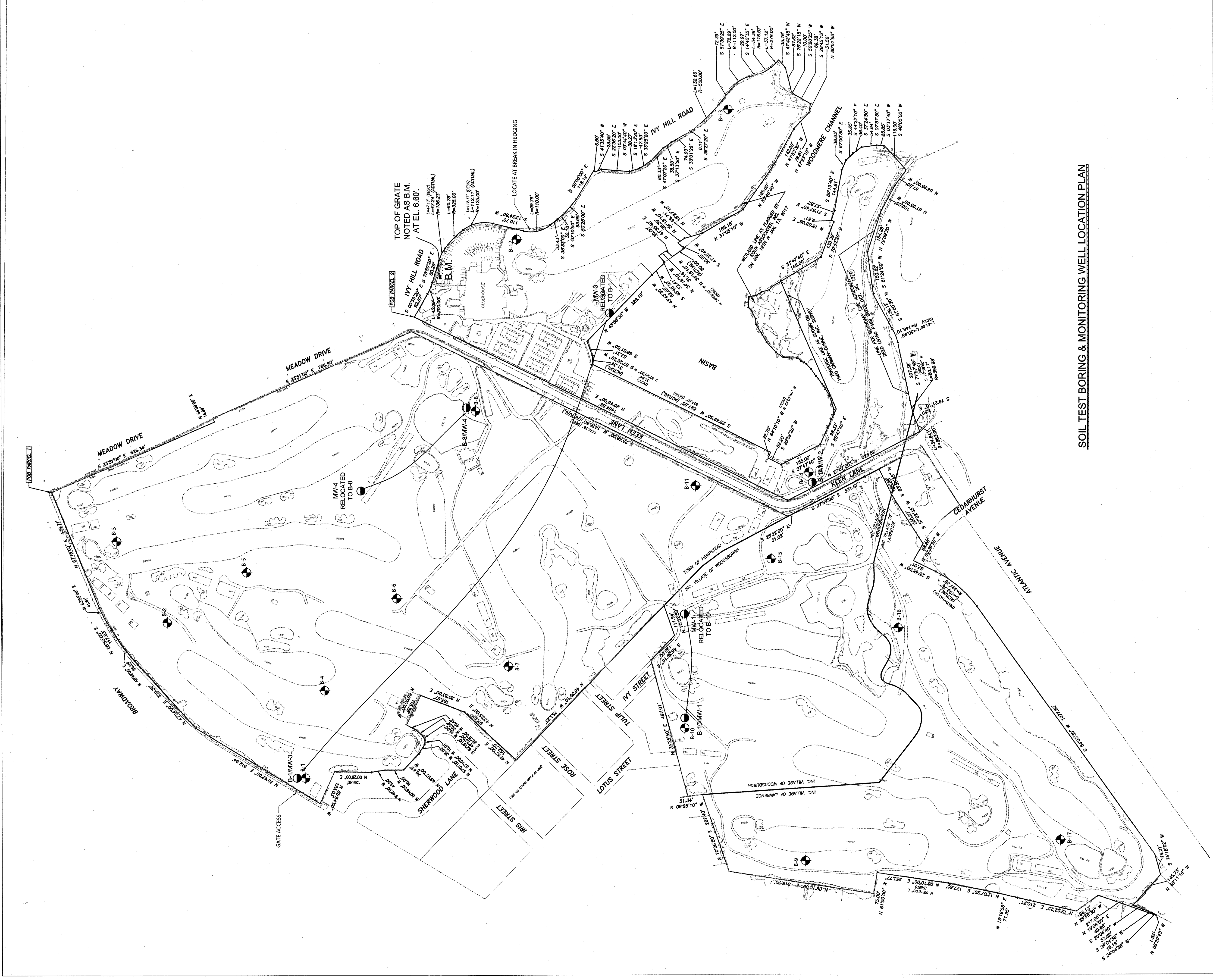
Carl Vernick, P.E.  
President

CV:mlf  
Encls.

