

DECISION DOCUMENT

Former BP Gasoline Service Station Site
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224424
May 2026



**Department of
Environmental
Conservation**

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

DECLARATION STATEMENT - DECISION DOCUMENT

Former BP Gasoline Service Station Site
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224424
May 2026

Statement of Purpose and Basis

This document presents the remedy for the Former BP Gasoline Service Station 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 (NYSDEC) for the Former BP Gasoline Service Station Site and the public's input to the proposed remedy presented by NYSDEC.

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;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques, any future on-site buildings which are part of the remedy should be constructed, to the extent feasible,

to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) in order to improve energy efficiency as an element of construction.

As part of the remedial design program, to evaluate the remedy with respect to green and sustainable remediation principles, an environmental footprint analysis will be completed. The environmental footprint analysis will be completed using an accepted environmental footprint analysis calculator such as SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA), SiteWise™ (available in the Sustainable Remediation Forum [SURF] library) or similar NYSDEC accepted tool. Water consumption, greenhouse gas emissions, renewable and non-renewable energy use, waste reduction and material use will be estimated, and goals for the project related to these green and sustainable remediation metrics, as well as for minimizing community impacts, protecting habitats and natural and cultural resources, and promoting environmental justice, will be incorporated into the remedial design program, as appropriate. The project design specifications will include detailed requirements to achieve the green and sustainable remediation goals. Further, progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the Final Engineering Report (FER), including a comparison to the goals established during the remedial design program.

Additionally, the remedial design program will include a climate change vulnerability assessment, to evaluate the impact of climate change on the project site and the proposed remedy. Potential vulnerabilities associated with extreme weather events (e.g., hurricanes, lightning, heat stress and drought), flooding, and sea level rise will be identified, and the remedial design program will incorporate measures to minimize the impact of climate change on potential identified vulnerabilities.

2. Excavation

The existing on-site building will be demolished and materials which cannot be beneficially reused on site will be taken off-site for proper disposal in order to implement the remedy.

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

- soils that create a nuisance condition, as defined in Commissioner Policy CP-51 Section G; and
- any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

Excavation and off-site disposal of all on-site soils which exceed restricted-residential SCOs, as defined by 6 NYCRR Part 375-6.8 in the upper 10 feet throughout the site and up to 15 feet in the northwest and central portions of the site.

Approximately 3,990 cubic yards of contaminated soil will be removed from the site. Collection and analysis of confirmation samples at the 10-foot remedial excavation depth will be used to verify that SCOs for the site have been achieved. If confirmation sampling indicates that SCOs were not achieved at the stated remedial depth, the Applicant must notify NYSDEC, submit the sample results and, in consultation with NYSDEC, determine if further remedial excavation is necessary. Further excavation for development will proceed after confirmation samples demonstrate that SCOs for the site have been achieved. In addition, documentation samples will

be collected from the 15-foot excavation depth in the northwest and central portion of the site.

To ensure proper handling and disposal of excavated material, waste characterization sampling will be completed for all identified contaminated site material. Waste characterization sampling will be performed exclusively for the purposes of off-site disposal in a manner suitable to receiving facilities and in conformance with applicable federal, state and local laws, rules, and regulations and facility-specific permits.

3. Backfill

Backfill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to establish the designed grades at the site.

4. Soil Vapor Extraction

Soil vapor extraction (SVE) will be implemented to remove volatile organic compound (VOC) vapors from the subsurface and prevent off-site migration of contaminated vapor. VOCs will be physically removed from the subsurface by applying a vacuum to wells that have been installed into the vadose zone (the area below the ground but above the water table). The vacuum draws air through the soil matrix which carries the VOC vapors from the soil to the SVE well. The air extracted from the SVE wells is then treated as necessary prior to being discharged to the atmosphere.

Prior to the full implementation of this technology, laboratory and on-site pilot scale studies will be conducted to more clearly define design parameters. SVE wells will be installed into the vadose zone and screened from 19 feet below the ground surface to a depth of approximately 24 feet. The air containing VOCs extracted from the SVE wells will be treated by passing the air stream through activated carbon which removes the VOCs from the air prior to it being discharged to the atmosphere. Upon system startup, SVE wells will be tested to confirm vacuum influence and effectiveness of the system. If there are no SVE wells located near the site boundary of concern, vacuum monitoring points will be installed near the site boundary to evaluate SVE effectiveness at preventing off-site migration of contaminated vapors.

5. 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.

Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan (SMP), as described below, will be required. The remedy will achieve a Track 2 restricted residential cleanup at a minimum.

6. Institutional Control

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 NYSDEC 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 NYCDOHMH; and
- require compliance with the NYSDEC approved Site Management Plan.

7. 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 Remedy Element 6 above.
 - Engineering Controls: The SVE System discussed in Remedy Element 4 and the Vapor Mitigation System discussed in Remedy Element 5 above.

This plan includes, but may not be limited to:

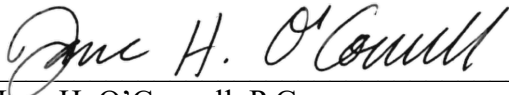
- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
 - descriptions of the provisions of the environmental easement including any land use and/or groundwater use restrictions;
 - provisions for the management and inspection of the identified engineering controls;
 - maintaining site access controls and NYSDEC 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 soil vapor and indoor air to assess the performance and effectiveness of the remedy;
 - a schedule of monitoring and frequency of submittals to the NYSDEC; and
 - 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, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
 - procedures for operating and maintaining the remedy;
 - compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
 - maintaining site access controls and NYSDEC notification; and
 - providing the NYSDEC access to the site and O&M records.

Declaration

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

May 18, 2026

Date



Jane H. O'Connell, P.G.
Remedial Remediation Engineer, Region 2

DECISION DOCUMENT

Former BP Gasoline Service Station Site
Brooklyn, Kings County
Site No. C224424
May 2026

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (NYSDEC), 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.

