

Geotechnical Foundations Land Planning Geo-Structural Environmental Water Resources

Principals:

October 29, 2020 via email: <u>btierney@amsacquisitions.com</u>

Brian Tierney AMS Yonkers LLC 595 Madison Ave. Suite 1101 New York, NY 10022

Fuad Dahan, PhD, PE, LSRP John M. Nederfield, PE Justin M. Protasiewicz, PE Michael St. Pierre, PE

Anthony Castillo, PE

RE:

Geotechnical Review Letter Chicken Island – Proposed Residential Development 32 John Street Yonkers, NY 10701 SESI Project No. 11550

Dear Mr. Tierney:

In accordance with our Professional Services Agreement dated October 5, 2020, we have completed our geotechnical review for the above referenced project. This letter contains a summary of our findings and presents recommendations for the proposed construction.

In preparation of this letter, SESI has completed our review of the following:

- Phase 1 Coordination concept plans, prepared by S9 Architecture, dated September 10, 2020;
- Phase 2 Coordination concept plans, prepared by S9 Architecture, dated September 10, 2020;
- Phase 3 Coordination concept plans, prepared by S9 Architecture, dated September 10, 2020;
- Phase 4 Coordination concept plans, prepared by S9 Architecture, dated September 10, 2020;
- Phase 5 Coordination concept plans, prepared by S9 Architecture, dated September 10, 2020;
- *Preliminary Geotechnical Report*, prepared by McLaren Engineering Group, dated January 30, 2007; and
- Historic SESI investigations performed in 2007 and 2017

Please feel free to contact me if you have any questions regarding the above.

Sincerely,

#### SESI CONSULTING ENGINEERS

Michael St. Pierre, P.E. President

Michael A. Felicetta Assistant Project Engineer II

#### **PROPOSED CONSTRUCTION & EXISTING SITE CONDITIONS**

SESI understands that the existing project site consists of approximately 13 acres of contiguous parcels known as Chicken Island, located in the City of Yonkers, New York. The majority of the existing site is bound by Palisades Avenue to the north, James Street and Henry Herz Street to the west, Nepperhan Avenue to the South, and New School Street to the east. The remaining portion of the proposed development is located to the southeast of the intersection of John Street and New School Street. The site currently consists of paved parking lots, roadways, and landscaped areas and also contains multiple retaining walls. The Saw Mill River enters the project site in an open channel to the east of the John Street Extension, flows westward in a culvert under New School Street, the municipal parking lot and Henry Hertz Street, then turns northward in an open channel, then continues northward in a culvert under Ann Street and the lots to the west. The existing site is generally gently sloping upward from west to east and south to north with grades ranging from approximately Elevation +51 to Elevation +66. Based on our review of the concept plans, the proposed construction may consist of a 5-phase residential development at the proposed project site. Phase 1 will consist of a 100 to 400-foot-tall residential high-rise with a 20 to 40-foot-high podium, also containing 3 stories of below grade parking; Phase 1A will consist of a 25 foot tall retail pavilion; Phase 2 will consist of a 165 to 250-foot-tall residential high-rise with a 65-foothigh podium, also containing 2 stories of below grade parking; Phase 3, which will be connected to the Phase 2 development, will consist of a 400-foot-tall residential high-rise with a 65-foot-high podium, also containing 2 stories of below grade parking; Phase 4 will consist of a 250-foot-tall residential high-rise with a 25-foot-high podium, also containing 1 story of below grade parking; and Phase 5 will consist of a 250-foot-tall residential high-rise with a 65-foot-high podium.

Based on our review of the concept plans, SESI understands the proposed construction will have basement floor elevations ranging between Elevation + 26.0 and Elevation +40 for Phase 1 through Phase 4, excluding Phase 1A as no elevations were provided. Phase 5 will have a finished floor elevation of +65 and not contain a basement level. Based on the proposed elevations, cuts to achieve the basement floor elevation will range between 25 and 40 feet for the Phase 1 development area, between 17 and 21 feet for the Phase 2 and 3 development areas, and between 1 and 6 feet for the Phase 4 development area. Deeper cuts should be anticipated for foundations, sub-slab utilities, and excavations for portions of the buildings such as elevator and sump pits. Fills of up to 3 feet will be required for the Phase 5 development area. It is assumed that Phase 1A construction does not have a basement and that only minor cuts and fill will be required to achieve the proposed finished floor elevation.

In preparation of this letter, SESI has not received any civil or structural design drawings or any of the proposed column and wall loads. Once completed, these plans should be made available to SESI for review, in order to confirm the preliminary recommendations presented herein remain valid.

#### HISTORIC FIELD INVESTIGATIONS

Our engineering evaluation is based on a review of existing soils and geologic data, a review of the investigation and *Preliminary Geotechnical Report*, prepared by McLaren Engineering Group, and previous investigations performed by SESI. The *Preliminary Geotechnical Report*, by McLaren Engineering Group included 22 boring logs and 4 test pit logs from a 2007 investigation. McLaren's explorations were performed at widely spaced locations across the site and on parcels adjacent to the proposed development. SESI's previous investigation performed in 2007 and 2017 as part of an environmental investigation consisted of the drilling of approximately 60 borings which included the installation of 46 monitoring wells and 5 soil vapor points. SESI's explorations were performed at widely spaced locations across the proposed development. An exploration location plan and the subsurface investigation logs by McLaren Engineering Group and SESI are included in **Appendix A**.

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#### SUBSURFACE CONDITIONS

Generally, the site subsurface conditions consist of uncontrolled fill, underlain by glacial till, underlain by bedrock. Based on a review of the investigations performed by McLaren Engineering Group and SESI's historic investigations, the following subsurface conditions were encountered in order of increasing depth:

<u>Surface Materials:</u> The surface materials encountered in the borings generally consisted of up to 6 inches of asphalt pavement within the parking lot areas and between 6 to 12 inches of topsoil within investigations performed in landscaped areas. Curbs, sidewalks, and slabs are also present at the site.

<u>Uncontrolled Fill:</u> An uncontrolled fill was encountered below the surface materials in all borings and generally consisted of a predominately granular soil intermixed with construction debris, containing concrete, brick, wood, metal and other miscellaneous debris. The uncontrolled fill also contained variable amounts of cobbles and boulders. The uncontrolled fill, within the limits of the proposed development, was noted to extend to depths ranging between 1 and 15 feet below existing grades; however, it was noted that, as much as 25 feet of uncontrolled fill was observed in locations on adjacent parcels. This stratum was generally observed to be in a loose to very dense state, which is typical of an uncontrolled fill.

<u>Glacial Till:</u> Underlying the uncontrolled fill, the native glacial till soils were encountered. The glacial soils typically consist of a heterogenous mixture of sand, silt, and gravel, laden with cobbles and boulders. It should be noted that two distinct types of glacial till are commonly encountered in this area, a gray-brown and a red-brown glacial till which is the result of two separate glacial epics which occurred in this region. The glacial till extended to depths of 25 to 75 feet below existing grades within the proposed development area and was occasionally deeper or shallower at the adjacent parcels. The glacial till was generally observed to be in a dense to very dense condition and generally became more dense with increasing depth. It should be noted that the advancement of borings in this layer was often very difficult due to the frequency and size of the cobbles and boulders and the density of the layer.

<u>Bedrock:</u> Underlying the glacial till, the gneissic parent bedrock (Fordham Gneiss formation) was encountered at elevations varying from -16 to +35. Based on the rock cores performed by McLaren Engineering Group, the Rock Quality Designations (RQDs) in the upper 10 feet ranged between 8% and 87%. The RQDs average approximately 48.3% in the upper 5 feet, 43.0% between 5 and 10 feet below the top of the rock surface, and the overall average RQD is approximately 47.6%. It should be noted that the eastern extent of the proposed development lies within the Inwood Marble formation and several blocks west of the proposed site is also mapped within the Inwood Marble formation. It is conceivable that this formation may be encountered during construction. It should be noted that bedrock was not encountered in all borings.

Within the proposed Phase 1 development, the top of bedrock was observed between elevation -16 and +23. Within the proposed Phase 2 & 3 developments, the top of rock was observed between elevations +15 and +17. Within the proposed Phase 4 development, the top of rock was observed between elevation +34 and +35, and finally, within the proposed Phase 5 development, the top of rock was observed between elevation varies between elevation +3 and +22, where encountered. It should be noted that the bedrock elevation varies across the site and generally is encountered at a higher elevation proceeding southward and eastward.

RELATIONSHIP OF RQD AND ROCK QUALTIY								
ROCK QUALITY DESIGNATION (RQD) <sup>(1)</sup>	DESCRIPTION OF ROCK QUALITY							
0 – 25	VERY POOR							
25 – 50	POOR							
50 – 75	FAIR							
75 – 90	GOOD							
90 – 100	EXCELLENT							
<sup>(1)</sup> "Rock Quality Designation" is defined as the cumulative divided by the total length of the rock core run. Obvious fract								

<u>Groundwater:</u> Across the development area, groundwater ranges between elevation +40.5 to elevation +60. The groundwater typically flows from east to west and becomes deeper in elevation proceeding west. It should be noted that localized zones of perched water may be encountered within the fill, in zones with high percentages of fine-grained soils, and at the soil-rock interface.

Within the proposed Phase 1 development, the groundwater table was observed between elevation +40.5 and +53. Within the proposed Phase 2 & 3 developments, the groundwater table was observed between elevations +41.5 and +51. Within the proposed Phase 4 development, the groundwater table was observed between elevation +50.5 and +53, and finally, within the proposed Phase 5 development, the groundwater table was observed between elevation +52 and +60.

A table summarizing approximate ground surface elevations, groundwater elevations, and top of rock elevations based on each development area is provided in Table 1 below:

Table 1 – Elevation Summary Table								
Development Area (Lowest Floor El.)	Ground Surface Elevations	Groundwater Elevations	Top of Rock Elevations					
Phase 1 Dev. Area (B.F.E. +26)	+51 to +66 (Increasing W to E)	+40.5 to +53	-16 to +23					
Phase 1A Dev. Area (F.F.E Unknown)	+54 to +56 (Increasing W to E)	+45	-15					
Phase 2 & 3 Dev. Area (B.F.E. +40)	+57 to +61 (Increasing W to E)	+41.5 to +51	+15 to +17					
Phase 4 Dev. Area (B.F.E. +57)	+58 to +63 (Increasing W to E)	+50.5 to +53	+34 to +35					
Phase 5 Dev. Area (F.F.E. +65)	+61 to +63 (Increasing W to E)	+52 to +60	+3 to +22					

#### **EVALUATION AND RECOMMENDATIONS**

The recommended site preparation and building support considerations discussed in this report are based primarily on geotechnical engineering considerations. Our geotechnical design considerations may require modifications to address environmental and/or legal considerations. This may include reuse of on-site materials, handling and disposal of soils, pumping/treating of groundwater, etc. It should be noted that much of the Site is in the Brownfield Cleanup Program. As such, a Site Management Plan was developed by SESI that governs all future development and intrusive activities.

From a soils and foundation support standpoint, this Site can be considered good with respect to providing satisfactory support of the planned construction. The primary negative aspects of the site are the depth of uncontrolled fill in some areas, the depth to groundwater, which in some cases is at a higher elevation than the proposed finished floor elevations, and the depth to bedrock. Although areas of thick uncontrolled fills were encountered, it is anticipated that these materials will be removed in the Phase 1, Phase 2, and Phase 3 development areas in order to construct the proposed structures.

Based on a review of the proposed development concept plans, the subsurface conditions, and the anticipated heavy loads from the structures, the proposed buildings could be supported on either a mat foundation or on a deep foundation consisting of drilled shafts. We do not believe that driven piles would be appropriate due to the frequency of boulders in the glacial soils. The selection of the appropriate foundation support option will also depend on the lateral and uplift loads of the structure. The use of tie-downs may be required with the mat foundation alternate if the dead load of the structure is not sufficient to resist the uplift or hydrostatic loads.

#### **Mat Foundation Option**

The proposed buildings may be supported on a mat foundation deriving its support from the natural glacial soils or controlled compacted fills and be designed using a maximum net allowable soil bearing pressure of 3.0 tsf (6,000 psf) to 5.0 tsf (10,000 psf), depending on the depth of the mat below the ground surface. The mat foundation should be designed using a subgrade modulus of 175 pci, assuming that a 12-inch thick layer of <sup>3</sup>/<sub>4</sub>-inch clean crushed stone is placed beneath the mat. Prior to the placement of stone, the subgrade should be inspected by SESI to confirm the required bearing capacity.

If an uncontrolled fill is present beneath the proposed mat foundation subgrade elevation (Phase 1A, 4 and 5 buildings), it will be necessary to remove the uncontrolled fill and replace it in a controlled manner. This could require excavations extending to depths of up to  $15\pm$  feet below existing grade to reach the natural soils. In order to achieve these depths, it will likely be necessary to install a support of excavation (SOE) system and dewatering system which is discussed later in this report.

Due to the high groundwater and the proposed foundation depths in the Phase 1, 2 and 3 buildings, the mat foundation will need to be designed as a watertight "bathtub" and will need to be designed to account for hydrostatic pressure which may require the use of tie-down anchors to overcome the uplift forces. The foundation walls would also need to be designed to withstand these forces. The watertight system would likely include the use of a membrane such as the Preprufe/Bituthene waterproofing system by W. R. Grace and Co. and the use of water-stops at joints where the foundation wall sections, and slab come together.

If tie-down anchors are required to compensate for the hydrostatic pressure or uplift forces on the building, they may consist of a 24-strand cable installed within a 12-inch diameter cased drill hole. The bonded zone for the anchor would fall within the glacial till or bedrock. A 24-strand anchor has a material capacity of approximately 840 kips. The length/depth of the anchor will be dependent on the required uplift loads and the number of anchors. The tie-down anchors will impart a load on the mat foundation

which may exceed the bearing capacity of the soil. The need for the anchors should be determined by the structural engineer during the design process.

Settlement of the mat foundation would be determined during the design of the foundation system.

#### Drilled Shaft Option

The proposed buildings may be supported on drilled shafts deriving their support from the dense glacial soils or bedrock. Drilled shafts drilled into the natural glacial soils or bedrock will provide relatively high capacity foundation elements. The drilled shafts would bypass any uncontrolled fills which would eliminate the need to remove and replace the fill and will eliminate the need for an SOE in the Phase 1A, 4 and 5 buildings. The drilled shaft or caisson foundation system would consist of a concrete filled casing, extending into the dense glacial soils or bedrock, depending on the loads required (dead load and uplift load) and depth to bedrock. Drilled shafts extending into the bedrock will include an uncased rock socket, and rebar cage or center bar. The diameter of the rock socket shall be approximately equal to the inside diameter of the pile. The depth of the rock socket shall not be less than the outside diameter of the casing and should be sufficient to develop the full load capacity of the drilled shaft with a minimum factor of safety of two.

The rock socket and casing should be thoroughly cleaned of foreign materials and water should be removed prior filling with concrete. The drilled shaft shall have a full depth structural rebar cage or equivalent steel full depth core installed into the rock socket. The diameter of the elements and amount of steel area required will be designed once loads are provided. The steel cage or core shall not exceed 25 percent of the gross area of the drilled shaft and shall have a minimum clearance of 2 inches between the inner steel and the casing. If water is present within the casing and/or rock socket and cannot be removed prior to placing the concrete, the concrete shall be placed by tremie methods or an approved method. The means and methods of the drilled shaft installation should be left to the discretion of the contractor.

Based on the size of the diameter and embedment into the bearing stratum of the drilled shaft, allowable capacities may range between 75 to 300 tons per element. Higher capacities may be obtained by increasing the rock socket depth or increasing the diameter of the drilled shaft or caisson.

Upon final design, a load testing program shall be implemented and performed in accordance with the 2020 Building Code of New York State.

Utilizing a drilled shaft system will also require a structural slab which will also need to be designed for hydrostatic forces if the lowest floor extends below the groundwater elevation.

Settlement of the foundation system using drilled shafts will be minimal.

#### Support of Excavation System

A support of excavation system will be required in order to achieve the proposed subgrade or overexcavation depths for all of the buildings. The SOE could consist of either drilled soldier beam and lagging system or interlocking sheet piles, although there may be some difficulty installing the sheet piles due to the frequency of cobbles and boulders. Based on the excavation depths, multiple levels of tie-backs will be required. The tie-backs will likely extend beyond the property lines requiring temporary easements from the adjoining property owners or City.

Another option would be to install an interlocking secant pile wall which could be used as both an SOE and the permanent foundation wall for the lower levels. A secant wall is constructed by drilling alternating primary and secondary concrete piles, where the secondary piles cut into the primary piles in order to create a continuous impervious wall. Often, steel beams are inserted into the primary piles to add

additional support. The result is a barrier to stop the flow of water and hold out the soils. Depending on the depth of the excavation, bracing or tie-backs may be required. The secant wall can also be used as the permanent wall of the structure, carrying the wall loads from above. As an alternate to using tie-backs or internal bracing, the building construction could be done using top down construction methods, whereby the secant wall is installed followed by the interior columns installed from the ground surface. Then, the ground floor slab is constructed to brace the top of the secant wall, except for a hole left in the slab to allow for excavation to the lower level beneath the ground floor slab. Once the next floor level is reached, the next level slab is constructed and the process is repeated until the lowest floor elevation is reached.

In all instances where the depth of the excavation extends below the groundwater elevation, the support of excavation system will need to be designed to resist hydrostatic pressures and will need to be designed as a watertight system. In order to construct the soldier beam and lagging system below the water table, the lagging could consist of steel plates welded together and welded to the H-piles. A temporary dewatering system will also be required to keep groundwater levels at least 2 feet below the bottom of the excavation during construction.

Due to the nature of the subsurface soils and the high volume of boulders within the soil matrix, line drilling will likely be required for the soldier beam and lagging or sheet pile wall options along the length of the proposed excavation support system in order to facilitate installation of the lagging without disturbing the soil behind the wall which would result in voids and settlement outside the SOE.

#### **Control of Groundwater**

Groundwater was encountered at elevations ranging from +40.5 to +60 which is below the proposed finished floor elevation in several of the buildings. It will also likely be encountered during any deeper utility installations.

In order to construct the proposed building foundations, a more comprehensive dewatering system may be required. It may be prudent to perform several pump tests on the existing wells in order to determine flow rates and to design a dewatering system.

If stormwater/groundwater seepage is encountered during construction (outside of the areas where know deep excavations and dewatering systems will be required), gravel filled sumps with pumps should be installed below the subgrade elevation to allow for dewatering of the excavation. If any significant groundwater inflow is encountered or if any excavations extend greater than two feet below the observed groundwater levels, a more comprehensive dewatering system may be required. Design of this system will be based on the depth and size of the excavation and the groundwater levels encountered. Permits for construction dewatering may also be required. All pumped water should be handled in accordance with all applicable requirements and regulations and the SMP and be approved by the environmental engineer.

Foundation drains are required for any retaining walls below grade and should be tied to the storm sewer system or to a sump with pump.

We recommend that the site be graded, when necessary, during construction to promote positive surface drainage and avoid ponding of water during construction.

#### Reuse of On-Site Soils

Inorganic cut soils may be reused as structural fill; however, some of the existing fill materials contain miscellaneous construction debris and some of the soils may possess a high silt/clay content and contain significant amounts of cobbles and boulders. The soils with a high silt/clay content will be moisture sensitive and cannot be worked or compacted when significantly over optimum water content and once

wet, will require a period of time to dry. Also, the soils excavated from below the groundwater elevation will be too wet for immediate reuse and will require treatment or drying time prior to use. Cobbles, boulders, and durable construction debris may be crushed and used as structural fill.

The ease with which soil fills can be constructed on this site will, to a degree, depend on the time of year in which construction takes place and the construction procedures utilized by the earthwork contractor. Wetting or drying of the fill soils may be required prior to their reuse. The moisture sensitive soils can also be treated with lime/cement in order to achieve the required moisture contents and densities.

The handling and reuse of soils should be performed and follow the guidance of the current Site Management Plan and the recommendations presented for reuse of on-site soils does not take into account any environmental constraints.

#### Seismic Design

The site soils for the proposed **Phase 1, 2 & 3** buildings have been classified as Site Class C for seismic design purposes in accordance with 2020 Building Code of New York State. Based on a structural occupancy/risk category of I/II/III and information provided by the USGS: U.S. Seismic Design Maps, the following seismic design criteria should be used for this project:

Mapped Spectral Response Acceleration for Short Periods	SS = 0.297g		
Mapped Spectral Response Acceleration for 1-Second Period	S1 = 0.061g		
Site Coefficient	Fa = 1.3		
Site Coefficient	Fv = 1.5		
Spectral Response for short periods	SMS = 0.386g		
Spectral Response for 1 second period	SM1 = 0.092g		
Design Spectral Response Acceleration for Short Periods	SDS = 0.257g		
Design Spectral Response Accelerations for 1-Second Period	SD1 = 0.061g		

The site soils for the proposed **Phase 1A, 4 & 5** buildings have been classified as Site Class D for seismic design purposes in accordance with 2020 Building Code of New York State. Based on a structural occupancy/risk category of I/II/III and information provided by the USGS: U.S. Seismic Design Maps, the following seismic design criteria should be used for this project:

SS = 0.297g
S1 = 0.061g
Fa = 1.562
Fv = 2.4
SMS = 0.464g
SM1 = 0.147g
SDS = 0.309g
SD1 = 0.098g

#### ADDITIONAL CONSIDERATIONS

The existing Saw Mill River flows through a culvert that is located beneath the Phase 4 building. The culvert will either need to be relocated or the proposed foundation be constructed to not impart a load onto the culvert. This will need to be coordinated with the appropriate regulatory agencies.

#### ADDITIONAL INVESTIGATIONS AND STUDIES

We recommend that an additional subsurface exploration program, including soil borings be performed to further explore the nature and consistency of the underlying subsurface conditions. If desired an MASW survey may also be performed within the proposed Phase 1A, 4 & 5 building areas to determine if a higher seismic site class may be utilized.

#### LIMITATIONS

SESI's recommendations are solely based on a review of the published geologic data and review of the referenced documents provided. The subsurface investigation performed by others, identifies the subsurface conditions only at the locations of the explorations and at the depths where the samples were taken. SESI Consulting Engineers reviews the published geologic data and provided field data and uses their professional judgment and experience to render an opinion on the subsurface conditions throughout the site. The recommendations presented here-in are preliminary and not for final design and should be verified with additional investigations or analyses. Because the actual subsurface conditions may differ, we recommend that SESI be retained to provide construction inspection in order to minimize the risks associated with unanticipated conditions.

This report should not be used:

- 1. When the nature of the proposed buildings is changed;
- 2. When the size or configuration of the proposed buildings are altered;
- 3. When the location or orientation of the proposed buildings are modified;
- 4. When there is a change in ownership; or
- 5. For application to an adjacent or any other site.

SESI shall not accept any responsibility for problems, which may occur if SESI is not consulted when there are changes to the factors considered in this report's development. The soil logs should not be separated from the Engineering Report in order to minimize the possibility of soil log misinterpretation.

#### DISCLAIMER

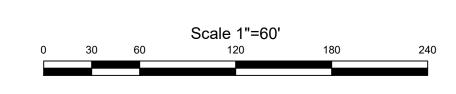
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# **APPENDIX A**

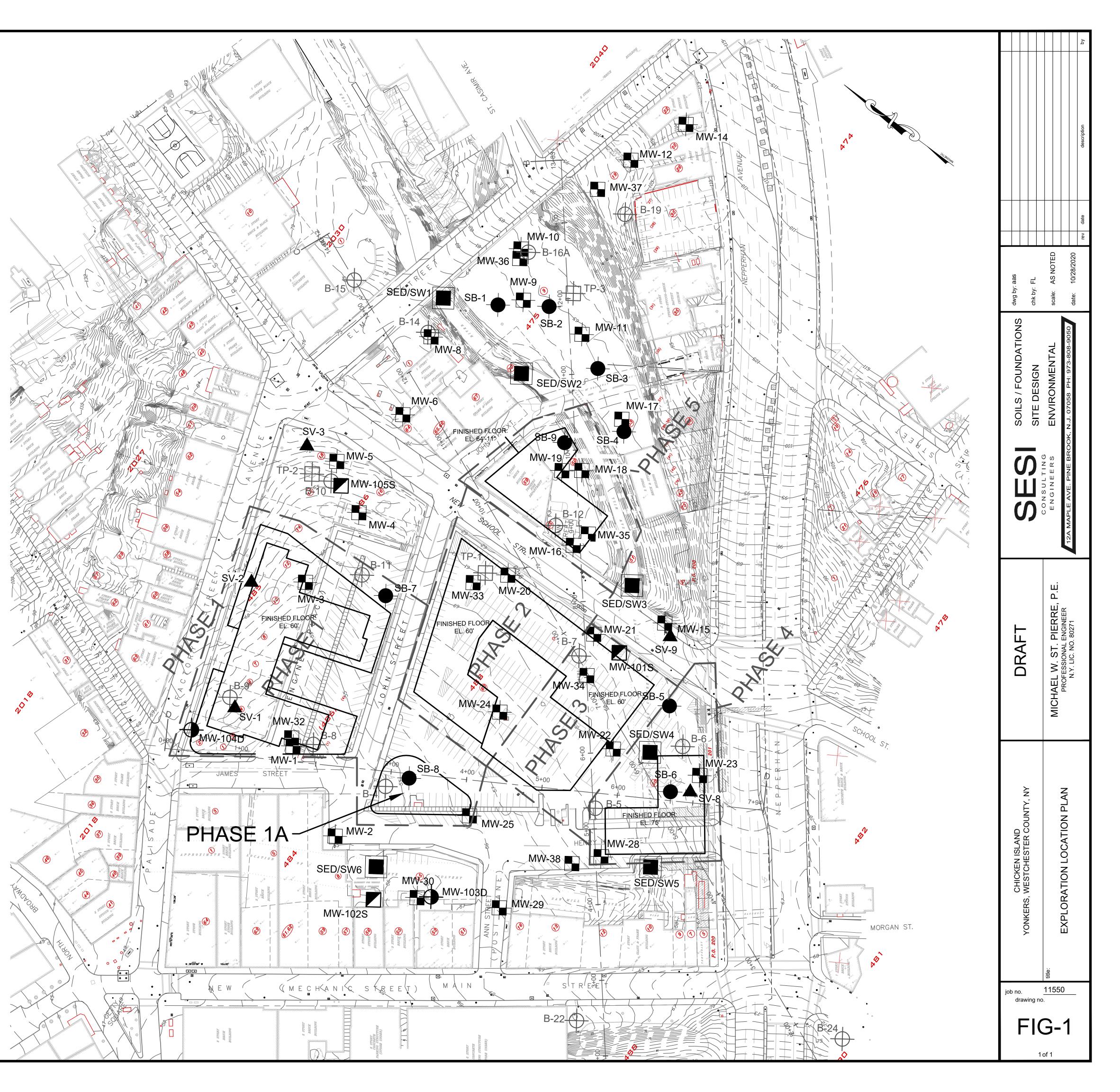
## LEGEND

MW-38	DEEP MONITORING WELL, SESI 2007
MW-30 -	SHALLOW MONITORING, SESI 2007
SED/SW5	WATER SAMPLE, SESI 2007
SB-6 -	SOIL BORING, SESI 2007
SV-1	SOIL VAPOR SAMPLING, SESI 2007
MW-104D	DEEP MONITORING WELL, SESI 2017
MW-102S	SHALLOW MONITORING WELL, SESI 2017
B-1	BORING LOCATION, MCLAREN 2007
TP-1	TEST PIT LOCATION, MCLAREN 2007
0+00 1+00	SOIL PROFILE STATION LINE, MCLAREN 2007

0+00



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PROJ	ЕСТ	NO.	N	-7190	INSPEC	TED BY:	GP	BORING NO.	<b>MW-1</b>
LOCA	ΤΙΟΙ	N	See 1	Figure 1	APPRO	X. ELEV.	51.55	DATE 8/17/2007	-
D E P T H F T	S A M P L E S	* S A M P L I N G	P I D R E A D			D	ESCRIPTION	I	
0  5					excavated to 5'	e SAND, li	ttle Gravel, lit	ttle Silt with Brick	
10		20/6" 55/1" 75/3"						little Silt with Concrete and soulde	
15 — 									
25				_	mplete @ 20 Fee g Well Installed,		ring well deta	il sheet for general schema	tic
				PLIT BARREL DROP * Blows		PTH TO W MARKS:		11' DATE: FION OF BORING	8/27/2007

PROJ	ЕСТ	NO.	N-7190 INSPECTED BY: GP BORING NO.					MW-2		
LOCA	τιοι	N .	See I	Figure 1	APPF	ROX. ELEV.		54.21	DATE 8/17/2007	, 
D E P T H F T	S A M P L E S	* R E S S S S S S S T S T I N C E	P I D R E A D			I	DES	SCRIPTION		
0 5					excavated to 5		little	e Gravel, litt	le Silt with Brick	
		10	0 Hg 0.00 0 Hg 0.00	Brown me	dium to fine S	SAND, some	Silt	t, little Grav	el with Cobbles and Bould	lers
				Monitorin		ed, see monit			l sheet for general schema	
SF				PLIT BARREL DROP * Blows		DEPTH TO REMARKS:			12' DATE: ON OF BORING	8/17/2007

PROJ	ЕСТ	NO.	N·	-7190	INS	SPECTED BY	:	GP	BORING NO.	MW-3			
LOCA	ΤΙΟΙ	N	See I	Figure 1	AP	PROX. ELEV	·	58.69	DATE 8/20/2007	, _			
D E P T H F T	S A M P L E S	* S A S I S T A N C E	P I D R E A D				DE	SCRIPTION					
0  5				6" Topsoil, or Vacuum exca FILL: Brown	vated to 5'	ine SAND, littl	le G	ravel, little S	ilt with Brick and Metal				
		75/5"	1.5 Hg 0.022		FILL: Brown medium to fine SAND, some Gravel, little Silt with Brick and Boulders FILL: Concrete pieces								
10  15		45	1.2 Hg 0.020			AND, little Gra		, little Silt wi	th Cobbles				
									neet for schematic				
				PLIT BARREL DROP * Blows	s/Ft.	DEPTH TO REMARKS:			12' DATE: ON OF BORING	8/20/2007			

PROJ	ЕСТ	NO.	N·	-7190	INSF	PECTED BY:	G	iP	BORING NO.	MW-4
LOCA	ΤΙΟΙ	N	See I	Figure 1	APP	ROX. ELEV.	62	.95	DATE 8/27/2007	7
D E P T H F T	S A M P L E S	* S A M P L I N G E	P I D R E A D			D	ESCRI	PTION		
0  5				6" Topsoil, Or Vacuum excav FILL: Brown	vated to 5'	e SAND, little	Gravel,	little Si	lt with Brick	
10		20/6" 55/1" 75/3"	1.3 Hg 0.021			fine SAND, littl			Silt with Concrete and B	oulders
				Boring Compl Monitoring W			Well I	Detail sh	eet for schematic	
				PLIT BARREL DROP * Blows	:/Ft.	DEPTH TO V REMARKS:			11' DATE: ON OF BORING	8/27/2007

PROJ	ЕСТ	NO.	N-7190 INSPECTED BY: GP BORING NO.						MW-5				
LOCA		N	See I	Figure 1	APP	ROX. ELEV.	68.74	DATE 8/27/2007	—				
D E P T H F T	S A M P L E S	* R S S S M S L A N C E	P I D R E A D			DE	SCRIPTION						
0  5				6" Topsoil, Org Vacuum excava FILL: Brown r	rated to 5'	ne SAND, little	Gravel, little	Silt with Brick					
		43	2.2 Hg 0.00	Hg 0.00									
		30	2.1 Hg 0.00	FILL: Gray medium to fine SAND, little gravel, little Silt with Brick									
							ravel, little Si	ilt with Cobbles					
30				Boring Comple			Well Detail sl	heet for schematic					
				PLIT BARREL DROP * Blows/		DEPTH TO W. REMARKS: <u>A</u>		19' DATE: ION OF BORING	8/27/2007				

PROJ	ЕСТ	NO.	N·	-7190	INS	PECTED BY:	GP	BORING	G NO.	MW-6	
LOCA	TIO	N	See I	Figure 1	APF	PROX. ELEV.	72.68	DATE	8/13/2007	_	
D E P T H F T	S A M P L E S	* R S S S M S S T S T S T S T S T S C E	P I D R E A D			DE	ESCRIPTIO	N			
0				4" Asphalt an	nd 6" Base						
				Vacuum exca	wated to 5'						
				FILL: Brown	medium to f	ine SAND, little	Gravel, littl	le Silt			
5—				Brown mediu	Im to fine SAN	ND, little Gravel	, little Silt w	vith Cobbles			
10				frequent Co	obbles and Bo	oulders					
  15											
20											
25											
30				Monitoring W	Vell installed,	see Monitoring	Well Detail	sheet for schema	tic		
35				Possible Bedrock At 35 Feet Boring Complete At 35 Feet							
_				Monitoring Well installed, see Monitoring Well Detail sheet for schematic							
				PLIT BARREL DROP * Blows		DEPTH TO W	ATER:		DATE:	8/13/2007	

PROJI	ЕСТ	NO. N-7190				SPECTED BY	:	GP	BORING NO.	<b>MW-8</b>
LOCA	τιοι	۱	See I	Figure 1	AP	PROX. ELEV		74.69	DATE 8/13/2007	_
D E P T H F T	S A M P L E S	* R E S S S S S S S T S T S T S T S C E	P I D R E A D				DES	SCRIPTION		
		Е 21 19	0 Hg 0.0 0 Hg 0.0	Cobble or Bo FILL: Gray-B Boring Comp	vated to 5' Brown coarse ulder Brown mediu	eet		ittle Gravel,	ttle Silt little Silt w/ Brick	
				PLIT BARREL DROP * Blows	s/Ft.	DEPTH TO REMARKS:			21' DATE: ON OF BORING	8/13/2007

PROJE	PROJECT NO.         N-7190					PECTED BY:	GP	BORING NO.	MW-9
LOCAT	τιοι	N	See I	Figure 1	AP	PROX. ELEV.	64.36	DATE 8/29/2007	
D E P T H F T	S A M P L E S	* R S E S S M I P S L T I A N C E	P I D R E A D			DE	ESCRIPTION		
		<u>Е</u>	1.2 Hg 0.0 1.0 Hg 0.0	FILL: Dark Same with Boring Con	white Clay and	fine Sand		, trace Gravel w/ Brick	
				PLIT BARRE DROP * Blo		DEPTH TO W REMARKS: _		3' DATE:	8/13/2007

PROJ	PROJECT NO.			-7190	INSPECTED BY:	GP	BORING NO.	MW-10
LOCA	ΤΙΟΙ	N	See I	Figure 1	APPROX. ELEV.	64.97	DATE 8/29/2007	-
D E P T H F T	S A M P L E S	* R E S S S S S S S T A N C E	P I D R E A D		DE	SCRIPTION		
0  5			1.8/1.4 Hg 0.0	6" Concrete Vacuum excavated FILL: Dark/Gray-	d to 5' Brown medium to fine SA	AND and Silt	t, trace Gravel w/ Brick	
					nstalled, see Monitoring V			
S/				PLIT BARREL DROP * Blows/Ft.	DEPTH TO WAREMARKS: A		8' DATE: ION OF BORING	8/29/2007

PROJECT NO.			N·	-7190	INS	SPECTED BY	<b>'</b> :	GP	BORING NO.	MW-11
LOCA	ΤΙΟΙ	N	See I	Figure 1	AP	PROX. ELEV	<i>I</i>	64.79	DATE 8/29/2007	_
D E P T H F T	S A M P L E S	* S A S I S T A N C E	P I D R E A D				DES	SCRIPTION		
0 <u> </u>			0.8 Hg 0.0	Vacuum excav FILL: Dark/G1		medium to find	e SA	ND and Silt	, trace Gravel w/ Brick	
5  10			0.7 Hg 0.0	Dark/Gray-Gr	eenish claye	ey SILT and fi	ne Sa	and, trace Gr	ravel	
				Boring Compl Monitoring W			ng W	/ell Detail sh	eet for schematic	
	40 SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.								1' DATE: ON OF BORING	8/29/2007

PROJ	PROJECT NO.			-7190	INSPE	CTED BY:	GP	BORING NO.	MW-12
LOCA	TIO	N	See I	Figure 1	APPR	OX. ELEV.	100.58	DATE 8/28/2007	, _
D E P T H F T	S A M P L E S	* RESISTANCE	P I D R E A D			DE	SCRIPTION		
0  5		50/5"		Vacuum excav FILL: Brown		e SAND and S	ilt, trace Grav	vel w/ Brick	
10		30/3	2.0 Hg 0.0	Obstruction 8.5	5 to 10 Feet: C	Concrete, Brick			
		42	1.8 Hg 0.0	FILL: Gray-Br	own medium	to fine SAND,	little Silt, litt	tle Gravel w/ Brick and Co	ncrete
15 — 				Brown mediun	n to fine SANL	, some Siit, in	tie Gravei wi	un Cobbles	
20				Boring Comple	ete At 20 Feet				
								heet for schematic	8/28/2007
S/				PLIT BARREL DROP * Blows/		EPTH TO W EMARKS: A		13.5' DATE: ION OF BORING	8/28/2007

PROJECT NO.	N	-7190	INSPECTED BY:	GP	BORING NO.	MW-14
LOCATION	See l	Figure 1	APPROX. ELEV.	111.85	DATE 9/5/2007	_
D S * R E A S E P M A S T P M I H L P S T F S I A T N N G C E	P I D R E A D		DE	SCRIPTION		
0 5 10 15 15 37	0.0		ted to 5' parse to fine SAND, little G fine SAND, little Gravel, li		ilt with Brick	
20 50/3" 25	Hg 0.007 0.0 Hg 0.014	Brown coarse to Boring Complete				
30 35 40 SAMPLER: 2-I 140 LB HAMM			l installed, see Monitoring W DEPTH TO W/ REMARKS: A	ATER:	20' DATE:	9/5/2007

PROJ	ЕСТ	NO.	N-	7190	IN	SPECTED BY:	GP	BORING NO.	MW-15				
LOCA	ΤΙΟΙ	N	See F	igure 1	AF	PPROX. ELEV.	73.74	DATE 9/4/2007	-				
D E P T H F T	S A M P L E S	* R E S S S S S S S T S T S T S C E	P I D R E A D			DI	ESCRIPTION						
			2.3 Hg 0.004 2.3 Hg 0.007	Vacuum ex	e and 4" Stone cavated to 5' -Brown coars		ittle Gravel, li	ttle Silt with Brick and Co	ncrete				
20		12	0.2 Hg 0.003	FILL: Conc	crete, Sand, Si	ilt, Gravel		ttle Silt with Concrete					
30  35				Light/Gray-Brown medium to fine SAND, little Gravel, trace Silt Rock at 38 feet									
40 SA	- MPI	_ER: 2-IN	CH O.D. SF	Boring Complete At 40 Feet       Monitoring Well installed, see Monitoring Well Detail sheet         SPLIT BARREL       DEPTH TO WATER:       18'       DATE:       9/4/2007									
				DROP * Blo				ON OF BORING	2. 11 2007				

PROJ	ЕСТ	NO.	N	-7190	INSF	PECTED BY:		GP	BORING NO.	MW-16
LOCA	ΤΙΟΙ	N	See I	Figure 1	APP	PROX. ELEV.	(	61.92	DATE 8/15/2007	·
D E P T H F T	S A M P L E S	* R S E S S M I P S L A N C E	P I D R E A D			D	ESC	RIPTION		
0  5				6" Asphalt Vacuum excav FILL: Gray-Bi		m to fine SANI	), litt	le Gravel,	little Silt w/ Cobbles and	Brick
10 — 		18 19	0 Hg 0.007 0 Hg 0.008	Gray-brown m	nedium to find	e SAND, little (	Grav	el, little Si	lt with Cobbles	
				Boring Comple			Wel	ll Detail sh	eet for schematic	
				PLIT BARREL DROP * Blows,	/Ft.	DEPTH TO V REMARKS:			7.5 DATE: ON OF BORING	8/15/2007

PROJ	ЕСТ	NO.	N·	-7190	INSPECTED BY:	GP	BORING NO.	MW-17
LOCA	ΤΙΟΙ	J	See I	Figure 1	APPROX. ELEV.	64.28	DATE 8/29/2007	-
D E P T H F T	S A M P L E S	* R S E S S M I P S L T I A N C E	P I D R E A D		DE	SCRIPTION		
0  5			0.7	3" Asphalt Vacuum excavated to FILL: Dark/Gray-Bro Fill: Same with gray o	own medium to fine SA	AND, little G	ravel, little Silt w/ Brick	
		18			alled, see Monitoring V			0/00/2007
SA				PLIT BARREL DROP * Blows/Ft.	DEPTH TO WA		1'   DATE:     ION OF BORING	8/29/2007

PROJ	ЕСТ	NO.	N·	-7190	INSPE	ECTED BY:	GP	BORING NO.	MW-18				
LOCA	τιοι	N	See I	Figure 1	APPR	ROX. ELEV.	61.91	DATE 8/15/2007	, 				
D E P T H F T	S A M P L E S	* RESSISA M STANCE	P I D R E A D			DE	SCRIPTION						
0  5					6" Asphalt Vacuum excavated to 5' FILL: Gray fine Sand and Silt, trace Gravel with Cobbles and Boulders								
		18	0 Hg 0.009	Dark/Gray-Bro Boulders	Dark/Gray-Brown fine SAND and Silt, trace Gravel, little Silt w/ frequent Cobbles and Boulders								
					Boring Complete At 15 Feet Monitoring Well installed, see Monitoring Well Detail sheet for schematic								
				PLIT BARREL DROP * Blows/		DEPTH TO W REMARKS:		7.5' DATE: TON OF BORING	8/15/2007				

PROJ	ЕСТ	NO.	N·	-7190	INS	PECTED BY:	GP	BORING NO.	MW-19				
LOCA	ΤΙΟΙ	N	See I	Figure 1	AP	PROX. ELEV.	62.85	DATE 8/15/200	17				
D E P T H F T	S A M P L E S	* R E S S S S S S S T A N C E	P I D R E A D			D	ESCRIPTIC	DN					
0  5				6" Asphalt Vacuum excav FILL: Dark/G		ine SAND, little	Gravel, litt	le Silt w/ Brick					
		12	0 Hg 0.0	0 Hg 0.0 Dark/Gray fine SAND and Silt, trace Gravel, trace Organic									
10		38	0 Hg 0.0		Dark/Gray fine SAND, some Silt, trace Gravel Same with Cobbles and Boulders								
15 —				Boring Compl	lete At 14 Fe	eet							
					/ell installed			l sheet for schematic					
S				PLIT BARREL DROP * Blows	s/Ft.	DEPTH TO W REMARKS:		7.5' DATE: ETION OF BORING	8/15/2007				

PROJ	ЕСТ	NO.	N	-7190	INSP	ECTED BY:	GP	BORING NO.	MW-20
LOCA		N	See 1	Figure 1	APP	ROX. ELEV.	61.24	DATE 8/14/2007	, 
D E P T H F T	S A M P L E S	* S A M P L I N G E	P I D R E A D			DI	ESCRIPTION		
0  5				4" Asphalt Vacuum exca FILL: Brown with Bould	SILT, some co	parse to fine Sa	nd with Cobb	bles	
10 — — — 15 —				Black SILT, s (Sample Colle		fine SAND (O	dor)		
				Boring Compl			Well Detail s	heet for schematic	
40 SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.						DEPTH TO W		10' DATE: TON OF BORING	8/14/2007

PROJ	ЕСТ	NO.	N	-7190	INSP	ECTED BY:	GP	BORING NO.	MW-21
LOCA	ΤΙΟΙ	N	See 1	Figure 1	APPI	ROX. ELEV.	61.5	DATE 8/14/2007	, 
D E P T H F T	S A M P L E S	* S A M P S T A N C E	P I D R E A D			DE	SCRIPTION	l	
0  5				4" Asphalt Vacuum exca FILL: Brown		avel with Cobbl	es		
				Tan/brown SA	AND and Grav	rel, trace Silt wi	th Boulders a	and Cobbles	
				Refusal on Bo Boring Comp Monitoring W	lete At 14.5 Fe	eet	Well Detail s	sheet for schematic	
				PLIT BARREL DROP * Blows		DEPTH TO W REMARKS: _A		10' DATE: ΠΟΝ OF BORING	8/14/2007

PROJECT NO.			N-7190		INSPECT	ED BY:	GP	BORING NO.	MW-22
LOCATION			See I	APPROX	. ELEV	60.00	DATE 8/16/2007	, -	
D E P T H F T	S A M P L E S	* S A S I S T A N C E	P I D R E A D			DES	SCRIPTION		
				6" Asphalt Vacuum excav FILL: Brown S	ated to 5' and, Gravel, Silt v	with Cobble	s, Brick and	Concrete	
		29	0 Hg 0.012					Silt with Brick and Concre h frequent Cobbles and Bo	
				Brown medium	to fine SAND, lit	ttle Gravel,	little Silt		
				Boring Comple Monitoring We		Ionitoring W	Vell Detail sh	neet for schematic	
				PLIT BARREL DROP * Blows/		TH TO WA IARKS: _AT		10' DATE:	8/16/2007

PROJECT NO.			N-7190		INSPE	CTED BY:	GP	BORING NO.	MW-23
LOCATION			See Figure 1			OX. ELEV.	62.95	DATE 8/14/2007	-
D E P T H F T	S A M P L E S	* R S S S M I S T I A N G E	P I D R E A D			DE	SCRIPTION		
0  5				4" Asphalt an Vacuum exca FILL: Brown		el with Cobble	25		
				Brown coarse	to fine SAND,	little Gravel, li	ttle Silt with	Cobbles	
15 — — 				Dark brown r	nedium to fine S	AND, little Si	lt, little Grav	el	
					lete At 20 Feet Vell installed, see	e Monitoring V	Vell Detail s	heet for schematic	
				PLIT BARREL DROP * Blows		EPTH TO WA		7' DATE: ION OF BORING	8/14/2007

PROJECT NO.			N-7190		INSPEC	TED BY:	GP	BORING NO.	MW-24	
LOCATION			See Figure 1 A			X. ELEV.	58.22	DATE 8/16/2007	_	
D E P T H F T	S A M P L E S	* S A S I S T A N C E	P I D R E A D			DE	SCRIPTION			
				6" Asphalt Vacuum excav FILL: Brown f	vated to 5' fine SAND, little	e Gravel, little	Silt w/ Brick	5		
10		29	29	0 Hg 0.004	Brown coarse	to fine SAND, li	ttle Gravel, li	ttle Silt w/ Co	obbles and Boulders	
 15				Boulders						
				Brown coarse		ttle Gravel, li		equent Cobbles and Bould	ers	
20				Boring Compl						
25				Monitoring W	ell installed, see	Monitoring V	Vell Detail sh	neet for schematic		
30 <u></u>										
35										
				PLIT BARREL DROP * Blows		PTH TO WA		13' DATE: ON OF BORING	8/16/2007	

PROJECT NO.			N-7190 IN		INSPEC	FED BY:	GP	BORING NO.	MW-25
LOCATION			See Figure 1		<b>APPRO</b>	(. ELEV	56.14	DATE 8/14/2007	, _
D E P T H F T	S A M P L E S	* R S S S M S S T S T N C E	P I D R E A D			DES	SCRIPTION		
0  5		L		4" Asphalt Vacuum excav FILL: Sand/Gr	ated to 5' avel/Silt with Bri	ck and Cobb	les		
				Brown Sandy S	SILT with frequer	ıt Cobbles ar	nd Boulders		
15 <u></u>				Boring Comple Monitoring We		/onitoring W	/ell Detail sh	eet for schematic	
S				PLIT BARREL DROP * Blows/		PTH TO WA		7' DATE: ON OF BORING	8/14/2007

PROJECT NO.			N-7190		INS	PECTED BY:	GP	BORING NO.	MW-28		
LOCATION			See Figure 1 Al		AP	PROX. ELEV.	58.57	DATE 8/22/2007	, 		
D E P T H F T	S A M P L E S	* S A M P L I N G E	P I D R E A D	DESCRIPTION							
0  5				6" Asphalt Vacuum excav FILL: Gray fii		ttle Gravel, little	Silt w/ Brick				
		50/5" 29	1.4 Hg 0.003	FILL: Dark/G Coal	ray-Brown r	nedium to fine SA	AND and Silt	t, little Gravel w/ Cobbles,	Boulders and		
10		27	27	27	1.4 Hg 0.003	Brown coarse				equent Cobbles and Boulde	rs
	-			Boulders							
15 —				Brown coarse	to fine SAND, little Gravel, little Silt w/ Cobbles and Boulders						
				Boring Compl	lete At 17 Fe	eet					
20				Monitoring W	vell installed	, see Monitoring	Well Detail s	sheet for schematic			
25	•										
30 <u></u>	•										
35											
				PLIT BARREL DROP * Blows	s/Ft.	DEPTH TO W REMARKS:		8' DATE: TION OF BORING	8/22/2007		

PROJECT NO.			N-7190		INS	SPECTED BY:	GP	BORING NO.	MW-29		
LOCATION			See I	Figure 1	igure 1 APPROX. ELEV. 56.72 DATE 8/22/2007						
D E P T H F T	S A M P L E S	* R E S S S S S S S T S T A N C E	P I D R E A D		DESCRIPTION						
0  5				6" Asphalt Vacuum exc FILL: Brow		fine SAND, some	Silt, little Gra	avel, w/ Brick			
10   15		16 20	1.3 <u>Hg 0.00</u> 1.8 Hg 0.00			fine SAND and Si		el w/ Brick Cobbles and Boulders			
20	-				plete At 18 F Well installed		Well Detail sl	heet for schematic			
30											
				PLIT BARREL DROP * Blov		DEPTH TO W REMARKS: _A		8' DATE: ION OF BORING	8/22/2007		

PROJ	ЕСТ	NO.	N·	-7190	INSF	PECTED BY:	GP		). MW-30
LOCA		N	See I	Figure 1	APP	ROX. ELEV.	56.09	DATE 8/22	/2007
D E P T H F T	S A M P L E S	* S A M P L I N G	P I D R E A D			D	ESCRIPTIC	DN	
0  5				6" Asphalt Vacuum exca FILL: Brown		ne SAND, some	e Silt, little	Gravel, w/ Brick	
10		20 16	0 <u>Hg 0.012</u> 0 Hg 0.016			ne SAND and S o fine SAND, 1		avel w/ Brick , little Organic clayey S	ilt with Cobbles
15				frequent co	bbles and bou				
				Boring Comp Monitoring W		et		l sheet for schematic	
				PLIT BARREL DROP * Blows		DEPTH TO V REMARKS:		12' DAT ETION OF BORING	E: <u>8/22/2007</u>

17	77 C		21		PRO	JECT N	AME:						BORING NO. MW						
4	-		31		LC	OCATIO	N:		Y	onkers, NY			JOB NO.		71	90			
_		ENGINEI	ERB					1					GROUND ELEVA			0+/-			
	ING BY:	S	Summit			STARTE			/2007				DUNDWATER TAB		1				
	ECTOR:		GP		DATE (	COMPL	ETED	11/16	/2007	0 Hr. 10'		Date	11/16/07 24 Hr.	N/A	Date N/	A			
DEPTH	METHOD	SAMPLE	DEP	то		Blows o	n Spoor	ı	REC	50			PTION AND STRA		N	P.I.D./Hg			
(ft) 0	WETHOD	No.	FROM (ft)	(ft)	0/6	6/12	12/18	18/24	(in)			-3011	FIION AND STRA	TIFICATIO	IN	P.I.D./Hg			
0			(11)	(11)	0/0	0/12	12/10	10/24	(11)	5" Asphalt									
		1	1	3	2	4	2	6	6		halt rown fine Sand and Silt, trace Gravel with Cobbles,								
			-	-			_	~		Boulders, As		ing and				0.0/0.0			
											I								
5																			
										Fill: Brown fin	ne Sanc	s, Boulders							
										Difficult Dril	t Drilling								
10																			
										Boulders									
15																			
15										Brown mediu		En a Car	nd trace Silt						
										Brown medit	um to	ine Sa	nd, trace Sht						
																<u> </u>			
																<u> </u>			
20																			
		2	20	22	4	2	4	3	24	Cobbles a	ind Bo	ulders				0.0/0.0			
										Boulders									
25																			
										Brown fine S	and ar	d Silt, t	trace Gravel with freq	uent Boulder	rs, Cobbles				
					ļ														
																<u> </u>			
20																			
30																			
																<u> </u>			
					<u> </u>											<u> </u>			
35																<u> </u>			
										Same						<u> </u>			
																<u> </u>			
					I					1									
40																			

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.
Nominal I.D. of Split Barrel Sampler	1% in	It is made available to authorized users only that they may have access to the same information available
Weight/type of Hammer on Drive Pipe	300 lb	to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations
Weight/type of Hammer on Split Barrel	140 lb	or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical
Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
		Approximate Change in Strata: Inferred Change in Strata:

17	77 C		2		PRO	JECT N	AME:		Rive	r Park (	Center		BORING NO.		MW	/-32
4	-		21		LC	OCATIO	N:		Y	onkers,	, NY		JOB NO.		71	90
	a day		ERB										GROUND ELEVAT	TION:	52.	0+/-
	ING BY:	S	Summit		DATE	START	ED	11/16	6/2007			GRO	OUNDWATER TABL	E DEPTH		
INSP	ECTOR:		GP		DATE	COMPL	ETED	11/16	6/2007	0 Hr.	10'	Date	11/16/07 24 Hr.	N/A	Date N/A	4
DEPTH		SAMPLE	DEP	TH		Blows o	n Spoor	า	REC							
(ft)	METHOD	No.	FROM	то					0		SOIL DE	ESCRI	PTION AND STRAT	IFICATION		PID
40			(ft)	(ft)	0/6	6/12	12/18	18/24	(in)							
										Brown	fine Sand an	d Silt, tr	ace Gravel with frequent	t Boulders an	d Cobbles	
45																
										WEAT	HERED RO	OCK				
l																
Í –										Rock C	Gneiss					
50																
											NG COMPL					
											oring Well I					
										See De	tail Sheet fo	or Moni	toring Well Schematic			
55																
60																
65																
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ĺ																
70																
ĺ																
1					L	L										
1					L	L										
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75					L	L										
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ĺ																
ĺ																
<u> </u>																
80																

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.
Nominal I.D. of Split Barrel Sampler	1% in	It is made available to authorized users only that they may have access to the same information available
Weight/type of Hammer on Drive Pipe	300 lb	to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations
Weight/type of Hammer on Split Barrel	140 lb	or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical
Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
		Approximate Change in Strata: Inferred Change in Strata:

FIGURE 33

17	77 C		21		PRO	JECT N	AME:		Rive	er Park (	Center		BORING	NO.		N	IW-33
4	-		51		LC	DCATIC	N:		Y	onkers,	NY		JOB NO.				7190
		ENGINE	ERB					ī					GROUND	ELEVAT	ION:	6	0.5+/-
	ING BY:		ADT		DATES				/2007			1	DWATER				
	ECTOR:		JZ		DATE (	COMPL	ETED	11/20	/2007	0 Hr.	N/A	Date	N/A	24 Hr.	N/A	Date 1	N/A
DEPTH		SAMPLE	DEP			Blows o	n Spoor	ı	REC		0011 0			D OTD AT			
(ft)	METHOD	No.	FROM	TO	0/0	0/40	40/40	4.0/0.4	( )	-	SOILD	ESCRI	PTION AN	DSIRAI	IFICATIO	/N	P.I.D./Hg
0			(ft)	(ft)	0/6	6/12	12/18	18/24	(in)	5" 41	- 1/ 4/ 6/-						
		S-1	1	3	21	21	14	23	10		halt, 4" Sto		Silt, trace (	Proval with	Cobblac		0.0/0.0
		5-1	1	5	21	21	14	23	10	I'III. DI	own nne 5	anu anu	Sin, nace v	Jiavei witi	i Cobbies,		0.0/0.0
5																	
		S-2	5	7	9	7	2	2	10	Brown	medium to	fine SA	ND, little S	silt, trace C	Fravel		0.0/0.0
										1							
10																	
		S-3	10	12	20	18	16	17	0	No Rec	covery						0.0/0.0
										Cobb	oles and Bo	oulders					
																	-
15			1.5	15	10		<b>5</b> 0 (0)										
		S-4	15	17	19	21	50/0"	-	0	No Rec	covery						0.0/0.0
20																	
		S-5	20	22	50/2"	-	-	-	0	No Rec	coverv						0.0/0.0
											oles and Bo	oulders					
25																	
										1							
					<u> </u>					1							
										-							
30			20	22	50/11					N							0.010 5
		S-6	30	32	50/1"	-	-	-	0	No Rec	covery						0.0/0.0
										Cabl	oles and Bo	auldara					
35										Coot	nes and BC	Juiders					
										1							
				1						1							
										1							
										1							
40																	

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.
Nominal I.D. of Split Barrel Sampler	1% in	It is made available to authorized users only that they may have access to the same information available
Weight/type of Hammer on Drive Pipe	300 lb	to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations
Weight/type of Hammer on Split Barrel	140 lb	or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical
Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
		Approximate Change in Strata: Inferred Change in Strata:

17	77 C		2		PRO	JECT N	AME:		Rive	r Park C	Center		BORING	NO.		MV	/-33
4	50		21		LC	OCATIO	N:		Y	onkers,	NY		JOB NO			71	90
	(ft) METHOD SAMPLE FROM 40 (ft)												GROUN	D ELEVA	FION:	60.	5+/-
BOR	ING BY:		ADT		DATE	START	ED	11/14	/2007			GRO	OUNDWA	TER TABL	E DEPTH	1	
INSP	ECTOR:		JZ		DATE	COMPL	ETED	11/20	/2007	0 Hr.	N/A	Date	N/A	24 Hr.	N/A	Date N/	A
DEPTH			DEP	PTH		Blows o	n Spoor	h	REC								
(ft)	METHOD		FROM	то		BIOWS O		•	NE0		SOIL D	ESCRI	PTION AN	ID STRAT	IFICATIO	Ν	P.I.D./Hg
40			(ft)	(ft)	0/6	6/12	12/18	18/24	(in)								
		S-7	40	42	30/2"					Brown	fine Sand a	and Silt,	trace Grave	el with Cob	bles		0.0/0.0
45																	
										Refusal	on Rock a	at 45 Fee	et				
										BORIN	G COMPI	LETE A'	T 45 FEET				
										Monitor	ring Well	Installed					
										See Det	ail Sheet f	for Moni	toring Well	Schematic			
50																	
55																	
60																	
65																	
										J							
										J							
										J							
70																	
										]							
75										]							
										]							
										1							
										]							
					1	1				1							
80										1							

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.
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Weight/type of Hammer on Split Barrel	140 lb	or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical
Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
		Approximate Change in Strata: Inferred Change in Strata:

17	77 C		21		PRO	JECT N	AME:		Rive	r Park (	Center		BORING	NO.		Ν	/W-34
4	2		51		LC	OCATIO	N:		Y	onkers,	, NY		JOB NO.				7190
		ENGINEI	ERB							1			GROUND				61.0+/-
	ING BY:		ADT		1	STARTE			/2007				OWATER	-			
	ECTOR:		JZ		DATE (	COMPL	ETED	11/18	8/2007	0 Hr.	N/A	Date	N/A	24 Hr.	N/A	Date	N/A
DEPTH	METHOD	SAMPLE	DEP	ТО		Blows o	n Spoor	า	REC				PTION AN			ואר	P.I.D./Hg
(ft) O	WETHOD	No.	FROM (ft)	(ft)	0/6	6/12	12/18	18/24	(in)		SOIL D	ESCKI		DOTRA	HFICATIC		F.I.D./Hg
0		S-1	0	2	31	17	8	10/24	0	5" Aspl	halt, 4" Sto	ne					
		S-2	2	4	13	10	7	6	18				e Sand, trac	e Gravel	trace Silt		0.0/0.0
		~ -	_					-	10		o nin moura		ie Sund, un	e oraren,	unce put		
																	0.0/0.0
5		S-3	4	6	3	3	3	5	12	Brown	medium to	fine Sa	nd, trace Gr	avel, trace	Silt		
										with Co	obbles, Bou	ılders					0.0/0.0
		S-4	6	8	6	8	42	50/2"	12								
10										Cobl	bles and Bo	oulders					
																	0.0/0.0
15																	0.0/0.0
15										No Rec	COVERN						0.0/0.0
		S-5	15	17	50/2"				0		bles and Bo	oulders					
		~ -							0			anders					
20																	0.0/0.0
		S-6	20	22	50/1"				0	No Rec	covery						
										Cobl	bles and Bo	oulders					
25																	
30																	
<u> </u>		S-7	30	32	50/0"				0	No Rec	coverv						0.0/0.0
		~ .							0		bles and Bo	oulders					
										1							
35																	
40																	

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.
Nominal I.D. of Split Barrel Sampler	1% in	It is made available to authorized users only that they may have access to the same information available
Weight/type of Hammer on Drive Pipe	300 lb	to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations
Weight/type of Hammer on Split Barrel	140 lb	or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical
Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
		Approximate Change in Strata: Inferred Change in Strata:

17	77 C		01		PRO	JECT N	AME:		Rive	r Park Center		BORING	NO.	MV	V-34
L	50.		21			OCATIO				onkers, NY		JOB NO			190
1	el e		ERB									GROUN	D ELEVATION:	61	.0+/-
BORI	NG BY:		ADT		DATE	START	ED	11/8/	2007		GRO	UNDWA	TER TABLE DEPTH	H	
INSP	ECTOR:		JZ		DATE	COMPL	ETED	11/18	/2007	0 Hr. N/A D	Date 1	N/A	24 Hr. N/A	Date N/	A
DEPTH		SAMPLE	DEF	-		Blows o	n Spoor	_ ו	REC						
(ft)	METHOD	No.	FROM	то						SOIL DES	SCRIP	TION AN	ID STRATIFICATIC	DN	P.I.D./Hg
40			(ft)	(ft)	0/6	6/12	12/18	18/24	(in)						
		S-8	40	42	50/1"	-	-	-	0	No Recovery					0.0/0.0
										Cobbles and Bould	ders				
		S-9	43	45	50/0"	-	-	-	0						0.0/0.0
45															
										Refusal on Rock at 4					
										BORING COMPLET		45 FEET			
										Monitoring Well Inst					
FO										See Detail Sheet for I	Monito	oring Well	I Schematic		L
50															
55															
55															
60															
65										1					
70															
75															
															L
80															

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.
Nominal I.D. of Split Barrel Sampler	1¾ in	It is made available to authorized users only that they may have access to the same information available
Weight/type of Hammer on Drive Pipe	300 lb	to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations
Weight/type of Hammer on Split Barrel	140 lb	or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical
Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

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

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

	2						AME:		1/1/6	r Park Center	BORING NO.		35	
	°.	And the second s			LC	OCATIO	N:	Yonkers, NY JOB NO.						
			ING								GROUND ELEVATION:	62.0	+/-	
INSPF	NG BY:		ADT		DATE S	STARTE	D	11/26	/2007	GR	OUNDWATER TABLE DEPTH			
	CTOR:		JZ		DATE (	COMPLI	ETED	11/26	/2007	0 Hr. 10' Date	11/26/07 24 Hr. N/A	Date N/A		
DEPTH		SAMPLE	DEF	тн		Blows o	n Spoor	,	REC					
(ft)	METHOD	No.	FROM	то		BIOWS			NE0	SOIL DESCR	PTION AND STRATIFICATION	I	P.I.D./Hg	
0			(ft)	(ft)	0/6	6/12	12/18	18/24	(in)					
										Asphalt and Base				
L		1	1	3	23	13	14	10	12	Fill: Black-brown coarse	to fine Sand and coarse to fine		0.0/0.0	
L										Gravel, some Silt		L		
L												L		
5												_		
L		2	5	7	6	5	2	5	10	Same			0.0/0.0	
Ļ												Ļ		
Ļ														
Ļ														
10										Cobbles and Boulders		Ļ		
Ļ												Ļ		
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15												Ļ		
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-												Ļ		
20												_		
-														
-										Cobbles and Boulders				
-														
<u>_</u>												F		
25												F		
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35												F		
33												F		
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┝												F		
40												F		
70														

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.
Nominal I.D. of Split Barrel Sampler	1% in	It is made available to authorized users only that they may have access to the same information available
Weight/type of Hammer on Drive Pipe	300 lb	to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations
Weight/type of Hammer on Split Barrel	140 lb	or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical
Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
		Approximate Change in Strata: Inferred Change in Strata:

17	77 C		2		PRO	JECT N	AME:		Rive	r Park C	Center		BORING NO.		MW	-35
4	-		21		LC	OCATIO	N:		Y	onkers,	NY		JOB NO.		71	90
	°.	ONBUL1	ERB										GROUND ELEVA	ION:	62.0	)+/-
BORI	NG BY:		ADT		DATE	START	ED	11/26	6/2007			GRC	OUNDWATER TABL	E DEPTH		
INSP	ECTOR:		JZ		DATE	COMPL	ETED	11/26	6/2007	0 Hr.	10'	Date	11/26/07 24 Hr.	N/A	Date N/A	1
DEPTH			DEP	ΡΤΗ		Blows o	n Spoor	, ,	REC							
(ft)	METHOD	SAMPLE No.	FROM	то		DIOWS 0		1	NLC		SOIL D	ESCRI	PTION AND STRAT	IFICATION		P.I.D./Hg
40		140.	(ft)	(ft)	0/6	6/12	12/18	18/24	(in)							
										Refusal	on Rock a	at 40 Fee	t			
										BORIN	G COMP	LETE A	Г 40 FEET			
										Monitor	ing Well	Installed				
										See Det	ail Sheet f	for Moni	toring Well Schematic			
45																
50																
55																
60																
65																
										ļ						
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70																
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75										ļ						
80																

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Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
		Approximate Change in Strata: Inferred Change in Strata:

17	77 C		21		PRO	LOCATION: Yonkers, NY JOB NO. 71						V-36					
4			21		LC	OCATIO	N:		Y	onkers,	NY		JOB NO.			7	190
		ENGINE	1 1 8										GROUNE	D ELEVAT	ION:	64	.5+/-
	ING BY:	Summit						11/19	/2007					1		1	
	ECTOR:	G	P/JZ/RF		DATE (	COMPL	ETED	11/29	/2007	0 Hr.	N/A	Date	N/A	24 Hr.	N/A	Date N/	A
DEPTH		SAMPLE	DEF	r		Blows o	n Spoor	٦	REC		0011 0						
(ft)	METHOD	No.	FROM	TO	0/0	0/4.0	40/40	40/04	(:)		SOIL D	ESCRI	PTION AN	P.I.D./Hg			
0			(ft) 0	(ft) 2			12/18	18/24	. ,	211 77 - 11	1						
			0	Z	12	30/1			12			madium	to fina Son	d and Silt	traga Cray	al with	0/0.008
												meanum	to fille Sali	iu anu sin,			0/0.000
										Organi	<b>C</b> 3						
5																	
										Boul	lders and C	obbles					
										1							
										1							
										]							
10																	
15																	
													and Set Per	rmanent Ste	eel Casing		
										Method	d Used due	to Obst	ructions				
20																	
20																	
										Sot Tor	nporary Ca	noing to	22 Foot				
										Set Tel	iiporary Ca	using to	22 1 000				
25										1							
										Boul	lders and C	obbles					
										1							
										1							
										]							
30																_	
					<u> </u>												
35					ļ						oit to 35 Fe						
	L		35	37	50/0"				0		l on Rock a						
													T 35 FEET				<u> </u>
		ļ									oring Well						
40										See De	tail Sheet f	or Moni	toring Wel	I Schematic	:		
40																	

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.
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Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
		Approximate Change in Strata: Inferred Change in Strata:

17	77 C		21		PRO	JECT N	AME:		Rive	r Park (	Center		BORING	NO.		MV	V-37
4	2		31		LC	OCATIO	N:		Y	onkers,	NY		JOB NO			7	90
		ENGINEI	-					1						D ELEVAT			4+/-
	ING BY:	Boar	t Longye	ar		STARTE			/2007			T		TER TABL			
	ECTOR:		JZ		DATE	COMPL	ETED	12/9/	/2007	0 Hr.	N/A	Date	N/A	24 Hr.	N/A	Date N/	A
DEPTH		SAMPLE	DEP			Blows o	n Spoor	ı	REC							NI	
(ft)	METHOD	No.	FROM	TO	0/0	6/40	12/18	18/24	(in)		SOIL D	ESCRI		ND STRAT	IFICATIO	IN	P.I.D./Hg
0			(ft)	(ft)	0/6	6/12	12/10	10/24	(in)	Organi	es and Gra	val					0.0/0.0
		S-1	1	3									Gravel an	d coarse to	fine Sand		0.0/0.0
		51	1	5									nd Cobbles		line Band,		
5																	
										Brown	medium to	fine SAN	ID, little m	edium to fin	e Gravel, lit	tle Silt with	
										Bould	lers and Co	obbles					
															0.0/0.0		
10																	
	-																
45																	
15										D		C. CAN	D	14 1:441			
											lers and Co		D, some Si	ilt, little med	ium to fine (	sravel with	
										Bouic		obbles					0.0/0.0
																	0.0, 0.0
20																	
		S-2	20	22													0.0/0.0
25																	
					<u> </u>												<u> </u>
20																	
30										S							
										Same	lers and Co	. 1. 1. 1					
										Bouic	iers and Co	obbles					
																	<u> </u>
35																	
																	<u> </u>
					İ —												<u> </u>
40										<u> </u>							

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Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
		Approximate Change in Strata: Inferred Change in Strata:

17	77 C		2		PRO	JECT N	AME:		Rive	r Park C	Center		BORING	RING NO. MV				
4	-		51		LC	OCATIO	N:		Y	onkers,	NY		JOB NO			7	190	
	1	ENGINEI	ERB											D ELEVA			.4+/-	
	ING BY:	Boar	t Longye	ear		START		12/4/	/2007			GRC	DUNDWA	TER TABI	E DEPTH			
	ECTOR:		JZ		DATE	COMPL	ETED	12/9/	/2007	0 Hr.	N/A	Date	N/A	24 Hr.	N/A	Date N	A	
DEPTH		SAMPLE	DEP			Blows o	n Spoor	า	REC									
(ft)	METHOD	No.	FROM	то							SOIL DI	ESCRII	PTION AN	ID STRAT	IFICATIO	N	P.I.D./Hg	
40			(ft)	(ft)	0/6	6/12	12/18	18/24	(in)									
													D, some Sil	t, little medi	um to fine (	Gravel with		
										Boulder	s and Cobl	oles					0.0/0.0	
45																		
45										~								
													), some Silt	, little medi	um to fine (	Gravel with	0.0/0.0	
<u> </u>		S-3	47	49						Boulder	s and Cobl	oles					0.0/0.0	
		3-3	4/	49													0.0/0.0	
50										Daf	on D1-	40 E					0.0/0.0	
50										Refusal on Rock at 49 Feet BORING COMPLETE AT 49 FEET Monitoring Well Installed See Detail Sheet for Monitoring Well Schematic								
														Schematic				
										See Del	an Sheet Io	or ivioin	toring wer	Schematic				
55																		
																_		
60																		
																_		
65																		
70																_		
75																_	ļ	
																	. <u> </u>	
L					<u> </u>	<u> </u>												
80																		

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.
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Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
		Approximate Change in Strata: Inferred Change in Strata:

177	77 6				PRO	PROJECT NAME: River Park Center BORING NO. MW-38 BC											
	5	>E	51			OCATIC				onkers, NY JOB NO. 719							
7	· ·	ONSULT	ING							GROUND ELEVATION: 57.5							
BOR	ING BY:	ADT/Bo	oart Long	ovear	DATE	STARTE	ED	11/27	/2007	GROUNDWATER TABLE DEPTH							
	ECTOR:		Z/RF/VN			COMPL			/2007	0 Hr. N/A Date N/A 24 Hr. N/A Date N/A							
DEPTH			DEF	тн	1												
(ft)	METHOD	SAMPLE	FROM	то		Blows o	n Spoor	ו	REC	SOIL DESCRIPTION AND STRATIFICATION							
0		No.	(ft)	(ft)	0/6	6/12	12/18	18/24	(in)								
									36	Fill: Light brown medium to fine SAND, little coarse to medium Gravel,	0.0/0.0						
		S-1	1	3						trace Silt with Cobbles							
5		S-2	4	6													
									60	Fill: Black/Light brown medium to fine SAND, some coarse to fine	0.4/0.0						
										Gravel, little Silt with Cobbles Black/Brown coarse to fine SAND with Cobbles							
		S-3	8	10													
10											10.7/0.0						
									24		0.7/0.0						
										Light brown Clayey Silt and medium to fine Sand, little coarse to fine							
										Gravel with Cobbles							
15																	
									48		0.0/0.0						
										Light brown coarse to fine SAND, little Silt, little Gravel							
										4							
20																	
									48	Light brown coarse to fine SAND, little Gravel, trace Silt with Cobbles	0.0/0.0						
										and Boulders							
										-							
25										Boulder							
20									24	4 -	0.0/0.0						
									24	4 F	0.0/0.0						
									36	4 F							
									50	1 F							
30										1 F							
		S-4	30	32					42	Gray coarse to fine Gravel and coarse to fine Sand, little Silt with	0.0/0.0						
		~ .	20							Cobbles							
										1 1							
35					l	l			54	1 1							
										1 7							
										1 1							
					1	1				1 1							
						I				Refusal on Rock at 38 Feet							
40					Ī	Ī				BORING COMPLETE AT 38 FEET							

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.
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Weight/type of Hammer on Drive Pipe	300 lb	to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations
Weight/type of Hammer on Split Barrel	140 lb	or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical
Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
		Approximate Change in Strata: Inferred Change in Strata:

17	77 C		21		PRO	JECT N	AME:		Rive	r Park C	enter		BORING	G NO.		м	W-38
L	50.		21		L	OCATIO	N:			onkers,			JOB NC	).		7	7190
	all o	ONSUL1	ERB										GROUN	ID ELEVATI	ON:	5	7.5+/-
BORI	NG BY:	ADT/Bo	part Long	gyear	DATE	START	ED	11/27	7/2007	GROU			OUNDWATER TABLE DEPTH				
INSP	ECTOR:		Z/RF/VN		DATE	COMPL	ETED	11/28	8/2007	0 Hr.	N/A	Date	N/A	24 Hr.	N/A	Date N	I/A
DEPTH		SAMPLE	DEF	PTH		Blows o	n Spoor	<u></u>	REC								
(ft)	METHOD	No.	FROM	то				-			SOIL D	DESCRI	PTION AN	ND STRATIF	ICATIO	N	P.I.D./Hg
40			(ft)	(ft)	0/6	6/12	12/18	18/24	(in)								
										Monitor	ing Well	Installed					
										See Deta	ail Sheet	for Moni	toring Wel	l Schematic			
45										l						-	
					<u> </u>	L			L								
					<u> </u>	L			<u> </u>								
					ļ					l							
50																-	_
						<u> </u>			<u> </u>								
55																-	-
60																	
60																-	_
										-							
65																	
																-	_
										1							
					<u> </u>					1							
										1							
70										1							
_										1						-	
										1							
										1							
		1								1							
75										1							
					1					1						-	
										1							
										1							
										1							
80										1							
		•	•	•	-	•	•	•	•	•							

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Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
		Approximate Change in Strata: Inferred Change in Strata:

17	77 C		21		PRO	JECT N	AME:		Rive	r Park Center BORING NO.	SB-1		
4	2		51		L	OCATIO	N:		Y		190		
		ENGINEI									8.5+/-		
	NG BY:		ADT			STARTE			/2007	GROUNDWATER TABLE DEPTH			
	ECTOR:		GP		DATE	COMPL	ETED	11/30	/2007	0 Hr. 3' Date 11/30/07 24 Hr. N/A Date N	/A		
DEPTH	METHOD	SAMPLE	DEF			Blows o	n Spoor	ı	REC	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg		
(ft) 0	METHOD	No.	FROM	TO (ft)	0/6	6/12	12/18	18/24	(in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg		
0			(ft)	(11)	0/6	0/12	12/10	10/24	(11)	4" Asphalt			
										Brick and Boulders			
5													
		S-1	5	7	6	2	2	1	0	No Recovery			
										Boulders			
10													
		S-2	10	12	11	50/1"			3	Gray coarse to fine SAND, little Gravel, trace Silt with Boulders	0.0/0.0		
										(Odor)			
15													
10		S-3	15	17	5	22	13	6	6	Gray/Tan coarse to fine SAND, little Gravel, trace Silt with Boulders	0.0/.005		
		55	15	17	5	22	15	0	0	Gray/ Fair coarse to fine SAND, inte Gravel, trace Sitt with Doublers	0.07.0005		
20													
		S-4	20	22	6	19	19	20	10	Same	0.0/.005		
											_		
										BORING COMPLETE AT 22 FEET			
25													
30													
35													
40													

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Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
		Approximate Change in Strata: Inferred Change in Strata:

17	77 C		21		PROJECT NAME:				Rive	r Park Center	BORING NO.	SB-2		
4	2				LC	CATIC	N:		Y	onkers, NY	JOB NO:	7190		
	6101	ENGINE						1			GROUND ELEVATION:	64.5+/-		
	ING BY:	Boar	t Longye	ear		STARTE			8/2007		GROUNDWATER TABLE DEPTH te 11/29/07 24 Hr. N/A			
	ECTOR:		RF	<b>T</b> 11	DATE	DATE COMPLETED			/2007	0 Hr. 10' Da	Date N/A			
DEPTH	METHOD	SAMPLE	DEF FROM	то		Blows o	n Spoor	ו	REC		CRIPTION AND STRATIFICATION	N P.I.D./Hg		
(ft) O	METHOD	No.	(ft)	(ft)	0/6	6/12	12/18	18/24	(in)	SOIL DESC	N P.I.D./Hg			
0		S-1	0	2	0/0	0/12	12/10	10/24	(11)	Fill: Black coarse to fi	ne Sand with Cinders, Brick, Cobbles	0.0/0.0		
		5-1	0	2						Thi. Black coarse to h	ine Sand with Chiders, Brick, Cobbles	0.0/0.0		
5														
										Gray-brown coarse to	fine SAND, some coarse to fine Grav	el, 0.0/0.0		
										trace Silt with Cobbles	S			
10														
		S-2	10	12						1	to fine SAND, some coarse to fine Gr	avel, 0.0/0.0		
										trace Silt with Cobbles	S			
										Cobbles				
15														
10		S-3	15	17						Light-brown coarse to	. 0.0/0.13			
			10	17						trace Silt		,		
												0.0/0.05		
20														
		S-4	20	22						Light-brown medium	to fine SAND and coarse to fine Grav	el, 0.0/0.019		
										trace Silt with Cobbles	s, Boulders			
										r				
25										BORING COMPLET	E AT 24 FEET			
												├───		
												├───		
30					1									
35														
40												├───		
40														

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Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
		Approximate Change in Strata: Inferred Change in Strata:

. 177	77 6		$\sim$		PRO	JECT N	AME		Rive	r Park C	Center		BORING NO.		-3 BORING	
a	5.	SE.	5							onkers,			JOB NO:		190	
7	· ·	ONSULT ENGINEI	ING.							,			GROUND ELEVATION:		.5+/-	
BORI	ING BY:	Boar	t Longye	ear	DATE	STARTE	ED	11/29	/2007			GRO	ROUNDWATER TABLE DEPTH			
INSP	ECTOR:		RF		DATE	COMPL	ETED	11/29	/2007	0 Hr.	Date N	/A				
DEPTH		SAMPLE	DEF	РΤΗ		Blows o	s on Spoon REG			0 Hr. 9' Date 11/29/07 24 Hr. N/A Date						
(ft)	METHOD	No.	FROM	то							SOIL	DESCRI	PTION AND STRATIFICATIC	N	P.I.D./Hg	
0			(ft)	(ft)	0/6	6/12	12/18	18/24	(in)							
										Asphalt						
		S-1	1	3					36	Fill: Gra	ay-brown	coarse to	o fine Sand and Gravel, trace Silt		0.0/.004	
5										1						
			5	7					24	Grav-br	own coar	rse to fine	e Sand and Gravel, trace Silt		0.0/.007	
										with Co						
										1						
10																
		S-2	11	13					60	-			fine Sand, little Gravel		0.0/.008	
										trace Sil	t with Co	obbles				
45														0.0/007		
15															0.0/.007	
		S-3	16	18					36	Orange	brown m	edium to	fine Sand, some coarse to fine		0.0/.006	
		55	10	10					50			t with col			0.07.0000	
20										1						
		S-4	21	23					72	Orange-	brown m	nedium to	fine Sand, some coarse to fine			
										Gravel,	little Silt	with cob	bles			
															-	
25										BORIN	G COMF	PLETE A	T 24 FEET			
										-						
30										1						
										1						
										]						
										]						
										]						
35																
															<b> </b>	
						<u> </u>										
40										-						
40					I										1	

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Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
		Approximate Change in Strata: Inferred Change in Strata:

17	77 C		21		PROJECT NAME:					r Park Center BORING NO.	SB-4		
4	2		51		LC	OCATIO	N:		Y	onkers, NY JOB NO:	719	0	
	1	ENGINEI						r		GROUND ELEVATION:	64.5+	+/-	
-	NG BY:		t Longye	ear		STARTE			9/2007	GROUNDWATER TABLE DEPTH			
	ECTOR:		JZ/RF		DATE	COMPL	ETED	11/29	9/2007	0 Hr. 10' Date 11/29/07 24 Hr. N/A D	Date N/A		
DEPTH		SAMPLE	DEF	1		Blows o	n Spoor	٦	REC				
(ft) O	METHOD	No.	FROM	TO (ft)	0/6	6/40	12/18	18/24	(in)	SOIL DESCRIPTION AND STRATIFICATION	ŀ	P.I.D./Hg	
0		S-1	(ft) 0	2	0/6	0/12	12/10	10/24	48	Fill: Black coarse to fine Sand and Gravel, trace Silt with Cinde	0.000	0.0/.007	
		5-1	0	2					40	Fin. Black coarse to fine Sand and Graver, trace Sitt with Child	215	0.0/.007	
										Fill: Brown coarse to fine Sand and Gravel, trace Silt with Cind	lers and	0.0/.011	
5										Cobbles			
									24				
10													
									60	Brown medium to fine SAND, some Silt, little Gravel with Col	bbles	0.0/.005	
											_		
											_		
15		S-2	14	16							1.1.641.	0.0/.007	
15		3-2	14	16					42	Gray-brown medium to fine SAND, some coarse to fine Grave Silt	i, iittie	0.0/.007	
									42	SIL			
20		S-3	19	21						Brown medium to fine SAND, little Silt, trace Gravel		0.0/.004	
									48				
											_		
25		S-4	24	26						Same	(	0.0/.006	
										BORING COMPLETE AT 26 FEET	_		
											⊢		
30											⊢		
					<u> </u>						⊢		
											F		
					I						F		
35													
											L		
					<u> </u>						F		
40													

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Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
		Approximate Change in Strata: Inferred Change in Strata:

17	77 C		21		PRO	JECT N	AME:		Rive	r Park Center	BORING NO.	SB-5			
4	2		51		L	OCATIO	N:		Y	onkers, NY	JOB NO:	7190			
		ENGINE	ERB					1			GROUND ELEVATION:	63+/-			
	NG BY:		ADT			STARTE			/2007		OUNDWATER TABLE DEPTH				
	ECTOR:		JZ		DATE	COMPL	ETED	11/30	/2007	0 Hr. N/A Date	N/A 24 Hr. N/A Date	N/A			
DEPTH		SAMPLE	DEP			Blows o	n Spoor	n REC		SOIL DESCRIPTION AND STRATIFICATION					
(ft)	METHOD	No.	FROM	TO	0/0	0/40	10/10	10/04	(in)	SOIL DESCRIPTION AND STRATIFICATION					
0			(ft)	(ft)	0/6	6/12	12/18	18/24	(in)						
		S-1	1	3						Brown medium to fine S/	AND, some medium to fine Gravel, little S	ilt 0.0/0.0			
		5-1	1	5						Brown medium to mie SP	and, some medium to fine Oraver, fittle 3	0.0/0.0			
5															
										Boulders and Cobbles					
10															
15															
		S-2	18	20						Brown coarse to fine SAN	ND, little medium to fine Gravel, little Silt	0.0/.007			
20		3-2	10	20						BIOWII COAISE to The SAT	ND, inthe medium to the Graver, inthe Shi	0.0/.007			
										Boulders and Cobbles					
		S-3	23	25						Same		0.0/.008			
25															
										Refusal on Rock at 28 Fe					
30										BORING COMPLETE A	T 28 FEET				
OF															
35															
40															
		1			1	1	1			1		1			

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Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
		Approximate Change in Strata: Inferred Change in Strata:

17	77 C		21		PROJECT NAME:												SB-6			
4					LC	OCATIC	N:		Y	onkers, NY			JOB NO:				7190			
_		ENGINEI											GROUN				1.5+	/-		
	NG BY:		ADT			STARTE			/2007		GROUNDWATER TABLE DEPTH									
	ECTOR:		RF		DATE	COMPL	ETED	11/28	1/28/2007 0 Hr. N/A			N/A Date N/A 24 Hr. N/A				Date	N/A			
DEPTH	METHOD	SAMPLE	DEP		-	Blows o	n Spoor	n	REC								.I.D./Hg			
(ft) O	METHOD	No.	FROM	TO (ft)	0/6	6/12	12/18	18/24	(in)	SOIL DESCRIPTION AND STRATIFICATION						JN	Р	.i.D./Hg		
0			(ft)	(11)	0/0	0/12	12/10	10/24	(11)	Asphalt										
		S-1	1	3	12	10	12	2	5	FILL: Brow	m coar	se to fir	e SAND 1	ittle mediu	m to fine		(	0.0/0.0		
		51		5	12	10	12	2	5	Gravel, trac		SC 10 III		ntie meara	in to fine		_	010/010		
										oraven, aue	e biit									
5																				
										Cobbles	and B	oulders								
10																				
15																	_			
		S-2	18	20	11	10	7	6	19	Proven mod	lium to	fine C	ND little	Silt trace (	Troval			0.0/0.0		
20		3-2	10	20	11	10	/	0	18	Brown med	num to	o nne SA	and, inthe i	siit, trace v	Jravel		_	0.0/0.0		
		S-3	23	25	7	11	6	4	6	Cobbles	and B	oulders					(	0.0/0.0		
25																				
		S-4	28	30	10	50/3"			8	Gray mediu					avel		- (	0.0/0.0		
30										BORING C	COMPI	LETE A	T 30 FEET	,						
																	$\vdash$			
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05																	$\vdash$			
35																	$\vdash$			
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Weight/type of Hammer on Split Barrel	140 lb	r judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical					
Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.					
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod					
		Approximate Change in Strata: Inferred Change in Strata:					

17	77 C		21		PRO	JECT N	AME:		Rive					BORING NO.			
4	2				LC	OCATIC	N:		Y	onkers, N	NY		JOB NO:			7	190
		ENGINEI						1		1			GROUND				9.0+/-
	ING BY:	Boar	t Longye	ear	DATE				/2007				OUNDWATER TABLE DEPTH				
	ECTOR:		JZ DEF	)TI I	DATE	COMPL	ETED	12/3/	/2007	0 Hr.	N/A	Date	N/A	24 Hr.	N/A	Date N	/A
DEPTH (ft)	METHOD	SAMPLE	FROM	то		Blows o	n Spoor	ו						N	P.I.D./Hg		
0	WETTOD	No.	(ft)	(ft)	0/6	6/12	12/18	18/24	(in)	SOIL DESCRIPTION AND STRATIFICATION						1 .i.D./rig	
-			(19	(11)	0/0	0/12	12/10	10/24	(11)								
		S-1	1	3						Fill: Blac	ck/brown o	coarse t	o fine Grave	and coar	se to fine S	Sand, trace	61.1/0.0
											roleum Od						
5																	
		S-2	5	7						Brown m	nedium to	fine SA	AND, some c	coarse to fi	ne Gravel,	trace Silt	31.2/.004
										(Petroleu	ım Odor)						
10																	
10		S-3	10	12						Crosser	dinan ( - C			diama ( - f	Current	641a 634	8.1/.008
		3-3	10	12							dium to fi im Odor)	ne SAN	ND, little me	dium to fir	ie Gravel,	little Silt	8.1/.008
										(Petrolet	ini Odor)						
										1							
15																	
		S-4	15	17						Brown m	nedium to	fine Gr	avel and me	dium to fii	ne Sand, lit	ttle Silt	10.1/.006
										(Petroleu	ım Odor)						
										BORING	G COMPL	ETE A	T 17 FEET				
20																	
										-							
25										-							
20																	
					İ —					1							
										]							
30										]							
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35							ļ										
40										1							
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Weight/type of Hammer on Split Barrel	140 lb	or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical					
Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.					
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod					
		Approximate Change in Strata: Inferred Change in Strata:					

1213	77 0								Dive	r Park Center BORING NO. SB-8 BC	
11	45	SE.	51			JECT N				r Park Center         BORING NO.         SB-8           onkers, NY         JOB NO:         7190	
7	0	ONSULT	ING			JUANU	/IN.		ř	GROUND ELEVATION: 55.0+/-	
POPI	NG BY:	ENGINEI	ADT			STARTE		11/26	6/2007	GROUNDWATER TABLE DEPTH	-
	ECTOR:		RF			COMPL			/2007	0 Hr. 10' Date 11/27/07 24 Hr. N/A Date N/A	
DEPTH			DEF	νтн							
(ft)	METHOD	SAMPLE	FROM	то		Blows o	n Spoor	ו	REC	SOIL DESCRIPTION AND STRATIFICATION	I.D./Hg
0		No.	(ft)	(ft)	0/6	6/12	12/18	18/24	(in)		. 3
-			( )						()	Asphalt	
		S-1	1	3	11	6	5	5	12		.0/0.0
										fine Gravel, trace Silt, with Brick, Wood, Concrete, Asphalt	
5											
		S-2	5	7	2	2	2	3	12	FILL: Brown medium to fine SAND, some Silt, trace Gravel 0.	.0/0.0
						1	1				
10											
		S-3	10	12	5	4	50/3"	-	12	FILL: Reddish-brown coarse to fine GRAVEL, trace Sand, 0.	.0/0.0
										trace Silt with Cobbles and Boulders	
15											
		S-4	15	17	13	8	5	5	6	Cobbles and Boulders 0.	.0/0.0
										BORING COMPLETE AT 17 FEET	
20											
										L	
25											
										-	
30										-	
30											
35											
										-	
					<u> </u>						-
40										-	
-				1		1		1	1		

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.
Nominal I.D. of Split Barrel Sampler	1¾ in	It is made available to authorized users only that they may have access to the same information available
Weight/type of Hammer on Drive Pipe	300 lb	to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations
Weight/type of Hammer on Split Barrel	140 lb	or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical
Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

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

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

17	//LSESI									r Park Center	BORING NO.	SB-9
4	2		51		LC	OCATIO	N:		Y	onkers, NY	JOB NO:	7190
		ENGINE	ERB								GROUND ELEVATION:	63.0+/-
	ING BY:	Boar	t Longye	ear		STARTE		11/28/2007			ROUNDWATER TABLE DEPTH	
	ECTOR:		RF		DATE COMPLETED		11/29	9/2007	0 Hr. 10' Dat	e 11/29/07 24 Hr. N/A Date	N/A	
DEPTH		SAMPLE	DEP		_	Blows o	n Spoor	า	REC			
(ft)	METHOD	No.	FROM	то		-				SOIL DESC	RIPTION AND STRATIFICATION	P.I.D./Hg
0			(ft)	(ft)	0/6	6/12	12/18	18/24	(in)			
										Asphalt		
		S-1	1	3							arse to fine Gravel and coarse to fine Sand	0.0/0.0
										trace Silt		
5										Cinders		
5		S-2	5	7							ine SAND, trace Silt with Cinders	0.0/0.0
		5-2	5	,						FILL. Black coarse to I	me SAND, trace Sitt with Childers	0.0/0.0
					1							
10												
		S-3	10	12						FILL: Brown medium	to fine SAND, some Silt with Cinders	0.0/0.0
										Gray-brown coarse to fi	ne SAND, some Silt, trace Gravel with Cob	oles
15												
		S-4	15	17						Gray-brown coarse to f	ine SAND, some Silt with Cobbles	0.0/0.0
										BORING COMPLETE	E AT 18 FEET	
20												
25												
30												
35												
40												

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.					
Nominal I.D. of Split Barrel Sampler	1% in	It is made available to authorized users only that they may have access to the same information available					
Weight/type of Hammer on Drive Pipe	300 lb	o our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations					
Weight/type of Hammer on Split Barrel	140 lb	r judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical					
Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.					
Core Size		Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod					
		Approximate Change in Strata: Inferred Change in Strata:					

PROJ	ЕСТ	NO.	N·	-7190	INS	PECTED BY:	GP		BORING NO.	SV-1
LOCA		N	See I	Figure 1	AP	PROX. ELEV.	55.77	,	DATE 8/20/2007	-
D E P T H F T	S A M P L E S	* RESSISAMPSTANCE	P I D R E A D			D	ESCRIPTI	ION		
0 5		38 50/6"	2.0 Hg 0.00 1.9 Hg 0.004		Sand, Grave	el, Silt w/ Metal a  little Silt, little C pulders	Gravel w/ l			
10 — — — 15 —				Brown mediu		ND, some Silt, 1	ittle Grave	el		
				Boring Compl			Well Deta	il she	et for schematic	
				PLIT BARREL DROP * Blows	s/Ft.	DEPTH TO V REMARKS:			NE DATE: ON OF BORING	8/20/2007

PROJ	ЕСТ	NO.	N·	-7190	INSF	PECTED BY:		GP	BORING NO.	SV-2
LOCA		N	See I	Figure 1	APP	PROX. ELEV.	6	2.97	DATE 8/20/2007	, _
D E P T H F T	S A M P L E S	* S A M P L I N G E	P I D R E A D			D	ESCI	RIPTION		
		-	0.7 Hg 0.0 1.1 Hg 0.0	FILL: Brown Brown mediu Boring Comp	Sand, Gravel, medium to fin m to fine SAN lete At 19 Fee	et	ilt, li	ttle Grave Gravel		
				PLIT BARREL DROP * Blows		DEPTH TO V REMARKS:			10' DATE: ON OF BORING	8/20/2007

PROJ	ЕСТ	NO.	N-7190			PECTED BY:	GP		BORING NO.	SV-3
LOCA	ΤΙΟΙ	J	See I	Figure 1	APF	PROX. ELEV.	67.76	6	DATE 8/27/2007	
D E P T H F T	S A M P L E S	* R E S I S T A N C E	PID READ.			D	ESCRIPT	ION		
0				Topsoil Vacuum excav FILL: Brown		little Gravel, litt	le Silt w/	Brick		
5 — — — 10 —		50/2"	1.3 Hg 0.007						lt, little Gravel w/ Brick	
			<u>ng 0.007</u>	Brown mediu	m to fine SAI	ND, little Grave	l, little Sil	lt with	h Cobbles and Boulders	
				Soil Vapor W	ell installed,	see Soil Vapor	Well Deta	iil she	eet for schematic	
				PLIT BARREL DROP * Blows	s/Ft.	DEPTH TO V REMARKS:			13' DATE: ON OF BORING	8/27/2007

PROJ	IECT	NO.	N·	-7190	INSPECTED B	SY:	GP	BORING NO.	SV-8
LOCA		N	See I	Figure 1	APPROX. ELE	EV	56.5	DATE 8/16/2007	
D E P T H F T	S A M P L E S	* R S S S M S L A N C E	P I D R E A D			DE	SCRIPTION		
0	-		0 Hg 0.007	6" Asphalt Vacuum exc FILL: Dark	Brown Sand, Gravel, Silt v				
			Hg 0.012		plete At 6 Feet Well installed, see Soil Va				
				PLIT BARREL DROP * Blov				NE DATE: ON OF BORING	8/16/2007

PROJ	ЕСТ	NO.	N·	-7190	INS	PECTED BY:	GP	BORING	NO.	SV-9
LOCA	ΤΙΟΙ	N	See I	Figure 1	APF	PROX. ELEV.	74.08	DATE	9/5/2007	_
D E P T H F T	S A M P L E S	* R S E S S M I P S L T I A N C G E	P I D R E A D			DI	ESCRIPTION	1		
0  5				4" Concrete a Vacuum exca FILL: Dark-B	wated to 5'		ittle Gravel,	little Silt with Br	ick and Co	ncrete
		28	0 Hg 0.004 0 Hg 0.004	Boring Comp	olete At 13.5 F	Feet		little Silt with Br		
				PLIT BARREL DROP * Blows	s/Ft.	DEPTH TO W REMARKS:		NE FION OF BORING	DATE:	9/5/2007

	Venkero	NV	LOW-FLOW	GROUNDWATER SA		WELLID M	W 4048		
Location:		NY	I	Job Number:	7190A	WELL I.D. : M	w-1015		
Personnel:	NL			Date:	8/14/2017 0				
Stickup? Y/N Distance ground to Stickup Rim/PVC	Distance From Rim to PVC	Total Depth of Well Rim/ <u>PVC</u>	Depth to Product Rim/ <u>PVC</u>	Depth to Water (Rim/ <u>PVC)</u>	Standing Water Column (feet)	Middle of Saturated Zone (feet)	Depth to Sample Tube (feet)	TOV @ Well Head (ppmv)	Pump <u>Peristaltic</u> o Bladder
	3"	19.78	N/E	14.93	4.85	17.37	18		
Turbidity at co	ollection (NTU):	8.1	(Less than	5 NTU is desirable)	Dupl	icate Collected	? <u>Y</u> /N		Sample /N
Stabilization	n Parameters	+/- 0.5 deg C.	+/- 0.1 Unit	+/- 10 umhos/cm or within 3% if >300umho	1 ppm	+/- 10 mV	No Limit	<.3 feet drawdown desirable	No Limit
Volume Purged (gallons)	Time (actual Time) 5 minute Intervals	TEMP. (Deg. C)	рН	Specific Conductivity uS/cm	Dissolved Oxygen (mg/L)	ORP mV millivolts	Turbidity NTUs	DTW (feet)	Odors Y/N
	8:28	18.55	7.05	1840	3.4	163	493	14.47	Y
	9:00 9:05 9:10 9:15	15.91 15.91 15.91 15.91 15.91	6.66 6.75 6.79 6.84	18.5 1840 1830 1830	0.89 0.98 0.74 0.7	187 185 182 178	17.1 7.1 5.3 5.1	15.22 15.23 15.23 15.24	N N N
	9:20	15.9	6.94	1820	0.64	171	2.5	15.24	N
	9:25	15.9	7.01	1830	0.63	170	8.3	15.28	N
	9:30	15.89	7.04	1830	1.01	170	9.1	15.28	N
	9:35 9:40	15.86 15.86	7.03 7.03	1810 1820	0.64 0.64	170 171	9.4 8.1	15.28 15.28	N N
Cover: Y / N		Bolts: Y / N	W	ell Condition Summa		Gripper: Y / N			
Cover. <u>1</u> /N		Boils. <u>1</u> / N	Sam	ple Collection Inform		Gripper. 1/ N		ļ	
Sample Time:	9:40	Appearance: Ver	ry Clear	Filtered Sample Tur	bidity:		OTHER:		
sired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If furbidity > 10 collect filterec biblization: Jeds/ Calculations: Jume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.			d unfiltered samples. Ne	otify PM of high turbidity and collecti	on of filtered samples prior t	o lab submittal.		Minimum 20 minute pu	rge to establish
	-	•		ABSORBENT SOCK					
Sock Length (ft) =		Capacity	(Qt.) =		Present:	Y/N	Product Measu	red (Inches) :	
	Ilation Date:			Sock Cha	nged :	Y/N	4		
Sock Dept	h (Depth to sock mid p	oint):					4		

			LOW-FLOW	GROUNDWATER SAI					
Location:		NY		Job Number:	7190A	WELL I.D. : M	W-101S		
Personnel:	NL			Date: PID:	8/1/2017 0			LTING	
Stickup? Y <u>/N</u> Distance ground to Stickup Rim/PVC	Distance From Rim to PVC	Total Depth of Well Rim/ <u>PVC</u>	Depth to Product Rim/ <u>PVC</u>	Depth to Water (Rim/ <u>PVC)</u>	Standing Water Column (feet)	Middle of Saturated Zone (feet)	Depth to Sample Tube (feet)	TOV @ Well Head (ppmv)	Pump <u>Peristaltic</u> or Bladder
Turbidity at co	ollection (NTU):		(Less than	n 5 NTU is desirable)	Dupi	icate Collected	? <u>Y</u> /N	Y.	Sample / <u>N</u>
Stabilizatio	n Parameters	+/- 0.5 deg C.	+/- 0.1 Unit	+/- 10 umhos/cm or within 3% if >300umho	1 ppm	+/- 10 mV	No Limit	<.3 feet drawdown desirable	No Limit
Volume Purged (gallons)	Time (actual Time) 5 minute Intervals	TEMP. (Deg. C)	рН	Specific Conductivity uS/cm	Dissolved Oxygen (mg/L)	ORP mV millivolts	Turbidity NTUs	DTW (feet)	Odors Y/N
Sample not	collected due	to presence	of PVC	shavings in	well				
Cover: <u>Y</u> / N		Bolts: <u>Y</u> / N		ell Condition Summa	<u>/</u> /N	Gripper: <u>Y</u> / N			
Sample Time:		Appearance: Ve	ry Clear	ple Collection Inform Filtered Sample Tur	bidity:		OTHER:		
stabilization. Notes/ Calculations:			nd unfiltered samples. N	otify PM of high turbidity and collecti	on of filtered samples prior t	o lab submittal.		Minimum 20 minute pu	rge to establish
				ABSORBENT SOCK					
	llation Date: h (Depth to sock mid p	Capacity oint):	(Qt.) =	Sock Cha	Present: nged :	Y/N Y/N	Product Measu	ired (Inches) :	

<b>F</b>			LOW-FLOW	GROUNDWATER SAI		1			
Location:		NY		Job Number:	7190A	WELL I.D. : M	W-101S		
Personnel:	NL		Date:		7/31/2017 2.3 ppm				
Stickup? Y <u>/N</u> Distance ground to Stickup Rim/PVC	Distance From Rim to PVC	Total Depth of Well Rim/ <u>PVC</u>	Depth to Product Rim/ <u>PVC</u>	Depth to Water (Rim/ <u>PVC)</u>	Standing Water Column (feet)	Middle of Saturated Zone (feet)	Depth to Sample Tube (feet)	TOV @ Well Head (ppmv)	Pump <u>Peristaltic</u> o Bladder
	2"	19.79	N/E	12.71	7.08				
Turbidity at co	ollection (NTU):		(Less than	5 NTU is desirable)	Dupl	icate Collected	? <u>Y</u> /N		Sample /N
Stabilization	n Parameters	+/- 0.5 deg C.	+/- 0.1 Unit	+/- 10 umhos/cm or within 3% if >300umho	1 ppm	+/- 10 mV	No Limit	<.3 feet drawdown desirable	No Limit
Volume Purged (gallons)	Time (actual Time) 5 minute Intervals	TEMP. (Deg. C)	рН	Specific Conductivity uS/cm	Dissolved Oxygen (mg/L)	ORP mV millivolts	Turbidity NTUs	DTW (feet)	Odors Y/N
	12:20	23.33	7.82	1810	5.14	90	31.8	12.87	N
	12:34 12:38 12:41 12:44	19.41 20.09 19.05 17.47	7.15 7.07 7.02 6.97	2060 2060 2210 2410	2.57 2.3 2.23 2.32	123 128 132 137	34.9 9.6 4.7 2.9	12.95 12.97 12.98 13	N N N
	12:46	17.25	6.95	2480	2.03	139	2.5	13	N
	12:49	17.05	6.96	2540	1.74	140	2.2	13.01	N
	12:51 12:54	16.95 16.95	6.97 6.97	2590 2640	1.7 1.64	141 142	1.7 1.3	13.01 13.04	N N
Cover: <u>Y</u> /N		Bolts: <u>Y</u> / N	W	ell Condition Summa Concrete Pad OK: <u>Y</u>		Gripper: <u>Y</u> / N			
			Sam	ble Collection Inform				l	
Sample Time:		Appearance: Vei		Filtered Sample Tur			OTHER:		
esired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If furbidity > 10 collect filtered abilization. otes/ Calculations: olume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.			d unfiltered samples. Ne	otify PM of high turbidity and collection	on of filtered samples prior t	o lab submittal.		Minimum 20 minute pu	rge to establish
				ABSORBENT SOCK					
Sock Length (ft) =		Capacity	(Qt.) =	Cash Class	Present:	Y/N	Product Measu	ired (Inches) :	
	Ilation Date:	- i 4) -		Sock Cha	nged :	Y/N	4		
Sock Dept	h (Depth to sock mid p	omit):					-		

			LOW-FLOW	GROUNDWATER SAI		1			
Location:		NY	ı.	Job Number:	7190A	WELL I.D. : M	W-102S		
Personnel:	NL		D;		7/31/2017 0.3 ppm				
Stickup? Y <u>/N</u> Distance ground to Stickup Rim/PVC	Distance From Rim to PVC	Total Depth of Well Rim/ <u>PVC</u>	Depth to Product Rim/ <u>PVC</u>	Depth to Water (Rim/ <u>PVC)</u>	Standing Water Column (feet)	Middle of Saturated Zone (feet)	Depth to Sample Tube (feet)	TOV @ Well Head (ppmv)	Pump <u>Peristaltic</u> or Bladder
	2"	20.13	N/E	11.73	8.4				
Turbidity at c	ollection (NTU):		(Less than	5 NTU is desirable)	Dupl	icate Collected	? <u>Y</u> /N		Sample /N
Stabilizatio	n Parameters	+/- 0.5 deg C.	+/- 0.1 Unit	+/- 10 umhos/cm or within 3% if >300umho	1 ppm	+/- 10 mV	No Limit	<.3 feet drawdown desirable	No Limit
Volume Purged (gallons)	Time (actual Time) 5 minute Intervals	TEMP. (Deg. C)	рН	Specific Conductivity uS/cm	Dissolved Oxygen (mg/L)	ORP mV millivolts	Turbidity NTUs	DTW (feet)	Odors Y/N
	10:32	23.85	8.34	917	12.12	91	7.2	11.95	N
	10:47 10:50 10:53 10:56	20.91 19.11 19.05 18.95	7.79 7.69 7.62 7.56	978 965 966 968	11.11 10.53 9.87 9.39	104 108 110 113	4.6 2.5 0.8 0.4	12.12 12.17 12.18 12.19	N N N
	10:59	18.95	7.51	968	9	115	0	12.21	N
	11:02	19.08	7.47	967	8.61	117	0	12.23	N
	11:05	19.14	7.44	969	8.52	118	0	12.23	N
	11:08	19.16	7.43	968	8.56	119	0	12.25	N
			W	ell Condition Summa	iry				
Cover: <u>Y</u> /N		Bolts: <u>Y</u> / N		Concrete Pad OK: Y		Gripper: <u>Y</u> / N			
0	44.00	A		ple Collection Inform					
stabilization.	11:08 (slow drip) & turbidity <10 if possible. If t	Appearance: Ver urbidity > 10 collect filtered ar		Filtered Sample Tur		o lab submittal.	OTHER:	Minimum 20 minute pu	rge to establish
Notes/ Calculations: Volume? Linear Ft of well casi	ng; 1"=0.041 gal. 2"= 0.163 ga	al. 4"=0.653 gal.		ABSORBENT SOCK					
Sock Length (ft) =		Capacity	(Qt.) =	ADOUNDENT SUCK	Present:	Y/N	Product Measu	red (Inches) :	
	Ilation Date:	Suparity	<u>, →••</u> , –	Sock Cha		Y/N			1
	th (Depth to sock mid p	oint):			•		1		
· · ·							1		

			LOW-FLOW	GROUNDWATER SAI		1			
Location:		NY	i.	Job Number:	7190A	WELL I.D. : M	IW-103D		
Personnel:	NL		PID:		7/31/2017 1.7 ppm	CONSULTING			
Stickup? Y/N Distance ground to Stickup Rim/PVC	Distance From Rim to PVC	Total Depth of Well Rim/ <u>PVC</u>	Depth to Product Rim/ <u>PVC</u>	Depth to Water (Rim/ <u>PVC)</u>	Standing Water Column (feet)	Middle of Saturated Zone (feet)	Depth to Sample Tube (feet)	TOV @ Well Head (ppmv)	Pump <u>Peristaltic</u> o Bladder
	2"	50.18	N/E	10.63'	39.55				
Turbidity at c	ollection (NTU):		(Less than	5 NTU is desirable)	Dupl	icate Collected	? <u>Y</u> /N		Sample /N
Stabilizatio	n Parameters	+/- 0.5 deg C.	+/- 0.1 Unit	+/- 10 umhos/cm or within 3% if >300umho	1 ppm	+/- 10 mV	No Limit	<.3 feet drawdown desirable	No Limit
Volume Purged (gallons)	Time (actual Time) 5 minute Intervals	TEMP. (Deg. C)	рН	Specific Conductivity uS/cm	Dissolved Oxygen (mg/L)	ORP mV millivolts	Turbidity NTUs	DTW (feet)	Odors Y/N
	8:38	18.92	8.61	2130	11.91	94	3.8	22.8	N
	9:02 9:05 9:08	18.83 18.23 18.78	8.69 8.96 9	2140 2200 2200	10.48 9.71 6.45	87 85 81	2.9 0.9 35.4	26.5 26.8 27.06	N N N
	9:11	18.68	9.13	2070	1.97	74	42.3	27.31	N
	9:15 9:17	18.65 18.63	9.12 9.12	2040 2030	1.9 1.87	70 67	40 35.1	27.38 27.42	N N
	l	l	W	ell Condition Summa	iry	·	·		·
Cover: <u>Y</u> /N		Bolts: <u>Y</u> / N		Concrete Pad OK: Y		Gripper: <u>Y</u> / N			
Sample Time:	9:17	Appearance: Ver		Filtered Sample Tur			OTHER:		
stabilization. Notes/ Calculations:	esired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered abilization.		nd unfiltered samples. N	otify PM of high turbidity and collecti	on of filtered samples prior to	o lab submittal.	•	Minimum 20 minute pu	rge to establish
			(0:)	ABSORBENT SOCK			Dec Localita		
	 Ilation Date: th (Depth to sock mid p	Capacity oint):	(ut.) =	Sock Cha	Present: nged :	Y/N Y/N	Product Measu	irea (inches) :	<u> </u>

			LOW-FLOW	GROUNDWATER SAI		1			
Location:		NY		Job Number:	7190A	WELL I.D. : M	W-104D		
Personnel:	NL			Date:	8.1.2017		SF	S	
				PID:	1.0 ppm		CONSU		
Stickup? <u>Y</u> /N Distance ground to Stickup Rim/PVC	Distance From Rim to PVC	Total Depth of Well Rim/ <u>PVC</u>	Depth to Product Rim/ <u>PVC</u>	Depth to Water (Rim/ <u>PVC</u> )	Standing Water Column (feet)	Middle of Saturated Zone (feet)	Depth to Sample Tube (feet)	TOV @ Well Head (ppmv)	Pump Peristaltic o Bladder
		58.8	N/E	21.49	37.31	39.99	40		
Turbidity at co	ollection (NTU):	54.7	(Less than	5 NTU is desirable)	Dupl	licate Collected	? Y/N		Sample /N
				+/- 10 umhos/cm or				<.3 feet	
Stabilizatio	n Parameters	+/- 0.5 deg C.	+/- 0.1 Unit	within 3% if >300umho	1 ppm	+/- 10 mV	No Limit	drawdown desirable	No Limit
				Specific	Dissolved	ORP			
Volume Purged (gallons)	Time (actual Time) 5 minute Intervals	TEMP. (Deg. C)	рН	Conductivity uS/cm	Oxygen (mg/L)	mV millivolts	Turbidity NTUs	DTW (feet)	Odors Y/N
	8:15	20.87	10.66	713	3.94	37	208	24.75	N
	0.45	04.05	10.00		0.04	45			
	9:15 9:20	21.25 21.35	10.68 10.64	694 689	3.31 4.28	15 15	67.4 81.3	34.18 34.73	N N
	9:20	21.35	10.64	690	3.46	15	65.9	34.73	N
	9:35	21.78	10.61	692	4.4	9	71.6	35.52	N
	9:40	21.72	10.62	694	3.94	10	66.4	35.88	N
	9:45	21.6	10.68	686	3.3	15	51.8	36.19	N
	9:50	22.15	10.69	684	3.64	11	55.4	36.28	N
	9:55	22.31	10.69	684	4.21	9	58.2	36.75	N
	10:00	21.98	10.71	688	4.52	13	54.7	37.38	N
				ell Condition Summa					
			VV	en Condition Summa	iry	1		1	
Cover: <u>Y</u> / N		Bolts: Y / <u>N</u>	C	Concrete Pad OK: Y		Gripper: <u>Y</u> / N			
Sample Time: Desired purge flow rate <100ml /min	(slow drip) & turbidity <10 if possible. If t	Appearance: Ver urbidity > 10 collect filtered ar		Filtered Sample Tur		o lab submittal	OTHER:	Minimum 20 minute pu	roe to establish
esired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If furbidity > 10 collect filtere abilization. lottes/ Calculations: olume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.						o kao odornikan.			ge to contabiliti
				ABSORBENT SOCK					
Sock Length (ft) =		Capacity	(Qt.) =		Present:	Y/N	Product Measu	ired (Inches) :	
	Ilation Date:			Sock Cha	nged :	Y/N			
Sock Dept	h (Depth to sock mid p	oint):							

Stickup? Y(N Distance ground to Stickup Rim/PVC       Distance From Rim to PVC       Total Depth of Product Rim/PVC       Standing Water Column (feet)       Middle of Saturated (feet)       Depth to Saturated Column       Depth to Saturated Column       Depth to Saturated (feet)       Depth to Saturated (feet)       Depth to Saturated Colspan="2">Stabilization (NTU):       0.5       (Less than 5 NTU is desirable)       Duplicate Collected? Y/N         Stabilization Parameters       +/- 0.5 deg C.       +/- 0.1 Unit +/- 0.5 deg C.       +/- 0.1 Unit +/- 0.1 Unit */- 0.1 Unit */- 0.1 Unit */- 0.0 duplicate       0 Duplicate Collected? Y/N       No Limit def         Volume Purged (gallons)       Time (actual Time) 5 minute Intervals       TEMP. (Deg. C)       pH       Conductivity Us/Crm       Dissolved (mg/L)       ORP mV       Turbidity NTUs       NUs         11:10       17.74       7.05       2280       0.47       47       4.3       2.9         111:20       17.64       7.06       2250       0.54       45       2.9       2.9         111:20       17.37       7.09       2230       0.52       41       0.5       2.9         111:30       17.37       7.09       2230       0.52       41       0.5       2.9				LOW-FLOW	GROUNDWATER SAI		T			
PID: 3.7 ppm           Stickup? Y/N Distance ground to Stickup Rim/PVC         Distance From Rim to PVC         Total Depth of Well Rim/PVC         Depth to Product Rim/PVC         Stickup? Y/N Depth to Water (Rim/PVC)         Standing Water Column (teet)         Depth to Sample Tube (teet)         Depth to Sample Tube (teet) <th< td=""><td>-</td><td></td><td>NY</td><td></td><td></td><td></td><td>WELL I.D. : M</td><td>IW-105S</td><td></td><td></td></th<>	-		NY				WELL I.D. : M	IW-105S		
Distance ground to Stickup Rim/PVC         Distance From Kim to PVC         Other Rim/PVC         Product Rim/PVC         Depth to Water Column (feet)         Saturated Zone (feet)         Sample Tube (feet)         Ito (feet)           3"         20.03         N/E         10.75         9.28         15.39         16           Turbidity at collection (NTU):         0.5         (Less than 8 NTU is desirable)         Duplicate Collected? Y/N            Stabilization Parameters         +/- 0.5 deg C.         +/- 0.1 Unit         */- 10 umhos/cm or within 3% if >300umho         1 ppm         +/- 10 mV         No Limit            Volume Purged (gallons)         Time (actual Time) 5 minute Intervals         TEMP. (Deg. C)         pH         Specific Conductivity uS/Cm         Dissolved Oxygen (0xgen)         ORP mV mV mV mV         Turbidity NTUS           11:10         17.75         7.05         2280         0.47         47         4.3           11:120         17.44         7.06         2250         0.54         45         2.9           11:20         17.37         7.09         2230         0.52         41         0.5           11:20         17.37         7.09         2230         0.52         41         0.5           11:30         17.37	Personnel:	NL								
Turbidity at collection (NTU):         0.5         (Less that 5 NTU is desirable)         Duplicate Collected? Y/N           Stabilization Parameters         */- 0.5 deg C.         */- 0.1 Unit         */- 10 umhos/cm or within 3% if >300umho         1 ppm         +/- 10 mV         No Limit         dra dra dra dra dra           Volume Purged (galons)         Time (actual Time) 5 minute Intervals         TEMP. (Deg. C)         pH         Specific Conductivity uS/cm         Dissolved (mg/L)         ORP millivoits         Turbidity NTUs         Turbidity NTUs           10:50         21.88         7.25         2200         0.47         47         4.3           11:10         17.75         7.05         2280         0.47         45         2.9           11:20         17.64         7.06         2250         0.54         45         2.9           11:25         17.74         7.08         2240         0.56         43         1.5           11:20         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         2230         0.52         41         0.5           10 <td>ance ground to</td> <td></td> <td></td> <td>Product</td> <td></td> <td>Water Column</td> <td>Saturated</td> <td>Sample Tube</td> <td>TOV @ Well Head (ppmv)</td> <td>Pump <u>Peristaltic</u> or Bladder</td>	ance ground to			Product		Water Column	Saturated	Sample Tube	TOV @ Well Head (ppmv)	Pump <u>Peristaltic</u> or Bladder
Stabilization Parameters         +/- 0.5 deg C.         +/- 0.1 Unit         +/- 10 umhos/cm or within 3% if >300umho         1 ppm         +/- 10 mV         No Limit         dra dra dra dra dra dra           Volume Purged (gallons)         Time (actual Time) 5 minute Intervals         TEMP. (Deg. C)         pH         Specific Conductivity us/cm         Dissolved Oxygen (mg/L)         ORP mV millivolts         Turbidity NTUs         Turbidity NTUs           10:50         21.88         7.25         2300         2.79         60         288           11:10         17.75         7.05         2280         0.47         47         4.3           11:120         17.64         7.06         2250         0.54         45         2.9           11:25         17.44         7.08         2240         0.56         43         1.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         230         0.52         41         0.5           11:30         17.37         7.09         230         0.52         41         0.5           11:30         17.37         Comercity P(N)         Gripper: Y/N         1         1         1 <tr< td=""><td></td><td>3"</td><td>20.03</td><td>N/E</td><td>10.75</td><td>9.28</td><td>15.39</td><td>16</td><td></td><td></td></tr<>		3"	20.03	N/E	10.75	9.28	15.39	16		
Stabilization Parameters         +/- 0.5 deg C.         +/- 0.1 Unit         within 3% if >300umho         1 ppm         +/- 10 mV         No Limit         dra de           Volume Purged (galons)         Time (actual Time) 5 minute Intervals         TEMP. (Deg. C)         pH         Specific Conductivity uS/cm         Dissolved Oxygen (mg/L)         ORP mV millivolts         Turbidity NTUs         Turbidity NTUs           10:50         21.88         7.25         2300         2.79         60         288           11:10         17.75         7.05         2280         0.47         47         4.3           11:15         17.74         7.06         2250         0.54         45         2.9           11:20         17.64         7.06         2230         0.52         41         0.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         10.5         10.5         10.5         10.5           11:30         17.97 <td>Turbidity at co</td> <td>lection (NTU):</td> <td>0.5</td> <td>(Less than</td> <td>5 NTU is desirable)</td> <td>Dupl</td> <td>icate Collected</td> <td>? <u>Y</u>/N</td> <td></td> <td>Sample /N</td>	Turbidity at co	lection (NTU):	0.5	(Less than	5 NTU is desirable)	Dupl	icate Collected	? <u>Y</u> /N		Sample /N
Volume Purged (gallons)         Imme (actual Time) 5 minute Intervals         TEMP. (Deg. C)         pH         Conductivity uS/cm         Oxygen (mg/L)         mV millivolts         Iurbidity NTUs           10:50         21.88         7.25         2300         2.79         60         288           11:10         17.75         7.05         2280         0.47         47         4.3           11:15         17.74         7.05         2260         0.51         46         2.5           11:20         17.64         7.06         2250         0.54         45         2.9           11:25         17.44         7.08         2240         0.56         43         1.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         1.1	Stabilization	Parameters	+/- 0.5 deg C.	+/- 0.1 Unit	within 3% if	1 ppm	+/- 10 mV	No Limit	<.3 feet drawdown desirable	No Limit
11:10         17.75         7.05         2280         0.47         47         4.3           11:15         17.74         7.05         2260         0.51         46         2.5           11:20         17.64         7.06         2250         0.54         45         2.9           11:25         17.44         7.08         2240         0.56         43         1.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         230         0.52         41         0.5           11:30         17.37         10.9         10.9         10.9         10.9         10.9           11:30         1.0         10.9         10.9         10.9         10.9         10.9         10.9           11:30         Appearance: Very Clear         Filtered Sample Turbidity: <t< td=""><td>•</td><td>5 minute Intervals</td><td>(Deg. C)</td><td></td><td>Conductivity uS/cm</td><td>Oxygen (mg/L)</td><td>mV millivolts</td><td>NTUs</td><td>DTW (feet)</td><td>Odors Y/N</td></t<>	•	5 minute Intervals	(Deg. C)		Conductivity uS/cm	Oxygen (mg/L)	mV millivolts	NTUs	DTW (feet)	Odors Y/N
11:15         17.74         7.05         2260         0.51         46         2.5           11:20         17.64         7.06         2250         0.54         45         2.9           11:25         17.44         7.08         2240         0.56         43         1.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         10.9         17.37         10.9         10.9         10.9           11:30         Mediation Summary         10.9         10.9         10.9         10.9         10.9           11:30         Appearance: Very Clear         Filtered Sample Turbidity:         OTHER		10:50	21.88	7.25	2300	2.79	60	288	1.09	N
11:25         17.44         7.08         2240         0.56         43         1.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         2230         0.52         41         0.5           11:30         17.37         7.09         2230         1.5         1         1           11:30         17.37         17.09         2230         1.5         1         1         1           11:30         17.37         17.09         2230         1.5         1			-			-			11.16 11.16	N N
11:30       17.37       7.09       2230       0.52       41       0.5         11:30       17.37       7.09       2230       0.52       41       0.5         11:30       17.37       7.09       2230       0.52       41       0.5         11:30       17.37       7.09       2230       0.52       41       0.5         11:30       11:30       17.37       7.09       2230       0.52       41       0.5         11:30       17.37       7.09       2230       0.52       41       0.5       1         11:30       Appearance: Very Clear       Filtered Sample Turbidity:       0THER:       0THER:       0THER:		11:20	17.64	7.06	2250	0.54	45	2.9	11.17	N
Image: Second second					-		-		11.17	N
Cover: Y / N     Bolts: Y / N     Concrete Pad OK: Y / N     Gripper: Y / N       Sample Collection Information       Sample Time:     11:30     Appearance: Very Clear     Filtered Sample Turbidity:     OTHER:		11:30	17.37	7.09	2230	0.52	41	0.5	11.17	N
Cover: Y / N     Bolts: Y / N     Concrete Pad OK: Y / N     Gripper: Y / N       Sample Collection Information       Sample Time:     11:30     Appearance: Very Clear     Filtered Sample Turbidity:     OTHER:										
Cover: Y / N     Bolts: Y / N     Concrete Pad OK: Y / N     Gripper: Y / N       Sample Collection Information     Sample Time:     11:30     Appearance: Very Clear     Filtered Sample Turbidity:     OTHER:										
Sample Collection Information Sample Time: 11:30 Appearance: Very Clear Filtered Sample Turbidity: OTHER:	I		I	W	ell Condition Summa	iry	1	I	1	1
Sample Time: 11:30 Appearance: Very Clear Filtered Sample Turbidity: OTHER:	ər: <u> Y</u> / N		Bolts: <u>Y</u> / N		Concrete Pad OK: Y	<u>/</u> /N	Gripper: <u>Y</u> / N			
			r	Sam	le Collection Inform	ation		1	-	
								OTHER:		
Desired puge now rate < 100mLmm (slow dnp) & turbolity < 10 if possible. In turbolity > 10 collect intered and universed samples. Notify PM of high turbolity and collection of intered samples prior to ab submittal. Notes/ Calculations: Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.	abilization. otes/ Calculations:			nd unfiltered samples. No	tify PM of high turbidity and collection	on of filtered samples prior t	o lab submittal.		Minimum 20 minute pu	rge to establish
ABSORBENT SOCK					ABSORBENT SOCK					
Sock Length (ft) = Capacity (Qt.) = Present: Y / N Product Measured (		-	Capacity	(Qt.) =				Product Measu	ired (Inches) :	
Sock Installation Date: Sock Changed : Y / N				1	Sock Cha	nged :	Y/N	4		
Sock Depth (Depth to sock mid point):	Sock Depth	(Depth to sock mid po	oint):					4		

Location	Yonkers,	NV	LOW-FLOW	GROUNDWATER SAI Job Number:		WELL I.D. : M	W 1059		
Location: Personnel:			i i	Date:	8/1/2017		- 1033		
reisonnei.			1	PID:	4.4 ppm				
Stickup? <u>Y</u> /N Distance ground to Stickup Rim/PVC	Distance From Rim to PVC	Total Depth of Well Rim <u>/PVC</u>	Depth to Product Rim/ <u>PVC</u>	Depth to Water (Rim/ <u>PVC</u> )	Standing Water Column (feet)	Middle of Saturated Zone (feet)	Depth to Sample Tube (feet)	TOV @ Well Head (ppmv)	Pump Peristaltic or Bladder
	3"	20.03	N/E	10.43	9.6	15.23	-16		
Turbidity at co	ollection (NTU):		(Less than	5 NTU is desirable)	Dupl	icate Collected	? Y/ <u>N</u>	Filtered San	nple 'N
Stabilization	n Parameters	+/- 0.5 deg C.	+/- 0.1 Unit	+/- 10 umhos/cm or within 3% if >300umho	1 ppm	+/- 10 mV	No Limit	<.3 feet drawdown desirable	No Limit
Volume Purged (gallons)	Time (actual Time) 5 minute Intervals	TEMP. (Deg. C)	рН	Specific Conductivity uS/cm	Dissolved Oxygen (mg/L)	ORP mV millivolts	Turbidity NTUs	DTW (feet)	Odors Y/N
	12:12	25.05	7.9	2200	12.01	-24	293	10.81	N
	12:40	20.82	7.74	1980	7.41	71	0	10.93	N
	13:05	21.73	7.67	1360	6.76	82	0	10.93	Ν
	13:15	20.97	7.52	1760	6	82	0	10.93	Ν
	13:30	17.95	7.46	1860	6.72	50	0	10.93	N
	13:35	17.52	7.29	1870	6.75	27	0	10.93	N
	13:40	17.32	7.23	1860	6.24	17	0	10.93	Ν
	13:43	17.23	7.17	1860	6.34	12	0	10.93	Ν
	13:48	17.15	7.11	1880	6.41	7	0	10.93	N
	13:52	17.17	7.1	1880	6.81	6	0	10.93	N
			W	ell Condition Summa	irv.				
Cover: <u>Y</u> / N		Bolts: Y / <u>N</u>		Concrete Pad OK: Y		Gripper: <u>Y</u> / N			
			Sam	ole Collection Inform	ation	•			
Sample Time:	13:52	Appearance: Ve		Filtered Sample Tur			OTHER: Shavi		
Desired purge flow rate <100mL/min   stabilization. Notes/ Calculations:	(slow drip) & turbidity <10 if possible. If	urbidity > 10 collect filtered ar	d untiltered samples. No	oury ⊬m of high turbidity and collecti	on or nitered samples prior t	d Iad Submittal.		Minimum 20 minute pu	ge to establish
				ABSORBENT SOCK					
Sock Length (ft) =		Capacity	(Qt.) =		Present:	Y/N	Product Measu	ired (Inches) :	
	llation Date: h (Depth to sock mid p	oint):		Sock Cha	nged :	Y/N	-		
	•		•				1		

	SEY E Ling			TEST BORING LOGS BC							NO. B-4
PROJECT:Y				nt						SHT. NO. 1 of	3
CLIENT: Mo										JOB NO.: 06-2	209
LOCATION: GROUND WAT		Stree	t, Yonkers,	NY		CAS.	CAND	0005	TUDE	ELEVATION	
DATE		ME	DEPTH	CASING	TYPE	HW	SAMP.	CORE NX	TUBE	PERMIT NO. DATE START	9/26/06
9/22/2006			12	64	DIA.	4"	24"			DATE FINISH	
					WT.	300	140			DRILLER L.R.	amos
					FALL	24"	30"			INSPECTOR	
DEPTH FEET	CASING		SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY			DENTIFICA	ATION		REMARKS
1		spin					0-6" Black 6"-1' Soil 1-3'				
2							Roller bit 6	•			BOREHOLE GROUTED
3							concrete &				YESXNO
							3-4'				
4							Roller bit b	oulder	·····		Samples received in field by Client's Rep.
5							4-7' soil				YESNOX
6											If YES, sign & print name
7											
8							7-10'				
9							Roller bit boulders				Signature
10							10-11'				
11							soil				Print name
12							11-14'				
13							Roller bit				
14							boulder				Materials used on Boring
15							14-16'				Benseal 2
16							soil				Benseal2_ Quick Gel2 Hole Plug 2
17							16-18'				Revert
18							roller bit bo	ulder			Concrete Asphalt
19							18-19' soil				Spoons Traps
20							19-21'	<u> </u>			Bits Tri Cone 2/2 15/16
21							Roller bit bo	oulder			Diamond _
22						,					
Ē							21-26'		ລເຂເທ	كاحاد	Misc. material/equipment
23							soil	╢╟╨		<b></b>	
24		_						IN J	AN 29 200	7	
25		·	ŀ						كالكاط	「四世	
26				_				M.G.	McLAREN	, P.C.	
27	+										

	JERSEY BORING & DRILLING CO., INC. PROJECT: Yonkers Redevelop			·	TEST BORING LOGS	BORING NO. B-4		
PROJECT:	Yonkers F	Redevelopm	ent			SHT. NO. 2 of		
CLIENT:Mo	Laren Engi	ineering				JOB NO. 06-2	09	
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION		REMARKS	
28	3"				26-28' Roller bit boulder			
29					28-30' soil	,		
30				·				
31				1	30-33'			
32					Roller bit boulder			
33					33-34' soil			
34 35					34-35' Roller bit boulders			
36					35-36' soil			
37					36-38' 6"			
38					Roller bit boulder			
39					20.40			
40	<b>\</b>				38-40' soil			
41		-			40-42'			
42					Roller bit boulder			
43		-						
44					42-47' soil			
45		4						
46		1						
47					47-49'			
48					Roller bit boulder			
50								
51					49-54' soil			
52								
53							<u></u>	

	JERSEY BORING & DRILLING CO., INC. PROJECT: Elm street - Yonkers R			т	EST BORING LOGS	BORING NO. B-4		
PROJECT:	Elm street	- Yonkers F	Redevelopm	ent		SHT. NO. 3 of	3	
CLIENT: N	IcLaren Eng	gineering	1			JOB NO. 06-2		
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE	IDENTIFICATION		REMARKS	
54								
55					54 501			
56					54-58' Boulder			
57								
58								
59					58-64' soil			
60					36-64 SOII			
61								
62								
63								
64					64-65'			
65					Roller bit boulder 65-66'			
66					soil			
67					66-70'			
68					Roller bit into rock			
69		F						
70								
71		F			70-75' 1st run			
72		1st run			Rec: 59"			
73								
74		Ę						
75					EOB at 75'			
76		F						
77	·							
78								
79						ŀ		
80								

	EY BORII LING CO.,		TEST BORING LOGS							BORING NO. B-5		
PROJECT:Y			nt					··· <u>·····</u>	SHT. NO. 1 of	2		
CLIENT: Mc	Laren Engi	innering	111/						JOB NO.: 06-2			
LOCATION: GROUND WAT		t, Yonkers,	NY		CAS.	SAMP.	0005		ELEVATION			
DATE	TIME	DEPTH	CASING	TYPE	HW	SAWF.	CORE NX	TUBE	PERMIT NO. DATE START	9/25/06		
9/26/2006		7'	25'	DIA.	4"				DATE FINISH			
ļł				<u>wт.</u>	300				DRILLER L. F			
	(D (0		BLOWS ON	FALL ≻	24"				INSPECTOR			
DEPTH FEET	CASING	SAMPLE NO.	SAMPLE SPOON PER 6"	SAMPLE RECOVERY		10	DENTIFIC	ATION		REMARKS		
1	3" spin					0-6" Black Roller bit 6"-3'6"	юр			BOREHOLE GROUTED		
3						soil				YESXNO		
4						3'6" - 4'6" Roller bit bo	oulder			Samples received in field by Client's Rep.		
5												
6						4'6" - 10'				YESNOX		
7						soil w. misc	. fill, brick			If YES, sign & print name		
8												
9										Signature		
10												
11						10-12' roller bit bou	ılder			Print name		
12			·									
13						12-14' soil						
14										Materials used on Boring		
15						14-17'				Benseal1		
16						roller bit bou	ılder			Quick Gel2 Hole Plug1		
17										Revert Well gravel		
18						17-18' soil				Concrete Asphalt		
19						_				Spoons Traps		
20				-		18-21' roller bit bou	lder			Bits Tri Cone 3 7/8 2 15/16		
21										Diamond _		
22						21-22'6" soil				Misc. material/equipment		
23										Misc. material/equipment		
24		- 				22'6"-25' roller bit into	rock					
25		F			•		JOOR					
26						25-30'						
27		1st run			(	25-30 Core 1st run REC: 54"						

JERSEY BORING & DRILLING CO., INC.				 T	TEST BORING LOGS	BORING	NO. B-5
PROJECT:			lent			SHT. NO. 2 of	
CLIENT: M						JOB NO. 06-2	
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION		REMARKS
28					Core 1st run REC: 54"		
29		1st run					
30					EOB at 30'		
31							
32							
34							
35							
36							
37							
38							1
39							
40							
41						2	
42 43							
43							
45							
46							
47							
48							
49							
50							
51							
52							
53					······································		

	SEY BORIN LING CO.,				TEST B	BORING NO. B-6						
PROJECT:Y	onkers Rec	levelopme	 nt						SHT NO. 1 of	SHT. NO. 1 of 2		
CLIENT: Mc										JOB NO.: 06-209		
LOCATION:	Elm Street	. Yonkers.	NY						ELEVATION			
GROUND WAT		,			CAS.	SAMP.	CORE	TUBE	PERMIT NO.			
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX		DATE START	9/22/06		
9/25/2006		10'		DIA.	4"				DATE FINISH			
				WT.	300	1			DRILLER J. C			
				FALL	24"				INSPECTOR			
	(") (0	ш	BLOWS ON				·			1		
DEPTH FEET	CASING BLOWS	SAMPLE NO.	SAMPLE SPOON PER 6"	SAMPLE RECOVERY			DENTIFICA	TION		REMARKS		
	4" spin		L			0-6"	blacktop					
1						6"-2' misc. fill						
2						misc. mi				BOREHOLE GROUTED		
3						2-3' Roller bit b				YESX_NO		
3						Roller bit b	ouider			4		
4										Samples received in field b		
										Client's Rep.		
5						3-8'				- · · · · · · · · · · · · · · · · · · ·		
ſ						soil				YESNOX		
6												
										If YES, sign & print name		
7												
										1		
8						8-9'				4		
			L				ouldon.			2:		
9						Roller bit b	ouider			Signature		
10												
10												
11						9-15'				Print name		
						soil				Fanchame		
12												
13												
										Materials used on Boring		
14												
15										Benseal1		
	*		<u> </u>			15-16'				Quick Gel1		
16			<u> </u>			Roller bit b	oulder	<del></del>		Hole Plug1_		
17			<b>├</b> ──┤							Revert		
· · · · · · · · · · · · · · · · · · ·										Well gravel		
18						16-22'				Asphalt		
						soil				Spoons		
19										Traps		
										Bits		
20										Tri Cone		
ſ										Diamond		
21										_		
Γ												
22										Misc. material/equipment		
23												
ſ												
24				·		22-25'						
			l			Roller bit b	oulder					
25			ļ i							4		
26						25-28'						
						soil						
27										1		

1	JERSEY BORING & DRILLING CO., INC.			ſ	EST BORING LOGS	BORING N	NO. B-6
PROJECT			ient			SHT. NO. 2 of 2	
CLIENT: M	cLaren Eng	gineering		· · · · · · · · ·		JOB NO. 06-20	
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION		REMARKS
28							
29							
30					28-33' Core 1st run		
31		1st run			REC: 46"		
32							
33					EOB at 33'		
34							
35							
36							
37							
38 39	· · · · · · · · · · · · · · · · · · ·						
40							
40							
42							
43							
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							·····

JERSEY BORING & DRILLING CO., INC.			TEST BORING LOGS							BORING NO. B-7		
PROJECT:	Yonkers Re	developme	nt		· · · · · · · · · · · · · · · · · · ·				SHT. NO. 1 of	12		
CLIENT: MO	Laren Engi	neering							JOB NO.: 06-			
LOCATION GROUND WAT		t, Yonkers,	NY						ELEVATION			
DATE	TIME	DEPTH	CASING	TYPE	CAS. HW	SAMP.	CORE NX	TUBE	PERMIT NO.			
10/3/2006		12'6"	UNDING	DIA.	4"				DATE START DATE FINISH			
				<u>.</u> WT.	300				DRILLER J. s			
				FALL	24"				INSPECTOR			
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY		I£	DENTIFIC	ATION		REMARKS		
1 2 3 4	3" spin					0-6" blackto 6"-5' soil	qq			BOREHOLE GROUTED YESX_NO Samples received in field by Client's Rep.		
5 6 7						5-7' roller t	it boulder			YESNOX If YES, sign & print name		
8				· · · · · · · · · · · · · · · · · · ·		7-8' soil				4		
9						8-9' Roller	hit houlder			Olara da un		
10						9-10' soil				Signature		
11		-		:								
12		+				10-15' Roller bit bo	ulder			Print name		
13												
14										Materials used on Boring		
15										Benseal _2_		
16		ŀ				15-18'				Benseal2_ Quick Gel2 Hole Plug1		
17		ļ			1	Roller bit Co	bbles			Revert		
18									<u></u>	Concrete Asphalt		
19		F				18-20' soil				Spoons Traps		
20						5011				Bits Tri Cone 2/2 15/16		
21										Diamond 1		
22						20-25' Roller bit bo	ulders			Misc. material/equipment		
23		F								macharequipment		
24		F										
25												
26		-			2	25-27'						
27	_ ↓				S	oil						

JERSEY BORING & DRILLING CO., INC. PROJECT: Elm Street - Yonkers					TEST BORING LOGS	BORING N	O. B-7
PROJECT	: Elm Street I cLaren Eng	t - Yonkers	Redevelop	ment		SHT. NO. 2 of 2	······································
DEPTH FEET	CASING BLOWS	SAMPLE	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	JOB NO. 06-209	REMARKS
28					27-29' 6" Roller bit boulder		
29 30							
30					29' 6" - 30' soil 30-35'		
32					cored boulders & roller bit		
33							
34							
35							
36							
37					35-38' soil		
38							
39		ŀ			38-40' Roller bit		
40	_		i		boulders		
41					40-43'		
42		-			soil		
43 44					43-44'		
44					Roller bit boulders 44-49'		
46		-			2nd run core rock		
47	_				REC: 51"		
48		E					
49							
50		ŀ		Ī	EOB at 49'		
51		Ļ					
52		ŀ					
53					· · · · · · · · · · · · · · · · · · ·		

DRIL	SEY BORI LING CO.	, INC.			TEST B	BORING	BORING NO. B-8			
PROJECT:	Yonkers R	edevelopme	ent	· · · · <u>· -</u> ·					SHT. NO. 1 of	3
CLIENT: Mo	Laren Eng	ineering							JOB NO.: 06-2	
LOCATION:		et, Yonkers,	NY						ELEVATION	
GROUND WAT			1		CAS.	SAMP.	CORE	TUBE	PERMIT NO.	
DATE 10/2/2006	TIME	DEPTH 10'	CASING 45'	TYPE DIA.	HW 4"		NX		DATE START	
10/2/2000				WT.	300				DATE FINISH	
				FALL	24"				INSPECTOR	<u>ynch</u>
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY		10	DENTIFIC	ATION		REMARKS
1	4" spin									
I		-	<u> </u>			0-6" blackto	מר			
2						6"-3' soil	24			BOREHOLE GROUTED
		7								YESX_NO
3										
4										
		1				3-6'				Samples received in field by Client's Rep.
5						Concrete re	ebar			oliento Rep.
		]								YESNOX
6		<u> </u>								
7						6-8'				If YES, sign & print name
		1				Roller bit bo	oulders			
8										
9						8-9'6"				Signature
		1				soil				Signature
10						9'6" - 10' co	bbles	· · · · · · · · · ·		
44						10 - 10' 6" s				
11		<u>-</u>				<u>10'6 - 11'c</u>	obbles roller	bit		Print name
12										
		]								
13	·									
14						11'-20'				Materials used on Boring
						soil				
15										Benseal 2
40										Quick Gel 2
16										Hole Plug1
17										Revert Well gravel
		1								Concrete
18										Asphalt
19										Spoons
Γ Γ				[						Traps Bits
20						<u> </u>				Tri Cone 2 - 2 15/16
21						20.21' cobbi	on 9 group			Diamond 1
- ' -						20-21' cobbi	es a graver			
22										Misc. material/equipment
23						04.05				1
23						21-25' soil				
24						501				
25										
25										
26						25-26' soil				
27	¥					26-27'6" col	obles			

	JERSEY BORING & DRILLING CO., INC. PROJECT: Yonkers Redevelopn			٦	BORING NO. B-8		
PROJECT:	Yonkers F	Redevelopm	ient			SHT. NO. 2 of	
CLIENT: M DEPTH FEET	CASING BLOWS	SAMPLE	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	JOB NO. 06-2	REMARKS
28	3"				27'6" - 30'		
29					soil		
30							
31							
32							
33					30-43'		
34					soil		
35							
36							
37							
38							
39 40							
40 41							
42							
43							
44							
45					43-46' roller bit cobbles		
46							
47					46-47' soil		
48					47-49'		
49					roller bit cobbles		
50					49-49'6" soil 49'6" - 50' roller bit cobbles		
51					50-51' soil		
52					51-53' Roller bit cobbles		
53							

JERSEY BORING & DRILLING CO., INC. PROJECT: Elm street - Yonkers F		INC.			EST BORING LOGS	BORING	
PROJECT:	Elm street	- Yonkers R	ledevelopm	ent		SHT. NO. 3 of 3	
CLIENT: M	IcLaren Eng	gineering				JOB NO. 06-20	9
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION		REMARKS
54					53-55' Roller bit into rock		
55							
56							
57		1st run			Core 1st run REC: 51"		
58				1			
59							
60					EOB at 60'		
61							
62							
63	,,,						
64							
65			·····				
66		:					
67							
68							
69							
70							
71							
72							
73			·				
74							
75							
76		i					
77							
78			· · · · · · · · · · · · · · · · · · ·				
79							
80							

JERSEY BORING & DRILLING CO., INC.					TEST B	ORING L	OGS		BORING NO. B-9		
PROJECT:Ye	onkers Rec	levelopme	1			,			SHT. NO. 1 of	2	
CLIENT: McL	aren Engir	nnering							JOB NO.: 06-209		
LOCATION:	Elm Street	t, Yonkers,	NY						ELEVATION		
GROUND WATE	R				CAS.	SAMP.	CORE	TUBE	PERMIT NO.		
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX		DATE START		
10/3/2006		6'	25'	DIA.	4"				DATE FINISH		
			L	WT.	300	ļ			DRILLER P. L	ynch	
			<b> </b>	FALL	24"				INSPECTOR	<b>T</b> <sup>m</sup> ··· ··· ··· ··· ··· ···	
DEPTH FEET	CASING BLOŴS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY		I	DENTIFIC	ATION		REMARKS	
1						0-3'					
2						soil				BOREHOLE GROUTED	
3										YESX_NO	
4						2.40				Samples received in field	
5						3-18' cobbles				Client's Rep.	
6										YESNOX	
7										If YES, sign & print name	
8											
9										Signature	
10											
11										Print name	
12											
13											
14										Materials used on Borin	
15										Benseal _2_	
16					a					Quick Gel1 Hole Plug1	
17										Revert	
18										Concrete Asphalt	
19										Spoons Traps	
20										Bits Tri Cone	
21						10 07				Diamond _	
22						18-27' soil				Misc. material/equipmer	
23											
24											
25											
26											
27											

JERSEY BORING & DRILLING CO., INC.			٦	BORING	NO. B-9		
PROJECT			nent			SHT. NO. 2 0	f 2
CLIENT: M	I cLaren En	gineering				JOB NO. 06-	209
DEPTH FEET	CASING BLOWS	SAMPLE	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION		REMARKS
28					27-30'		
29				i	Roller bit into rock		
30				<u></u>			
31							
32		1st run			Core 1st run REC: 40"		
33		ISCIUI		-			
34							
35					EOB at 35'		
36 37							
38							
39							
40							
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							
51							
52		-					
53	l		I		1		1

	SEY BORIN LLING CO.,				TEST B		DGS	BORING	NO. B-10	
PROJECT:			nt						SHT. NO. 1 o	f 1
CLIENT: MO	cLaren Engi	neering							JOB NO.: 06-	
LOCATION GROUND WAT	EIM Stree	t, Yonkers,	NY		<u> </u>				ELEVATION	
DATE	TIME	DEPTH	CASING	TYPE	CAS. HW	SAMP. SS	CORE NX	TUBE	PERMIT NO.	
10/3/2006		5'		DIA.	4"	- 33			DATE START DATE FINISH	
				WT.	300				DRILLER P. I	
				FALL	24"				INSPECTOR	
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY			DENTIFIC	ATION		REMARKS
2	4" casing					0-3' soil				BOREHOLE GROUTED
3							·······			-
5						3 - 10' Roller bit				Samples received in field by Client's Rep.
6						boulders				YESNOX
7										If YES, sign & print name
8	$\downarrow$									
9										Signature
10										
11		-				40.45				Print name
12		-				10-15' 1st run Rec: 37"				
13		1st run			ľ	Rec. 37				Matariala
14		ŀ								Materials used on Boring
15										Benseal1 Quick Gel 1
16		F								Hole Plug Revert
17		Ē								Well gravel Concrete
18		ŀ								Asphalt Spoons
19										Traps Bits
20 21		-								Tri Cone Diamond _
22		-								
23		F								Misc. material/equipment
24		F								NOTES:
25		F								
26		F								
27		[								

	SEY BORII		TEST BORING LOGS						BORING	NO.	B-11
PROJECT:	Yonkers Re	edevelopme	nt				·····		SHT. NO. 1 of	£3	
CLIENT: MO	cLaren Engi	ineering							JOB NO.: 06-		
		et, Yonkers,	NY			·····			ELEVATION		
GROUND WAT DATE	TIME	DEPTH	CASING	TV05	CAS.	SAMP.	CORE	TUBE	PERMIT NO.		
10/4/2006		12	40	TYPE DIA.	HW 4"	SS	NX		DATE START		
		12		WT.	300				DATE FINISH		
				FALL	24"				DRILLER L.R	amos	<u></u>
Ξ.	UN	ш	BLOWS ON			L			INSPECTOR	1	
DEPTH	CASING BLOWS	SAMPLE NO.	SAMPLE SPOON PER 6"	SAMPLE RECOVERY			DENTIFICA			REM	ARKS
1	4" spin					0-6" Black 1 6"-2' Soil	top				
2										BOREHOLE	GROUTED
_										YESX_	NO
3						2-3' Roller I	oit boulders		. <u> </u>		
4						3-5' Soil				Samples rece	ived in field by
5										Client's Rep.	
6						5-6'6" Rolle	r bit cobbles				_NO_X
7										If YES, sign &	print name
8							Roller bit b	oulders		-	
9						7' 6" - 9' 6' Concrete &				Signature	
10						9'6'-10'S	oil				
11						10' - 13'				Print name	
12		ŀ				Roller Bit Boulder				Front name	
13		ļ			I	Douidei					
14						13-14'		<u> </u>	<u> </u>	Materials use	ed on Boring
15				·		C gravel					
Γ		ŀ				14-17"				Benseal Quick Gel	2 <u></u>
16		ŀ				Roller Bit poulder				Hole Plug Revert	2 _3 2
17										Well gravel	
18					F	17-18' Roller Bit b				Concrete Asphalt	1/4
19						18-18' 6" So 18' 6"- 19' R	il oller bit cobb			Spoons	
20					1	9'-19' 6" S	oil			Traps Bit	s
Г						9' 6" - 20'	CODDIES			Tri Cone Diamond	
21		ŀ								_	
22		F								Misc. materia	l/equipment
23		F				0-25'					
24		-				Roller bit obbles					
25											
26					2	5-27' roller i	bit				
27	_↓					Gravel					

	SEY BORII LING CO.,			-	TEST BORING LOGS	BORING	G NO. B-11
PROJECT: CLIENT: E	Yonkers F	Redevelopm	nent			SHT. NO. 2	
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE		IDENTIFICATION	JOB NO. 06	REMARKS
28	3"						
29					27-30' Roller bit		
30					Boulder		-
31					30-32' soil		
32							1
33							
34							
35 36		-			32-40'		
37					Roller bit boulders		
38		ļ					
39		• •					
40	•						
41		·					
42		ļ			40-45' cobbles		
43		ŀ					
44		F					
45					······································		
46					45-49'		
47					Roller bit boulders		
48							
49					·		
5051		-			49-51' soil		
52					51-52' 6"		
53					Roller bit boulders		

	JERSEY BORING & DRILLING CO., INC.			т	EST BORING LOGS	BORING NO. B-11		
	LING CO.,	INC.						
CLIENT: N	AcLaren En	- TONKERS I	Redevelopm	ient		SHT. NO. 3 of		
DEPTH FEET	CASING BLOWS			SAMPLE RECOVERY	IDENTIFICATION	JOB NO. 06-2		
54						·		
55					52' 6" -56' Roller bit			
56					cobbles			
57					56-59' soil			
58								
59 60				ŀ	59-60'			
61					Roller bit boulder			
62					60-65'			
63					cobbles			
64								
65		ŀ						
66		F						
67		-  -			65-70' cobbles			
68								
69 70		-  -						
71					70-73'			
72					soil			
73								
74		-			73-75'			
75					Roller bit into rock			
76								
77					Rec: 46"			
78		1st run						
79								
80					EOB at 80'			

.

-	SEY BORIN LING CO.,				TEST B	BORING NO. B-12						
PROJECT:	Yonkers Re	developme	nt						SHT. NO. 1 of 3	3		
CLIENT: Mo	Laren Engi	neering							JOB NO.: 06-20			
LOCATION:	Elm Stree	t, Yonkers,	NY				······		ELEVATION			
GROUND WAT					CAS.	SAMP.	CORE	TUBE	PERMIT NO.			
DATE 10/9/2006	TIME	DEPTH 8'	CASING	TYPE DIA.	HW 4"	SS	NX		DATE START			
10/9/2006		<b>0</b>		WT.	300				DRILLER P. L			
				FALL	24"				INSPECTOR	<u>,</u>		
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY			DENTIFIC	ATION		REMARKS		
1	4" spin					0-6" Black 6"-2' soil	top					
										BOREHOLE GROUTED		
2						2-4' soil				YESX_NO		
Ŭ												
4										Samples received in field by Client's Rep.		
5						4-6' concre	ete & rebar			YESNOX		
6								<u> </u>		If YES, sign & print name		
7												
8						0.001						
9						6-20' Roller bit b	oulders			Signature		
10										Print name		
11										rintname		
13												
14										Materials used on Boring		
15										Benseal		
16										Quick Gel Hole Plug		
17	-									Revert		
18										Concrete Asphalt Spoons		
19										Traps Bits		
20									·	Tri Cone Diamond		
21												
22						20-27' Roller bit b	oulders			Misc. material/equipment		
23												
24												
25												
26												
27	↓	İ										

	JERSEY BORING & DRILLING CO., INC. PROJECT: McLaren Engineerir CLIENT: Elm Street - Yonkers R			T	EST BORING LOGS	BORING NO. B-12		
PROJECT:	McLaren E	Ingineering		4		SHT. NO. 2 of		
DEPTH FEET	CASING BLOWS		BLOWS ON	SAMPLE	IDENTIFICATION	JOB NO. 06-2	REMARKS	
28					27-35'			
29	<b>↓</b>				Roller bit boulders			
30								
31 32								
33								
34								
35								
36								
37					35-40' C gravel			
38 39								
39 40								
41								
42					40-47'			
43					soil			
44								
45						-		
46								
47 48					47-49'			
48 49					Roller bit boulders			
50				· · · · ·				
51					49-60' Roller bit boulders			
52								
53						_		

JERSEY BORING & DRILLING CO., INC.			T	EST BORING LOGS	BORING	NO. B-12	
			r Redevelopm	ent		SHT. NO. 3 of	3
CLIENT: N						JOB NO. 06-20	
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION		REMARKS
54							
55							
56							
57							
58							
59							
60							
61							i
62					60-65' Core 1st run		
63		1st run			Rec: 20" rock		
64							
65							
66							
67		2nd run			65-70' Core 2nd run		
68		2110 1011			Rec: 36"		
69							
70					EOB at 70'		
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							

JERSEY BORING & DRILLING CO., INC. PROJECT: Yonkers Redevelopme				TEST BO	BORING	BORING NO. B-14				
PROJECT:	Yonkers Re	developme	nt						SHT. NO. 1 of 3	3
CLIENT: Mc	Laren Engi	neering					······		JOB NO.: 06-20	
LOCATION:		t, Yonkers,	NY						ELEVATION	
GROUND WAT					CAS. HW	SAMP.	CORE NX	TUBE	PERMIT NO.	40.4.00
DATE 10/5/2006	TIME	DEPTH 10'	CASING 45'	TYPE DIA.	4"	ł!		<u> </u>	DATE START DATE FINISH	
1010/2000				WT.	300	<u></u>			DRILLER J. sa	
			†	FALL	24"			1	INSPECTOR	
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY			DENTIFIC	ATION		REMARKS
1	4" spin									
,						0-6" blackto	qc			BOREHOLE GROUTED
2		-				6"-3' soil				YESX_NO
3										
			<u>                                     </u>					·		1
4										Samples received in field by Client's Rep.
5		{				3-10'				YESNOX
6						Roller bit bo	oulders			
		1								If YES, sign & print name
7		4								
8										
9										Signature
10	I									
11						10-13'				Print name
12						soil				
13										
14				i		13-14' bou	Iders			Materials used on Boring
15					ĺ					Benseal
										Quick Gel
16				1		14-18'				Hole Plug
17				1	ļ	soil				Revert
17				, J						Well gravel
18					ł					Asphalt
				i				<u>,, , , , , , , , , , , , , , , , , , ,</u>		Spoons
19	<b> </b>					18-19' Roll	ler bit boulde	ers		Traps
20						19-21'				Bits Tri Cone
				1		soil				Diamond
21										
22						04 00' Doll	hit bouldo			
22						21-22 RUIR	er bit boulde	rs		Misc. material/equipment
23				1						
		1		1						
24						22-26'				
						soil				
25										
26										
27	<b>•</b>				l					

JERSEY BORING & DRILLING CO., INC. PROJECT: Yonkers Redevelopm			1	BORING NO. B-14			
PROJECT: CLIENT: M	Yonkers F	Redevelopm	ient			SHT. NO. 2 c	
DEPTH FEET	CASING BLOWS	SAMPLE	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	JOB NO. 06	REMARKS
28	3"				26-31' boulders		
29							
30 31							
32						<u></u>	
33							
34					31-38' Gravel		
35							
36							
37							
38							
39							
40							
41							
42					38-48'		
43					boulders		
44							
45	<u>↓</u>	-					seal
46		-				Quicł Hole	Plug
47							
48							
49					48-50' cobbles		
50					···-		Cone amond
51					50-55'		
52 53					Roller bit boulders		

JERSEY BORING & DRILLING CO., INC.			T	EST BORING LOGS	BORING NO. B-14		
PROJECT:	Elm street	- Yonkers F	Redevelopm	ent		SHT. NO. 3 of :	
CLIENT: M DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	JOB NO. 06-20	9 REMARKS
54							
55							
56					EOB at 55'		
57							
58							
59						i	
60						· · · · · · · · · · · · · · · · · · ·	
61							
62							
63							
64							
65					<u> </u>		
66							
67 68							
69							
70							
71						Be	enseal
72						Qui	ck Gel   le Plug
73							
74							
75							
76						r	Fri Cone
77							Diamond
78							
79							
80							

	SEY BORIN LLING CO., I				TEST B	OGS		BORING NO. B-15			
	Yonkers Red	-developme	ant						SHT. NO. 1 of	<i>F</i> 4	
	cLaren Engir		<u> </u>						JOB NO.: 06-20		
	: Elm Street	At Vonkers	NY		<u></u>		<u> </u>		ELEVATION		
ROUND WATE		., 10mo.c,	<u></u>	,	CAS.	SAMP.	CORE	TUBE	PERMIT NO.		
DATE	TIME	DEPTH	CASING	TYPE	HW	SAWE.	NX		DATE START	10/3/06	
10/4/2006		12	64	DIA,	4"		1	+	DATE START		
10	· · · · · ·	( <u> </u>	++	WT.	300	+		1	DRILLER L.Ra		
+	1	t	++	FALL	24"	+	<u> </u>	1	INSPECTOR		
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER	VERY				REMARKS			
	ට ක 4" spin	<u>s</u>	6"	REA		0-6" Black	top	<u> </u>		1	
1		1 '		i )	1		-				
J	· ·	1 '		, J	1	6"-4' soil				BOREHOLE GROUTED	
2	·[/	' L		i	1						
ļ	í   י	1 '		i )	1					YESX_NO	
3	└ <u></u>	1 '		i ]	1						
1	1 1 7	1 '		i	i -						
4	<b>└──┤</b> ──┘	<b>!</b> '	<u> </u>	,ļ	t					Samples received in field b	
اے	1 7	1 '		i	1	4-5'	••			Client's Rep.	
5	L	<b>{</b> '	<b></b>	, <del> </del>	<i>(</i>	Roller bit b	Joulder				
اړ	1 7	1 '		i )	í -					YESNOX	
6	<b>⊢</b> −−−	4 '		ι	i	5-8' soil				and the Plant name	
- <sup>1</sup>	.    '	1 '		, J	i	soil				If YES, sign & print name	
7	$\vdash \vdash \vdash$	1 '	<b>├</b>	<i>i</i>	i						
8		1 '	<b> </b>	.	1						
7	<b>├──┤</b> ──┤	t'	++	·+	ſ					-	
9	.1   )	1 '	<b>  </b>	i J	(	8-10' 6"				Signature	
۲	<b>├</b>	1 '		i J	(	Roller bit b	houlder			Signature	
10	.[ ] )	1 '		i J	(		Ouluei				
۲	<u>⊢</u> + →	ť'	ft	·t	(	·		<u></u>	<del></del>	-	
11	1   )	1 '	<b>—</b>	.	í.	10' 6" - 13	21			Print name	
۲ <sup>(</sup>	()	1 '	<b> </b>	i	t i	soil					
12	1   )	1 '		i I	í.	50					
F	H	1 '	[]	i	1						
13	.[ ] /	1 '		·	í						
۲	·	ſ <b></b> ,	1 1	·	ı ———	13-14'				Materials used on Boring	
14	1 1!	1′		·	ı	cobbles					
Γ		· · · · · · · · · · · · · · · · · · ·		,	1			······			
15	/ <u>  '</u>	1 '		. 1	1					Benseal1	
Ē		1 '		, J	1					Quick Gel1	
16	('	1 '		, J	1	14-22'				Hole Plug	
		1 '		, J	1	roller bit				Revert	
17		1 '		·	1	boulders				Well gravel	
J	· · ·	1 '		, ļ	1					Concrete	
18		4 '		, J	1					Asphalt1/4	
	(   )	1 '		, J	1					Spoons	
19		4 '		, J	1					Traps	
	( )	1 '	<b>  </b>	, J	1					Bits	
20	<b>⊢</b>	4 '	<b> </b>	, J	1					Tri Cone	
21	( )	1 '		, J	1					Diamond _	
21	$\vdash \vdash \vdash$	1 '	<b> </b>	i ļ	1						
22	.1   '	1 '		, J	1					Misc. material/equipment	
22	$\vdash \vdash \vdash$	<b>├───</b> ′	++	·+	·					Misc. materiai/equipment	
23	1   1	1 '	<b> </b>	·	1	22-27'					
23	<b>└───┤</b> ───┘	1 '		, J	1						
24	1 1 7	1 '		, J	1	1st run REC: 47"					
24	$\vdash$	1 '		, J	1	REU: 47					
25	.    /	1st run	<u> </u>	، ا	i						
25	$\vdash \!$			. 1	1						
26	.1   /	1 '		, I	6						
26	<b> </b>	1 '	<b> </b>		ł						
27	/ 1 /	1 '		·	ŧ	EOB at 27'	//				
	1 🔻 -	1 -	1 1								

	EY BORIN ING CO., I				TEST B	ORING LO	BORING NO. B-16				
PROJECT: Y	onkers Re	developme	ent						SHT. NO. 1 of	1	
CLIENT: McL	aren Engir	neering							JOB NO.: 06-209		
OCATION:	Elm Street	, Yonkers,	NY						ELEVATION		
ROUND WATE			<b>.</b>		CAS.	SAMP.	CORE	TUBE	PERMIT NO.		
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX		DATE START		
		No water	<u> </u>	DIA.	4" 300				DATE FINISH		
		water		WT. FALL	24"				DRILLER P. L	ynen	
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY			DENTIFIC	ATION		REMARKS	
1 2 3 4						0-4' Concrete &	& Rebar			BOREHOLE GROUTED YESX_ NO Samples received in field b	
5		*								Client's Rep.	
6										YESNOX	
$\vdash$										If YES, sign & print name	
7										······	
Г											
8			l			4-15' Pollor bit					
						Roller bit boulders				Ciapatura	
9						boulders				Signature	
10											
···-											
11										Print name	
12											
13			L							Materials used on Device	
14										Materials used on Boring	
14											
15										Benseal	
			1			EOB at 15	•			Quick Gel	
16										Hole Plug2_	
										Revert	
17										Well gravel	
			<b></b>								
18			<b>├</b> ───┤							Asphalt	
19			<b></b>							Spoons Traps	
										Bits	
20										Tri Cone 6" roller bit	
-" -										Diamond _	
21											
Γ											
22										Misc. material/equipment	
22										NOTES:	
23			$\vdash$							NOTES.	
24											
25										broke wheel off 6" roller bit	
25			<b>  </b>							had to move.	
26											
20											
27										1	

	EY BORIN .ING CO., I				TEST B		DGS		BORING NO. B-16A		
PROJECT: Y	onkers Re	developme	l		· · · · <b>-</b>				SHT. NO. 1 of	1	
CLIENT: McL	aren Rede	velonment							JOB NO.: 06-2		
LOCATION:	Elm Street	Yonkers.	NY						ELEVATION		
GROUND WATE		.,			CAS.	SAMP.	CORE	TUBE	PERMIT NO.	- <u> </u>	
DATE	TIME	DEPTH	CASING	TYPE	HŴ	SS	NX		DATE START	10/4/06	
10/4/2006		7'	1	DIA.	4"				DATE FINISH	10/4/06	
				WT.	300				DRILLER P. L	ynch	
				FALL	24"	1			INSPECTOR		
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY			DENTIFIC	ATION		REMARKS	
1						0-2' soil					
										BOREHOLE GROUTED	
23										YESX_NO	
4										Samples received in field b Client's Rep.	
5										YESNOX	
6 7										If YES, sign & print name	
8						2' -18' 6" Roller bit					
9		-				boulders				Signature	
10											
11										Print name	
12											
13											
14										Materials used on Boring	
15										Benseal2 Quick Gel	
16										Hole Plug1	
17										Revert Well gravel Concrete	
18										Asphalt Spoons	
19						18' 6" - 20'	· · · · · · · · · · · · · · · · · · ·			Traps Bits	
20						soil EOB at 20				Tri Cone	
21										Diamono _	
22										Misc. material/equipment	
23		•								NOTES:	
24										Obstruction in way would	
25										lock up rods & break all wrenches, pull off hole.	
26											
27											

DRIL	SEY BORIN LING CO.,	INC.			TEST B	ORING LO	DGS	BORING NO. B-19		
PROJECT:	Yonkers Re	developme	nt						SHT. NO. 1 o	f 4
CLIENT: MO	Laren Engi	neering							JOB NO.: 06-	
LOCATION GROUND WAT		t, Yonkers,	NY			r			ELEVATION	
DATE	TIME	DEPTH	CASING	TYPE	CAS. HW	SAMP.	CORE NX	TUBE	PERMIT NO.	
10/6/2006		11'	UNDING	DIA.	4"				DATE START DATE FINISH	
				WT.	300				DRILLER L.R	
				FALL	24"				INSPECTOR	
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY		10	DENTIFIC	ATION		REMARKS
1 2 3 4 5	4" spin					0-5' soil				BOREHOLE GROUTED YESXNO Samples received in field by Client's Rep.
6 7 8 9						5-10' cobbl	es			YESNOX If YES, sign & print name
10								·		Signature
11 12 13		-				10-13' 6" ı	oller bit boul	der		Print name
14										Materials used on Boring
15						13' 6" - 15' r 	oller bit bould	der		Benseal
16 17 18						15-20' roller	bit boulder			Quick Gel Hole Plug Revert Well gravel Concrete
19		-  -  -								Asphalt Spoons Traps Bits
20	3"									Tri Cone Diamond
21 22		F								_
22					2	20-45' roller	bit boulders			Misc. material/equipment
24										
25		-								
26		E								
27	<b>↓</b>									

	SEY BORII LING CO.,			٦	TEST BORING LOGS	BORING	NO. B-19
PROJECT:	Yonkers F	Redevelopm	nent			SHT. NO. 2 o	
CLIENT: M DEPTH FEET	CASING BLOWS	SAMPLE		SAMPLE RECOVERY	IDENTIFICATION	JOB NO. 06-	REMARKS
28	3"						
29					•		
30							
31							
32				· · ·			
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							
45					· · · · · · · · · · · · · · · · · · ·		
46					45-50'		
47					Roller bit boulders		
48							
49							
50							
51					50-53'		
52					soil		
53	*						

JERSEY BORING & DRILLING CO., INC.				Т	EST BORING LOGS	BORING	
PROJECT	Vonkoro P	INC.					
CLIENT: N	Icl aren En	aincoring				SHT. NO. 3 of 4	
						JOB NO. 06-219	)
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION		REMARKS
54					53-54' Roller bit Boulder		
55							
56							
57					54-65' Roller bit		
58					cobbles & gravel		
59							
60							
61							
62							
63		ľ					
64		[					
65							
66 67		ŀ			65-67' Roller bit Boulder		
68					67-70' soil		
69		F					
70	$\downarrow$						
71		-			70-73' Roller bit cobbles		
72		F					
73					73-74' soil		
74							
75		E			74-77' Roller bit		
76		E			Cobbles		
77					77-78' Roller bit		
78					boulder		
79					78-80' Soil		
80							

JERSEY BORING & DRILLING CO., INC. PROJECT: Yonkers Redevelopme			т	EST BORING LOGS	BORING NO. B-19		
PROJECT	Yonkers F	Redevelopm	nent			SHT. NO. 4 of 4	4
CLIENT: N	/IcLaren En	gineering				JOB NO.06-20	
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION		REMARKS
80					00.041.01		
81					80-84' 6" Roller bit cobbles		
82					CODDIES		
83							
84							
85					84' 6" - 85' boulder		
86		:			85'-90' 1st run core		
87					REC: 52"		
88		1st run					
89							
90					EOB at 90'		
91							
92							
93			· · · · · · · · · · · · · · · · · · ·				i
94		-					
95		-					
96		-					
97		ļ					
98		-					
99		ŀ					
100		e e					
101		Ļ					
102		ŀ					
103							
104		-					
105							

DRIL	SEY BORING LING CO., II	NC.		······································	TEST BO		BORING NO. B-22			
PROJECT:Y	onkers Red	evelopmen	t						SHT. NO. 1 of 2	
PROJECT:Y CLIENT: Mc LOCATION:	Laren Engin	inering							JOB NO.: 06-20	9
LOCATION:	Elm Street,	, Yonkers, I	NY		CA0	CAMP	CORE	TUBE	ELEVATION PERMIT NO.	
GROUND WAT	ER	DEPTH	CASING	TYPE	CAS. HW	SAMP. SS	CORE NX	IUBE	DATE START 1	10/9/06
DATE 10/10/2006		DEPTH 10'	UNUING	DIA.	4"				DATE FINISH 1	10/10/06
				WT.	300				DRILLER P. Ly	
				FALL	24"	1			INSPECTOR	
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY			DENTIFICA	ATION		REMARKS
1						0-4' Roller	bit boulders			BOREHOLE GROUTED
3										
4										Samples received in field by Client's Rep.
5					I	4-25' Roller bit b	oulders & co	bbles		YESNO_X
6					l	, JUICE DIL C	O UC			If YES, sign & print name
8										
9										Signature
10										
11										Print name
12										
13										Materials used on Boring
14	-									Benseal2
16										Quick Gel1 Hole Plug1 Revert
17	,									Well gravel Concrete
18										Asphalt Spoons
19		1								Traps Bits Tri Cone
20				1						Diamond _
21		1		1						Misc. material/equipment
23										
24		4		-						
25	5	<u> </u>								-
26	6			1						
2	7			1						<u> </u>

	SEY BORIN LING CO.,			T	EST BORING LOGS	BORING	NO. B-22
PROJECT:			ent			SHT. NO. 2 of	2
CLIENT: M						JOB NO. 06-2	
DEPTH FEET	CASING BLOWS	SAMPLE	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION		REMARKS
28					25-30'		
29					Decomposed rock		
30							
31							
32		1st run			Core 1st run REC: 42"		
33 34							
34	· 						
36					EOB at 35'		
37							
38							
39							
40							
41							
42							
43							
44 45							
45 46			·····				
47							
48							
49							
50							
51							
52			i				
53							

	EY BORIN LING CO.,			<u>.</u>	TEST B	ORING L	OGS		BORING NO. B-23				
PROJECT: Y	onkers Re	developme	i ent						SHT. NO. 1 of				
CLIENT: McI	Laren Engir	neering							JOB NO.: 06-				
LOCATION:		t, Yonkers,	NY						ELEVATION				
GROUND WATE		DEPTH	CASING	TYPE	CAS. HW	SAMP.	CORE NX	TUBE	PERMIT NO. DATE START 10/10/06				
10/10/2006		5'	0/10/110	DIA.	4"				DATE START				
				WT.	300				DRILLER P. I				
				FALL	24"				INSPECTOR				
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY			DENTIFIC	ATION		REMARKS			
1	4" spin I					0-6" Black	top						
						6"- 4'				BOREHOLE GROUTED			
2						soil							
2										YESX_NO			
3													
4										Samples received in field by Client's Rep.			
5						4-6' Roller bit				YESNOX			
6					· · · ·	boulder				If YES, sign & print name			
7													
8													
Ĭ													
9						6-20'				Signature			
10						soil							
11										Print name			
12													
Γ													
13													
14	· · ·									Materials used on Boring			
15										Benseal			
16										Quick Gel Hole Plug			
Γ										Revert			
17										Well gravel			
18										Concrete			
										Asphalt Spoons			
19										Traps			
20										Bits Tri Cone			
21										Diamond _			
22						1st run core	e			Misc. material/equipment			
23		1st run				REC: 60"							
23													
24													
26						EOB at 25'							
27													

JERSEY BORING & DRILLING CO., INC. PROJECT: Yonkers Redevelopment					TEST B	ORING LO	BORING	BORING NO. B-24		
PROJECT:	Yonkers Re	developme	ent						SHT. NO. 1 of	1
CLIENT: MC	Laren Engi	neering							JOB NO.: 06-2	209
LOCATION: GROUND WAT		t, Yonkers,	INY		CAS.	SAMP.	CORE	TUDE	ELEVATION	
DATE	TIME	DEPTH	CASING	TYPE	HW	SAMP.	NX	TUBE	PERMIT NO. DATE START	10/6/06
10/6/2006		5'		DIA.	4"				DATE FINISH	
				WT.	300				DRILLER L. F	
				FALL	24"				INSPECTOR	
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY			DENTIFIC	ATION		REMARKS
1						0-1' soil	<u></u>			BOREHOLE GROUTED
2						1-2' timber	wood	<del></del>		YESXNO
3						2-3' brick				NO
4						3-5' Roller	bit			Samples received in field by
5						boulder				Client's Rep.
6						5-8'				YESNO_X
7						Roller bit in	to rock			If YES, sign & print name
8										
9						8-13'				Signature
10						Core 1st ru Rec: 40"	n			Signature
		1st run				Rec. 40				
11										Print name
12										
13						EOB at 13'				Materials used on Boring
14										
15							<u></u>			Benseal Quick Gel
16										Hole Plug Revert
17										Well gravel
18										Asphalt
19										Spoons Traps
20										Bits Tri Cone
21										Diamond _
22										Misc. material/equipment
23										
24										
25										
26										
27										

	SEY BORII LING CO.,				TEST B	ORING LO	DGS		BORING	BORING NO. B-25		
PROJECT:	Yonkers Re	edevelopme	nt						SHT. NO. 1 of	1		
CLIENT: Mo LOCATION:	Laren Eng	ineering	NIX/						JOB NO.: 06-2			
GROUND WAT		et, ronkers,	NT		CAS.	SAMP.	CORE	TUBE	ELEVATION PERMIT NO.	·····		
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX	TODE	DATE START	10/9/06		
10/9/2006		10'		DIA.	4"				DATE FINISH	10/9/06		
				WT. FALL	300 24"				DRILLER L. R	lamos		
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	LE VERY			DENTIFIC	ATION		REMARKS		
1 2	4" spin					0-6" Black	top			BOREHOLE GROUTED		
3						6" - 6' cobbles		YESX_NO				
4 5								Samples received in field by Client's Rep.				
6										YESNOX		
7						6-7' Roller I		If YES, sign & print name				
8						7-8' soil	<u> </u>					
9 10						8-10' cobbles				Signature		
11						10-11' Rolle	er bit boulder			Print name		
12	Ļ					11-12' cobb	les					
13							er bit boulder			Materials used on Boring		
14 15						<u>13-14' cobb</u> 14-15' Rolle	les er bit into roc	k		Benseal		
16										Quick Gel Hole Plug		
17						1st run REC: 48"				Revert		
18		1st run								Concrete Asphalt Spoons		
19 20										Traps Bits		
20						EOB at 20'				Tri Cone Diamond _		
22										Misc. material/equipment		
23		-										
24												
25												
26 27												

	SEY BORIN LING CO., I				TEST B	BORING	IG NO. B-26			
ROJECT	Yonkers Red	levelonme	nt				<u></u>		SHT. NO. 1 of	1
LIENT: MC	Laren Engin	eerina							JOB NO.: 06-2	
OCATION:	Elm Street	, Yonkers.	NY						ELEVATION	
ROUND WAT		<u> </u>			CAS.	SAMP.	CORE	TUBE	PERMIT NO.	
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX		DATE START	
10/11/2006		6' 3"		DIA.	4"				DATE FINISH	
				WT.	300				DRILLER Jose	e Santiago
			<u> </u>	FALL	24"	<u> </u>			INSPECTOR	T
DEPTH FEET	E CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY		11	DENTIFICA			REMARKS
1	4" casing					0-6" Blacki 6"-3' brick				BOREHOLE GROUTED
2						(misc. fill)	a gravei			BOREHULE GROUTED
3										YESXNO
3										Samples received in field I
4						3-8'				Client's Rep.
6		1st run				Core 1st ru Rec: 19"	n			YESNOX
о 7						1.00.17				If YES, sign & print name
8						0.401				Signature
9						8-13' Core 2nd r	un			Signature
10		2nd run				Rec: 16"				
11		2.10 1011								Print name
12										
13	*					EOB at 13	,	· <u> </u>	<u></u>	Materials used on Boring
14										
15										Benseal
										Quick Gel
16										Hole Plug
										Revert
17										Well gravel Concrete
40										Asphalt
18			⊢							Spoons
19										Traps
.0										Bits
20										Tri Cone
21										Diamond _
22										Misc. material/equipmen
23										
24										
24										
25										
	,									

	EY BORIN .ING CO.,				TEST B	BORING NO. B-27					
PROJECT: Y	onkers Re	developme	I	<u></u>			SHT. NO. 1 of	1			
CLIENT: Mcl	Aren Engin	neerina							JOB NO.: 06-209		
LOCATION:	Elm Street	t, Yonkers,	NY						ELEVATION		
GROUND WATE		·			CAS.	SAMP.	CORE	TUBE	PERMIT NO.		
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX		DATE START	10/10/06	
10/10/2006		18' 11"	64	DIA,	4"				DATE FINISH	10/10/06	
				WT.	300				DRILLER J. S	antiago	
				FALL	24"				INSPECTOR		
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY			DENTIFICA	ATION		REMARKS	
1	4" spin					0-6" Black	-				
2						6"-2' roller boulder	bit			BOREHOLE GROUTED	
3						2-3' Wood				YESXNO	
4										Samples received in field b	
5		,				3-8' roller bit				Client's Rep.	
6						boulder				YESNOX	
7										If YES, sign & print name	
8											
9						8-9' soil				Signature	
10						9-10' Roller bit -	boulder				
11						10-13'				Print name	
12						soil					
13											
14										Materials used on Boring	
15						13-16' Roller bit				Benseal 1	
						boulder				Quick Gel1	
16						40.40				Hole Plug1 Revert	
17						16-18' soil				Well gravel Concrete	
18						18-19'				Asphalt1/4 Spoons	
19						Roller bit b 19-20"				Traps Bits	
20						Roller bit b	oulder	·····		Tri Cone Diamond _	
21						20-25'				_	
22						Core 1st ru REC: 41"	ın			Misc. material/equipment	
23		1st run									
24											
25	<b>↓</b>					EOB at 25'	1			4	
26						EUD at 20					
27											

DRIL	SEY BORIN LING CO.,	INC.			TEST B	BORING	NO. B-28				
PROJECT:	Yonkers Re	developme	nt						SHT. NO. 1 of	1	
CLIENT: Mo LOCATION: GROUND WAT	Laren Engii	neering							JOB NO.: 06-209		
GROUND WAT	ER	t, TORKEI3,			CAS.	SAMP.	ELEVATION PERMIT NO.				
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	CORE NX	TUBE	DATE START	10/10/06	
				DIA.	4"				DATE FINISH	10/11/06	
				WT. FALL	300				DRILLER L.R	Ramos	
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	.E /ERY		1	DENTIFIC	ATION	INSPECTOR	REMARKS	
1 2 3 4 5 6 7	3" spin					0-6" Black 6"-5' cobbles 5-10' Roller bit boulders	top			BOREHOLE GROUTED YESXNO Samples received in field by Client's Rep. YESNOX If YES, sign & print name	
8 9 10 11 12 13						10-15' Roller bit boulders				Signature Print name Materials used on Boring	
14 15 16 17 18 19 20		1st run			ł	1st run REC: 35" EOB at 20'				Benseal Quick Gel Hole Plug Revert Well gravel Concrete Asphalt Spoons Traps Bits Tri Cone	
21 22 23 24 25 26 27										Diamond _	

	JERSEY BORING & DRILLING CO., INC.						ORING LO	DGS	BORING NO. B-29				
PROJECT:	PROJECT: Yonkers Redevelopment SHT. NO. 1 of												
CLIENT: MO	LIENT: McLaren Engineering JOB NO.: 06- OCATION: Elm Street, Yonkers, NY ELEVATION										09		
GROUND WAT		si eei	L, TUTKETS,										
DATE	TIM	E	DEPTH	CASING	TYPE	CAS. HW	SAMP.	CORE NX	TUBE	PERMIT NO. DATE START 10/9/06			
10/10/2006			14'		DIA.	4"				DATE FINISH	10/10/06		
					FALL	300 24"				DRILLER L.R.	amos		
DEPTH FEET	CASING	BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	LE VERY	24	1	DENTIFIC	ATION	INSPECTOR	REMARKS		
1	4" sr	pin					0-6" blackto 6"-5' Cobbl		BOREHOLE GROUTED				
3											Samples received in field by Client's Rep.		
5			- · ·						<u> </u>				
6							5-7' roller t	oit boulder			YESNOX If YES, sign & print name		
7									,				
8							7-8' soil						
9 10							8-10 Rolle	r bit boulder			Signature		
11							10-11' cob		Print name				
12							11-12' soil						
13													
14							12-15' Rolle	er bit boulder	S		Materials used on Boring		
15											Benseal Quick Gel		
16											Hole Plug Revert		
17		-					15-20'				Well gravel		
18							Roller bit bo	oulders			Asphalt Spoons		
19											Traps Bits		
20											Tri Cone Diamond _		
21							20-25'						
22		-					Roller bit bo	oulders			Misc. material/equipment		
23													
24													
25	-+	-+											
26							25-35' Roller bit de	composed re	ock				
27	*												

	SEY BORII LING CO.,			٦	EST BORING LOGS	BORING	NO. B-29				
PROJECT:	McLaren I	Engineering	I			SHT. NO. 2 0					
CLIENT: E	m Street - `	Yonkers Re	developmer BLOWS ON	nt		JOB NO. 06-	209				
DEPTH FEET	CASING BLOWS	SAMPLE NO.	SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION		REMARKS				
28	<u>4"</u>										
29											
30					25-35' Roller bit						
31					Decomposed rock						
32											
33											
34											
35											
36					Core 1st run						
37		1st run			Rec: 38"						
38		istiun									
39											
40	+				EOB at 40'						
41											
42											
43											
44											
45			·····								
46											
47		·									
48											
49											
50											
51											
52											
53		[									

	SEY BORIN LING CO.,				TEST B	BORING NO. B-30					
PROJECT: `	Yonkers Re	edevelopme	ent					SHT. NO. 1 of 1			
CLIENT: Mc	Laren Engi	ineering							JOB NO.: 06-209		
LOCATION:		et, Yonkers,	NY						ELEVATION	200	
GROUND WAT					CAS.	SAMP.	CORE	TUBE	PERMIT NO.	· · · · · · · · · · · · · · · · · · ·	
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX		DATE START	10/11/06	
10/11/2006	· · · · · · · · ·	3'	4	DIA.	4"				DATE FINISH	10/11/06	
	·····	ļ	<u> </u>	WT.	300				DRILLER P.	Lynch	
				FALL	24"	L			INSPECTOR		
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY		i	DENTIFIC	ATION		REMARKS	
1	4"					0-6" blackt	ор			BOREHOLE GROUTED	
2 3						6"-10' soil				YESX_ NO	
4										Samples received in field by Client's Rep.	
6										YESNOX If YES, sign & print name	
7 8										in reo, sign a print name	
9 10	-									Signature	
11						1st run				Print name	
12 13		1st run				REC: 52"					
14		-								Materials used on Boring	
15		-								Bonacal	
F						EOB at 15'				Benseal Quick Gel	
16		t								Hole Plug	
Γ		ľ								Revert	
17										Well gravel	
Γ										Concrete	
18										Asphalt	
										Spoons	
19		Ļ								Traps	
20		F								Bits	
		ŀ								Tri Cone Diamond	
21		-									
22		F								Misc. material/equipment	
23		F							:	NOTES:	
24 25											
25										broke wheel off 6" roller bit ha to move.	
27		F									



bridge, highway & rail engineering entertainment engineering subaqueous investigation civil & site engineering structural design marine facilities geotechnics surveying forensics

# **TEST PIT FIELD NOTES**

Job No: 106100 Location: Yonkers, NY Project Title: River Park Center Project Client: SFC, L.L.C. Performed by: Chris Humphries Dates: 12/18/06 – 12/19/06 Weather: Partly cloudy, 50-55 F

### TEST PIT No.1

- 0' 1.5' Asphalt and gravel base coarse
- 1.5' 14' Fill Dense to medium dense material, consisting of fine to coarse sand with little silt, some to and fine coarse gravel, cobbles, and boulders.
  Brick foundation present between 1.5'-6'.
  Timber present between 5'-6'
  Ash present between 11.5'-12'.

Groundwater present at 14.' Groundwater appears contaminated, possibly by crude oil.

Test pit appears to be original location of river bottom.

### M. G. McLAREN, P.C.

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### **TEST PIT No.2**

- 0' 1' Roots and organic material.
- 1' 7.5' Fill Dense to medium dense material consisting of fine to coarse sand with some clay, little silt. Some to and coarse gravel, cobbles, and boulders.
- Brick foundation present between 3'-5'.
  7.5'-14' Undisturbed, dense to medium dense material consisting of fine to coarse sand, with little to some silt. Some to and fine coarse gravel, cobbles, and boulders.

No water present.

### TEST PIT No.3

- 0' 2' Decomposed asphalt and base coarse
- 2' 5' Orange/brown sand and clay. Traces of fire extinguishing materials at 3'-4'. Some coarse gravel.
- 5'- 6' Fill Dense to medium dense dark brown sand with some clay, with little silt. Some coarse gravel.
- 6'-7' Fill Dense to medium dense orange/brown sand with some clay, with little silt. Some coarse gravel.
- 7'-7.5' Fill Dense to medium dense light brown sand with some clay, with little silt. Some coarse gravel.
- 7.5'-8' Organic layer with dense to medium dense fine to coarse sand.
- 8'-14' Undisturbed dense to medium dense material consisting of fine to coarse sand, with little to some silt, some to and fine coarse gravel, cobbles, and boulders.

Water present at 3.5'



## **TEST PIT No.4**

0' - 1.5'	Asphalt and base coarse
1.5′ – 5′	Fill – Dense to medium dense material
	consisting of fine to coarse sand, with little
	silt, some to and fine coarse gravel,
	cobbles, and boulders.
5' – 6'	Organic layer with dense to medium dense
	fine to coarse sand.
6'-8'	Fill – Dense to medium dense material
	consisting of fine to coarse sand, with little
	silt, some to and fine coarse gravel,
	cobbles, and boulders.
8'-12.5'	Undisturbed, dense to medium dense
	material consisting of fine to coarse sand,
	with little silt, some to and fine coarse
	gravel, cobbles, and boulders.

No water present. Bedrock encountered at 12.5'.