Cc: Angelo Laino: [alaino@vhb.com](mailto:alaino@vhb.com)

NO	SO	REC	CLASSIFICATION
1	A	1	DARK BRN. SAND (OU) (U)
2	B	1	DARK BRN. SILTY SAND (OU) (U)
3	B	2	TR. GRAVEL (SM) (FILL) (I)
4	B	3	BRN. SAND (OU) (U)
5	B	4	LIGHT BRN. SAND (OU) (U)
6	B	5	GRAY WITH LIGHT BRN. SAND (OU) (U)
7	B	6	GRAY WITH LIGHT BRN. SAND (OU) (U)
8	B	7	GRAY WITH LIGHT BRN. SAND (OU) (U)
9	B	8	GRAY WITH LIGHT BRN. SAND (OU) (U)
10	B	9	GRAY WITH LIGHT BRN. SAND (OU) (U)
11	B	10	GRAY WITH LIGHT BRN. SAND (OU) (U)
12	B	11	GRAY WITH LIGHT BRN. SAND (OU) (U)
13	B	12	GRAY WITH LIGHT BRN. SAND (OU) (U)
14	B	13	GRAY WITH LIGHT BRN. SAND (OU) (U)
15	B	14	GRAY WITH LIGHT BRN. SAND (OU) (U)
16	B	15	GRAY WITH LIGHT BRN. SAND (OU) (U)
17	B	16	GRAY WITH LIGHT BRN. SAND (OU) (U)
18	B	17	GRAY WITH LIGHT BRN. SAND (OU) (U)
19	B	18	GRAY WITH LIGHT BRN. SAND (OU) (U)
20	B	19	GRAY WITH LIGHT BRN. SAND (OU) (U)
21	B	20	GRAY WITH LIGHT BRN. SAND (OU) (U)
22	B	21	GRAY WITH LIGHT BRN. SAND (OU) (U)
23	B	22	GRAY WITH LIGHT BRN. SAND (OU) (U)
24	B	23	GRAY WITH LIGHT BRN. SAND (OU) (U)
25	B	24	GRAY WITH LIGHT BRN. SAND (OU) (U)
26	B	25	GRAY WITH LIGHT BRN. SAND (OU) (U)
27	B	26	GRAY WITH LIGHT BRN. SAND (OU) (U)
28	B	27	GRAY WITH LIGHT BRN. SAND (OU) (U)
29	B	28	GRAY WITH LIGHT BRN. SAND (OU) (U)
30	B	29	GRAY WITH LIGHT BRN. SAND (OU) (U)
31	B	30	GRAY WITH LIGHT BRN. SAND (OU) (U)
32	B	31	GRAY WITH LIGHT BRN. SAND (OU) (U)
33	B	32	GRAY WITH LIGHT BRN. SAND (OU) (U)
34	B	33	GRAY WITH LIGHT BRN. SAND (OU) (U)
35	B	34	GRAY WITH LIGHT BRN. SAND (OU) (U)
36	B	35	GRAY WITH LIGHT BRN. SAND (OU) (U)
37	B	36	GRAY WITH LIGHT BRN. SAND (OU) (U)
38	B	37	GRAY WITH LIGHT BRN. SAND (OU) (U)
39	B	38	GRAY WITH LIGHT BRN. SAND (OU) (U)
40	B	39	GRAY WITH LIGHT BRN. SAND (OU) (U)
41	B	40	GRAY WITH LIGHT BRN. SAND (OU) (U)
42	B	41	GRAY WITH LIGHT BRN. SAND (OU) (U)
43	B	42	GRAY WITH LIGHT BRN. SAND (OU) (U)
44	B	43	GRAY WITH LIGHT BRN. SAND (OU) (U)
45	B	44	GRAY WITH LIGHT BRN. SAND (OU) (U)
46	B	45	GRAY WITH LIGHT BRN. SAND (OU) (U)
47	B	46	GRAY WITH LIGHT BRN. SAND (OU) (U)
48	B	47	GRAY WITH LIGHT BRN. SAND (OU) (U)
49	B	48	GRAY WITH LIGHT BRN. SAND (OU) (U)
50	B	49	GRAY WITH LIGHT BRN. SAND (OU) (U)
