DECISION DOCUMENT

Atlantic Brooklyn Project
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224305
February 2023

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

DECLARATION STATEMENT - DECISION DOCUMENT

Atlantic Brooklyn Project
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224305
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Statement of Purpose and Basis

This document presents the remedy for the Atlantic Brooklyn Project 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 Atlantic Brooklyn Project 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, 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 gas 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 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 soils which exceed the protection of groundwater soil cleanup objectives (SCOs), as defined by 6 NYCRR Part 375-6.8 for those contaminants found in site groundwater above standards, specifically chlorinated volatile organic compounds.

Track 2 Area: Excavation and off-site disposal of all on-site soils which exceed restricted residential use SCOs, as defined by 6NYCRR Part 375-6.8 in the upper 15 feet. In areas where a Track 2 restricted residential cleanup is achieved, a Cover System will not be a required element of the remedy.

Track 4 Area: All soils in the upper two feet which exceed the restricted residential SCOs, as defined by 6NYCRR Part 375-6.8, will be excavated and transported off-site for disposal.

Approximately 23,000 cubic yards of contaminated soil will be removed from the site. Collection and analysis of confirmation samples at the remedial excavation depth will be used to verify that SCOs for the site have been achieved. If confirmation sampling indicated that SCOs were not achieved at the stated remedial depth, the Applicant must notify DEC, submit the sample results, and in consultation with DEC, 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.

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 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

Clean fill meeting the requirements of 6 NYCRRR 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 in the Track 4 Area of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (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. Soil Vapor Extraction (SVE)
Soil vapor extraction (SVE) will be implemented to remove volatile organic compounds (VOCs) from the subsurface and to prevent off-site migration of site-related contaminant in soil vapor. VOCs will be physically removed from the soil 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 VOCs 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. The SVE system will consist of vertical SVE well points along a portion of the northern perimeter and the center portion of the site and beneath the northern portion of the building. A full design of the SVE system will be submitted under design document.

6. Vapor Mitigation
Any on-site buildings will be required to have a sub-slab depressurization system, 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, as described below, will be required. The remedy will achieve a Track 2 restricted residential and Track 4 restricted residential use cleanup at a minimum.

7. 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 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 (which also allows for commercial and industrial 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 8 above.
   - Engineering Controls: The Cover System discussed in paragraph 4, the Soil Vapor Extraction System discussed in paragraph 5, and the Vapor Mitigation System described in paragraph 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;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 4 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives;
- 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:
   - a schedule of monitoring and frequency of submittals to the Department; 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 Department notification; and
   - providing the Department 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 Department guidance, as appropriate. The remedy is protective of public health and the environment.

February 10, 2023

Date

Jane H. O'Connell, Regional Remediation Engineer
Region 2

DECISION DOCUMENT

Atlantic Brooklyn Project
Brooklyn, Kings County
Site No. C224305
February 2023

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=C224305

Brooklyn Public Library - Bedford Branch
496 Franklin Avenue
Brooklyn, NY 11238
Phone: (718) 623-0012

Brooklyn Community Board 3
Restoration Plaza
1360 Fulton Street, 2nd Floor
Brooklyn, NY 11216
Phone: (718) 622-6601

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 within an urban area at 1045 - 1065 Atlantic Avenue in the Bedford-Stuyvesant neighborhood of Brooklyn, NY. The approximately 1.07 acres site is identified on the New York City Tax Map as Block 2020, Lot 68 (formerly Lots 68, 70, 73, 74 and 77). The site is bounded by residential properties to the north followed by Lefferts Place, commercial properties to the west, south, and east, and elevated railroad to the east followed by Franklin Avenue, and Atlantic Avenue to the south.

Site Features:
The site is currently vacant, and all on-site buildings have been demolished as of January 2023. The site was previously improved as follows:

1065 Atlantic Avenue (former Lot 68) was formerly occupied by a two-story building with a garage on the first floor and office space, storage, and an artist's loft on the second floor. The building occupied the entire lot.

1061-1063 Atlantic Avenue (former Lot 70) was formerly occupied by a two-story commercial/light industrial building with a partial cellar on the south side of the building. The building occupied the entire lot.

1059 Atlantic Avenue (former Lot 73) was formerly occupied by a concrete paved lot.

1053 and 1057 Atlantic Avenue (former Lot 74) was formerly occupied by a one-story building with two commercial units. There was a small paved rear yard behind 1053 Atlantic Avenue that contained a walk-in freezer and storage.

1045 Atlantic Avenue (former Lot 77) was formerly occupied by a one-story industrial building,

a warehouse building, and a concrete paved rear yard.

Current Zoning and Land Use:
The site is currently vacant and is zoned M1-1 light manufacturing and is surrounded by similarly zoned properties to the east, west, and south. Properties to the north are zoned R6B residential with a C2-4 commercial overlay; the majority of the properties to the north long Lefferts Place appear to be single family residences.

