



## **Phase II Environmental Site Assessment Report**

**FOR**

**Proposed Development  
140-154 North Main Street  
Port Chester, New York**

**Prepared For:**

**ST. KATHERINE GROUP INC.  
181 Westchester Avenue, Suite 301a  
Port Chester, NY 10573**

**Prepared By:**

**SESI CONSULTING ENGINEERS, DPC  
12A Maple Avenue  
Pine Brook, NJ 07058**

**DATE:**

**November 12, 2018**

A handwritten signature in blue ink, appearing to read "Fuad Dahan".

---

**Fuad Dahan, P.E.**

**NY Lic. No. 090531**

# Table of Contents

<b>1.0 INTRODUCTION .....</b>	<b>2</b>
1.1 Site Settings .....	2
1.2 Proposed Site Development.....	2
2.1 Utility Clearance and Geophysical Survey .....	3
2.2 Borings.....	3
<b>3.0 ANALYTICAL RESULTS.....</b>	<b>4</b>
3.1 Soil Investigation Results .....	4
<b>4.0 CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>5</b>

## Appendices

- Appendix A: Analytical Results (Electronic)
- Appendix B: Boring Logs

## Figures

- Figure 1.1: Site Location Map
- Figure 2.1: Boring Location Plan
- Figure 3.1: Soil Sampling Results Plan

## Tables

- Table 1: Soil Analytical Results Table

## **1.0 INTRODUCTION**

SESI Consulting Engineers, DPC (SESI) has conducted this Phase II Environmental Site Assessment (Phase II ESA) on behalf of the Requestor, St. Katherine Group Inc. (St. Katherine), for an approximate 0.5-acre property located at 140-144 N. Main Street, 146-150 N. Main Street and 152-154 N. Main Street, Port Chester, New York (Site). The Site consist of three single-story retail buildings covering and estimated 15,400 square feet, as approximated from municipal records. There are partial cellars under each building.

Historically, the Site was developed with a 20 to 36 car capacity garage, a plumbing establishment, a lumber shed, cigar factory, stores, and dwellings from 1911 to 1934. In addition, historically, there were three (3) gasoline underground storage tanks (USTs) associated with the garage (one at 144 N. Main Street, and two at 148 N. main Street). Figure 1.1 presents a Site location plan.

SESI collected soil samples to investigate the potential for subsurface impacts in connection with the historical uses of the Site.

### **1.1 Site Settings**

The Site consists of three adjacent through mid-block properties as identified in the chart below. The properties each contain a single-story retail building with multiple tenants covering an estimated total of 15,400 square feet, as approximated from the roof surface. The three properties are located at 140-154 N. Main Street in the Village of Port Chester, New York. The site is bounded by N. Main Street to the east, a city owned permit parking lot and street (Marvin Place) to the west and parcels developed by others to the north and south. The buildings are presently occupied by multiple retail tenants and a warehouse.

### **1.2 Proposed Site Development**

The planned new construction for the Site will consist of a mixed-use development consisting of 20,000 SF of retail space, 200 units of residential space, and 200 parking spaces.

## 2.0 SUBSURFACE INVESTIGATION

The field work was conducted under the site-specific Health and Safety Plan (HASP) on October 2, 2018.

### 2.1 Utility Clearance and Geophysical Survey

Prior to conducting any subsurface drilling SESI's drilling contractor contacted New York's utility mark-out system. In addition, SESI retained the services of American Geophysics, a private utility locator, to locate any underground utilities not included in the one-call system and to conduct a geophysical survey to investigate the potential for historical USTs. American Geophysics located numerous underground utilities through-out the Site. No anomalies indicative of UST's were identified. American Geophysics' report is provided in Appendix C.

### 2.2 Borings

Six (6) soil borings, were advanced using a direct push Geoprobe® rig. A total of 6 soil samples were collected and analyzed for various parameters at a NYSDEC ELAP-certified laboratory, TestAmerica, Inc. The soil samples were collected from varying depths based on field screening, which includes screening with Photo Iodization Detector (PID), visual observations, and olfactory observations. All soil samples were named based on their respective soil boring number and specified depth. The boring locations are provided on Figure 2.1.