NYSDEC 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

NYSDEC seeks input from the community on all remedies. A public comment period was held during which the public was encouraged to submit comments on the proposed remedy. All comments on the remedy received during the comment period were considered by NYSDEC 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=C224424>

Brooklyn Community Board 4
1420 Bushwick Ave Ste 270
Brooklyn, NY 11207
Phone: (718) 628-8400

Brooklyn Public Library - Bushwick Branch
340 Bushwick Ave
Brooklyn, NY 11206
Phone: (718) 602-1348

Receive Site Citizen Participation Information By Email

Please note that NYSDEC'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

Site Location:

The 0.24-acre Former BP Gasoline Service Station site is located at 860 Flushing Avenue, Brooklyn, NY in an urban area. The property is identified as tax block 3138, lot 32 on the New York City tax map. The site is bounded to the north by Flushing Avenue followed by a multi-story residential building that is part of the NYCHA Bushwick Houses complex; to the east by Bushwick Avenue followed by commercial and residential buildings with ground floor commercial use; to the south by a six-story residential building with ground floor commercial use; and to the west by a two-story deli.

Site Features:

The site is an irregularly shaped lot formerly occupied by BP gasoline service station and is currently vacant with construction fence surrounding the site. The former convenience store building and the former pump island canopy remain.

Current Zoning and Land Use:

The site is located in a residential zoning district (R6A) with a commercial overlay (C2-4). The site has been assigned an E-Designation for hazardous materials and noise as part of the Rheingold Rezoning. The site is located in a Disadvantaged Community. The surrounding parcels are currently used for a combination of residential, commercial, and outdoor space. The site is located approximately 350 feet from the nearest school. There are no daycare centers located within 500 feet of the site.

Past Use of the Site:

The site was used as a gasoline filling station with auto service from at least 1979 until 2025. In addition to petroleum retail operations, prior uses include auto washing/inspection/repair and chair manufacturing with paint spraying.

Site Geology and Hydrogeology:

The site is relatively flat and the surrounding area slopes downward towards the northwest. The

elevation of the site is approximately 34-feet above mean sea level. Site soils consist of urban fill in the top 11 to 22 feet, underlain by sand and varying amounts of clay, silt, gravel, and cobbles. Bedrock was not encountered during the investigation. Groundwater is present at approximately 27 feet below ground surface (ft bgs) and flows west towards the East River, which is located approximately 1.8 miles west of the site.

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

SECTION 4: LAND USE AND PHYSICAL SETTING

NYSDEC 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, an alternative that restricts 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) 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

The Applicant under the Brownfield Cleanup Agreement is a Volunteer. The Applicant does not have an obligation to address off-site contamination. However, NYSDEC, in consultation with NYSDOH, has determined that this site does not pose a significant threat to public health or the environment; 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

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. NYSDEC 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 contaminants of concern identified at this site are:

benzo(a)anthracene	1,3,5-trimethylbenzene
fluoranthene	xylene (total)
pyrene	benzene
barium	ethylbenzene
copper	tetrachloroethene (PCE)
lead	cyclohexane
mercury	2,2,4-trimethylpentane

The contaminants 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.

There were no IRMs performed at this site during the RI.

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.

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 upon investigations conducted to date, the primary contaminants of concern are SVOCs and metals in soil; and VOCs in soil vapor.

Soil - Sample results were compared against the restricted residential soil cleanup objectives (RRSCO). SVOCs were detected including maximum concentrations of benzo(a)anthracene at 53.8 parts per million, or ppm (RRSCO of 1.4 ppm); fluoranthene at 141 ppm (RRSCO of 100 ppm); and pyrene at 114 ppm (RRSCO of 100 ppm). Metals were detected including maximum concentration of barium at 3,160 ppm (RRSCO of 410 ppm), copper at 305 ppm (RRSCO of 280 ppm), lead at 3,150 ppm (RRSCO of 400 ppm), and mercury at 6.07 ppm (RRSCO of 0.30 ppm). Lead was further analyzed using Toxic Characteristic Leaching Procedure (TCLP) and detected at 5.54 mg/L which exceeded the USEPA Allowable Limit of 5 mg/L for hazardous lead. PFAS, VOCs, pesticides, and PCBs were either not detected or were detected at concentrations below RRSCOs.

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

Groundwater - Groundwater sample results were compared to NYSDEC Ambient Water Quality Standards and Guidance Values (AWQSGV). VOCs were detected including maximum concentrations of benzene at 3.4 parts per billion, or ppb (AWQSGV of 1 ppb), ethylbenzene at 19 ppb (AWQSGV of 5 ppb), xylene (total) at 39 ppb (AWQSGV of 5 ppb), chloroform at 14 ppb (AWQSGV of 7 ppb), 1,3,5-trimethylbenzene at 13 ppb (AWQSGV of 5 ppb), and naphthalene at 21 ppb (AWQSGV of 10 ppb). SVOCs were detected including maximum concentrations of benzo(a)anthracene at 0.57 ppb (AWQSGV of 0.002 ppb), benzo(b)fluoranthene at 0.7 ppb (AWQSGV is 0.002 ppb), and indeno(1,2,3-cd)pyrene at 0.48 ppb (AWQSGV is 0.002 ppb). Perfluorooctane sulfonic acid (PFOS) was detected at a maximum concentration of 31.9 parts per trillion, or ppt (AWQSGV of 2.7 ppt) and perfluorooctanoic acid (PFOA) was detected at a maximum concentration of 94.7 ppt (AWQSGV of 6.7 ppt). Metals detected in unfiltered groundwater samples include maximum concentrations of chromium at 201.2 ppb (AWQSGV of 50 ppb), nickel at 102.3 ppb (AWQSGV of 100 ppb), and lead at 94.14 ppb (AWQSGV of 100 ppb). However, in filtered groundwater samples, which are more representative of dissolved

metals concentrations, only naturally occurring elements such as iron, sodium, and manganese were detected. Pesticides and PCBs were not detected above the AWQSGV in any groundwater samples.

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

Soil Vapor - Both petroleum and chlorinated solvent VOCs were identified in soil vapor samples, with the highest concentrations of VOCs in the northern part of the site. Detections of petroleum-related VOCs include maximum concentrations of total xylenes at 6,400 micrograms per cubic meter (ug/m³), cyclohexane at 15,000 ug/m³, 2,2,4-Trimethylpentane at 34,000 ug/m³, and 1,3,5-Trimethylbenzene at 4,000 ug/m³. Detections of chlorinated VOCs include maximum concentrations of tetrachloroethylene (PCE) at 86 ug/m³.

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

Since the site is fenced and covered by asphalt or concrete, people will not come into contact with site-related soil and groundwater contamination unless they dig below the surface. People are not drinking the contaminated groundwater because the area is serviced by a public water supply that is not affected by this condition. Volatile organic compounds in soil vapor (air spaces within the soil) may move into buildings 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 buildings, 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. In addition, environmental sampling indicates soil vapor intrusion from site contaminants is not a concern for off-site buildings.

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 (RAOs) 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.

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 2: Restricted Residential use with generic soil cleanup objectives remedy.

The selected remedy is referred to as the Excavation, SVE, and SSDS remedy.

The elements of the selected remedy, as shown in Figure 3 through Figure 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;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;

- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques, any future on-site buildings which are part of the remedy should be constructed, to the extent feasible, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) in order to improve energy efficiency as an element of construction.

As part of the remedial design program, to evaluate the remedy with respect to green and sustainable remediation principles, an environmental footprint analysis will be completed. The environmental footprint analysis will be completed using an accepted environmental footprint analysis calculator such as SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA), SiteWise™ (available in the Sustainable Remediation Forum [SURF] library) or similar NYSDEC accepted tool. Water consumption, greenhouse gas emissions, renewable and non-renewable energy use, waste reduction and material use will be estimated, and goals for the project related to these green and sustainable remediation metrics, as well as for minimizing community impacts, protecting habitats and natural and cultural resources, and promoting environmental justice, will be incorporated into the remedial design program, as appropriate. The project design specifications will include detailed requirements to achieve the green and sustainable remediation goals. Further, progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the Final Engineering Report (FER), including a comparison to the goals established during the remedial design program.

Additionally, the remedial design program will include a climate change vulnerability assessment, to evaluate the impact of climate change on the project site and the proposed remedy. Potential vulnerabilities associated with extreme weather events (e.g., hurricanes, lightning, heat stress and drought), flooding, and sea level rise will be identified, and the remedial design program will incorporate measures to minimize the impact of climate change on potential identified vulnerabilities.

2. Excavation

The existing on-site building will be demolished and materials which cannot be beneficially reused on site will be taken off-site for proper disposal in order to implement the remedy.

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

- soils that create a nuisance condition, as defined in Commissioner Policy CP-51 Section G; and
- any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

Excavation and off-site disposal of all on-site soils which exceed restricted-residential SCOs, as defined by 6 NYCRR Part 375-6.8 in the upper 10 feet throughout the site and up to 15 feet in the northwest and central portions of the site.

Approximately 3,990 cubic yards of contaminated soil will be removed from the site. Collection and analysis of confirmation samples at the 10-foot remedial excavation depth will be used to verify that SCOs for the site have been achieved. If confirmation sampling indicates that SCOs

were not achieved at the stated remedial depth, the Applicant must notify NYSDEC, submit the sample results and, in consultation with NYSDEC, determine if further remedial excavation is necessary. Further excavation for development will proceed after confirmation samples demonstrate that SCOs for the site have been achieved. In addition, documentation samples will be collected from the 15-foot excavation depth in the northwest and central portion of the site.

To ensure proper handling and disposal of excavated material, waste characterization sampling will be completed for all identified contaminated site material. Waste characterization sampling will be performed exclusively for the purposes of off-site disposal in a manner suitable to receiving facilities and in conformance with applicable federal, state and local laws, rules, and regulations and facility-specific permits.

3. Backfill

Backfill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to establish the designed grades at the site.

4. Soil Vapor Extraction

Soil vapor extraction (SVE) will be implemented to remove volatile organic compound (VOC) vapors from the subsurface and prevent off-site migration of contaminated vapor. VOCs will be physically removed from the subsurface by applying a vacuum to wells that have been installed into the vadose zone (the area below the ground but above the water table). The vacuum draws air through the soil matrix which carries the VOC vapors from the soil to the SVE well. The air extracted from the SVE wells is then treated as necessary prior to being discharged to the atmosphere.

Prior to the full implementation of this technology, laboratory and on-site pilot scale studies will be conducted to more clearly define design parameters. SVE wells will be installed into the vadose zone and screened from 19 feet below the ground surface to a depth of approximately 24 feet. The air containing VOCs extracted from the SVE wells will be treated by passing the air stream through activated carbon which removes the VOCs from the air prior to it being discharged to the atmosphere. Upon system startup, SVE wells will be tested to confirm vacuum influence and effectiveness of the system. If there are no SVE wells located near the site boundary of concern, vacuum monitoring points will be installed near the site boundary to evaluate SVE effectiveness at preventing off-site migration of contaminated vapors.

5. 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.

Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan (SMP), as described below, will be required. The remedy will achieve a Track 2 restricted residential cleanup at a minimum.

6. Institutional Control

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 NYSDEC 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 NYCDOHMH; and
- require compliance with the NYSDEC approved Site Management Plan.

7. Site Management Plan

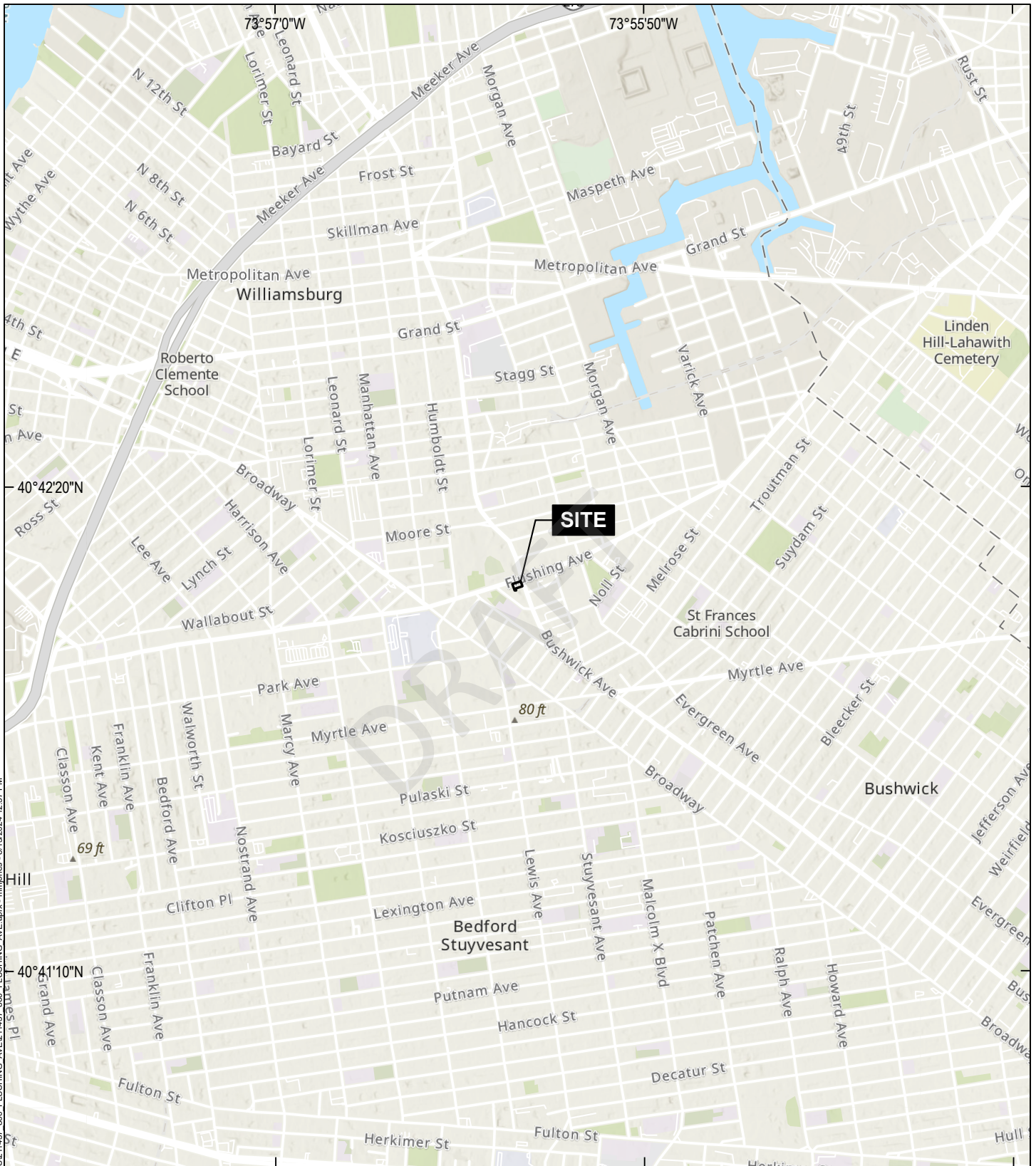
A Site Management Plan is required, which includes the following:

- 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 Remedy Element 6 above.
 - Engineering Controls: The SVE System discussed in Remedy Element 4 and the Vapor Mitigation System discussed in Remedy Element 5 above.

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/or groundwater use restrictions;
 - provisions for the management and inspection of the identified engineering controls;
 - maintaining site access controls and NYSDEC 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 soil vapor and indoor air to assess the performance and effectiveness of the remedy;
 - a schedule of monitoring and frequency of submittals to the NYSDEC; and
 - 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, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
 - procedures for operating and maintaining the remedy;
 - compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
 - maintaining site access controls and NYSDEC notification; and

- providing the NYSDEC access to the site and O&M records.



GIS: \\haleyaldrich.com\share\CF\Projects\0211437\GIS\211437_860_FLUSHING_AVE\proj.mxd - 8/13/2024 12:37 PM



MAP SOURCE: ESRI
 SITE COORDINATES: 40°42'06"N, 73°56'14"W

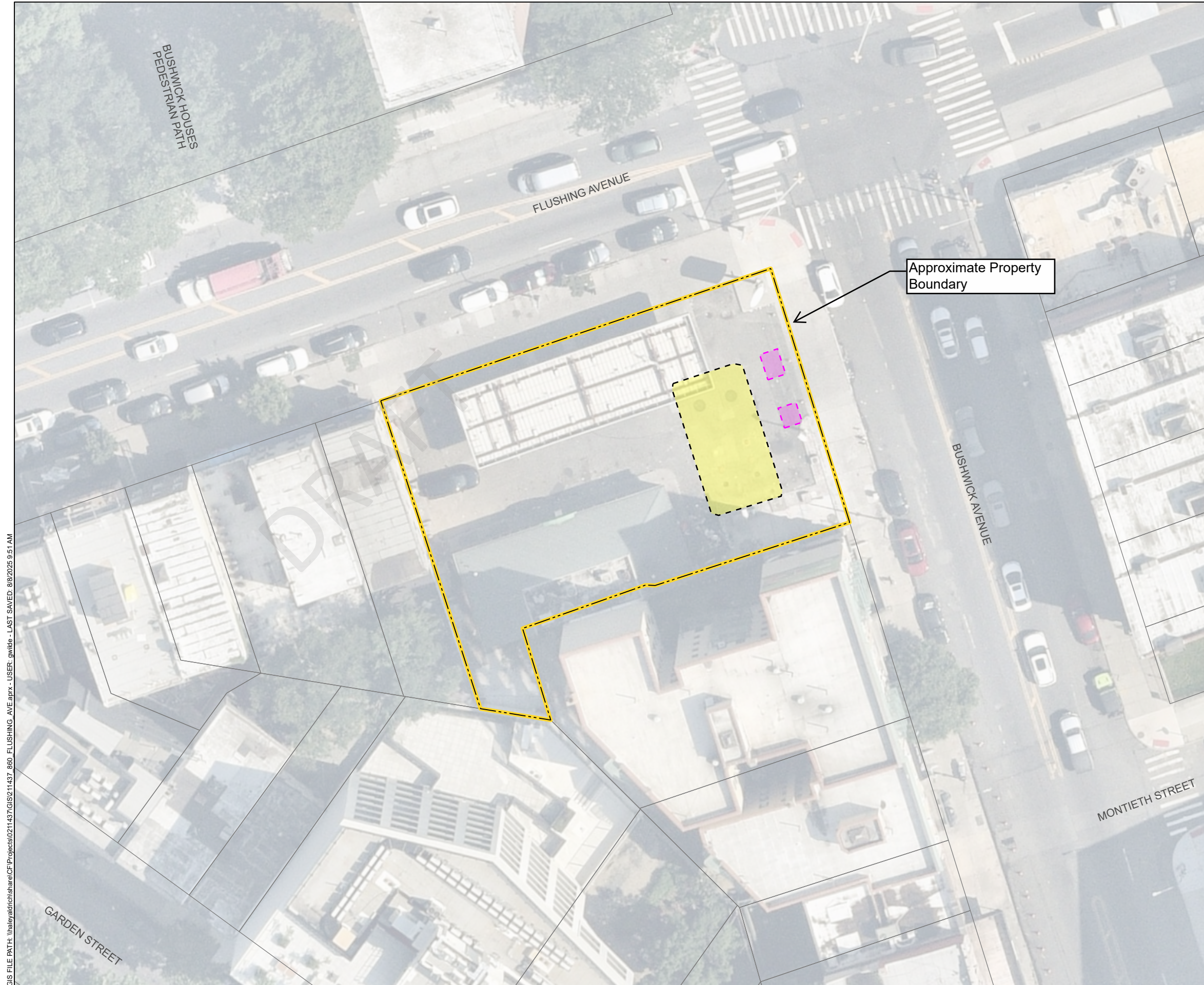
**HALEY
 ALDRICH**

860 FLUSHING AVENUE
 BROOKLYN, NEW YORK

SITE LOCATION

APPROXIMATE SCALE: 1 IN = 2000 FT
 SEPTEMBER 2025

FIGURE 1

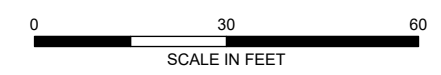


LEGEND

- SITE BOUNDARY
- PARCEL BOUNDARY
- LOCATION OF TWO EXISTING 12,000-GALLON DOUBLE-WALLED FIBERGLASS UNDERGROUND STORAGE TANKS - ASSUMED LOCATION OF THREE FORMER 4,000-GALLON STEEL UNDERGROUND STORAGE TANKS
- SUBSURFACE ANOMALIES DETECTED DURING GROUND-PENETRATING RADAR SURVEY ON JULY 21, 2025

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. PARCEL DATA SOURCE: NEW YORK CITY DEPARTMENT OF CITY PLANNING, INFORMATION TECHNOLOGY DIVISION
3. AERIAL IMAGERY SOURCE: NEARMAP, JULY 3, 2025



HALEY ALDRICH 860 FLUSHING AVENUE
BROOKLYN, NEW YORK

SITE MAP

DECEMBER 2025

FIGURE 2

GIS FILE PATH: \\haleyaldrich\share\CF\Projects\0211437\GIS\211437_860_FLUSHING_AVE.aprx - USER: gwhite - LAST SAVED: 8/20/2025 9:51 AM

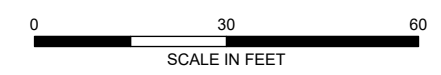


LEGEND

- SITE BOUNDARY
- PARCEL BOUNDARY
- 10 FT EXCAVATION
- 15 FT EXCAVATION

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. PARCEL DATA SOURCE: NEW YORK CITY DEPARTMENT OF CITY PLANNING, INFORMATION TECHNOLOGY DIVISION
3. AERIAL IMAGERY SOURCE: NEARMAP, JULY 3, 2025



HALEY ALDRICH 860 FLUSHING AVENUE
BROOKLYN, NEW YORK

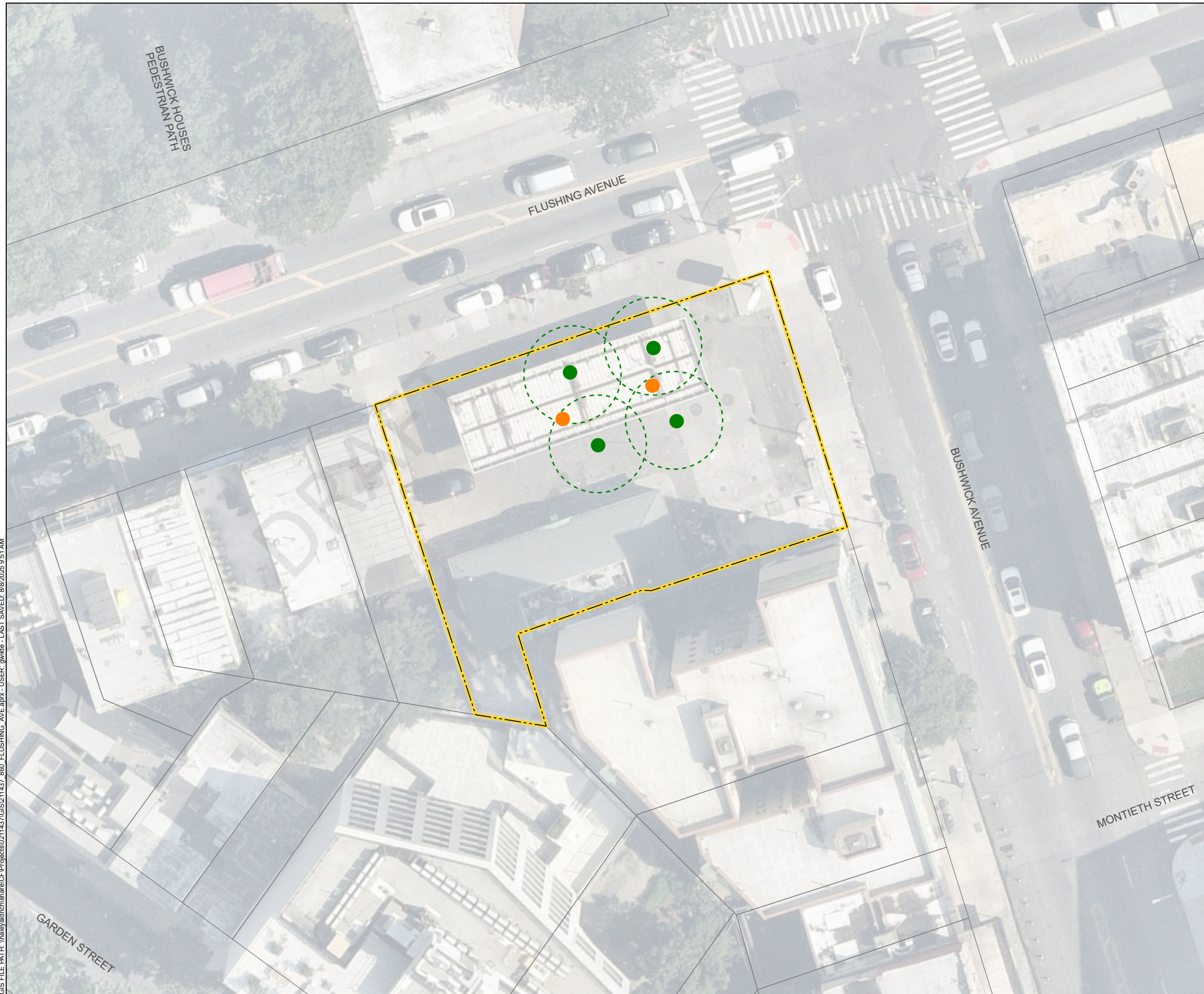
EXCAVATION PLAN

DECEMBER 2025






FIGURE 3

GIS FILE PATH: \\haleyaldrich\share\CF\Projects\0211437\GIS\211437_860_FLUSHING_AVE.aprx - USER: gwhite - LAST SAVED: 8/29/2025 9:51 AM

GIS FILE PATH: \\haleyaldrich\share\CF\Projects\0211437\GIS\211437_860_FLUSHING_AVE.aprx - USER: gwhite - LAST SAVED: 8/29/2025 9:51 AM

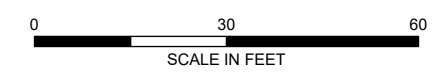


LEGEND

-  SITE BOUNDARY
-  PARCEL BOUNDARY
-  SVE WELL SCREENED FROM 14 TO 25 FT BGS
-  ASSUMED 15 FEET RADIUS OF INFLUENCE
-  SVE MONITORING POINT

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. PARCEL DATA SOURCE: NEW YORK CITY DEPARTMENT OF CITY PLANNING, INFORMATION TECHNOLOGY DIVISION
3. AERIAL IMAGERY SOURCE: NEARMAP, JULY 3, 2025
4. FT BGS - FEET BELOW GROUND SURFACE