Past Use of the Site:
1065 Atlantic Ave (former lot 68) was first developed between 1888 and 1908 and used for commercial/industrial purposes, including a wagon house in 1908 and an auto repair shop with battery service by 1932 to present.

1061 to 1063 Atlantic Ave (former Lot 70) was first developed sometime prior to 1888 and use for commercial and industrial purposes. Historical uses included an auto repair and brake shop, office space, a church, and a variety of commercial usages.

1059 Atlantic Ave. (former Lot 73) was developed prior to 1888 with a building for beer bottling. Between 1908 and 1932, it was redeveloped into an auto repair shop. The building was demolished between 1965 and 1976 and has been vacant since.

1053 and 1057 Atlantic Ave (former Lot 74) was developed prior to 1888 and used for commercial and industrial purpose from at least 1888 to present. Historical usage of the subject site indicative of potential recognized environmental concerns includes auto painting and auto repair from 1965 to 2007.

1045 Atlantic Ave (former Lot 77) was first developed prior to 1888, used for residential purposed from at least 1888 to 1908 and commercial and industrial purposes from at least 1932 to the present. historical usage of the subject site indicative of potential recognized environmental concern includes metal manufacturing, auto repair, and petroleum delivery services.

Site Geology and Hydrogeology:
The site is underlain by historic fill material to approximately 6 feet below grade (ftbg) on the western portion of the site and down to about 9 ftbg on the eastern portion of the site. Underlaying the historical fill materials are native soil which were mostly poorly graded, with alternating layers of fine to medium grained sands with occasional layers of gravel around 30 - 40 ftbg. Groundwater is present at depths of approximately 70-73 ftbg and flows generally to the northwest.

A site location map is attached as Figure 1.

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

The Applicants under the Brownfield Cleanup Agreement are a Volunteer. The Volunteer does not have an obligation to address off-site contamination. The Department has determined that the site poses a significant threat to human health and the environment and there are off-site impacts that require remedial activities; accordingly, enforcement action is necessary.

The Department will seek to identify any parties (other than the Volunteer) known or suspected to be responsible for contamination at or emanating from the site, referred to as Potentially Responsible Parties (PRPs). The Department will bring an enforcement action against the PRPs. If an enforcement action cannot be brought or does not result in the initiation of a remedial program by any PRPs, the Department will evaluate the off-site contamination for action under the State Superfund. The PRPs are subject to legal actions by the State for recovery of all response costs the State incurs or has incurred.

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. 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:

trichloroethene (TCE)
tetrachloroethene (PCE)
chromium
lead
nickel
chloroform
benzo(a)anthracene
benzo(a)pyrene
benzo(b)fluoranthene
chrysene
dibenz[a,h]anthracene
pyrene
phenanthrene
naphthalene
mercury

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

- groundwater
- soil
- soil vapor intrusion

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.

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 for this site include VOCs, SVOCs, and metals in soil, and VOCs in soil vapor and groundwater.

Soil - Several VOCs were found at concentrations exceeding the restricted residential soil cleanup objectives (RRSCO) or the protection of groundwater soil cleanup objectives (PGSCOs), including tetrachloroethene (PCE) at 4.6 parts per million or ppm (PGSCO is 1.3), trichloroethene (TCE) at 17 ppm (PGSCO is 0.47 ppm), and naphthalene at 320 ppm (RRSCO is 100 ppm).

SVOCs exceeding RRSCOs include benzo(a)anthracene up to 230 ppm (RRSCO is 1 ppm), benzo(a)pyrene up to 200 ppm (RRSCO is 1 ppm), benzo(b)fluoranthene up to 250 ppm (RRSCO is 1 ppm), benzo(k)fluoranthene up to 82 ppm (RRSCO is 3.9 ppm), chrysene up to 220 ppm (RRSCO is 3.9 ppm), dibenzo(a,h)anthracene at 26 ppm (RRSCO is 0.33 ppm), fluoranthene up to 470 ppm (RRSCO is 100 ppm), indeno(1,2,3-cd)pyrene up to 110 ppm (RRSCO is 0.5 ppm), phenanthrene up to 490 ppm (RRSCOs is 100), and pyrene up to 400 ppm (RRSCO is 100 ppm).

Several metals were detected at concentrations exceeding the RRSCOs, including total chromium at 7960 ppm (RRSCO is 180 ppm), trivalent chromium at 420 ppm (RRSCO is 180 ppm), lead at 754 ppm (RRSCO is 400 ppm), mercury at 3.96 ppm (RRSCO is 0.81 ppm), and nickel at 714 ppm (RRSCO is 310 ppm). Generally, most of the metal impacts were found in the fill layer and appear to be related to historical fill, with the exception of chromium which extended deeper into the native material and may be related to historic site uses.

