DECISION DOCUMENT

204 4th Avenue
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224295
June 2022

Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - DECISION DOCUMENT

204 4th Avenue
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224295
June 2022

Statement of Purpose and Basis

This document presents the remedy for the 204 4th Avenue site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the 204 4th Avenue site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. Remedial Design
A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve

energy efficiency as an element of construction.

2. Excavation

Excavation and off-site disposal of contaminant source areas, including:

- any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination;
- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
- soils which exceed the protection of groundwater soil cleanup objectives (PGWSCOs), as defined by 6 NYCRR Part 375-6.8 for those contaminants found in site groundwater above standards; and
- soils that create a nuisance condition, as defined in Commissioner Policy CP-51 Section G.

In addition, all soils in the upper two feet which exceed the restricted residential soil cleanup objectives (SCOs) will be excavated and transported off-site for disposal.

Approximately 6,000 - 7,000 cubic yards of soil will be removed from the site

3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the designed grades at the site.

4. Cover System

A site cover will be required to allow for restricted residential use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable SCOs. Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

5. Groundwater Dewatering & Treatment

The proposed maximum depth of excavation in the source area is 22 feet below grade, which is below the static water table (approximately 16 feet below grade); therefore, dewatering to facilitate the remedial excavation is anticipated. Extracted groundwater will either be containerized for off-site licensed or permitted disposal consistent with applicable local, State, and Federal regulations rules and regulations, or will be treated and discharged to the local sewer system in compliance with all municipal requirements, including permits from NYCDEP and/or pre-treatment if warranted.

6. Vapor Mitigation

Any on-site buildings will be required to have a sub-slab depressurization system (SSDS), or other acceptable measures, to mitigate the migration of vapors into the building from the subsurface.

7. Institutional Controls

The remedy will achieve a Track 4 restricted residential cleanup, at a minimum. Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and
- require compliance with the Department approved Site Management Plan.

8. Site Management Plan

A Site Management Plan is required, which includes the following:

a. An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
   - Institutional Controls: the Environmental Easement discussed in paragraph 7 above.
   - Engineering Controls: the Cover System and Vapor Mitigation System discussed in paragraphs 4 and 6.

   This plan includes, but may not be limited to:
   - an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
   - descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
   - provisions for the management and inspection of the identified engineering controls;
   - maintaining site access controls and Department notification; and,
   - the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
   - monitoring of groundwater to assess the performance and effectiveness of the remedy;
   - a schedule of monitoring and frequency of submittals to the Department;
   - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c. An Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of the active vapor mitigation system(s). The plan includes, but is not limited to:

- procedures for operating and maintaining the system(s); and
- compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

June 13, 2022

Date

Gerard Burke, Director
Remedial Bureau B

DECISION DOCUMENT

204 4th Avenue
Brooklyn, Kings County
Site No. C224295
June 2022

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, where a contaminant is present at levels exceeding the soil cleanup objectives or other health-based or environmental standards, criteria or guidance, based on the reasonably anticipated use of the property.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repositories:

DECInfo Locator - Web Application
https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C224295

Brooklyn Public Library - Pacific Branch
25 4th Avenue at Pacific Street
Brooklyn, NY 11217
Phone: (718) 638-1531

Brooklyn Community Board 6

250 Baltic Street
Brooklyn, NY 11201
Phone: (718) 643-3027

Receive Site Citizen Participation Information by Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location
The site is located at 204 4th Avenue in an urban area in the Gowanus neighborhood of Brooklyn. The site is bounded by Sackett Street to the north, Union Street to the south, 4th Avenue to the east, and commercial properties to the west.

Site Features
The site was a gasoline filling station and was previously improved with a 360 square foot storage building, a cashier's kiosk, and a canopy covering the pump islands. The site is no longer being used as a filling station and is currently vacant, and all on-site buildings have been demolished.

Current Zoning and Land Use
The site is zoned M1-2 for light manufacturing and is surrounded by similarly zoned properties and residential zoned properties to the east.

Past Use of the Site
The site was first developed in approximately 1906 and used for residential/commercial purposes from approximately 1906 to 1961. In the early 1960s, the residential/commercial buildings were demolished, and a gasoline station was constructed in 1965. The site has been used as a gasoline station until October 2019.