Table 2.1 is a table summary of the borings conducted and the samples collected.

Table 2.1: Summary of boring depths and sample collection depths

Location	Matrix	Depths (ft BGS)	PID Hits	Comments
GP-1	Soil	1-1.5'	0	Strong Sewage Like Odor
GP-2	Soil	3-3.5'	0	Strong Sewage Like Odor
GP-3	Soil	1.5-2'	0	NA
GP-4	Soil	0-0.5'	0	NA
GP-5	Soil	3-3.5'	0	Ash and Brick Observed
GP-6	Soil	1.5-2'	0	Ash Observed

## 3.0 ANALYTICAL RESULTS

### 3.1 Soil Investigation Results

In total, six (6) soil samples were collected from 6 borings as listed in Table 2.1, which were submitted for analysis. The soil samples were sent to Test America on a chain-of-custody (COC) and analyzed for TCL/TAL+30. The laboratory files are included in Appendix A. Soil sample locations and a summary of the results are shown in Figure 3.1. A summary table of the analytical results is included in Table 1, attached, and the laboratory reports for the soil samples are included electronically in Appendix A. Table 3.1 presents the soil results compared to NYSDEC unrestricted soil clean up objectives (USCOs) and restricted residential soil clean up objectives (RRSCOs) in 6 NYCRR Part 375-6.8(a-b).

Soil borings GP-1 through GP-4 were advanced within the basements of the Site buildings. Soil borings GP-5 and GP-6 were advanced northwest of the buildings within the asphalt parking lot. Visual evidence of historic fill related impacts was observed in GP-5 and GP-6.

No volatile organic compounds (VOCs) or Polychlorinated Biphenyls (PCBs) were identified in any sample collected exceeding the NYSDEC USCO or RRSCOs. Several semi volatile organic compounds (SVOC), pesticides, and/or metals were identified at concentrations exceeding their USCO and/or RRSCOs in samples collected from GP-4(0.5') (lead); GP-5(3') (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, chrysene, Indeno[1,2,3-cd]pyrene, 4,4'-DDE, 4,4'-DDT, copper, lead, zinc, and mercury); GP-6(1.5') (Indeno[1,2,3-cd]pyrene, copper, lead, zinc, and mercury). These findings are summarized on Tables 3.1 below.

Table 3.1: Summary of exceedances of the NYSDEC USCOs and RRSCOs

	Unrestricted	Restricted Residential	GP-1(1')	GP-2(3')	GP-3(1.5')	GP-4(0.5')	GP-5(3')	GP-6(1.5')
			Result	Result	Result	Result	Result	Result
Benzo[a]anthracene	1	1	ND	ND	ND	0.042	1.5	0.65
Benzo[a]pyrene	1	1	ND	ND	ND	0.028	1.2	0.62
Benzo[b]fluoranthene	1	1	ND	ND	ND	0.041	2.0	0.92
Chrysene	1	3.9	ND	ND	0.10	0.036	1.6	0.78
Indeno[1,2,3-cd]pyrene	0.5	0.5	ND	ND	ND	0.026	0.94	0.56
4,4'-DDE	0.0033	8.9	ND	ND	ND	ND	0.0038	ND
4,4'-DDT	0.0033	7.9	ND	ND	ND	ND	0.025	ND
Copper	50	270	15.7	12.0	17.8	16.0	75.9	69.0
Lead	63	400	10.1	4.6	6.9	282	739	808

	Unrestricted	Restricted Residential	GP-1(1')	GP-2(3')	GP-3(1.5')	GP-4(0.5')	GP-5(3')	GP-6(1.5')
			Result	Result	Result	Result	Result	Result
Zinc	109	10000	32.0	17.6	24.9	38.4	450	572
Mercury	0.18	0.81	0.017	ND	0.019	0.075	1.1	0.83

ND = Not Detected

Indicates compound Exceeds NYSDEC USCO but is below NYSDEC RRSCO

Indicates compound exceeds NYSDEC USCO and RRSCO

## 4.0 CONCLUSIONS

The Site historic uses and the investigation results indicate evidence of historic fill impacts in the site soil.