51	B	50	GRAY WITH LIGHT BRN. SAND (OU) (U)
52	B	51	GRAY WITH LIGHT BRN. SAND (OU) (U)
53	B	52	GRAY WITH LIGHT BRN. SAND (OU) (U)
54	B	53	GRAY WITH LIGHT BRN. SAND (OU) (U)
55	B	54	GRAY WITH LIGHT BRN. SAND (OU) (U)
56	B	55	GRAY WITH LIGHT BRN. SAND (OU) (U)
57	B	56	GRAY WITH LIGHT BRN. SAND (OU) (U)
58	B	57	GRAY WITH LIGHT BRN. SAND (OU) (U)
59	B	58	GRAY WITH LIGHT BRN. SAND (OU) (U)
60	B	59	GRAY WITH LIGHT BRN. SAND (OU) (U)
61	B	60	GRAY WITH LIGHT BRN. SAND (OU) (U)
62	B	61	GRAY WITH LIGHT BRN. SAND (OU) (U)
63	B	62	GRAY WITH LIGHT BRN. SAND (OU) (U)
64	B	63	GRAY WITH LIGHT BRN. SAND (OU) (U)
65	B	64	GRAY WITH LIGHT BRN. SAND (OU) (U)
66	B	65	GRAY WITH LIGHT BRN. SAND (OU) (U)
67	B	66	GRAY WITH LIGHT BRN. SAND (OU) (U)
68	B	67	GRAY WITH LIGHT BRN. SAND (OU) (U)
69	B	68	GRAY WITH LIGHT BRN. SAND (OU) (U)
70	B	69	GRAY WITH LIGHT BRN. SAND (OU) (U)
71	B	70	GRAY WITH LIGHT BRN. SAND (OU) (U)
72	B	71	GRAY WITH LIGHT BRN. SAND (OU) (U)
73	B	72	GRAY WITH LIGHT BRN. SAND (OU) (U)
74	B	73	GRAY WITH LIGHT BRN. SAND (OU) (U)
75	B	74	GRAY WITH LIGHT BRN. SAND (OU) (U)
76	B	75	GRAY WITH LIGHT BRN. SAND (OU) (U)
77	B	76	GRAY WITH LIGHT BRN. SAND (OU) (U)
78	B	77	GRAY WITH LIGHT BRN. SAND (OU) (U)
79	B	78	GRAY WITH LIGHT BRN. SAND (OU) (U)
80	B	79	GRAY WITH LIGHT BRN. SAND (OU) (U)
81	B	80	GRAY WITH LIGHT BRN. SAND (OU) (U)
82	B	81	GRAY WITH LIGHT BRN. SAND (OU) (U)
83	B	82	GRAY WITH LIGHT BRN. SAND (OU) (U)
84	B	83	GRAY WITH LIGHT BRN. SAND (OU) (U)
85	B	84	GRAY WITH LIGHT BRN. SAND (OU) (U)
86	B	85	GRAY WITH LIGHT BRN. SAND (OU) (U)
87	B	86	GRAY WITH LIGHT BRN. SAND (OU) (U)
88	B	87	GRAY WITH LIGHT BRN. SAND (OU) (U)
89	B	88	GRAY WITH LIGHT BRN. SAND (OU) (U)
90	B	89	GRAY WITH LIGHT BRN. SAND (OU) (U)
91	B	90	GRAY WITH LIGHT BRN. SAND (OU) (U)
92	B	91	GRAY WITH LIGHT BRN. SAND (OU) (U)
93	B	92	GRAY WITH LIGHT BRN. SAND (OU) (U)
94	B	93	GRAY WITH LIGHT BRN. SAND (OU) (U)
95	B	94	GRAY WITH LIGHT BRN. SAND (OU) (U)
96	B	95	GRAY WITH LIGHT BRN. SAND (OU) (U)
97	B	96	GRAY WITH LIGHT BRN. SAND (OU) (U)
98	B	97	GRAY WITH LIGHT BRN. SAND (OU) (U)
99	B	98	GRAY WITH LIGHT BRN. SAND (OU) (U)
100	B	99	GRAY WITH LIGHT BRN. SAND (OU) (U)