PFOS and PFOA were not detected in soil at concentrations exceeding the restricted residential guidance values. No pesticides, PCBs and herbicides were found at concentrations exceeding RRSCOs.

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

Groundwater - VOCs were detected in groundwater at concentrations exceeding the ambient water quality standards (AWQS), including chloroform at a maximum concentration of 34 parts per billion, or ppb (AWQS is 7 ppb) and TCE at 42 ppb (AWQS is 5 ppb).

SVOCs were detected at concentrations exceeding the AWQS including benzo(a)anthracene at a maximum concentration of 1 ppb, benzo(b)fluoranthene at 1.5 ppb, benzo(k)fluoranthene at 0.49 ppb, indeno(1,2,3-cd)pyrene at 0.97 ppb, and chrysene at 0.96 ppb compared to their respective AWQS of 0.002 ppb.

PFAS were detected above the maximum contaminant level (MCL) of 10 parts per trillion (ppt) each with perfluorooctanesulfonic acid (PFOS) at a maximum concentration of 19 ppt and perfluorooctanoic acid (PFOA) at 79.3 ppt.

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

Soil Vapor - Chlorinated VOCs were detected in soil vapor samples including PCE at 42,200 micrograms per cubic meter (ug/m3), and TCE at 190,000 ug/m3.

Data indicates that there is the potential for 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 fenced and mostly covered by broken up concrete, so people are not expected to come into contact with site related soil and groundwater contamination unless they dig below the surface. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. 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. Because there are no on-site buildings, inhalation of site contaminants in indoor air due to vapor intrusion does not represent a concern for the site in its current condition. However, the potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on-site development. Sampling indicates that soil vapor intrusion from site contaminants is a potential 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 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

- 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 Multiple Cleanup Track 2 and Track 4 remedy.

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

The elements of the selected remedy, as shown in Figure 2 through 4, are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, 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 gas 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 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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Track 2 Area: Excavation and off-site disposal of all on-site soils which exceed restricted residential use SCOs, as defined by 6NYCRR Part 375-6.8 in the upper 15 feet. In areas where a Track 2 restricted residential cleanup is achieved, a Cover System will not be a required element of the remedy.

Track 4 Area: All soils in the upper two feet which exceed the restricted residential SCOs, as defined by 6NYCRR Part 375-6.8, will be excavated and transported off-site for disposal.

Approximately 23,000 cubic yards of contaminated soil will be removed from the site. Collection and analysis of confirmation samples at the remedial excavation depth will be used to verify that SCOs for the site have been achieved. If confirmation sampling indicated that SCOs were not achieved at the stated remedial depth, the Applicant must notify DEC, submit the sample results, and in consultation with DEC, 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.

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 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

Clean fill meeting the requirements of 6 NYCRRR 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 in the Track 4 Area of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (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. Soil Vapor Extraction (SVE)
Soil vapor extraction (SVE) will be implemented to remove volatile organic compounds (VOCs) from the subsurface and to prevent off-site migration of site-related contaminant in soil vapor. VOCs will be physically removed from the soil 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 VOCs 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. The SVE system will consist of vertical SVE well points along a portion of the northern perimeter and the center portion of the site and beneath the northern portion of the building. A full design of the SVE system will be submitted under design document.

6. Vapor Mitigation
Any on-site buildings will be required to have a sub-slab depressurization system, 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, as described below, will be required. The remedy will achieve a Track 2 restricted residential and Track 4 restricted residential use cleanup at a minimum.

7. 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 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 (which also allows for commercial and industrial 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:

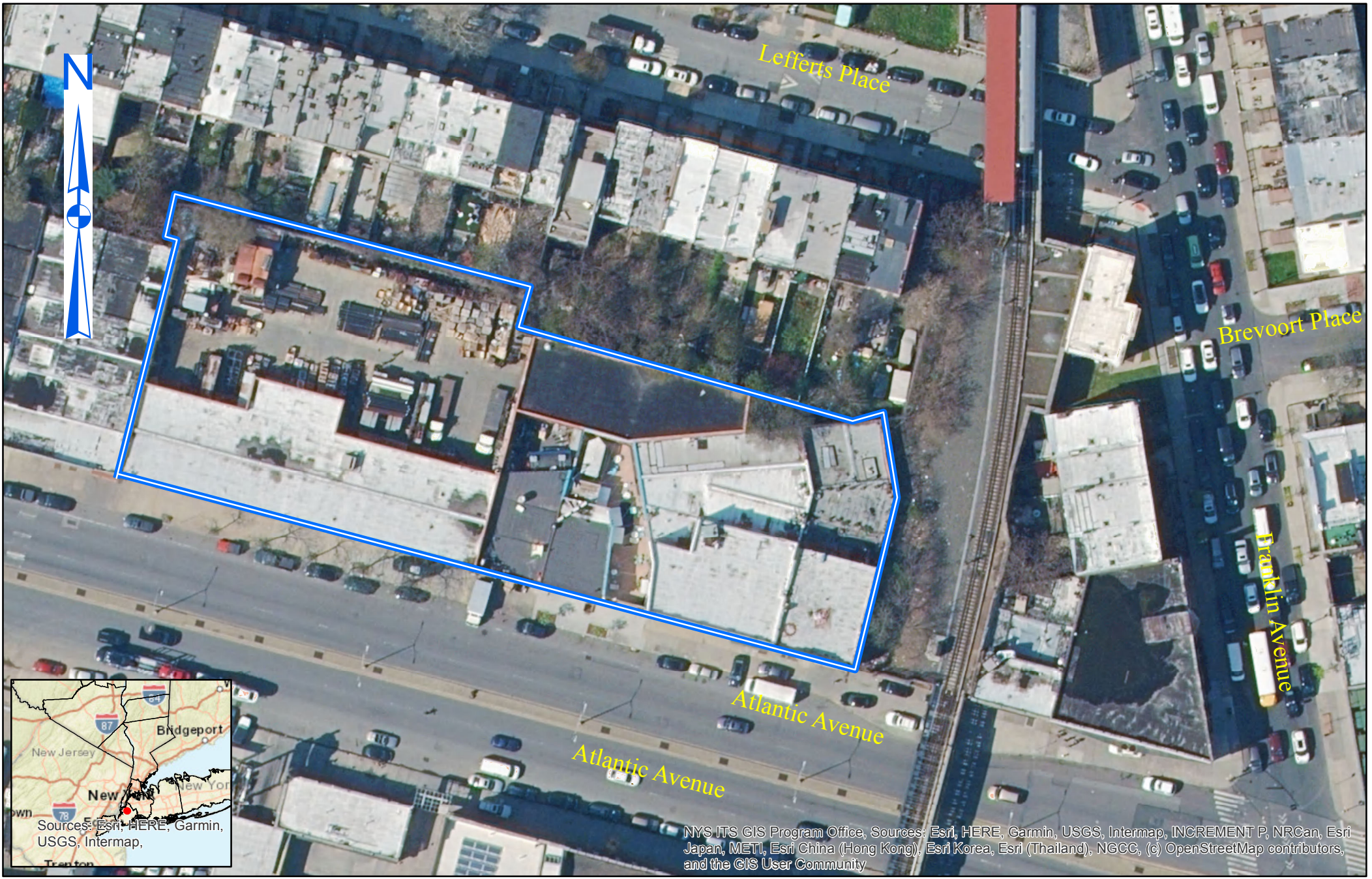
a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
   - Institutional Controls: The Environmental Easement discussed in Paragraph 8 above.
   - Engineering Controls: The Cover System discussed in paragraph 4, the Soil Vapor Extraction System discussed in paragraph 5, and the Vapor Mitigation System described in paragraph 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;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 4 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives;
- 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:
   - a schedule of monitoring and frequency of submittals to the Department; and
   - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

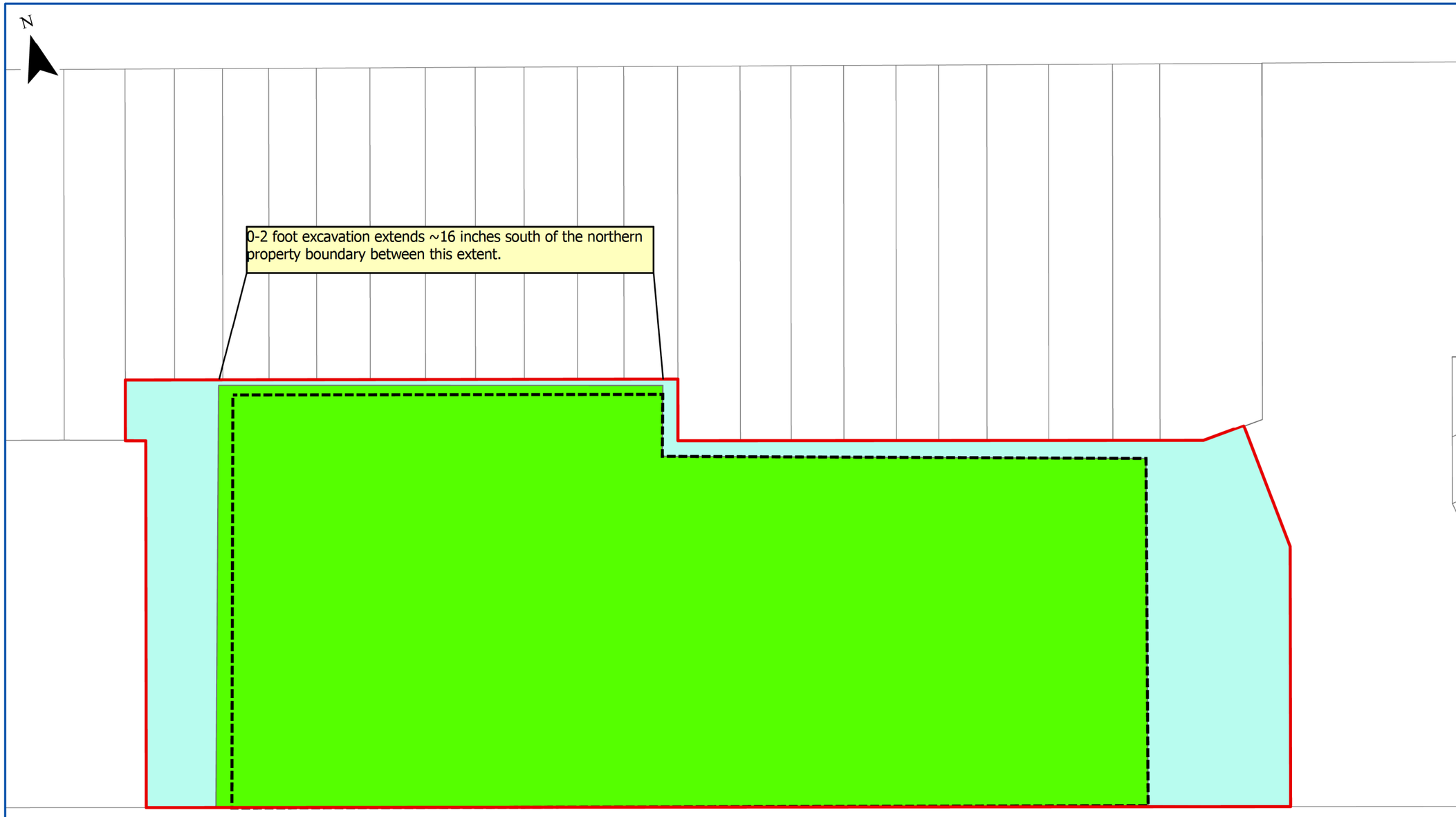
c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
   - procedures for operating and maintaining the remedy;
   - compliance 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 Department notification; and
   - providing the Department access to the site and O&M records.



NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Figure 1 - Site Boundary Map
Atlantic Brooklyn Project
Site No. C224305

0 25 50 100
Feet



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

DRAWING PREPARED FOR:

1065 Atlantic Avenue LLC
42-09 235th Street
Douglaston, New York 10363

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

Project:	TOT1903	Designed by:	JL
Date:	1/26/2023	Drawn by:	AM
Scale:	AS SHOWN	Approved by:	JL

Proposed Excavation Plan

1045 - 1065 Atlantic Avenue
Brooklyn, NY

FIGURE NO:

2

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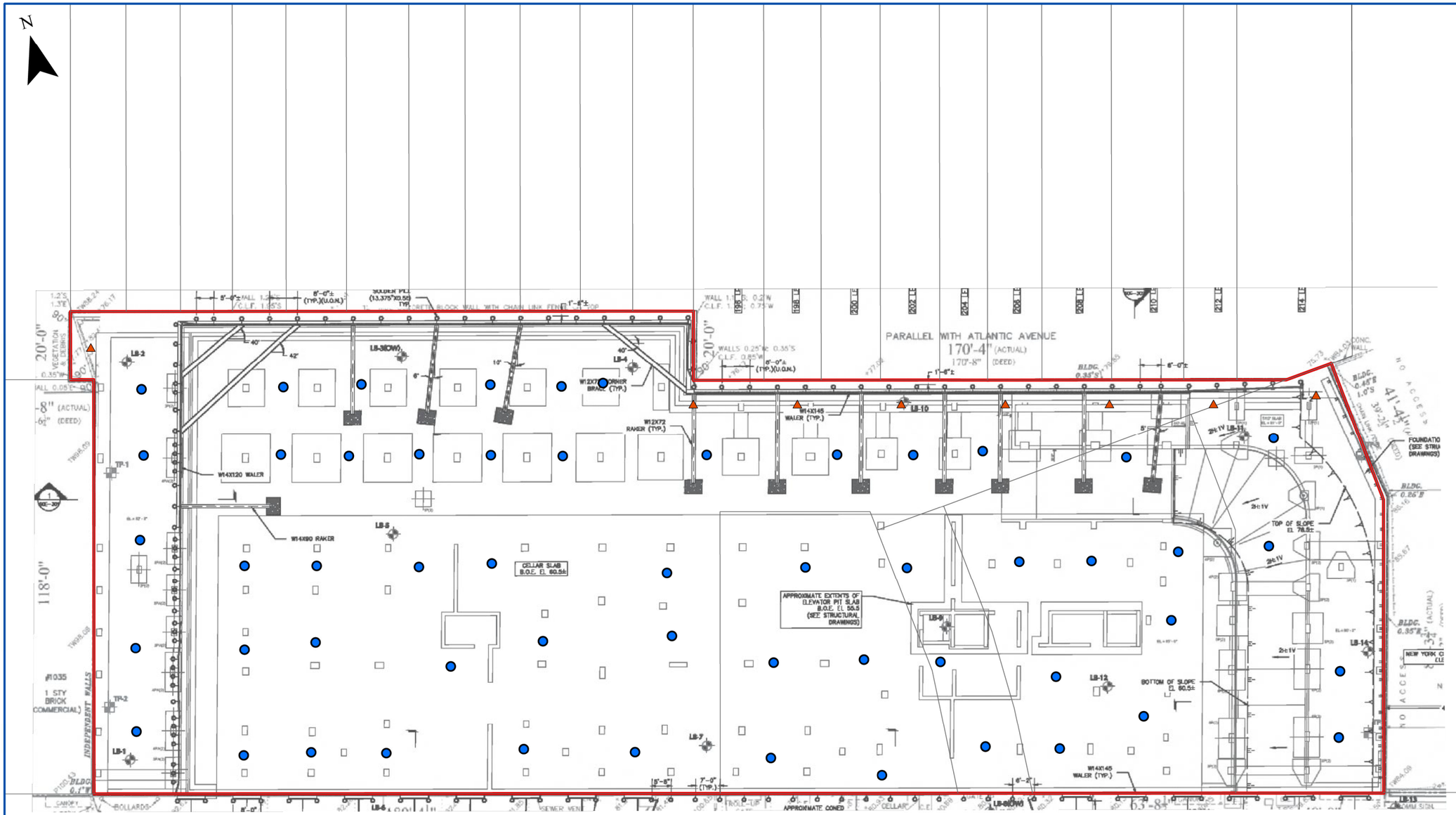

0 25 50 75 100 Feet

Note: Basemap sourced from Support of Excavation plans (100% DD)

- BCP Site Boundary
- Tax Lot Boundary
- Proposed Sidewall Endpoint Sample Locations
- Proposed Bottom Endpoint Location

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

DRAWING PREPARED FOR:

1065 Atlantic Avenue LLC
42-09 235th Street
Douglaston, New York 10363

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

Project:	TOT1903	Designed by:	JL
Date:	1/6/2023	Drawn by:	AM
Scale:	AS SHOWN	Approved by:	JL

Proposed Endpoint Sampling Plan

1045 - 1065 Atlantic Avenue
Brooklyn, NY

FIGURE NO:

3

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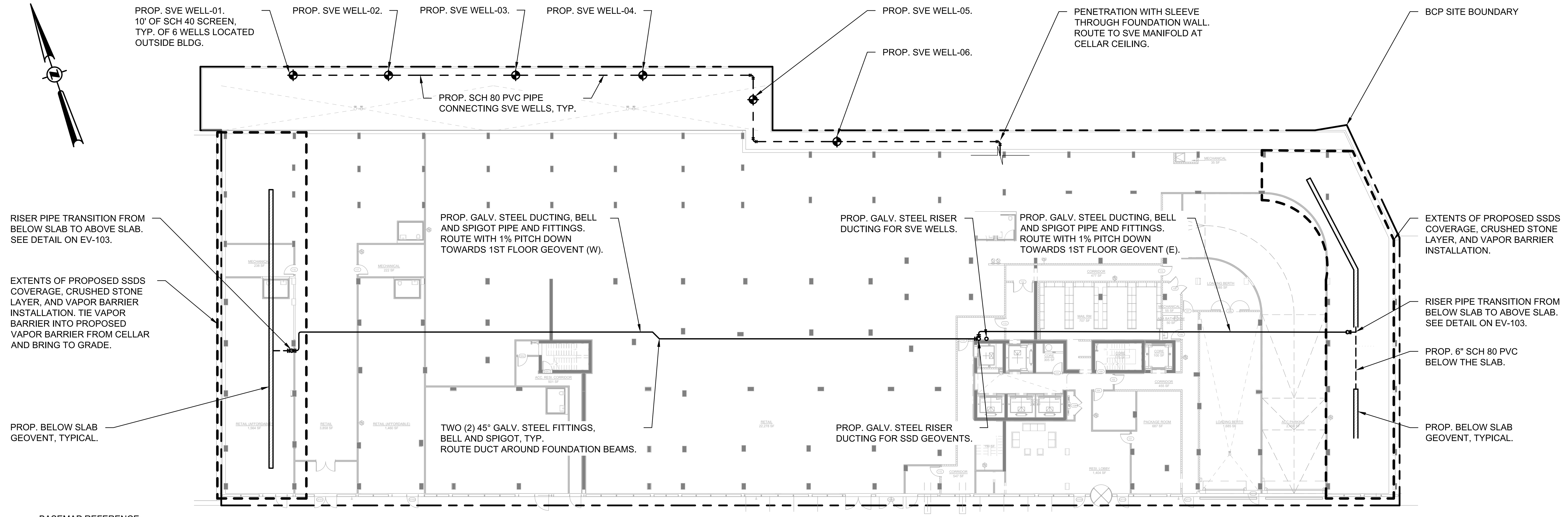
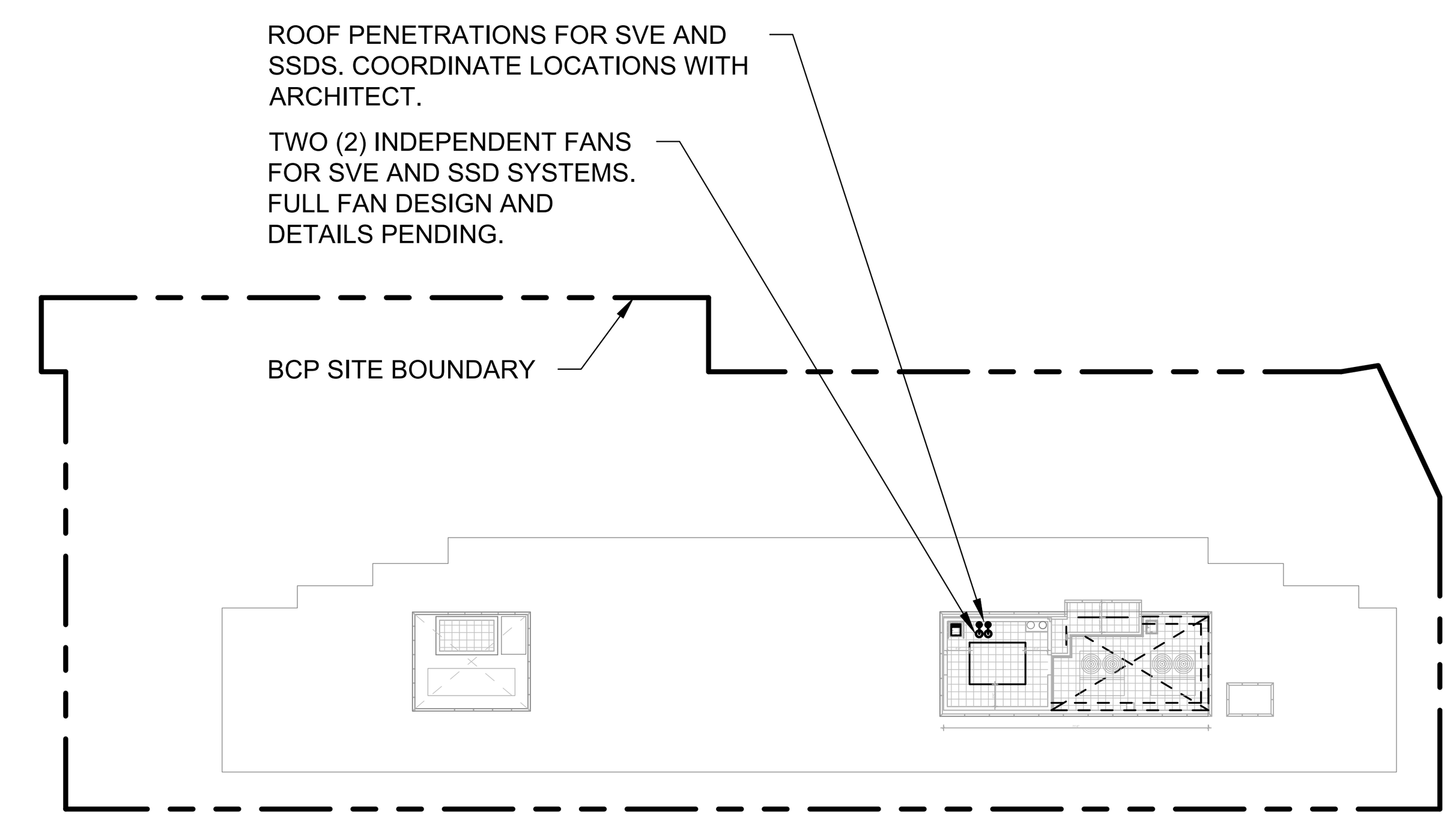


BASEMAP REFERENCE:
1041-1065 ATLANTIC AVE FLOOR PLANS
PREPARED ON OCTOBER 01, 2022
PREPARED BY DENCITY WORKS ARCHITECTS

PARTIAL PLAN VIEW - FIRST FLOOR

SCALE: 1" = 20'

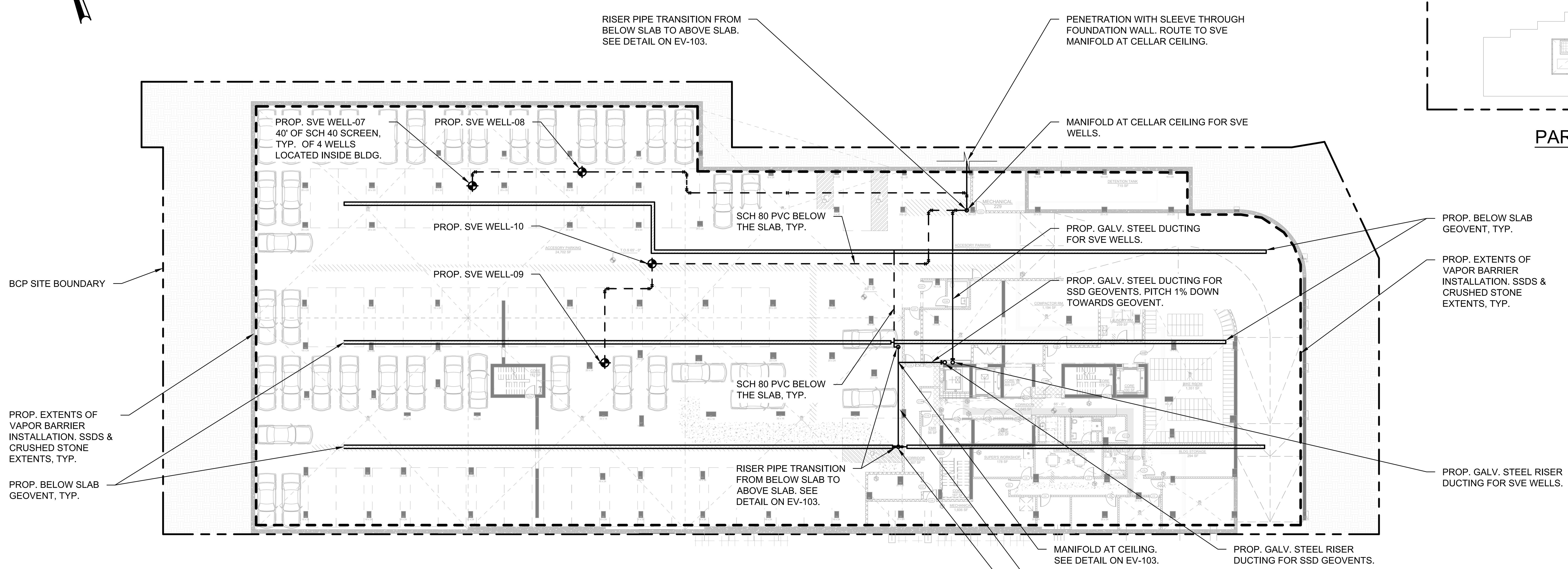
0 20 40
SCALE: 1" = 20'



PARTIAL PLAN VIEW - ROOF PLAN

SCALE: 1" = 50'

0 50 100
SCALE: 1" = 50'



BASEMAP REFERENCE:
1041-1065 ATLANTIC AVE FLOOR PLANS
PREPARED ON OCTOBER 01, 2022
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PARTIAL PLAN VIEW - CELLAR FLOOR

SCALE: 1" = 20'

0 20 40
SCALE: 1" = 20'

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. GROSSER CONSULTING ENGINEER AND HYDROGEOLOGIST, P.C.
630 Johnson Avenue. • Suite 7
Bohemia • NY • 11716-2618
Phone: (631) 589-6353 • Fax: (631) 589-8705
E-mail: INFO@PWGROSSER.COM

CONSULTANTS

FOR REGULATORY REVIEW ONLY NOT FOR CONSTRUCTION

7		
6		
5		
4		
3	REVISIONS PER DEC COMMENT	01/26/2023
2	FOUNDATION BID SET REVISIONS	11/18/2022
1	100% DESIGN DEVELOPMENT	10/01/2022

TOTEM BKLYN
55 WASHINGTON ST. SUITE #710
BROOKLYN, NY 11201

1041-1065 ATLANTIC AVE
BROOKLYN, NY 11238

1041-1065 ATLANTIC AVE
BROOKLYN, NY 11238

SSDS & SVE FLOOR & ROOF PLANS

Figure 4

TOT1903