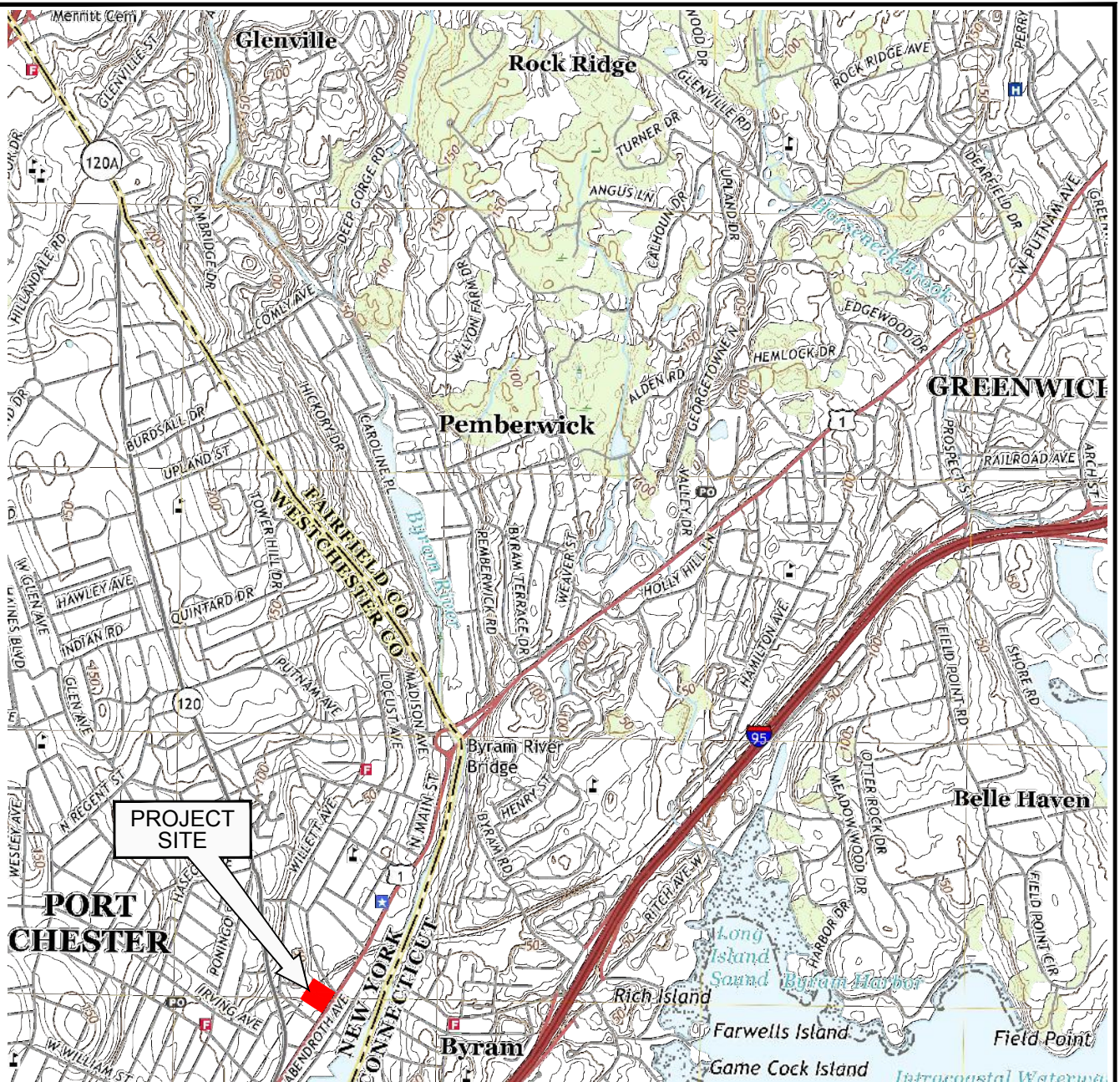
The soil data indicates the presence of SVOCs and heavy metals exceeding NYSDEC RRSCOs, and the soil data indicates the presence of SVOCs, pesticides, and heavy metals exceeding NYSDEC USCOs, with the greatest concentrations identified on the northwest portion of the property within the asphalt paved parking lot where ash and brick were identified within the soil borings.