- NOTES**
- SOIL DESCRIPTIONS ARE BY VISUAL EXAMINATION OF SOIL SAMPLES RECOVERED DURING DRILLING OPERATIONS.
  - SOIL DESCRIPTIONS ARE IN ACCORD WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.
  - GROUND WATER TABLE WAS MEASURED INSIDE THE DRILL CASING AT THE COMPLETION OF EACH BOREHOLE.
  - SOIL STRATIFICATIONS ARE ACCURATE TO WITHIN TWO FEET VERTICALLY.
  - SOIL SAMPLES WERE OBTAINED USING A CENTRAL MINE EQUIPMENT (CME) AUTOMATIC TRIP HAMMER.
  - SOIL TEST BORING GROUND SURFACE ELEVATIONS SHOWN ARE REFERENCED TO TOP OF DRAIN INLET AT B.M. EL. 6.68'.
  - B-M.W. - DENOTES MONITORING WELLS RELOCATED.



SOIL TEST BORING & MONITORING WELL LOCATION PLAN

SOIL GROUPS	TYPICAL NAMES AND SOIL SYMBOLS	UNIFIED SOIL CLASSIFICATION
1a THRU 1d	BED ROCK	
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 SOILS, 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	ALLOWABLE LOAD PER SQUARE FOOT (PSF)	MAXIMUM ALLOWABLE FOUNDATION PRESSURE (PSF)
1. GRANULAR SOILS (SAND, GRAVEL, SAND & GRAVEL)	60	5,748
2. SANDY GRAVEL AND GRAVEL (GW, GP) (NOTES 3, 4, 5, AND 6)	40	3,800
3. SANDY SILT AND SILTY SAND (GM, GC) (NOTES 3, 4, 5, AND 6)	8	766
4. CLAYEY SAND AND SANDY CLAY (SW, SP) (NOTES 3, 4, 5, AND 6)	0	0
5. CLAYEY SILT AND SILTY CLAY (SM, SC) (NOTES 3, 4, 5, AND 6)	6	575
6. CLAYEY SAND AND SANDY CLAY (ML, CL) (NOTES 3, 4, 5, AND 6)	5	479
7. CLAYEY SILT AND SILTY CLAY (OL, MH) (NOTES 3, 4, 5, AND 6)	2	192
8. CLAYEY SAND AND SANDY CLAY (CH, OH) (NOTES 3, 4, 5, AND 6)	1.5	144
9. PEAT AND OTHER HIGHLY ORGANIC SOILS (PT)	SEE 1804.2.1 *	SEE 1804.2.1 *

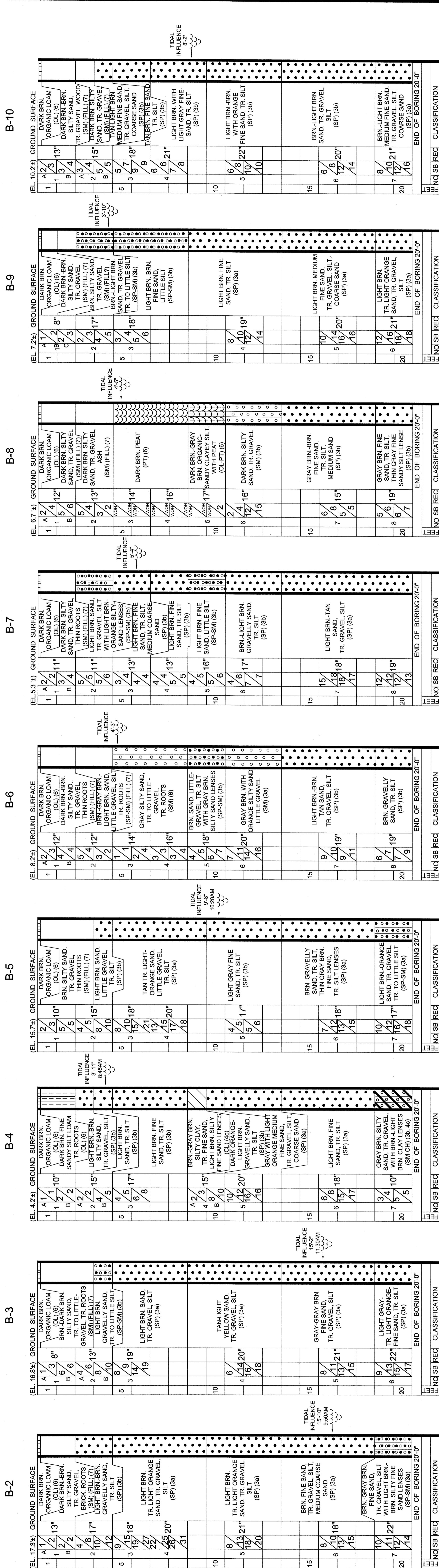
\* REFER TO SECTION 1804.2 OR NOTES FOLLOWING TABLE 1804.1 IN N.Y.C. BUILDING CODE FOR ADDITIONAL INFORMATION.