Site Geology and Hydrogeology
The site is at an elevation of 25 feet above the National Geodetic Vertical Datum and is generally flat. The stratigraphy of the site, from the surface down, consists of primarily historic urban fill, characterized by loosely compacted fine to coarse sand with fragments of brick and concrete, to depths ranging from 12 to 21 feet below grade across the site. The fill material is underlain by silty light brown sand, and by a layer of grey sandy clay material with organic matter (wood, roots) present in the matrix. Groundwater at the site is approximately 13 to 16 feet below grade and generally flows towards the north/northwest.

A site location map is attached as Figure 1 and a site layout is attached as Figure 2.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) were/was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

One or more of the Applicants under the Brownfield Cleanup Agreement is a Participant. The Participant(s) has/have an obligation to address on-site and off-site contamination. Accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor
- indoor air

- sub-slab vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

1,2,4-trimethylbenzene
1,3,5-trimethylbenzene
toluene
xylene (mixed)
benzo(a)anthracene
benzo(a)pyrene
lead
benzene
ethylbenzene
toluene
mercury

The contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

The following IRMs have been completed at this site based on conditions observed during the RI.

UST Closure

The IRM consisted of removal of known USTs and appurtenances, investigation of anomalies identified in the Phase II, removal of USTs identified during the anomaly investigation, and end-point soil/groundwater samples.

The IRM was documented in a CCR approved 03/03/21.

Groundwater Treatment

The second IRM consisted of a application of a chemical used to enhance degradation of petroleum compounds. PetroFix was mixed with water and applied to injection points across the site.

The IRM will be documented in the form of a Construction Completion Report or Final Engineering Report.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination:
Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), per- and polyfluoroalkyl substances (PFAS), and pesticides. Soil vapor samples were analyzed for VOCs. Based on the investigations done to date, the primary contaminants of concern for the site include VOCs, SVOCs, and metals in soil, and VOCs in groundwater and soil vapor.

Soil - Soil sample results were compared against either the restricted residential soil cleanup objectives (RRSCOs) or the applicable protection of groundwater SCOs (PGSCOs). The highest concentrations of petroleum-related VOCs were detected in the central portion of the site in the vicinity of the underground storage tanks, including 1,2,4-trimethylbenzene at maximum concentration of 2,100 parts per million, or ppm (PGWSCO of 3.6 ppm), 1,3,5-trimethylbenzene at a maximum concentration of 730 ppm (PGWSCO of 8.4 ppm), toluene at a maximum concentration of 11 ppm (PGWSCO of 0.7 ppm), and xylene (total) was found at a maximum concentration of 50 ppm (PGWSCO of 1.6 ppm). The highest concentration of SVOCs were detected in the northern portion of the site at 2-4 ft below grade including benzo(a)anthracene at a maximum concentration of 11 ppm (PGWSCO of 0.002 ppm and RRSCO of 1 ppm), benzo(a)pyrene at a maximum concentration of 10 ppm (RRSCO of 1 ppm). Metals were found

throughout the site including lead at a maximum concentration of 3,170 ppm (RRSCO of 400 ppm). Mercury was found in the central region of the site at concentration of 5.84 ppm (RRSCO of 0.81 ppm. No PFAS were detected above their respective restricted residential guidance values or protection of groundwater guidance values.

Data does not indicate any off-site impacts in soil related to this site.

Groundwater - Petroleum VOCs were detected in the central portion of the site at concentrations exceeding Ambient Water Quality Standards (AWQS) including 1,2,4-trimethylbenzene at a maximum concentration of 1,400 parts per billion, or ppb (AWQS of 5 ppb) and toluene at maximum concentration of 320 ppb (AWQS of 5 ppb). For SVOCs, benzo(a)anthracene was found at a maximum concentration of 460 ppb (AWQS of 0.002 ppb). Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) were detected at maximum concentrations of 164 parts per trillion (ppt) and 48 ppt, respectively, compared to the maximum contaminant level (drinking water standard) of 10 ppt each.

Data does not indicate any off-site impacts in groundwater related to this site.