**TABLES**  
**(Electronic)**

## FIGURES



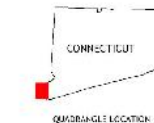
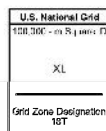
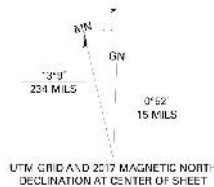
N:\ACAD\10429\10429 FIG-1.1 SITE LOCATION PLAN.DWG 10/10/18 01:41:56PM, jenny, LAYOUT:FIG-1.1



**Produced by the United States Geological Survey**

North American Datum of 1983 (NAD83)  
World Geodetic System of 1984 (WGS84). Projection and  
1 000 meter grid: Universal Transverse Mercator, Zone 18T  
This map is not a legal document. Boundaries may be  
generalized for this map scale. Private lands within government  
reservations may not be shown. Obtain permission before  
entering private lands.

Imagery.....NAIP, May 2015 - September 2016  
Roads.....U.S. Census Bureau, 2016  
Names.....GNIS, 1979 - 2018  
Hydrography.....National Hydrography Dataset, 2004 - 2016  
Contours.....National Elevation Dataset, 2012  
Boundaries.....Multiple sources; see metadata file 2016 - 2017  
Wetlands.....FWS National Wetlands Inventory 1990 - 2011



QUADRANGLE LOCATION

1	2	3
4	5	6
7	8	9

ADJOINING QUADRANGLES

1 Ossining  
2 Mount Kisco  
3 Pound Ridge  
4 White Plains  
5 Stamford  
6 Mount Vernon  
7 Mamaroneck  
8 Bayville

PROPOSED DEVELOPMENT  
140-154 NORTH MAIN STREET  
PORT CHESTER, NEW YORK

**SITE LOCATION MAP**

**SESI**  
CONSULTING  
ENGINEERS D.P.C.

12A MAPLE AVE. PINE BROOK, N.J. 07058 PH: 973-808-9050

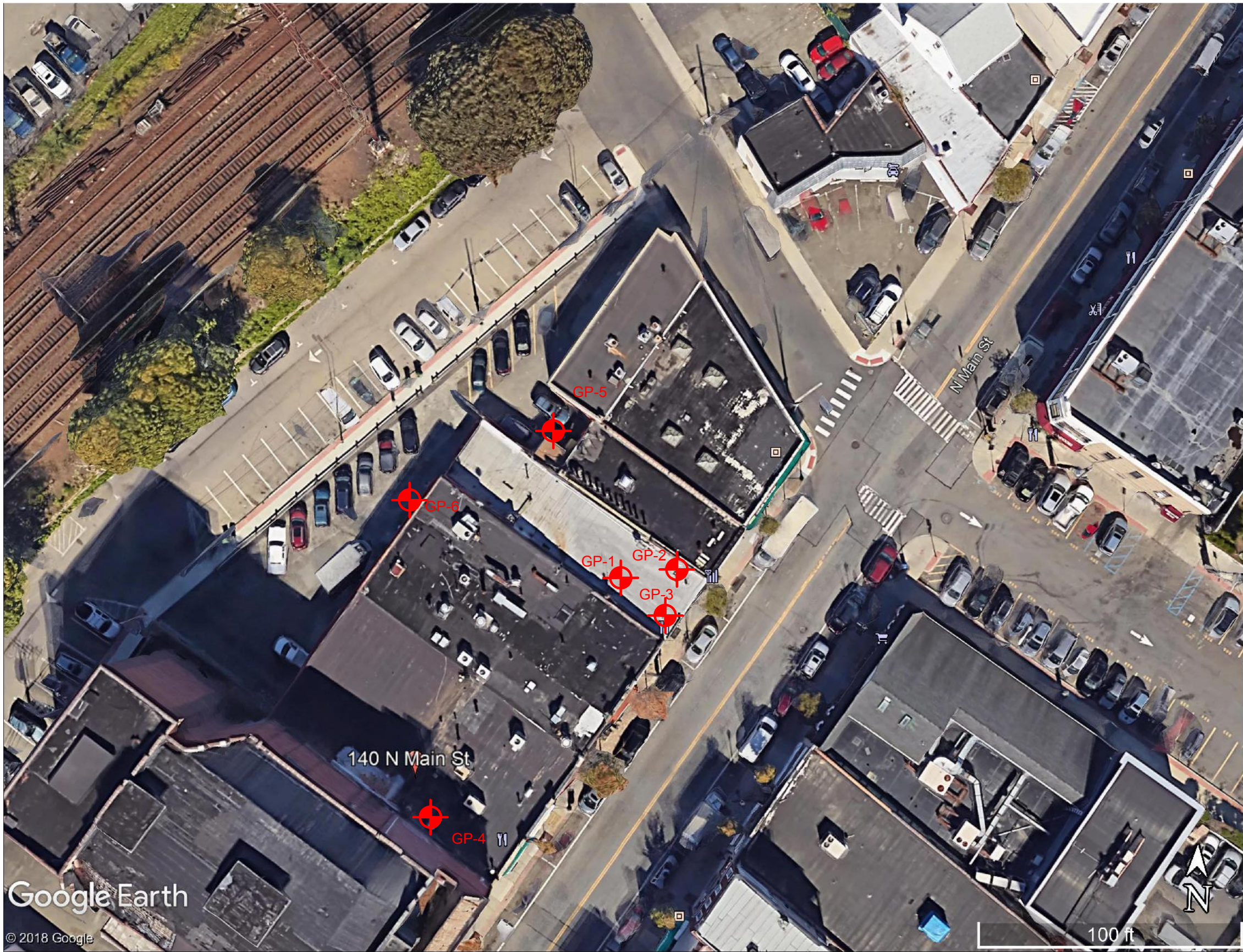
SOILS / FOUNDATIONS  
SITE DESIGN  
ENVIRONMENTAL