**SOIL MECHANICS DRILLING CORP.**  
**Subsoil Investigations**  
 SUBSURFACE INVESTIGATION  
 THE WOODMERE COUNTRY CLUB  
 99 MEADOW DRIVE  
 WOODMERE, NEW YORK

YHB ENGINEERING  
 2150 COUNTRY PATH  
 SUITE 200  
 HAUPPAUGE, NEW YORK 11788

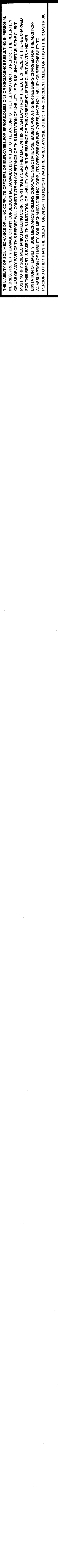
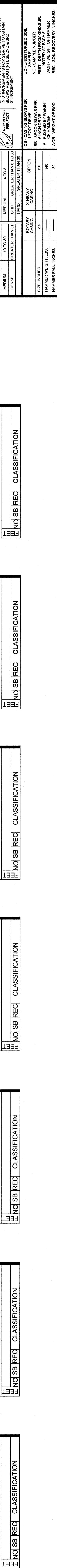
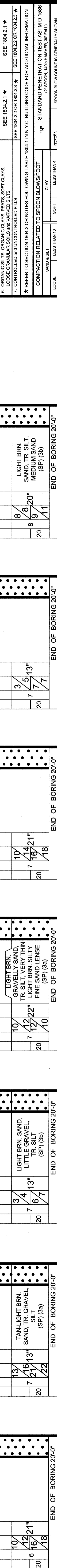
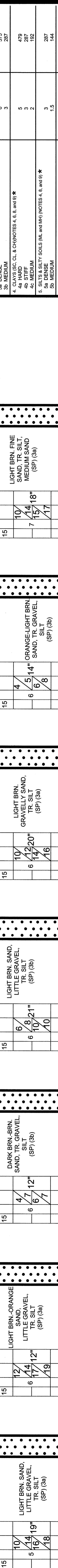
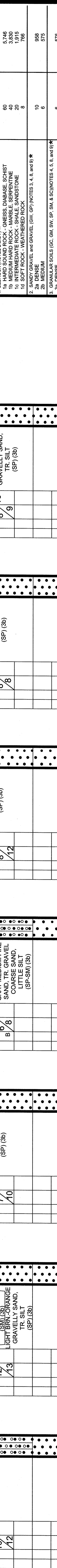
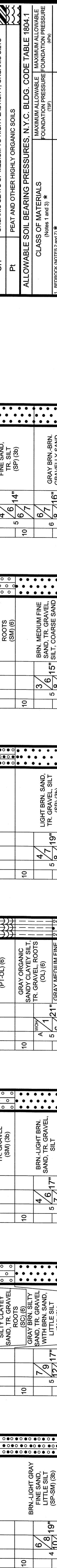
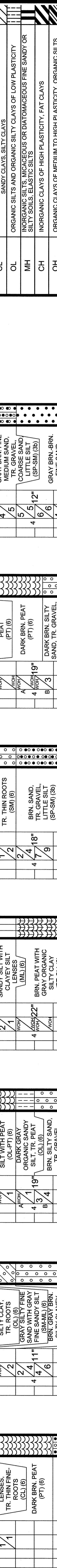
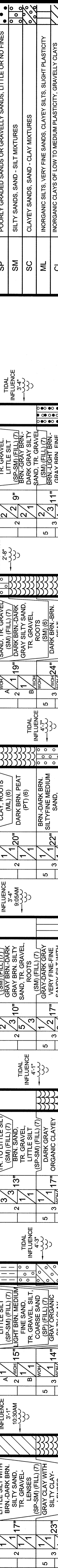
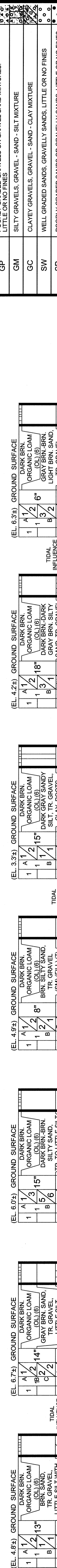
3770 MERRICK ROAD - SEAFORD, NEW YORK 11783 • 516.221-2333