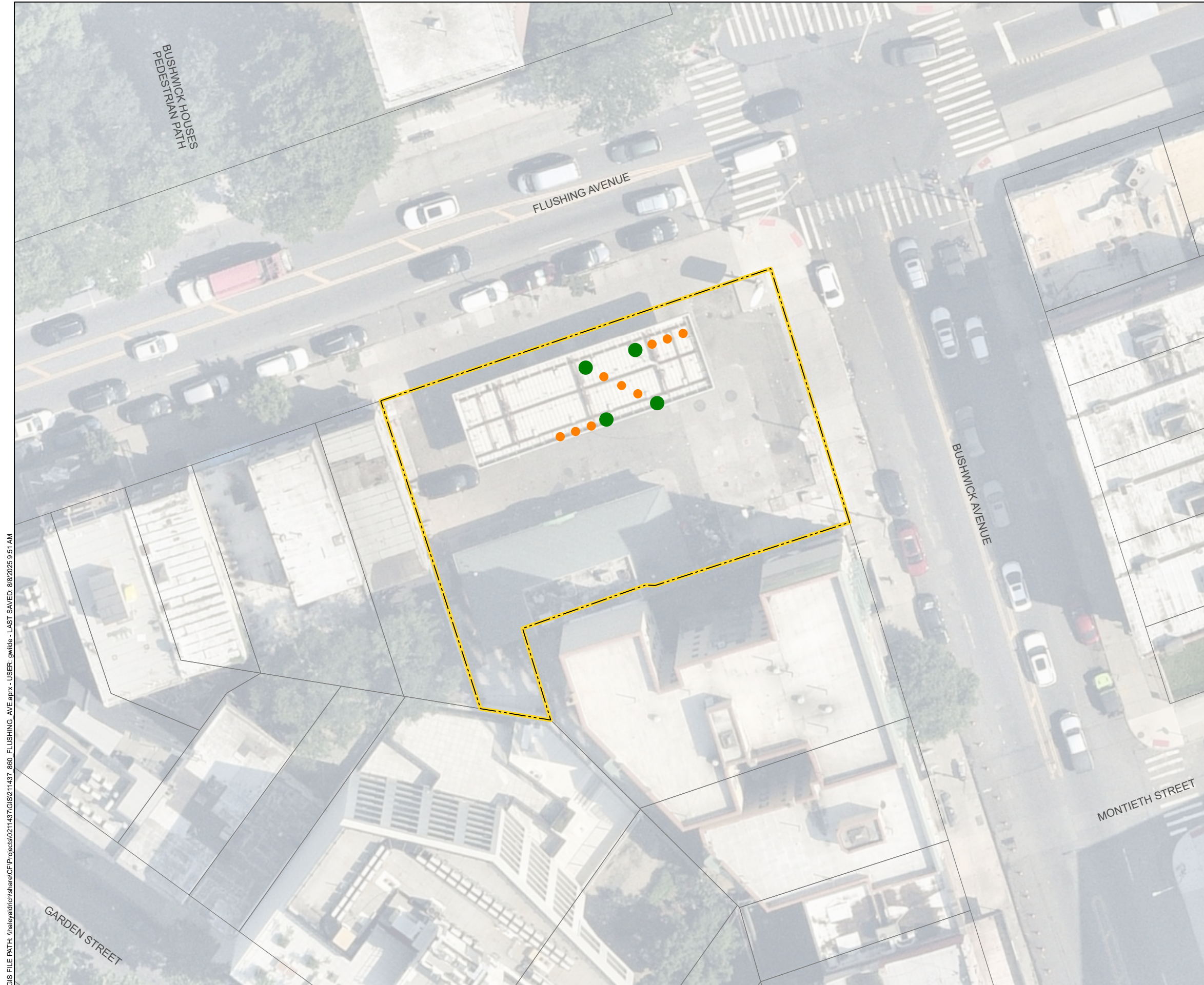


HALEY ALDRICH 860 FLUSHING AVENUE
BROOKLYN, NEW YORK

**CONCEPTUAL SOIL VAPOR
EXTRACTION SYSTEM LAYOUT**



DECEMBER

FIGURE 4



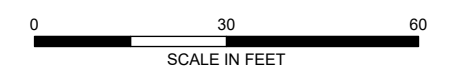
LEGEND

-  SITE BOUNDARY
-  PARCEL BOUNDARY

-  SVE PILOT TEST WELL SCREENED FROM 19 TO 24 FT BGS
-  SVE PILOT TEST MONITORING POINT (LOCATIONS MAY BE ADJUSTED BASED ON SITE CONDITIONS)

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. PARCEL DATA SOURCE: NEW YORK CITY DEPARTMENT OF CITY PLANNING, INFORMATION TECHNOLOGY DIVISION
3. AERIAL IMAGERY SOURCE: NEARMAP, JULY 3, 2025
4. FT BGS - FEET BELOW GROUND SURFACE
5. SVE - SOIL VAPOR EXTRACTION



860 FLUSHING AVENUE
BROOKLYN, NEW YORK

SVE PILOT TEST LOCATION PLAN

APRIL 2026

FIGURE 4A

GIS FILE PATH: \\haleyaldrich\share\CFP\Projects\0211437\GIS\211437_860_FLUSHING_AVE.aprx - USER: gwhite - LAST SAVED: 8/29/2025 9:51 AM

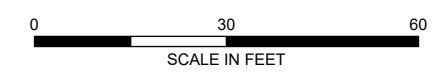


LEGEND

- SITE BOUNDARY
- PARCEL BOUNDARY
- SUB-SLAB HORIZONTAL PIPING NETWORK
- SUB-SLAB LEADER PIPE TO VERTICAL RISER
- RISER EXTENDING FROM SUB-SLAB TO THE BUILDING ROOF
- ▲ SUB-SLAB VAPOR MONITORING/PRESSURE FIELD TESTING POINT
- ⤿ SUB-SLAB PIPING END CAP
- INDOOR AIR SAMPLE LOCATION
- AMBIENT AIR SAMPLE LOCATION

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. PARCEL DATA SOURCE: NEW YORK CITY DEPARTMENT OF CITY PLANNING, INFORMATION TECHNOLOGY DIVISION
3. AERIAL IMAGERY SOURCE: NEARMAP, JULY 3, 2025
4. BUILDING FOUNDATION LAYOUT SOURCE: DRAWING SOE-102.00 - DRAFT FOUNDATION SET DATED JULY 17, 2025



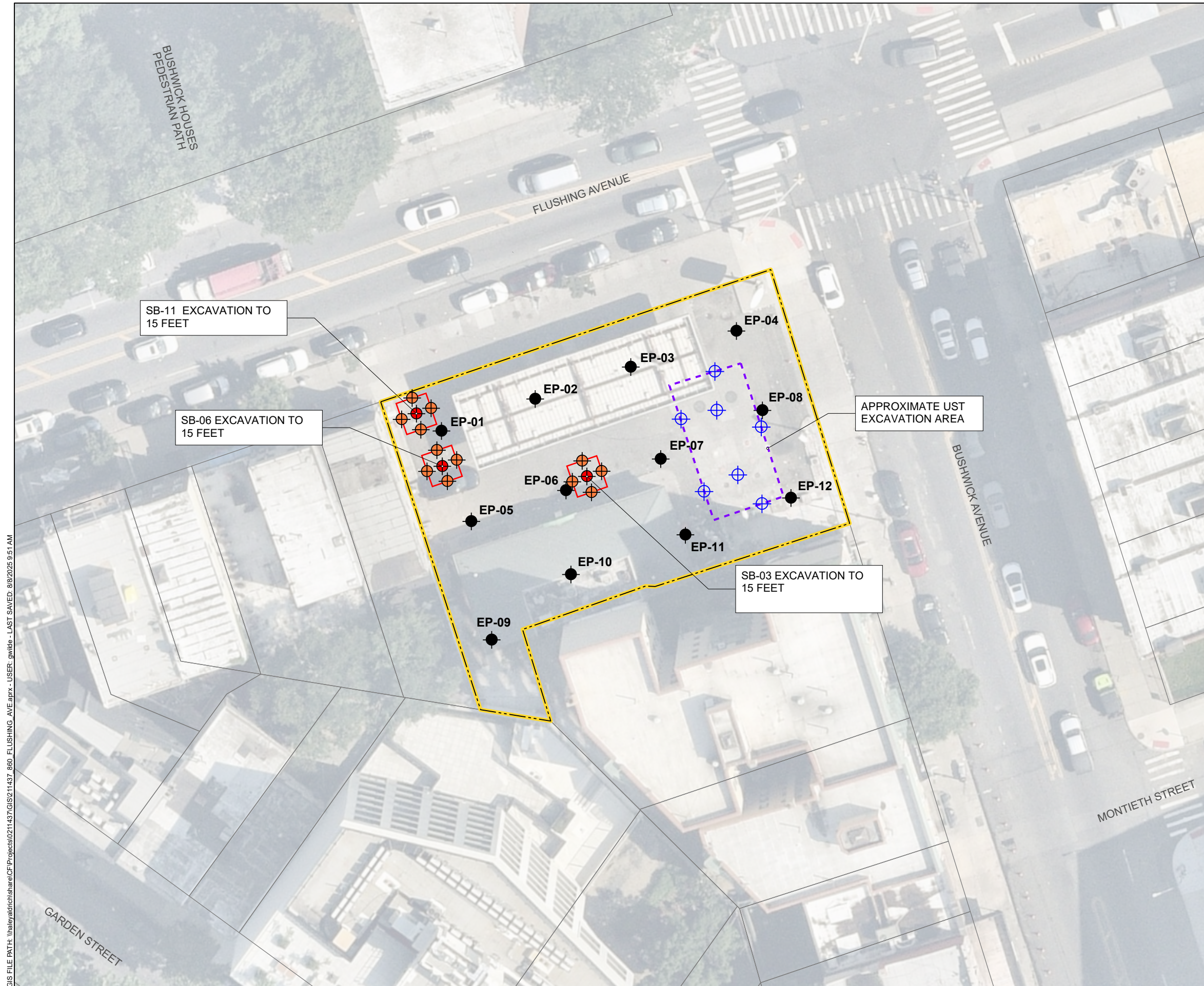
HALEY ALDRICH 860 FLUSHING AVENUE
BROOKLYN, NEW YORK

**CONCEPTUAL SSDS SYSTEM
LAYOUT WITH SVI SAMPLING PLAN**












MARCH 2026

FIGURE 5

GIS FILE PATH: \\haleyaldrich\share\CFP\Projects\0211437\GIS\211437_860_FLUSHING_AVE.aprx - USER: gwhite - LAST SAVED: 8/29/2025 9:51 AM

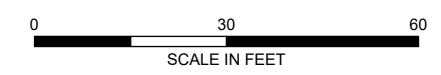


LEGEND

-  SITE BOUNDARY
 -  PARCEL BOUNDARY
 -  PROPOSED SITE-WIDE EXCAVATION BASE CONFIRMATION SAMPLE
 -  PROPOSED BASE DOCUMENTATION SAMPLE
 -  PROPOSED SIDEWALL CONFIRMATION SAMPLE
- HOTSPOT SAMPLE KEY**
-  SB-11_N_'SIDEWALL DEPTH'
 -  SB-11_'BOTTOM DEPTH'
 -  SB-11_E_'SIDEWALL DEPTH'
 -  SB-11_W_'SIDEWALL DEPTH'
 -  SB-11_S_'SIDEWALL DEPTH'
 -  PROPOSED UNDERGROUND STORAGE TANK (UST) EXCAVATION SAMPLE, IF REQUIRED (SEE NOTE 4)

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. PARCEL DATA SOURCE: NEW YORK CITY DEPARTMENT OF CITY PLANNING, INFORMATION TECHNOLOGY DIVISION
3. AERIAL IMAGERY SOURCE: NEARMAP, JULY 3, 2025
4. WHEN USTs ARE EXCAVATED, IF CONTAMINATED SOIL IS REMOVED BEYOND THE 10-FOOT REMEDIAL DEPTH, THE NUMBER AND LOCATION OF CONIRMAION SAMPLES BENEATH THE TANK AREAS SHOULD BE COLLECTED PURSUANT TO PARAGRAPH 5.4(b)5 OF DER-10 TECHNICAL GUIDANCE FOR SITE INVESTIGATION AND REMEDIATION.



HALEY ALDRICH 860 FLUSHING AVENUE
BROOKLYN, NEW YORK

PROPOSED DOCUMENTATION AND CONFIRMATION SAMPLE MAP

MARCH 2026

FIGURE 6

GIS FILE PATH: \\haleyaldrich\share\CF\Projects\0211437\GIS\211437_860_FLUSHING_AVE.aprx - USER: gwhite - LAST SAVED: 8/9/2025 9:51 AM