Soil Vapor, Sub-slab Soil Vapor and Indoor Air - VOCs were detected at elevated concentrations in soil vapor. The VOC, 2,2,4-trimethylpentane, was detected at 509,000 ug/m3 at the northern site boundary. Tetrachloroethylene (PCE) and trichloroethylene (TCE) were both not detected on the site. However, as a result of the 2,2,4-trimethylpentane detection, supplemental soil vapor sampling was conducted off-site across the street to the north of the site and in the building immediately west of the site. The VOC, 2,2,4-trimethylpentane, was not detected in any of the samples collected off-site. PCE was not detected and TCE was detected at 1.76 ug/m3 in soil vapor across Sackett Street. In the building next door to the site, PCE was not detected and TCE was detected at 2.28 ug/m3 in sub-slab soil vapor and 3.57 ug/m3 in indoor air.

Data does not indicate any off-site impacts in soil vapor related to this site.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

The site is completely fenced which restricts public access. However, persons who enter the site could contact contaminants in the soil by walking on the site, digging, or otherwise disturbing the soil. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in soil vapor (air spaces within the soil), may move into structures and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of structures, is referred to as soil vapor intrusion. The site is vacant so inhalation of site contaminants in indoor air via vapor intrusion is not a current concern. However, the potential exists for inhalation of site contaminants due to soil vapor intrusion for any future on-site development. Environmental sampling indicates that soil vapor intrusion in not a concern for off-site structures.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Track 4: Restricted use with site-specific soil cleanup objectives remedy.

The selected remedy is referred to as the Excavation, Cover System, Dewatering and Vapor Mitigation remedy.

The elements of the selected remedy, as shown in Figures 3 through 6, are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
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- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

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- any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination;
- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
- soils which exceed the protection of groundwater soil cleanup objectives (PGWSCOs), as defined by 6 NYCRR Part 375-6.8 for those contaminants found in site groundwater above standards; and
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In addition, all soils in the upper two feet which exceed the restricted residential soil cleanup objectives (SCOs) will be excavated and transported off-site for disposal.

Approximately 6,000 - 7,000 cubic yards of soil will be removed from the site

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A site cover will be required to allow for restricted residential use of the site in areas where the

upper two feet of exposed surface soil will exceed the applicable SCOs. Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

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The proposed maximum depth of excavation in the source area is 22 feet below grade, which is below the static water table (approximately 16 feet below grade); therefore, dewatering to facilitate the remedial excavation is anticipated. Extracted groundwater will either be containerized for off-site licensed or permitted disposal consistent with applicable local, State, and Federal regulations rules and regulations, or will be treated and discharged to the local sewer system in compliance with all municipal requirements, including permits from NYCDEP and/or pre-treatment if warranted.

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Any on-site buildings will be required to have a sub-slab depressurization system (SSDS), or other acceptable measures, to mitigate the migration of vapors into the building from the subsurface.

7. Institutional Controls

The remedy will achieve a Track 4 restricted residential cleanup, at a minimum. Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and
- require compliance with the Department approved Site Management Plan.

8. Site Management Plan

A Site Management Plan is required, which includes the following:

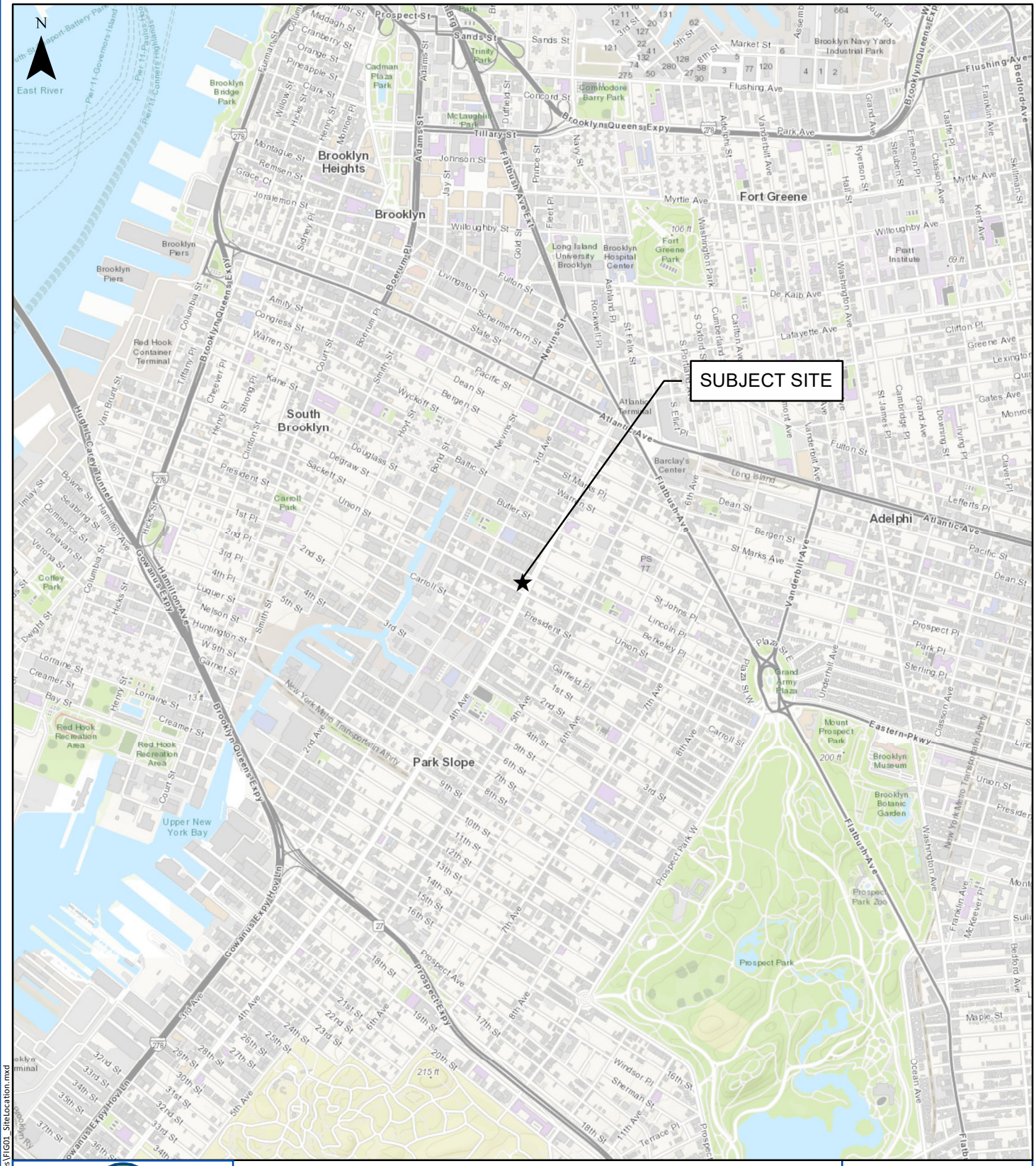
a. An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
   - Institutional Controls: the Environmental Easement discussed in paragraph 7 above.
   - Engineering Controls: the Cover System and Vapor Mitigation System discussed in paragraphs 4 and 6.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and,
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
    - monitoring of groundwater to assess the performance and effectiveness of the remedy;
    - a schedule of monitoring and frequency of submittals to the Department;
    - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c. An Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of the active vapor mitigation system(s). The plan includes, but is not limited to:
    - procedures for operating and maintaining the system(s); and
    - compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting.



PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting Engineer & Hydrogeologist, PC
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