DRAWING NUMBER: 19L474.17  
 SHEET: 1 OF 2  
 DRAWING DATE: NOVEMBER 1, 2019  
 DRAWN BY: [REDACTED]  
 CHECKED BY: [REDACTED]  
 DATE OF BORING: OCTOBER 22, 2019



SOIL GROUPS	TYPICAL NAMES AND SOIL SYMBOLS
1a THRU 1d	BED ROCK
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, LOW PLASTICITY, GRAVELLY CLAYS
OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH	INORGANIC SILTS, INTERMEDIATE TO HIGH PLASTICITY, FAT CLAYS
CH	ORGANIC 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	MAXIMUM ALLOWABLE FOUNDATION PRESSURE
CLASS OF MATERIALS (Notes 1 and 3) *	MAXIMUM ALLOWABLE FOUNDATION PRESSURE (PSF)
1. BED ROCK (NOTES 2 AND 7) *	AS TESTED
2. SANDS, SILTS AND CLAYS (NOTES 4, 6, 8, AND 9) *	AS TESTED
3. INTERMEDIATE ROCK - SHALE, SANDSTONE	20
4. SOFT ROCK - WEATHERED ROCK	8
5. DENSE SANDS AND GRAVELS (GW, GP) (NOTES 3, 4, 6, AND 9) *	10
6. MEDIUM SANDS AND GRAVELS (GM, GC, SW, SP, SM, SC) (NOTES 4, 6, 8, AND 9) *	6
7. LIGHT SANDS AND GRAVELS (GW, GP) (NOTES 4, 6, 8, AND 9) *	3
8. MEDIUM SANDS AND GRAVELS (GM, GC, SW, SP, SM, SC) (NOTES 4, 6, 8, AND 9) *	3
9. LIGHT SANDS AND GRAVELS (GW, GP) (NOTES 4, 6, 8, AND 9) *	3
10. MEDIUM SANDS AND GRAVELS (GM, GC, SW, SP, SM, SC) (NOTES 4, 6, 8, AND 9) *	2
11. LIGHT SANDS AND GRAVELS (GW, GP) (NOTES 4, 6, 8, AND 9) *	2
12. MEDIUM SANDS AND GRAVELS (GM, GC, SW, SP, SM, SC) (NOTES 4, 6, 8, AND 9) *	2
13. LIGHT SANDS AND GRAVELS (GW, GP) (NOTES 4, 6, 8, AND 9) *	2
14. MEDIUM SANDS AND GRAVELS (GM, GC, SW, SP, SM, SC) (NOTES 4, 6, 8, AND 9) *	2
15. LIGHT SANDS AND GRAVELS (GW, GP) (NOTES 4, 6, 8, AND 9) *	2
16. MEDIUM SANDS AND GRAVELS (GM, GC, SW, SP, SM, SC) (NOTES 4, 6, 8, AND 9) *	2
17. LIGHT SANDS AND GRAVELS (GW, GP) (NOTES 4, 6, 8, AND 9) *	2
18. MEDIUM SANDS AND GRAVELS (GM, GC, SW, SP, SM, SC) (NOTES 4, 6, 8, AND 9) *	2
19. LIGHT SANDS AND GRAVELS (GW, GP) (NOTES 4, 6, 8, AND 9) *	2
20. MEDIUM SANDS AND GRAVELS (GM, GC, SW, SP, SM, SC) (NOTES 4, 6, 8, AND 9) *	2



**SOIL MECHANICS DRILLING CORP.**  
 subsoil investigations  
 THE WOODMERE INVESTIGATION CLUB  
 99 MEADOW DRIVE  
 WOODMERE, NEW YORK

Y H B ENGINEERING  
 2150 JOSHUA'S PATH  
 SUITE 300  
 HAUPPAUGE, NEW YORK 11788

3770 MERRICK ROAD • SEAFORD, NEW YORK 11783 • 516 221-2333

NOVEMBER 1, 2019  
 DRAWING NO. 19L474.17  
 SHEET 2 OF 2