21-25 31st Street
Supplemental Remedial Investigation Work Plan

21-25 31st Street
Astoria, NY 11105
Queens County
Block 831, Lot 20
NYSDEC Spill #1402686
CEQR #10DCP019Q
Site No. C241167

Submitted to:
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau B, Section A
625 Broadway, 12th Floor
Albany, NY 12233-7016

Prepared for:
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August 2016

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CERTIFICATION

I, Mohamed K. Ahmed, certify that I am currently a Qualified Environmental Professional as defined in 6NYCRR Part 375 and that this Remedial Investigation Work Plan was prepared in accordance with all applicable statues and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

8/10/16

Mohamed K. Ahmed, Ph.D., CPG Date

1.0 INTRODUCTION

On behalf of 21-25 31st Street LLC (Volunteer), Tenen Environmental, LLC (Tenen) has prepared this Supplemental Remedial Investigation Work Plan (SRIWP) for the property located at 21-25 31st Street (Block 831, Lot 20) in the Astoria neighborhood of Queens, New York (the Site). The Site location and layout are identified on Figures 1 and 2. The scope of work described in this SRIWP is based upon the findings of the remedial investigation (RI) described in the Remedial Investigation Work Plan (RIWP) dated July 2015 and implemented by Tenen in March 2016. The results of the RI are included in a draft Remedial Investigation Report (RIR) dated April 18, 2016 and currently under review by the New York State Department of Environmental Conservation (NYSDEC).

The supplemental RI activities are proposed to address several data gaps identified in the RIR. This SRIWP describes work to further investigate and characterize the nature and extent of contamination previously identified on the Site. The scope of work includes investigation of subsurface soil, soil vapor and groundwater within areas where historic operations have or may have potentially impacted environmental media and potential receptors. The results of the investigation, in conjunction with the findings of the 2016 RI, will be used to update the qualitative human health exposure assessment (EA) and to support the development of a Remedial Action Work Plan (RAWP) for the Site. This Work Plan has been prepared in accordance with the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10, May 3, 2010).

1.1 Work Plan Organization

This SRIWP includes an introduction (Section 1), background information (Section 2), scope of work (Section 3) and project schedule (Section 4). Quality assurance/quality control, health and safety, citizen participation and project team information are addressed in separate appendices. Supporting tables and figures referenced throughout are included at the end of this SRIWP.

1.2 Work Plan Objective

Previous investigations at the Site, detailed in Section 2.6, have indicated several potential areas of concern including the identification of a portion of the Site as the location of a former dry cleaner and the historical use of the northeast adjacent property for auto repair operations. Subsurface investigations have confirmed the presence of chlorinated solvent impacts, petroleum-related impacts and historical fill material at the Site. Dry cleaning solvents and their breakdown components were present in the groundwater, soil, soil vapor and indoor air at the Site. In addition, dissolved phase petroleum was identified in groundwater samples from the upgradient monitoring wells.

The objective of the SRI is to address the data gaps identified in the RI and provide additional information necessary to prepare a qualitative human health exposure assessment (QHHEA) and to develop a remedial strategy for the Site to be incorporated into a RAWP. Specific activities described in this SRIWP include the following:

- Further assess the groundwater conditions along 31st Street;
- Further assess the subsurface soil conditions at the groundwater interface and at the deep clay layer, which is a perceived aquiclude;
- Confirm the groundwater flow direction;

- Further assess the subsurface soil conditions in areas impacted by historic operations;
- Assess the soil vapor conditions at proposed development depth of 15 feet below grade (ft-bg); and,
- Video-scope the existing sewers along 31st and 32nd Streets.

2.0 BACKGROUND

This section includes summaries of previous site investigations. Additional background information, including the Site description and hydrogeology are included in the draft RIR.

2.1 Summary of RI Findings

Tenen has prepared a draft Remedial Investigation Report, dated April 2016, which is summarized below.

Between February to April 2016, Tenen conducted a soil, groundwater and soil vapor remedial investigation at the Site in order to investigate the nature and extent of contamination, to determine if contaminant levels threaten public health or the environment and to provide information to develop a remedial strategy. The methodology and results of the RI are summarized below.

Soil
A total of eleven soil borings, five exterior and six interior, were advanced at the Site. A total of 31 soil samples were collected at depths ranging from grade to 77 feet below grade. A hollow stem auger (HSA) drill rig and a Sonic® drill rig were used to advance exterior soil borings. A remote 420M Geoprobe® direct push machine was used to advance interior borings. Four interior soil borings were advanced to refusal in the basement of the former dry cleaning facility historically present at the Site. Two interior soil borings were advanced to refusal beneath the ground floor slab in the section of the Site that has no basement. Five exterior soil borings were advanced along the north corner of the Site, along 31st Street, in the rear driveway and on the southeast border of the Site, along 32nd Street, in order to identify the extent of contamination along the perimeter of the Site.

A photoionization detector (PID) was used to screen the soil borings; no elevated field readings were detected. A comparison of the soil analytical results with the New York State Part 375 Unrestricted Use Soil Cleanup Objectives (SCOs) and the Residential Use SCOs is summarized below:

- PCE was detected in sample SB12 (1-3) above the Unrestricted Use SCO but below the Residential Use SCO.
- Petroleum-related VOCs were detected at the groundwater interface in two samples (GW6 (40-42) and GW8 (40-42), at concentrations above the Unrestricted Use SCOs but below the Residential Use SCOs.
- SVOCs were detected in two samples, SB13 (1-3) and SB14 (1-3), at concentrations above the Residential Use SCOs. These fill-related PAHs are present in the area of the Site that does not have a basement.
- Pesticides and PCBs were not detected above the Unrestricted Use SCOs.
- Three metals, lead, silver and zinc were detected above the Unrestricted Use SCOs in sample SB14 (1-3); lead was detected above the Unrestricted Use SCO in sample SB9 (0-3).
- With the exception of a minor exceedance of lead in sample SB9 (0-3), all impacts are vertically delineated to the Residential Use SCOs.

Groundwater
Five soil borings were converted into permanent shallow groundwater wells. At two locations, deep wells were installed above the interface of a clay layer that may serve as an aquiclude. All new wells were constructed using two-inch inner diameter (ID) PVC casing. A ten-foot 0.02-inch slot PVC screen, with a filter pack of sand in the annular space around the screens, was installed in the top seven feet of groundwater. The annular area around the well casing was sealed with bentonite pellets for an interval of two feet.

The wells were sampled using low flow techniques. Analytical results were compared to the New York State Class GA Ambient Water Quality Standards (AWQSs) and are summarized below:

- Concentrations of chlorinated volatile organic compounds (cVOCs) were detected above the AWQS in shallow wells along 31st Street and in both deep wells. The concentrations of cVOCs were higher in the deep wells compared to the concentrations in the co-located shallow wells.
- Petroleum impacts were detected in the four most-upgradient shallow wells. Petroleum compounds were not detected above the AWQS in deep wells.
- No SVOCs, with the exception of naphthalene, were detected in any groundwater samples.
- One pesticide, dieldrin, was detected at estimated concentrations above the AWQS. PCBs were not detected above the AWQS.
- Dissolved earth metals were detected above the AWQSs in all monitoring well groundwater samples.

Soil Vapor, Indoor Air and Ambient Air
Two indoor sub-slab soil vapor points were installed directly below the basement slab. Two indoor air samples co-located with the sub-slab soil vapor points were collected. Three soil vapor points were installed outside of the building footprint at approximately 8 ft-bg, to match the interval of the sub-slab samples. One ambient air sample, co-located with outdoor soil vapor points, was collected.

Soil vapor lines were purged and sampled. Soil vapor, ambient air and indoor air samples were analyzed for TO-15 VOCs. Analytical results are summarized below:

- Elevated (above ambient levels) concentrations of PCE in soil vapor collected from beneath the building were detected, with a maximum concentration of 766 ug/m^3. Concentrations of TCE were also detected above ambient concentrations.
- The concentrations of cVOCs in soil vapor sample locations between the Site and nearby school are low. Several petroleum-related compounds, including benzene, xylenes, ethanol and trimethylbenzenes, were detected in soil vapor at concentrations above the ambient levels.

Data Gaps

- A vertical profile of the cVOC contamination in groundwater has not been completed. Currently, the groundwater sampling intervals are generally 39 to 45 ft-bg and 75 to 80 ft-bg.
- The thickness and extent of the encountered clay layer is not known.
- The pitch of the clay layer is unknown on a Site-specific basis. Given the regional pitch to the south, it is possible that the deep groundwater impacts are driven by the clay layer interface and not the shallow groundwater flow direction. It is similarly possible that the clay layer serves as a competent aquiclude.

- Additional sampling is required in order to complete the vertical delineation of the impacts, to assess preferential pathways (including the discharge location of the drain in the driveway) and to assess alternative remedies in order to select the remedy.

3.0 SCOPE OF WORK

The supplemental remedial investigation proposed for the Site includes the installation and sampling of one interior test pit, one soil boring, one soil vapor sampling point and one monitoring well. The objective of the investigation is to obtain data that will be used to update the qualitative human health exposure assessment (QHHEA) and develop remedial alternatives for the Site. The investigation activities are further described below. The methodology is consistent with that detailed in the previously approved RIWP, with the exception of the test pit described in Section 3.1.1 and the sewer investigation described in Section 3.6.

3.1 Soil Sampling

A subsurface investigation will be performed to vertically delineate the extent of PCE contamination impacts in soil.

The following scope of work will be implemented:

- Install one test pit in the vicinity of SB-12, located in the basement of the dry cleaning facility historically present at the Site, to identify the stratigraphy and any apparent gross contamination associated with the historic operation of the drycleaner;
- Collect soil samples to further delineate the extent of PCE contamination;
- Advance one exterior soil boring (GW-3D) along 31st Street, screening soil from the bottom of previously-installed GW-3 to the top of the first confining unit (clay layer);
- Collect soil samples at the interval of highest suspected contamination, based on photoionization detector (PID) readings, and at the top of the clay layer to complete vertical delineation of PCE in shallow and deep intervals;
- Analyze soil samples for Target Compound List (TCL) VOCs; and,
  Convert soil boring GW-3D to a permanent groundwater well (the details of which are included in Section 3.3).

3.1.1 Soil Sampling Methodology

One interior test pit (TP-1) will be excavated in the basement of the former dry cleaning facility, subject to the terms of access granted by the tenant. A concrete saw will be used to cut an approximately two-foot by two-foot opening in the concrete, and the test pit will be excavated and backfilled using hand tools.

One exterior soil boring (GW-3D) will be advanced using a Geoprobe® rotary sonic rig. The boring will be advanced to the first observed confining layer. All samples will be collected using dedicated acetate liners within five-foot intervals.

At all soil boring locations, the collected soil volumes will be screened with a photoionization detector (PID) using an 11.7 electron-volt (eV) bulb. Visual and olfactory observations will be recorded.

All soil sample locations are shown on Figure 3.

Samples will be collected in laboratory-supplied containers and will be sealed, labeled, and placed in a cooler containing ice (to maintain a temperature of approximately 4 degrees Celsius) for delivery to a NYSDOH Environmental Laboratory Accreditation Program (ELAP)-certified analytical laboratory. Soil samples will be analyzed for TCL VOCs.

A record of each sample, including notation of any odors, color, or other observations of the sample matrix, will be kept in the sampler's field log book. A chain of custody will be maintained throughout the field sampling, transport of samples to the laboratory, and during lab analysis.

3.2 Soil Vapor, Indoor Air and Ambient Air Sampling

The following scope of work is proposed to investigate potential soil vapor impacts at the assumed depth of development in the driveway located on the northeast portion of the property. The scope of work will include the following:

- Install one exterior soil vapor point (SV-11) at approximately 20 ft-bg;
- Reinstall select sub-slab soil vapor points (SV-2 and SV-6);
- Purge and collect soil vapor samples at SV-2, SV-6, SV-8 and SV-11;
- Collect one ambient air sample (AA-2) and one indoor air sample (IA-3); and,
- Analyze soil vapor, ambient air and indoor air samples for TO-15 VOCs.

A sample from exterior soil vapor point SV-11 will be collected at a depth of 20 ft-bg to match the depth of the assumed excavation. One ambient air sample (AA-2) will be collected at the upwind border of the Site. The sub-slab soil vapor points SV-2 and SV-6 will be reinstalled as detailed in the RIWP. One indoor air sample (IA-3) will be collected co-located with soil vapor point SV-6. All locations are shown on Figure 4.

3.2.1 Soil Vapor, Indoor Air and Ambient Air Sampling Methodology

All samples will be collected in accordance with the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH, October 2006). The sample locations may be adjusted based on field observations or conditions.

One soil vapor sampling probe, a 6-inch long perforated vapor intake, will be installed using a Geoprobe® rotary sonic rig to a depth of 20 ft-bg.

The new and existing soil vapor sampling probes will be connected to ¼-inch diameter tubing to the surface. The boreholes above the sampling probe to grade will be sealed using a sand pack and an inert sealant to prevent ambient air mixing with the soil vapor. Ambient air will be purged from the boring hole by attaching the surface end of the ¼-inch diameter tubing to an air valve and then to a vacuum pump. The vacuum pump will remove one to three volumes of air (volume of the sample probe and tube) prior to sample collection.

The soil vapor samples will be screened for organic vapors using a PID. Samples will be collected in laboratory-supplied Summa canisters, which have been certified clean by the laboratory. The flow rate of both purging and sampling will not exceed 0.2 liters per minute (L/min). Soil vapor sampling will occur for the duration of eight hours. A sample log sheet will be maintained summarizing sample identification, date and time of sample collection, sampling depth, identity of samplers, sampling methods and devices, soil vapor purge volumes, volume of the soil vapor extracted, vacuum of canisters before and after the samples are collected, apparent moisture content of the sampling zone, and chain of custody protocols.

As part of the soil vapor evaluation, helium tracer gas will be used in accordance with NYSDOH protocols as a quality assurance/quality control (QA/QC) device to verify the integrity of the soil

vapor probe seal. A portable monitoring device will be used to analyze a sample of soil vapor for the tracer prior to sampling. If this analysis shows a significant presence of the tracer, the probe seals will be adjusted to prevent infiltration. At the conclusion of the sampling, tracer monitoring will be performed a second time to confirm the integrity of the probe seals.

One ambient air sample (AA-2) is proposed at a location upwind of the Site (final location to be determined in the field).

Samples will be collected in laboratory-supplied canisters and will be sealed, labeled, and placed in a secure container for delivery to a NYSDOH ELAP-certified analytical laboratory. All samples will be analyzed for EPA Method TO-15 VOCs.

3.3 Groundwater Sampling

The following scope of work is proposed to further characterize the groundwater at the Site and develop information for use in the qualitative exposure assessment:

- Extend soil boring GW-3D into the first confining layer and install a two-inch diameter permanent monitoring well at the lower portion of the shallow aquifer;
- Collect groundwater samples from newly installed and developed well GW-3D and from existing wells GW-1, GW-3S, GW-4, GW-2S, GW-2D, GW-7 and GW-8; and,
- Analyze groundwater samples for TCL VOCs.

The proposed deep monitoring well location, shown on Figure 3, has been proposed to further delineate previously detected contamination from the on-site former dry cleaning facility.

3.3.1 Well Installation and Sampling Methodology

One soil boring will be converted into a permanent deep groundwater well consisting of two-inch inner diameter (ID) PVC casing and riser. A five-foot PVC screen will be installed at the bottom of the shallow aquifer. The slot size will be determined based on the grain size of the soils encountered. A filter pack of sand will be placed in the annular space around the screens and will extend two feet above the screen. The annular area around the well casing will be sealed with bentonite pellets for an interval of two feet. A grout, consisting of a cement and bentonite mixture or an anti-shrink mixture, will extend from the bentonite pellet seal to two ft-bg. The remaining annular space will be sealed with a concrete cap and well apron (expanding cement). A locking well cap will be installed upon completion of the well. The monitoring well will be surveyed to the common Site datum.

The monitoring well will be developed on the day it is installed by pumping using dedicated Teflon tubing. Turbidity will be measured using a nephelometer, and the well will be developed until the reading is 50 Nephelometric Turbidity Units (NTU) or less, or until at least three well volumes have been evacuated. The monitoring well will be sampled at least ten days after development.

All sampling equipment will be decontaminated prior to use. Prior to sampling, water levels will be measured using an electronic product-water level indicator. Sample collection will be accomplished by using low-flow procedures in accordance with EPA Region 1 Low-Stress (Low-Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells. (EQASOP-GW 001 Revision 3 dated July 30, 1996 Revised: January 19,

2010). Samples will not be collected until pH, temperature and conductivity measurements stabilize and the turbidity reading is 50 NTU or stabilizes above 50 NTU.

All groundwater samples will be analyzed for TCL VOCs.

3.4 Quality Assurance / Quality Control (QA/QC)

Samples will be collected in accordance with the Quality Assurance Project Plan (QAPP) included as Appendix A.

Sample analysis will be performed by a NYSDOH ELAP-certified laboratory. The laboratory will report sample results on a five-day turnaround time. An independent subconsultant will validate sample results and prepare a Data Usability Summary Report (DUSR).

3.5 Summary Table of Proposed Sampling Locations

As required by Section 3.3(b) 3 of DER-10, below is a table with proposed sampling locations and QA/QC samples.

Proposed Sampling Locations and Analysis

Sample Location	Matrix	Sampling Intervals	Analytical Parameters	Sampling Method / Minimum Reporting Levels	Rationale
GW3D	Soil	Samples will be collected at the interval of highest suspected contamination, if encountered (based on PID readings), and from the two-foot interval at the first confining layer.	TCL VOCs	MDL less than Unrestricted Use SCOs	Investigate chlorinated impacts
TP-1		Samples will be collected from the first two-foot interval with no apparent impacts. If no impacts are detected, a sample will be collected from the 3-5 ft-bg interval.			

Sample Location	Matrix	Sampling Intervals	Analytical Parameters	Sampling Method / Minimum Reporting Levels	Rationale
GW-1, GW-3S, GW-4, GW-2S, GW-7 and GW-8	Groundwater	Five-foot interval into groundwater interface	TCL VOCs	EPA 8260 / MDL less than Class GA Standards	Assess shallow VOC concentrations.
GW-2D, GW-3D		Five-foot interval above the first confining layer			Assess deep groundwater conditions

Sample Location	Matrix	Sampling Intervals	Analytical Parameters	Sampling Method / Minimum Reporting Levels	Rationale
SV11	Soil Vapor	20 ft-bg	TO-15 VOCs	EPA TO-15 / MDL less than 1.00 ug/m3 except TCE/PCE less than 0.25 ug/m3	Assess soil gas conditions at depth of assumed excavation.
SV-2 and SV-6		Sub-slab			Confirm on-site impacts; document off-site conditions.
SV-8		8 ft-bg			
IA-3	Indoor Air	--			Assess indoor air conditions.
AA-2	Ambient Air	--			Assess outdoor ambient air conditions upwind of the Site.

Sample Location	Purpose	Sampling Intervals	Analytical Parameters	Rationale
Trip Blanks	QA / QC	--	TCL VOCs	Quality assurance and quality control
Soil Duplicate				
Soil Blank				
Soil MS/MSD				
Groundwater Duplicate				
Groundwater MS/MSD				

MDL – Method Detection Limit
RL – Reporting Limit
ug/m^3 – micrograms per cubic meter

Reporting and method detection limits are laboratory- and sampling event-specific. The overall objective is to ensure that the minimum reporting levels are such that they can be used to evaluate potential sources, assess risk from detected compounds, and compare detected concentrations against applicable regulatory levels.

3.6 Sewer Investigation

In order to assess whether potential migration pathways are present, a sewer line assessment using a pipe camera will be performed for the sewers along 31st and 32nd Streets. The sewers are maintained by the New York City Department of Environmental Protection (NYCDEP) and NYCDEP records pertaining to these sewers are included in Appendix A.

The purpose of the sewer investigation is to scope the Site connections (including the driveway drain, ejector pit and associated piping) and sewers in the areas of the Site connections originating at the former dry cleaner to identify potential preferential pathways that should be further investigated. The sewer connections are of concern based on the potential for the release of dry cleaner solvents to the sewer system.

The sewer and Site connections investigation will be completed by a plumber licensed in New York City and in accordance with a permit from NYCDEP. Additional sampling may be required based on the results of the sewer investigation.

3.7 Qualitative Exposure Assessment

Following receipt of the sample results, the qualitative exposure assessment (EA) will be updated. The EA will utilize the results of the remedial investigation to evaluate and document potential exposure routes and identify and characterize potential current and future receptors. The samples collected as part of the supplemental remedial investigation will be used to identify potential human exposure scenarios associated with contaminants in soil, soil vapor and groundwater. The results of the EA will be included in the remedial investigation report, as described in Section 3.12.

3.8 Health and Safety Plan (HASP)

All work at the Site will be completed in accordance with the Health and Safety Plan (HASP) included as Attachment B to the RIWP.

3.9 Air Monitoring

The NYSDOH Generic Community Air Monitoring Plan (CAMP), included as Appendix 1A of DER-10, will be implemented during all ground-intrusive sampling activities. Details of the CAMP are included in the HASP included as Attachment B to the RIWP.

3.10 Investigation-Derived Waste (IDW)

Following the completion of sampling, boreholes will be backfilled with clean cuttings or sand. If grossly contaminated soil cuttings are encountered or if excess soil cuttings are generated, they will be placed in 55-gallon drums. Any purge water or other investigation-derived waste (IDW) will be containerized in 55-gallon drums. After the investigation is complete, the drum contents will be characterized and off-Site disposal will be arranged.

3.11 Citizen Participation Plan (CPP)

A Citizen Participation Plan (CPP) has been prepared to provide information about how NYSDEC will inform and involve the public during the investigation and cleanup of the Site. A copy of the CPP is provided as Appendix D to the RIWP.

3.12 Reporting

The results of the SRI will be incorporated into the remedial investigation report prepared in accordance with the requirements of DER-10. The report will include details of the sampling, tabulated sample results, the sewer investigation report and an assessment of the data and conclusions. If warranted, recommendations for additional actions will be included.

Soil sample results will be compared to the Part 375-6.8Unrestricted Use SCOs, Residential and Restricted Residential Use SCOs and the Protection of Groundwater SCOs as included in Part 375-6.8. Groundwater sample results will be compared to the Class GA Standards. Soil vapor and indoor air results will be compared to the ambient air results and, where appropriate, the NYSDOH AGVs and Matrices.

The report will also include the qualitative exposure assessment, CAMP results, laboratory data packages, DUSR, geologic logs, well construction diagrams and well purging/sampling logs. All data will also be submitted electronically to NYSDEC via the Environmental Information Management System (EIMS) in EqUIS format.

4.0 SCHEDULE

It is estimated that the soil and soil vapor sampling and well installation tasks described in this work plan can be completed within six field days with an additional ten days for well development prior to groundwater sampling. Project activities will be completed within approximately 15 weeks after Work Plan approval by NYSDEC. The following project schedule has been developed:

Work Plan Implementation Schedule

Task	Estimated Task Duration (business days)	Total Duration (business days)
Work Plan Approval	0	0
Mobilization	15	15
Sewer Investigation and Analysis	5	20
Test Pit Soil Sampling	1	21
Monitoring Well and Soil Vapor Probe Installation, Soil Sampling at Boring GW-3D	2	23
Soil Vapor Sampling	1	24
Monitoring Well Development	10	34
Groundwater Sampling	3	37
Laboratory Analysis	10	47
Draft Report and Data Validation	30	77

The revised Remedial Investigation Report will be submitted before October 30, 2016.

5.0 REFERENCES

New York State Department of Environmental Conservation, Division of Environmental Remediation. DER Technical Guidance for Site Investigation and Remediation (DER-10). NYSDEC 2010.

New York State Department of Environmental Conservation DEC Policy. Commissioner's Policy 51 – Soil Cleanup Guidance. October 21, 2010. NYSDEC 2010.

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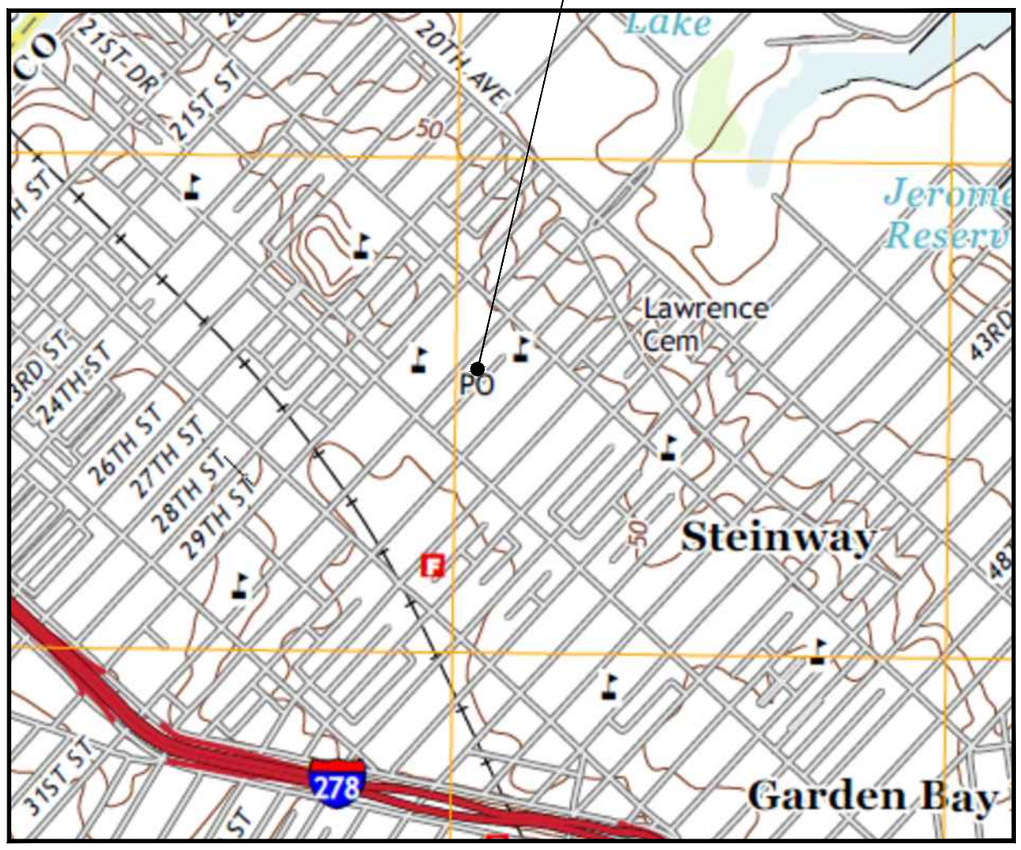

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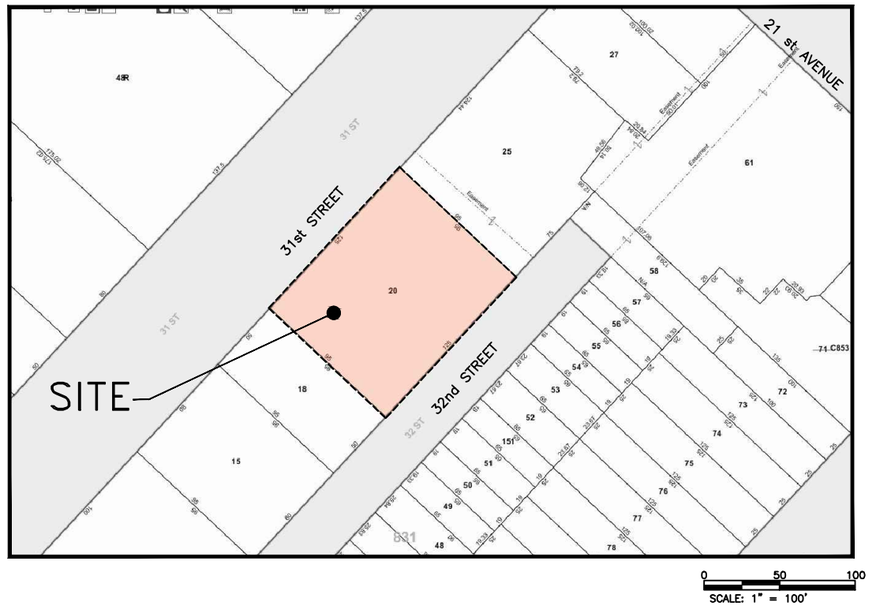
http://www.usgs.gov



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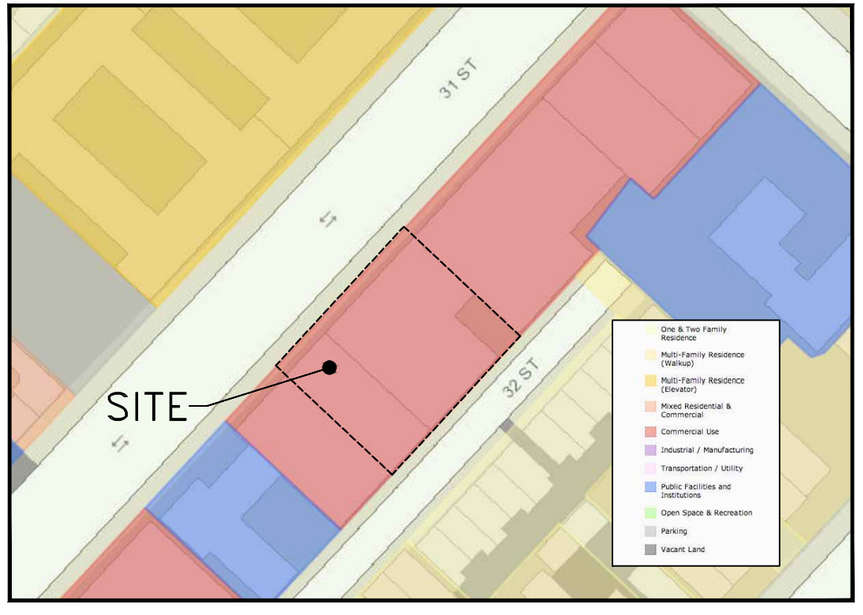

RE: DEPARTMENT OF CITY PLANNING ZOLA, 2014
http://gis.nyc.gov/doitt/nycitymap/template?applicationName=ZOLA

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DRAWN BY	CHECKED BY	DATE	SCALE:
JM	MC	APRIL 2014	AS NOTED

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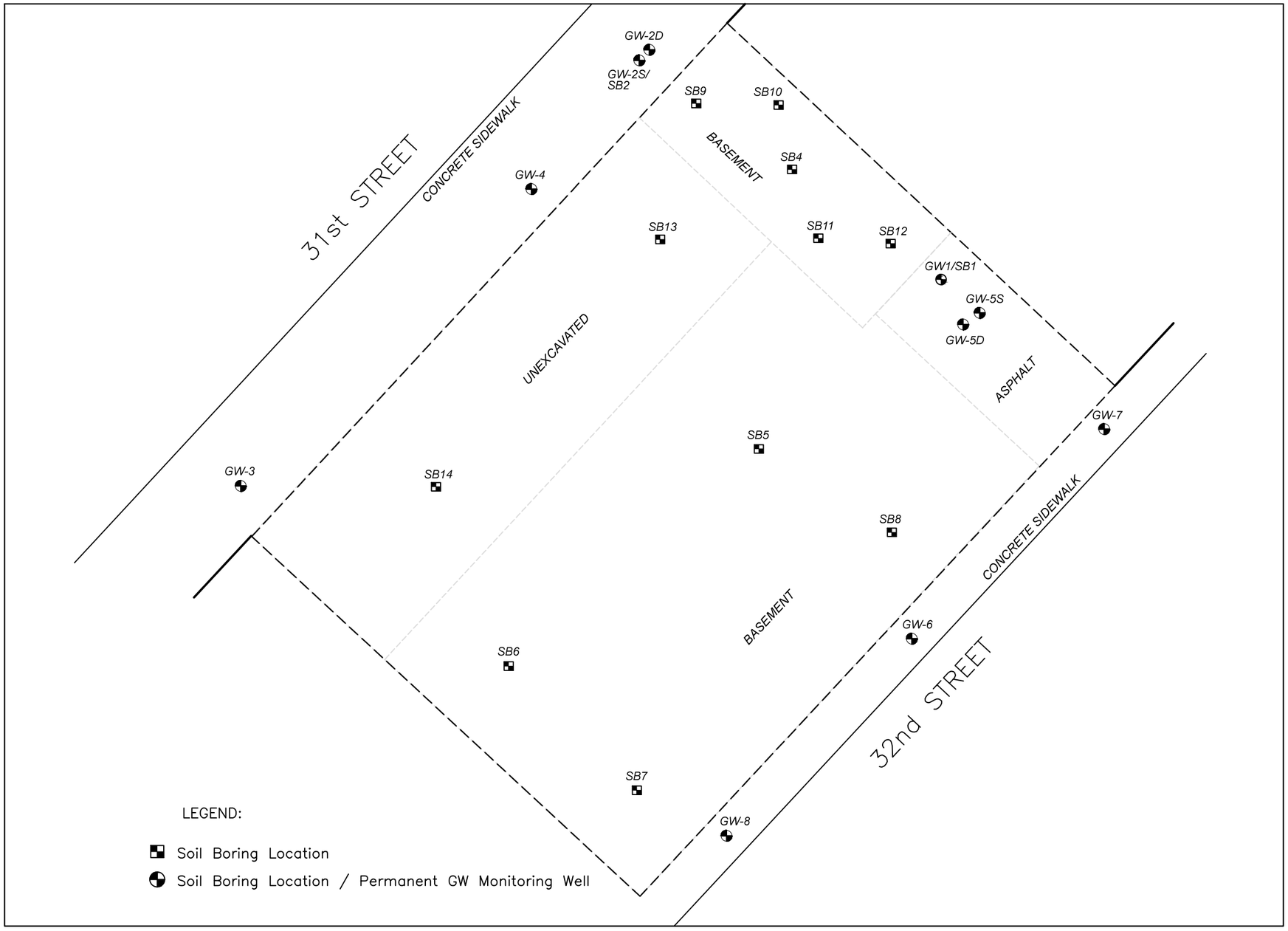

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CONSULTANT

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Site Layout

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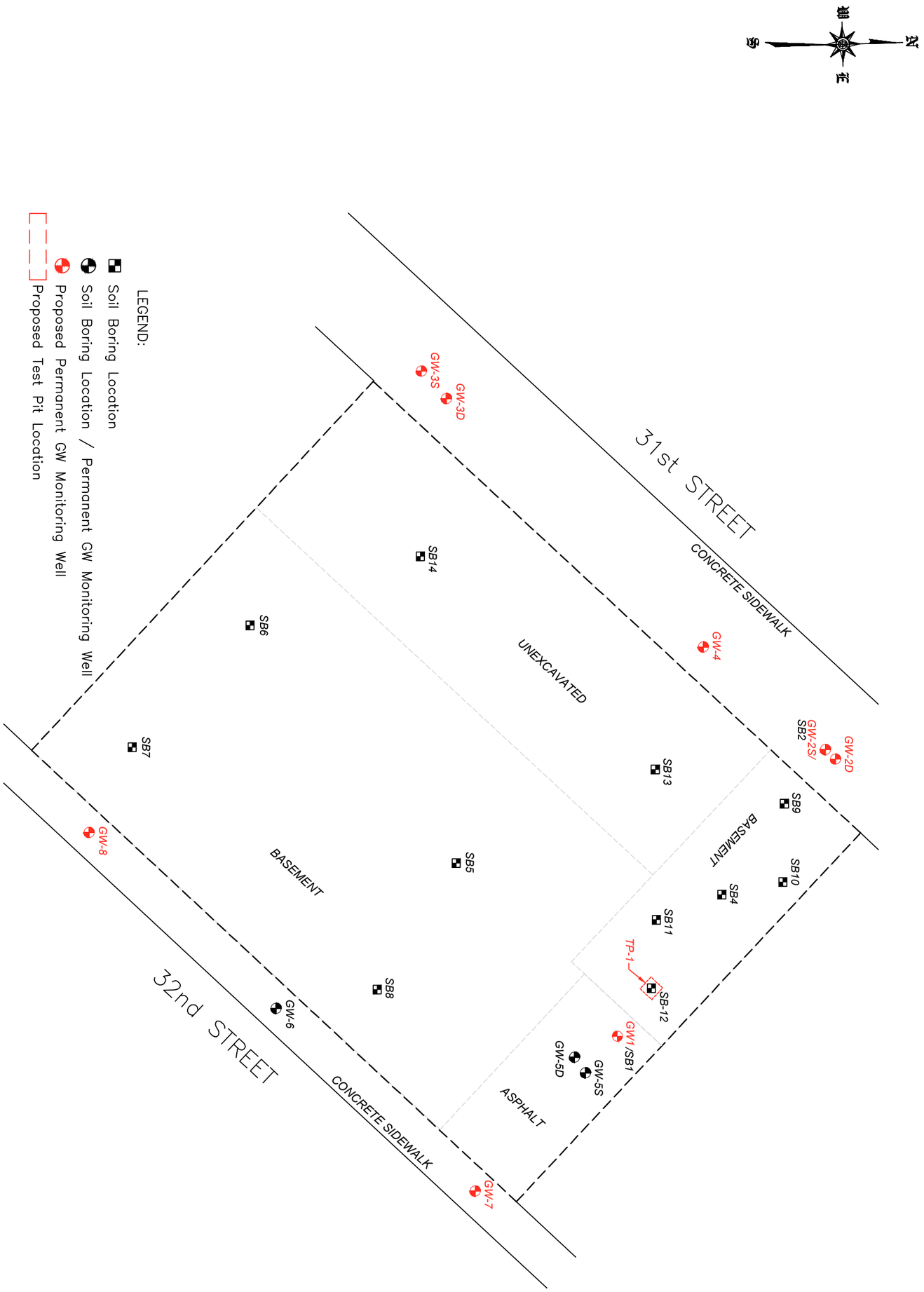
FIGURE 2



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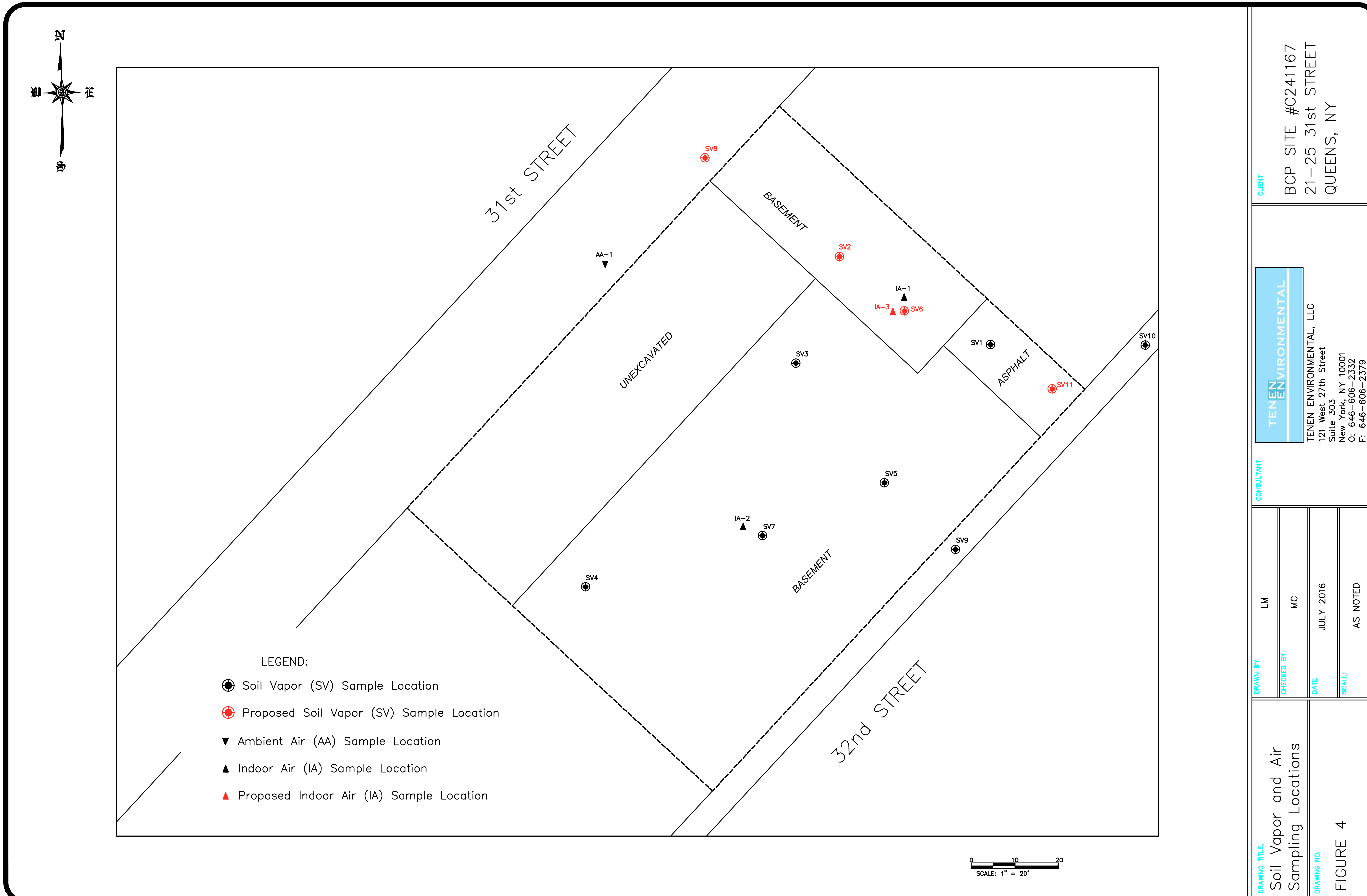
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CLIENT
BCP SITE #C241167
21–25 31st STREET
QUEENS, NY
TENEN ENVIRONMENTAL
CONSULTANT
TENEN ENVIRONMENTAL, LLC
121 West 27th Street
Suite 303
New York, NY 10001
O: 646–606–2332
F: 646–606–2379
DRAWN BY
LM
CHECKED BY
MC
DATE
JULY 2016
SCALE:
AS NOTED
DRAWING TITLE:
Soil Vapor and Air
Sampling Locations
DRAWING NO.
FIGURE 4

ENGINEERS FINAL MAP

OF THE CONSTRUCTION OF A PRIVATE SEWER IN

31(2ND AVE.) ST.

FROM A POINT ABOUT 116 FEET NORTHEAST OF 21ST AVE. (WOLCOTT AVE.) TO A POINT ABOUT 375 FEET SOUTHWEST OF 21ST AVE.

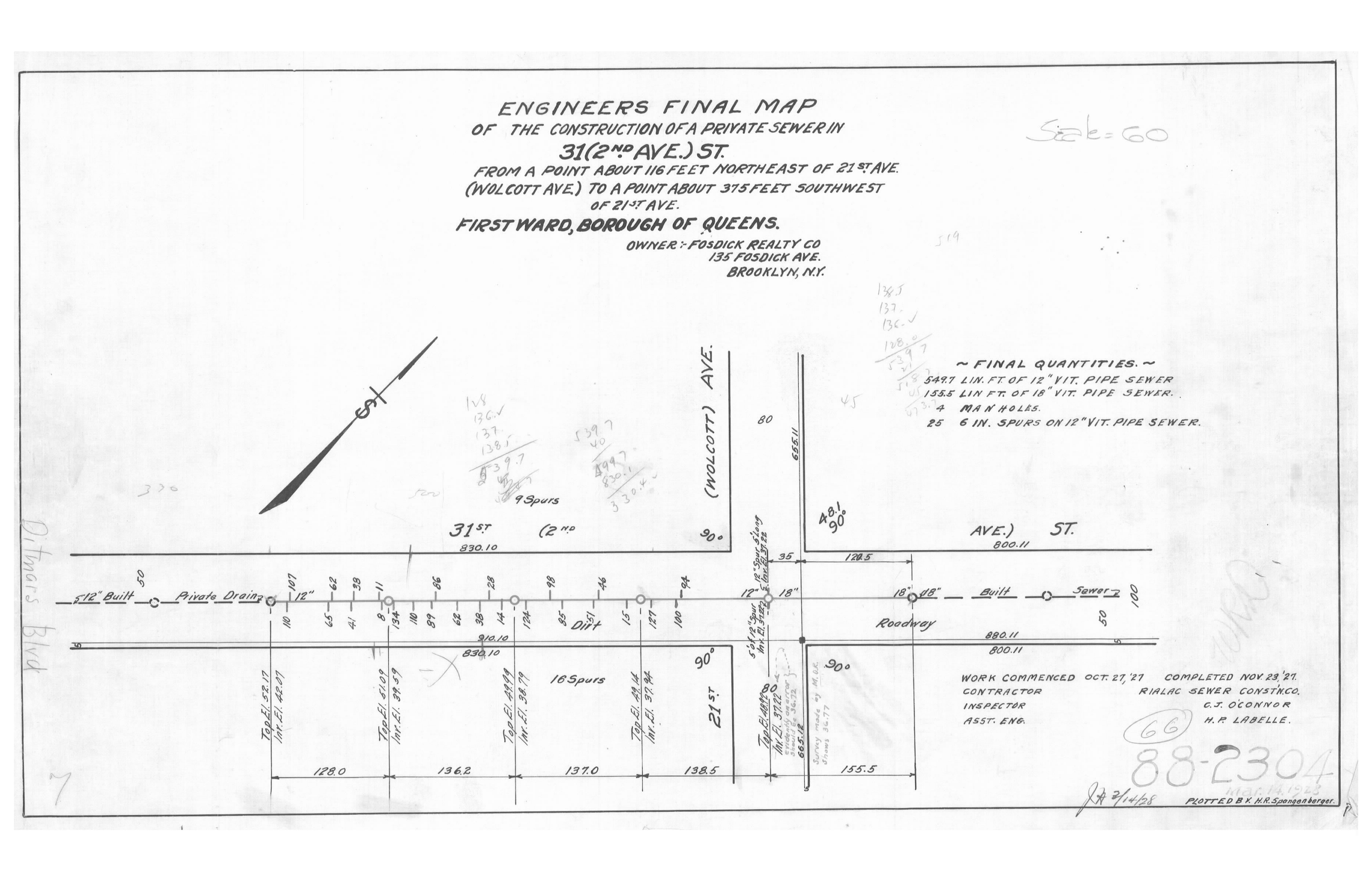
FIRST WARD, BOROUGH OF QUEENS.

OWNER:- FOSDICK REALTY CO
135 FOSDICK AVE.
BROOKLYN, N.Y.

Scale = 60

~ FINAL QUANTITIES. ~

549.7 LIN. FT. OF 12" VIT. PIPE SEWER
155.5 LIN FT. OF 18" VIT. PIPE SEWER.
4 MAN HOLES.
25 6 IN. SPURS ON 12" VIT. PIPE SEWER.



WORK COMMENCED OCT. 27, '27 COMPLETED NOV. 23, '27.
CONTRACTOR RIALAC SEWER CONST'N. CO.
INSPECTOR C. J. O'CONNOR
ASST. ENG. H. P. LABELLE.

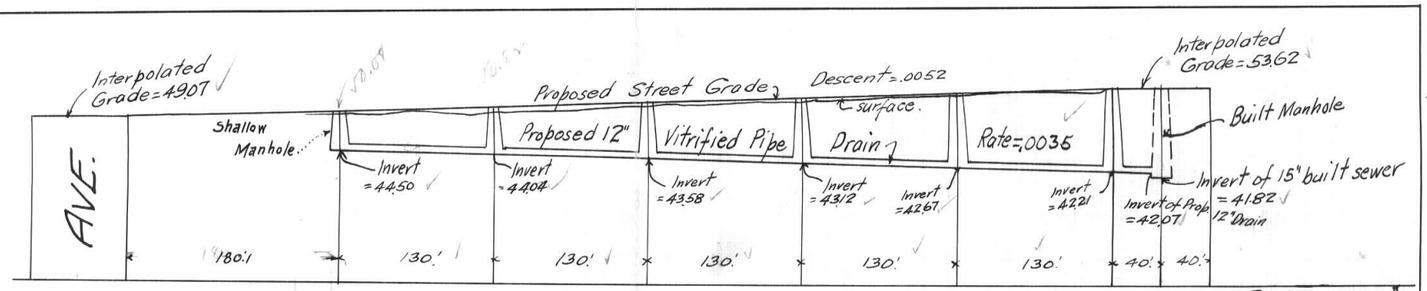
66

88-2304

Mar. 14 1928

2/14/28

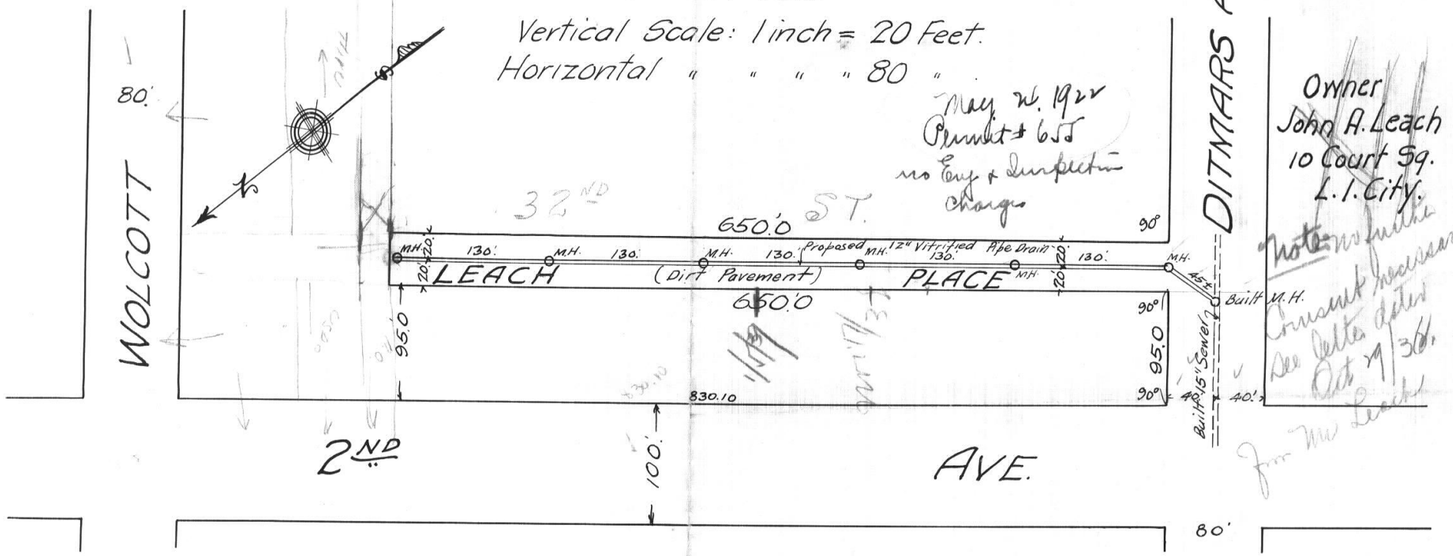
PLOTTED BY H.R. Spangenberger.



PROFILE

Vertical Scale: 1 inch = 20 Feet.
Horizontal " " " " 80 " .

May 26. 1922
Permit # 655
no Eng. & Inspection charge.



PLAN OF PROPOSED TEMPORARY PRIVATE DRAIN

PROPOSED TO BE BUILT BY JOHN A. LEACH
IN LEACH PLACE, 1ST WARD, BOROUGH OF QUEENS

Note:- All construction details to conform to the standard plans and specifications of the Bureau of Sewers, Borough of Queens. No storm water to be admitted. Gasket and Mortar joints to be used exclusively. Any modifications or changes in this plan, must be submitted in writing to the Engineer-in-charge, Bureau of Sewers for his approval

James Rice
Clifford Buford
DECEMBER 2nd 1921

Made by
LEONARD C.L. SMITH
City Surveyor
Queensboro Corp. Bldg
Long Island City

Frederick Seely Jr. Franklin Perrine

88-2364

P.Q. 341-20M-70148 114

APPROVED
BUREAU OF SEWERS
COMBINED SEWER
MARTIN NELSON
ENGINEER OF SEWERS
BY [illegible] OCT 1 1962

PERMIT DIVISION

PRESIDENT, BOROUGH OF QUEENS

APPLICATION FOR SEWER PERMIT

COMMISSIONER OF BOROUGH WORKS,
BOROUGH OF QUEENS,

8/27 19 62

Sir:

36116

Application is hereby made for permission to East side of 31 St
225 ft South of 21 Ave

The connection (or repair) to be made under this permit will be ready for inspection on
early 19

In front of 21-27 31 St Street

Building Permit No. NB. 8670/61

Charges, $ ✓

Beverley Management Owner

WARD BLOCK 83 LOT 20, 21, 22, 23, 24

4.08.1(G) With regard to sheeting of sewer trench during excavation, the contractor shall comply with the provisions of the New York State Labor laws and particularly with Rule No.23 (as amended) of the Industrial Code as promulgated by the Board of Standards and Appeals, Department of Labor, State of New York

Adolph Di Blasi Plumber

Address 37-20 103 St Corona

License No. 7540

Dry sewer bond in amt. $450 attached

P. Q. 348

INSPECTOR'S REPORT ON SEWER CONNECTIONS OR REPAIRS
PERMIT DIVISION BOROUGH OF QUEENS

PERMIT NO. 36116 ISSUED 10-1-62 19 BUILDING PERMIT NO. NB8670/61

OWNER Beverley Mgt. PLUMBER Adolph Di Blasi

LOCATION es 31 St. 225' s/21 Av.

INSPECTION WANTED notify

HOUSE NO. 21-27 31 St.

SIZE AND KIND OF SEWER comb. CONDITION OF SEWER Good

REMARKS 8" Cast iron

I hereby certify that I made the inspection of Sewer Connection or repairs above described and that all work done under this permit had been properly completed in accordance with existing ordinances and rules and regulations.

Date: 10/8 1962 Signed C J Dunn
Inspector