Document Path: W:\Projects\A-D\AHI\1903\mapfiles\FIG01_SiteLocation.mxd

Vicinity Map

204 4th Avenue
Brooklyn, NY

Miles
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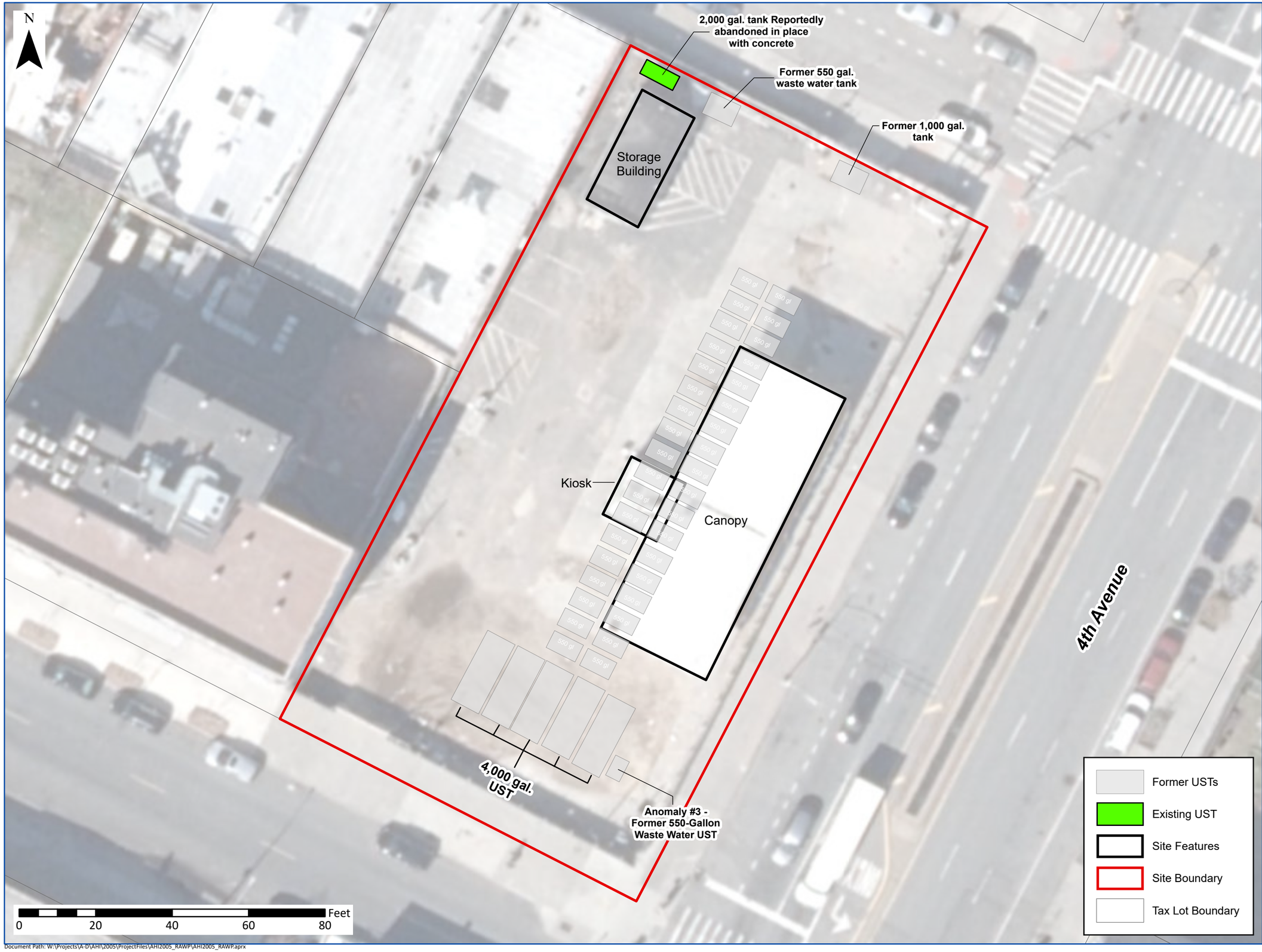
Project:	AHI2005
Date:	1/22/2020
Designed by:	RM
Drawn by:	WY
Approved by:	RM
Figure No:	1



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DRAWING PREPARED FOR:

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

Project:	AHI2005	Designed by:	RM
Date:	12/7/2021	Drawn by:	PH
Scale:	AS SHOWN	Approved by:	RM

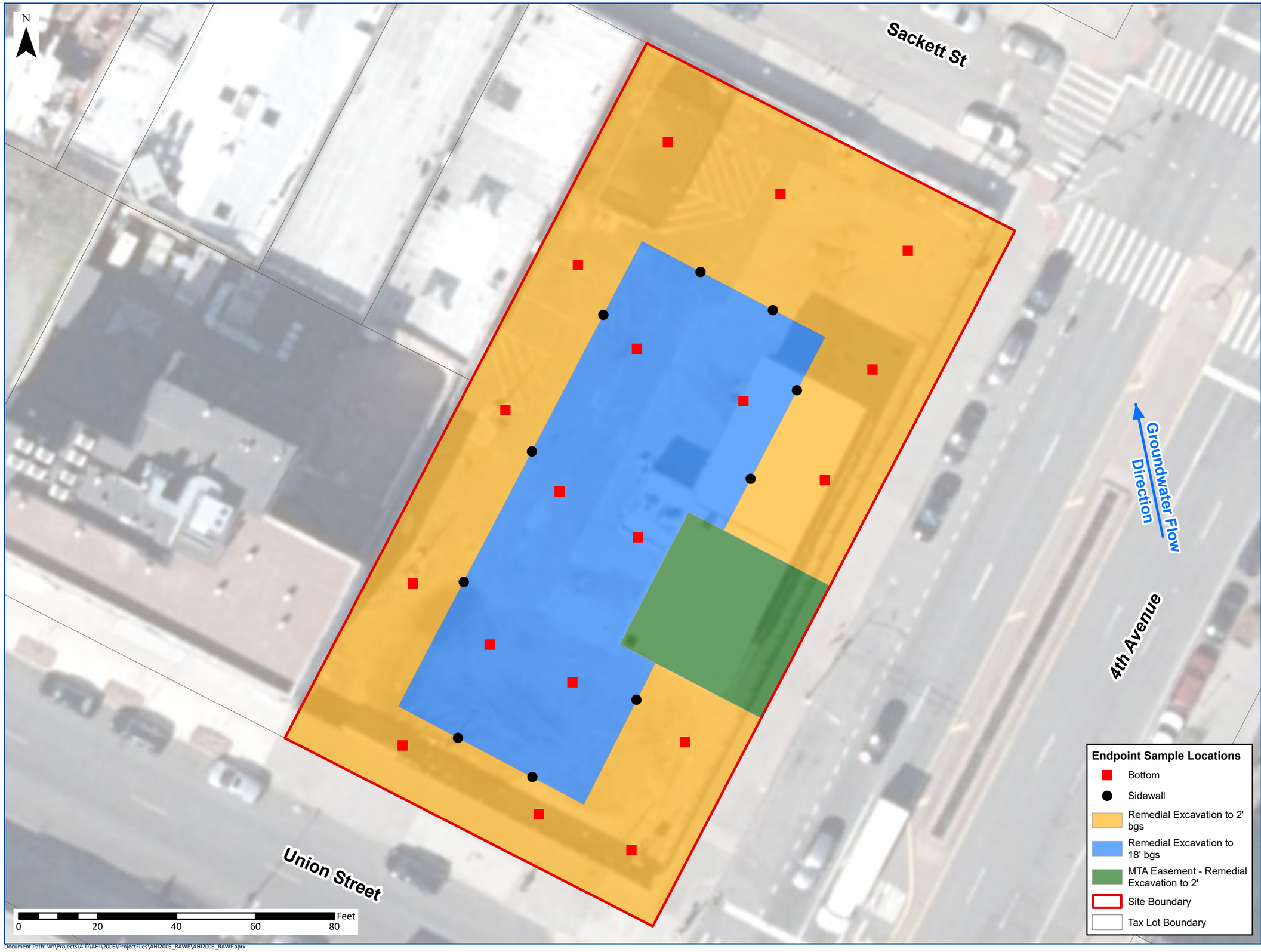
SITE PLAN

204 4th Avenue
Brooklyn, NY

FIGURE NO:

2

Document Path: W:\Projects\A-D\AHI\2005\ProjectFiles\AHI2005_RAWP\AHI2005_RAWP.aprx



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DRAWING PREPARED FOR:

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

Project:	AHI2005	Designed by:	RM
Date:	2/23/2022	Drawn by:	PH
Scale:	AS SHOWN	Approved by:	RM

Alternative 2 - Excavation Areas & Endpoint Sample Locations

204 4th Avenue
Brooklyn, NY

FIGURE NO:

3

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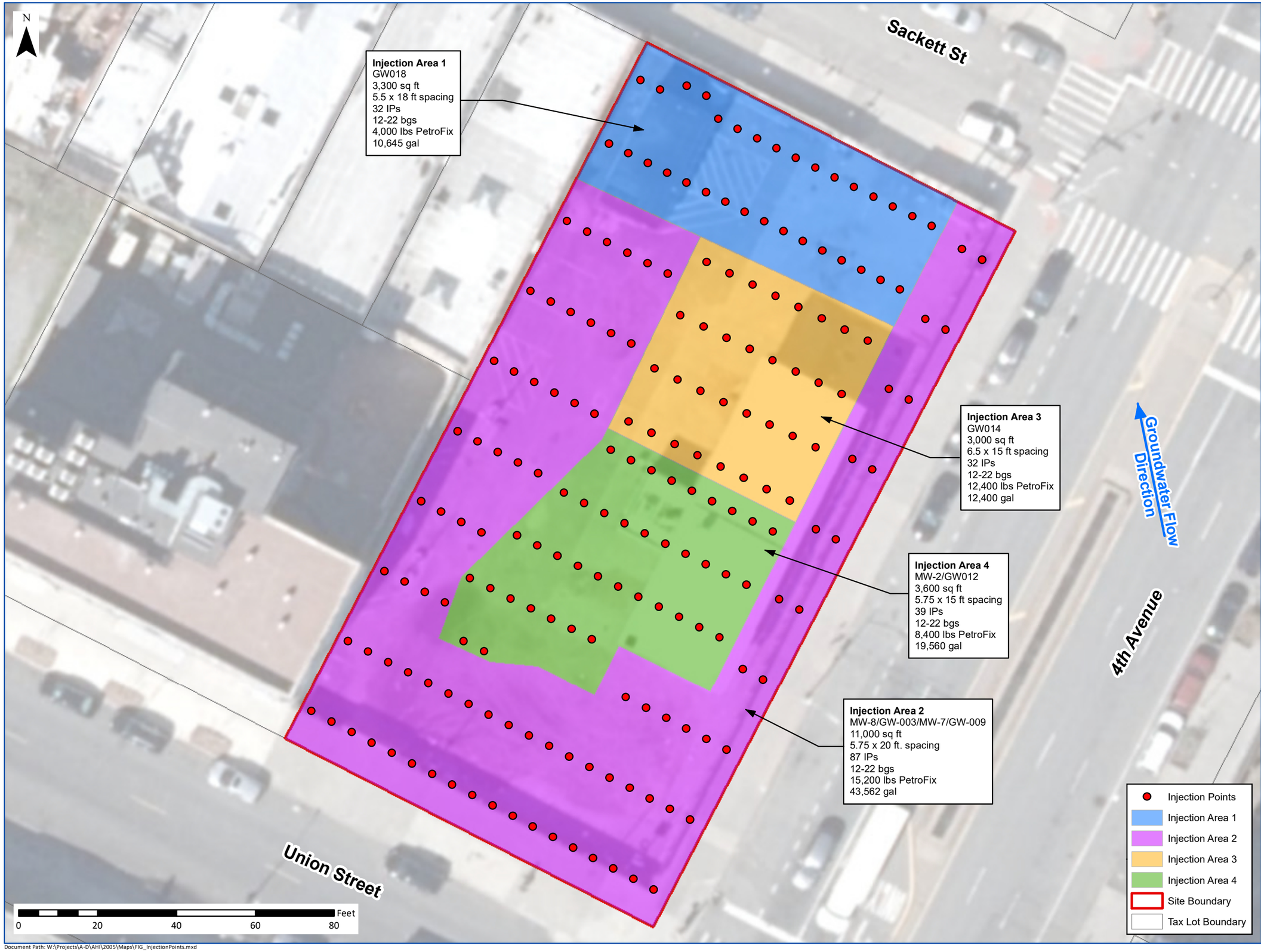

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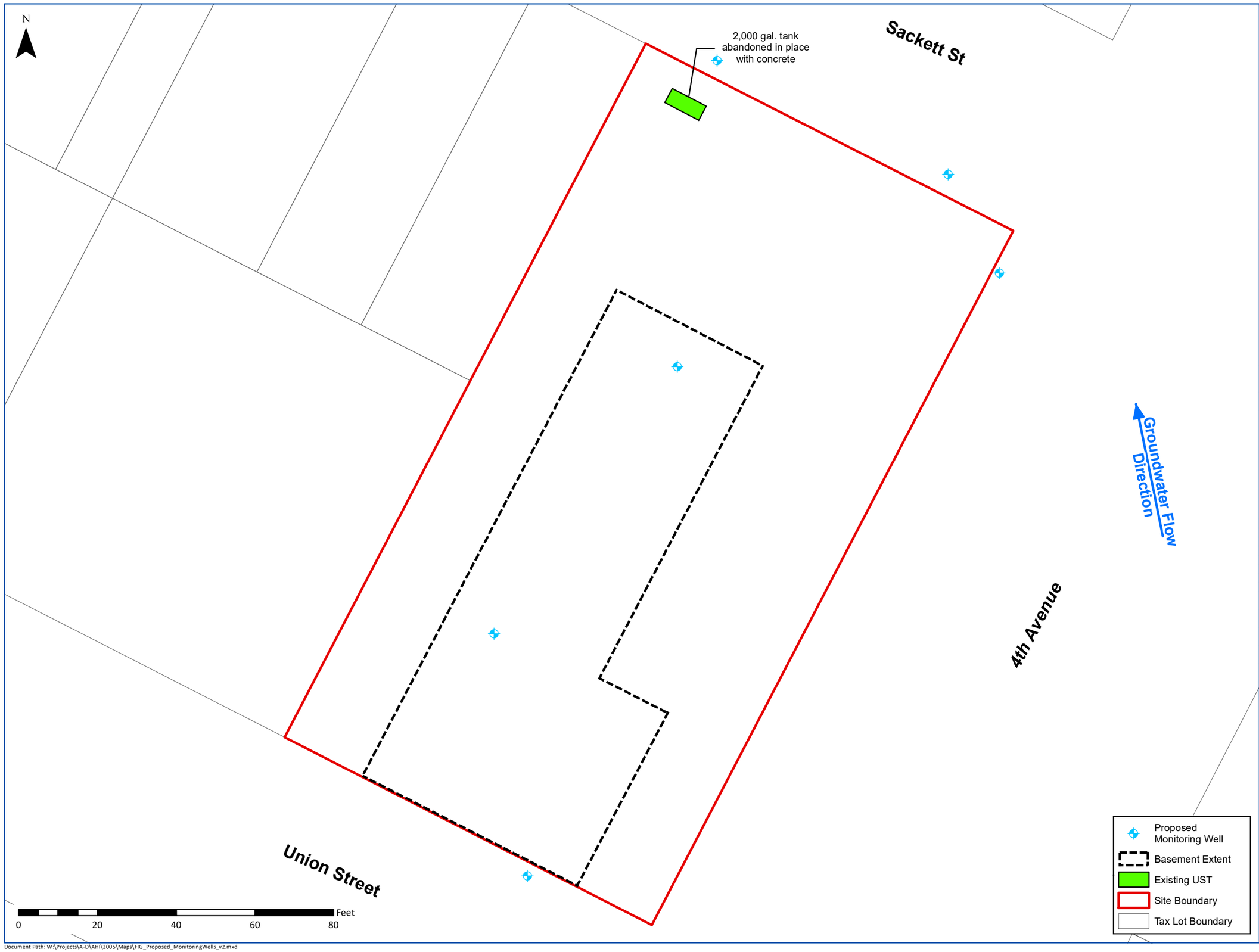
Project:	AHI2005	Designed by:	RM
Date:	12/7/2021	Drawn by:	PH
Scale:	AS SHOWN	Approved by:	RM

Injection Points

204 4th Avenue
Brooklyn, NY

FIGURE NO:

4



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Proposed Monitoring Wells

204 4th Avenue
Brooklyn, NY

FIGURE NO:

5

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SSDS & Vapor Barrier Locations

204 4th Avenue
Brooklyn, NY

FIGURE NO:

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