**FIG-1.1**

DRAWN BY: yy  
CHECKED BY: AA  
SCALE: N.T.S.  
DATE: 10/10/18  
JOB NO.: 10429




N:\ACAD\10429\10429 BORING LOCATION PLAN.DWG 10/10/18 01:09:57PM, Jenny, LAYOUT:FIG-2.1



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This drawing and all information contained hereon is proprietary information of SESI CONSULTING ENGINEERS D.P.C. and may not be copied or reproduced, either in whole or in part, by any method, without written permission of SESI CONSULTING ENGINEERS D.P.C.

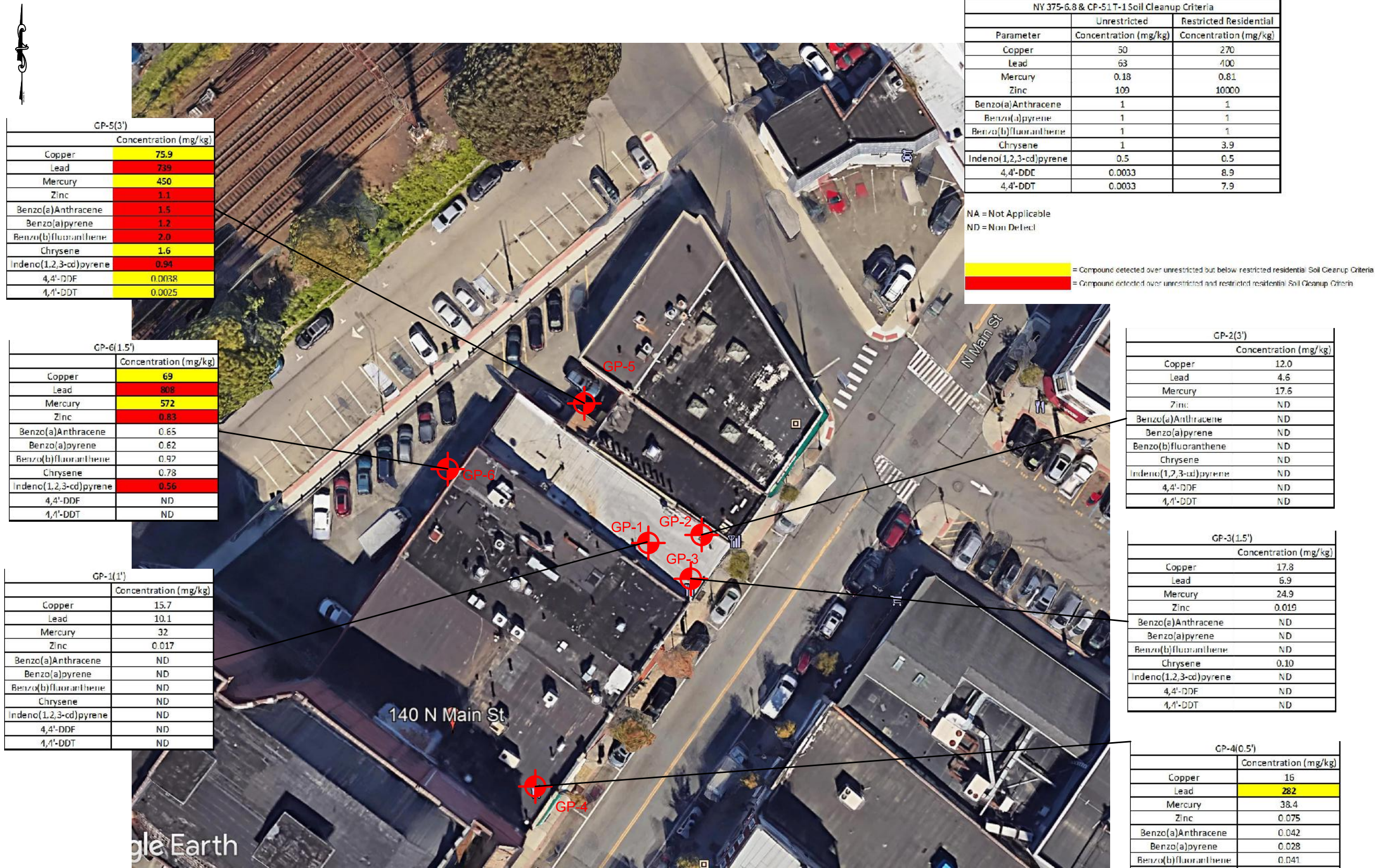
**NOTE:**  
THIS PLAN IS FOR LOCATING BORINGS ONLY.  
OTHER SITE WORK SHOWN HERE IS NOT INTENDED FOR CONSTRUCTION.

**LEGEND:**  
 GP-1 - BORING NUMBER & APPROX. LOCATION

project: PROPOSED DEVELOPMENT 140-154 NORTH MAIN STREET PORT CHESTER, NEW YORK		SOILS / FOUNDATIONS SITE DESIGN ENVIRONMENTAL		dwg by: yy
drawing title: BORING LOCATION PLAN		SES CONSULTING ENGINEERS D.P.C.		chk by: AA
job no: 10429		12A MAPLE AVE. PINE BROOK, N.J. 07058 PH: 973-808-9050		scale: N.T.S.
drawing no:				date: 10/10/18
FIG-2.1				



N:\ACAD\10429\10429 FIG-3.1 SOIL SAMPLING RESULTS.DWG 10/10/18 02:25:50PM jenny\_LAYOUT:FIG-3.1



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**LEGEND:**  
GP-1 - BORING NUMBER & APPROX. LOCATION

dwg by: yy  
chk by: AA  
scale: N.T.S.  
date: 10/10/18

SOILS / FOUNDATIONS  
SITE DESIGN  
ENVIRONMENTAL

**SESI**  
CONSULTING  
ENGINEERS D.P.C.

12A MAPLE AVE. PINE BROOK, N.J. 07058 PH: 973-808-9050

project:  
PROPOSED DEVELOPMENT  
140-154 NORTH MAIN STREET  
PORT CHESTER, NEW YORK

drawing title:  
BORING LOCATION PLAN

job no: 10429  
drawing no:


**FIG-3.1**



**APPENDIX A**  
**Laboratory Results**  
**(Electronic)**

## **APPENDIX B**

### **Boring Logs**

					PROJECT NAME: 140-154 n. Main St.		GEOPROBE NO. <b>GP-1</b>	
					LOCATION: Port Chester, NY		JOB NO. 10429	
					METHOD: Direct Push		GROUND ELEVATION:	
GEOPROBE BY: ERC					DATE STARTED: 10/2/2018		GROUNDWATER TABLE DEPTH:	
INSPECTOR: JS					DATE COMPLETED: 10/2/2018		0 Hr.	±0.5"
							24 Hr.	Date
DEPTH (ft)	RECOVERY (in)	SAMPLE TUBE No.	DEPTH		ENVIRONMENTAL SOIL SAMPLE NAME	SOIL DESCRIPTION AND STRATIFICATION	PID	
			FROM (ft)	TO (ft)				
0								
5	22	S-1	0			4" Concrete Slab, 3" Gravel (strong sewage odor)	0	
				2	GP-1 (1') 12:00	Dark Gray coarse to fine SAND, some coarse to fine Gravel, little Silt	0	
	2	S-2	2	2.5			0	
10						Geoprobe Refusal @ ±2.5 Feet Below Grade		
15								
20								
25								
30								
35								
40								

Nominal I.D. of Hole	in.
Nominal I.D. of Barrel Sampler	1% in


The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.

Pp: Pocket Penetrometer; DP: Direct Push

Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE #

					PROJECT NAME: 140-154 N. Main St.		GEOPROBE NO. <b>GP-2</b>	
					LOCATION: Port Chester, NY		JOB NO. 10429	
					METHOD: Direct Push		GROUND ELEVATION:	
GEOPROBE BY: ERC					DATE STARTED: 10/2/2018		GROUNDWATER TABLE DEPTH:	
INSPECTOR: JS					DATE COMPLETED: 10/2/2018		0 Hr.	±0.5"
							24 Hr.	Date
DEPTH (ft)	RECOVERY (in)	SAMPLE TUBE No.	DEPTH		ENVIRONMENTAL SOIL SAMPLE NAME	SOIL DESCRIPTION AND STRATIFICATION	PID	
			FROM (ft)	TO (ft)				
0								
5	23	S-1	0			3" Concrete Slab, 2" Gravel (strong sewage odor)	0	
				2		5" Dark Gray coarse to fine SAND, some coarse to fine Gravel, little Silt	0	
	14	S-2	2			Brown medium to fine SAND, little medium to fine Gravel, trace Silt	0	
				4	GP-2 (3') 12:45	(slight sewage odor)		
10						Geoprobe Boring Completed @ ±4 Feet Below Grade		
15								
20								
25								
30								
35								
40								

Nominal I.D. of Hole	in.
Nominal I.D. of Barrel Sampler	1% in


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Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE #

					PROJECT NAME: 140-154 N. Main St.		GEOPROBE NO. <b>GP-3</b>	
					LOCATION: Port Chester, NY		JOB NO. 10429	
					METHOD: Direct Push		GROUND ELEVATION:	
GEOPROBE BY: ERC					DATE STARTED: 10/2/2018		GROUNDWATER TABLE DEPTH:	
INSPECTOR: JS					DATE COMPLETED: 10/2/2018		0 Hr.	±0.5"
							24 Hr.	Date
DEPTH (ft)	RECOVERY (in)	SAMPLE TUBE No.	DEPTH		ENVIRONMENTAL SOIL SAMPLE NAME	SOIL DESCRIPTION AND STRATIFICATION	PID	
			FROM (ft)	TO (ft)				
0								
5	21	S-1	0			3" Concrete Slab, 2" Gravel	0	
				2	GP-3 (1.5') 13:30	Dark Gray coarse to fine SAND, some coarse to fine Gravel, little	0	
	7	S-2	2			Silt (slight sewage odor)	0	
				4		Brown medium to fine SAND, little medium ti fine Gravel, trace Silt	0	
						Geoprobe Boring Completed @ ±4 Feet Below Grade		
10								
15								
20								
25								
30								
35								
40								

Nominal I.D. of Hole	in.
Nominal I.D. of Barrel Sampler	1% in

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Pp: Pocket Penetrometer; DP: Direct Push

Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE #



					PROJECT NAME: 140-154 N. Main St.		GEOPROBE NO. <b>GP-4</b>	
					LOCATION: Port Chester, NY		JOB NO. 10429	
					METHOD: Hand Auger		GROUND ELEVATION:	
GEOPROBE BY: ERC					DATE STARTED: 10/2/2018		GROUNDWATER TABLE DEPTH:	
INSPECTOR: JS					DATE COMPLETED: 10/2/2018		0 Hr.	N/E
							24 Hr.	Date
DEPTH (ft)	RECOVERY (in)	SAMPLE TUBE No.	DEPTH		ENVIRONMENTAL SOIL SAMPLE NAME	SOIL DESCRIPTION AND STRATIFICATION	PID	
			FROM (ft)	TO (ft)				
0								
	6	S-1	0	0.5	GP-4 (0.5') 14:00	2" Concrete Slab, 1" Gravel	0	
						Light Brown coarse to fine Sand, and coarse to fine Gravel, trace Silt		
						End of Boring @ ±0.5 Feet Below Grade		
5								
10								
15								
20								
25								
30								
35								
40								

Nominal I.D. of Hole	in.
Nominal I.D. of Barrel Sampler	1% in


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Pp: Pocket Penetrometer; DP: Direct Push

Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE #

					PROJECT NAME: 140-154 N. Main St.		GEOPROBE NO. <b>GP-5</b>	
					LOCATION: Port Chester, NY		JOB NO. 10429	
					METHOD: Direct Push		GROUND ELEVATION:	
GEOPROBE BY: ERC					DATE STARTED: 10/2/2018		GROUNDWATER TABLE DEPTH:	
INSPECTOR: JS					DATE COMPLETED: 10/2/2018		0 Hr.	N/E
							24 Hr.	Date
DEPTH (ft)	RECOVERY (in)	SAMPLE TUBE No.	DEPTH		ENVIRONMENTAL SOIL SAMPLE NAME	SOIL DESCRIPTION AND STRATIFICATION	PID	
			FROM (ft)	TO (ft)				
0								
5	8	S-1	0			5" Asphalt	0	
				2		Fill: Dark Brown coarse to fine SAND, some Clayey Silt, little	0	
	20	S-2	2			medium to fine Gravel, with Asphalt, Ash, Bricks	0	
				4	GP-5 (3') 14:30	Brown medium to fine SAND, little Clayey Silt, little medium to fine Gravel	0	
						Geoprobe Boring Completed @ ±4 Feet Below Grade		
10								
15								
20								
25								
30								
35								
40								

Nominal I.D. of Hole	in.
Nominal I.D. of Barrel Sampler	1% in

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Pp: Pocket Penetrometer; DP: Direct Push

Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE #

Page 1 of 1

					PROJECT NAME: 140-154 N. Main St.		GEOPROBE NO. <b>GP-6</b>	
					LOCATION: Port Chester, NY		JOB NO. 10429	
					METHOD: Direct Push		GROUND ELEVATION:	
GEOPROBE BY: ERC					DATE STARTED: 10/2/2018		GROUNDWATER TABLE DEPTH:	
INSPECTOR: JS					DATE COMPLETED: 10/2/2018		0 Hr.	N/E
							24 Hr.	Date
DEPTH (ft)	RECOVERY (in)	SAMPLE TUBE No.	DEPTH		ENVIRONMENTAL SOIL SAMPLE NAME	SOIL DESCRIPTION AND STRATIFICATION	PID	
			FROM (ft)	TO (ft)				
0								
5	18	S-1	0			5" Asphalt	0	
				2	GP-6 (1.5') 15:00	Fill: Dark Brown coarse to fine SAND, some Clayey Silt, little	0	
	20	S-2	2		medium to fine Gravel, with Asphalt, Ash, Bricks, Concrete	0		
				4	Brown medium to fine SAND, little Clayey Silt, little medium to fine Gravel	0		
					Geoprobe Boring Completed @ ±4 Feet Below Grade			
10								
15								
20								
25								
30								
35								
40								

Nominal I.D. of Hole	in.
Nominal I.D. of Barrel Sampler	1% in

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Pp: Pocket Penetrometer; DP: Direct Push

Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE #