

DECISION DOCUMENT

Broad Street Irving Ave Cleaners Site
Brownfield Cleanup Program
Port Chester, Westchester County
Site No. C360213
March 2026



**Department of
Environmental
Conservation**

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

DECLARATION STATEMENT - DECISION DOCUMENT

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Statement of Purpose and Basis

This document presents the remedy for the Broad Street Irving Ave Cleaners Site 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 (DEC) for the Broad Street Irving Ave Cleaners Site and the public's input to the proposed remedy presented by the DEC.

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 to the extent feasible in the future development at this Site, any future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) 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(TM) (available in the Sustainable Remediation Forum [SURF] library) or similar DEC 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

- a. Excavation and off-site disposal of all on-site soils which exceed unrestricted SCOs, as defined by 6 NYCRR Part 375-6.8. If a Track 1 cleanup is achieved, a Cover System will not be a required element of the remedy. Approximately 14,000 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 indicates 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.
- b. 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.

- c. Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

3. Backfill

Backfill 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. Groundwater Remedy

In-situ enhanced biodegradation will be employed to treat detected petroleum and chlorinated hydrocarbon VOCs in groundwater in an area to be determined following removal of soil and collection of post soil remediation groundwater sampling as described under remedial element 2. The biological breakdown of contaminants through aerobic respiration will be enhanced by the placement of an oxygen release compound (ORC), or similar material into the subsurface. A remedial design will be submitted to the DEC for review, prior to implementation, and will include quantity of ORC and the placement location.

5. Vapor Intrusion Evaluation

As part of the Track 1 remedy, a soil vapor intrusion evaluation will be completed. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion.

6. Local Institutional Controls

If no EE or SMP is needed to achieve soil, groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Chapter 873, Article VII of the Laws of Westchester County, which prohibits potable use of groundwater without prior approval.

7. Contingent Remedy Elements

The intent of the remedy is to achieve a Track 1 unrestricted use, therefore, no EE or SMP is anticipated. If the soil vapor intrusion (SVI) evaluation is not completed prior to completion of the Final Engineering Report, then a SMP and EE will be required to address the SVI evaluation and implement actions as needed. In the event that Track 1 unrestricted use is not achieved, including achievement of soil, groundwater and soil

vapor remedial objectives, the following contingent remedial elements will be required, and the remedy will achieve Track 2 restricted residential cleanup.

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, cleanup at a minimum.

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 DEC 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, commercial or 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 County DOH; and
- Require compliance with the DEC approved Site Management Plan.

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 7 above.

Engineering Controls: Groundwater monitoring wells will be installed to evaluate the effectiveness of the excavation and groundwater remedies discussed in Remedy Elements 2 and 4 above. Additional groundwater remedies may be required if bulk reduction of contaminants to asymptotic levels are not achieved. Contingent upon the results of the Soil Vapor Intrusion Evaluation, discussed in Remedy Element 5 above, an active sub-slab depressurization system will be installed. (e.g., sub-slab

depressurization system or groundwater treatment)

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;
- A provision should redevelopment occur to ensure no soil exceeding protection of groundwater concentrations will remain below storm water retention basin or infiltration structures.
- Descriptions of the provisions of the environmental easement including any land use and/or groundwater use restrictions;
- A provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the Site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- Provisions for the management and inspection of the identified engineering controls;
- Maintaining Site access controls and DEC 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 DEC;
- Monitoring for vapor intrusion for any buildings on the Site, as may be required by the Institutional and Engineering Control Plan discussed above.

Declaration

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

March 18, 2026

Sarah Saucier

Date

Sarah Saucier, Director
Remedial Bureau C

DECISION DOCUMENT

Broad Street Irving Ave Cleaners Site
Port Chester, Westchester County
Site No. C360213
March 2026

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (DEC), 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 DEC 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 DEC 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 DEC in selecting a remedy for the Site. Site-related reports and documents were made available for review by the public at the following document repository:

DECInfo Locator - Web Application
<https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C360213>

Port Chester - Rye Brook Public Library
Attn: Robin Lettieri
1 Haseco Avenue

Port Chester, NY 10573
Phone: 914-939-6710

Receive Site Citizen Participation Information By Email

Please note that the DEC'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 Broad Street Irving Ave Cleaners Site is a 0.77-acre Site in an urban area. The site is located at 131 Irving Avenue, in Port Chester, New York. The Site is located in a mixed-use commercial and residential neighborhood and located next to the Port Chester Metro North train station.

Site Features: The Site is relatively flat and included twelve buildings, with some asphalt parking and driveways. All structures were vacated by September 2024 and were demolished by June 2025.

Current Zoning and Land Use: The Site is currently located in the CD-6 District. The CD-6 district has the highest density and heights of all the Port Chester zones and allows for a wide variety of uses designed to be located near and with connections and access to public transit. The surrounding properties include residential and commercial properties.

Past Use of the Site: The Site previously consisted of eight separate parcels which have had multiple uses since the early 1900's, including automobile garage/repair, cleaners/laundry facilities, upholsterer, jeweler, and print shop.

Site Geology and Hydrogeology: The Site's average topographic elevation is approximately 33 feet above mean sea level which dips slightly to the northeast. Uncontrolled fill consisting of gray, brown/dark gray/brown/orange-brown sand, often micaceous, with varying amounts of silt and gravel, also containing variable amounts of cinders and ash are present at depths from 2 to 8 ft-bgs. Beneath this layer lies alluvial deposits consisting of brown/dark gray/light gray/yellow-brown medium to fine sand, often micaceous, with variable amounts of silt, and occasionally small amounts of fine gravel. Bedrock is present at depths ranging from 5 to 22 ft-bgs.

Groundwater is present at approximately 5 - 9 feet below ground surface and primarily flows to the east toward the Byram River, which is located approximately 900 feet west

of the Site.

A Site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The DEC 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 which allows for unrestricted use of the Site was evaluated.

A comparison of the results of the Remedial Investigation (RI) against unrestricted use standards, criteria and guidance values (SCGs) for the Site contaminants is available in the RI Report (January 2025).

SECTION 5: ENFORCEMENT STATUS

The Applicants under the Brownfield Cleanup Agreement are Volunteers. The Volunteers do not have an obligation to address off-site contamination. The DEC has determined that this Site poses a significant threat to human health and the environment. The DEC will bring enforcement action against any parties known or suspected to be responsible for contamination at or emanating from this Site to implement a remedial program to address off-site contamination.

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
- sub-slab vapor
- indoor air

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 DEC 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 is/are:

benzene	benzo(a)pyrene
ethylbenzene	benzo(b)fluoranthene
toluene	benzo(k)fluoranthene
xlenol	chrysene
acetone	dibenz[a,h]anthracene
sec-butylbenzene	indeno(1,2,3-cd)pyrene
butylbenzene	perfluorooctanoic acid
naphthalene	perfluorooctane sulfonic acid
n-propylbenzene	DDD
1,3,5-trimethylbenzene	DDE
isopropylbenzene	DDT
2,2,4-trimethylpentane	arsenic
1,2,4-trimethylbenzene	barium
tetrachloroethene (PCE)	copper
ethanol	lead
benzo(a)anthracene	mercury

selenium
zinc

chromium
cis-1,2-dichloroethene

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.

Nature and Extent of Contamination:

Soil and groundwater samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, metals, and the emerging contaminants per-and poly fluoroalkyl substances (PFAS) and 1,4-dioxane. Soil vapor samples were analyzed for VOCs. Based on investigations conducted to date, the primary contaminants of concern include VOCs, SVOCs, pesticides and metals, in soil; VOCs, SVOCs, Metals, and PFAS in the groundwater; and VOCs in soil vapor.

Soil - Soil samples were compared against the unrestricted use soil cleanup objectives (UUSCOs) and Restricted Residential Use Soil Cleanup Objectives (RRSCO).

VOCs were detected including maximum concentrations of acetone at 0.11 parts per million (ppm) compared to the UUSCO of 0.03 ppm and the RRSCO of 100 ppm, benzene at 0.66 ppm (UUSCO of 0.06 ppm/ RRSCO of 3.7 ppm), toluene at 130 ppm (UUSCO of 0.7 ppm/ RRSCO of 100 ppm), ethylbenzene at 270 ppm (UUSCO of 1 ppm RRSCO of 76 ppm), xylenes at 1400 ppm (UUSCO of 0.26 ppm/ RRSCO of 100 ppm), n-butylbenzene at 46 ppm (UUSCO of 18 ppm/ RRSCO of 100 ppm), sec-butylbenzene at 16 ppm (UUSCO of 25 ppm/ RRSCO of 100 ppm), naphthalene at 52 ppm (UUSCO of 12 ppm/ RRSCO of 100 ppm), n-propylbenzene at 120 ppm (UUSCO of 5 ppm/

RRSCO of 100 ppm), 1,3,5- trimethylbenzene at 160 ppm (UUSCO of 3.1 ppm/ RRSCO of 100 ppm), and 1,2,4-trimethylbenzene at 580 ppm (UUSCO of 5.9 ppm/ RRSCO of 100 ppm). For SVOCs, benzo(a)anthracene was detected at 13 ppm compared to the UUSCO of 1 ppm and the RRSCO of 1.4 ppm, benzo(a)pyrene at 12 ppm (UUSCO and RRSCO of 1 ppm), benzo(b)fluoranthene at 15 ppm (UUSCO of 1 ppm/ RRSCO of 1.4 ppm), benzo(k)fluoranthene at 4.7 ppm (UUSCO of 0.8 ppm/ RRSCO of 4.9 ppm), chrysene at 13 ppm (UUSCO of 1 ppm/RRSCO of 4.9 ppm), dibenzo(a,h)anthracene at 1.7 ppm (UUSCO and RRSCO of 0.33 ppm), and indeno(1,2,3-cd)pyrene at 8.8 ppm (UUSCO of 0.5 ppm/ RRSCO of 1.4 ppm). For pesticides, 4,4-DDE was detected at 0.05 ppm compared to the UUSCO of 0.0033 ppm and the RRSCO of 3.4 ppm, 4,4-DDD at 0.01 ppm (UUSCO of 0.033 ppm/ RRSCO of 5 ppm), and 4,4-DDT at 0.11 ppm (UUSCO of 0.0033 ppm/RRSCO of 3.8 ppm). For metals, arsenic was detected at a concentration of 20.4 ppm compared to the UUSCO of 13 ppm and the RRSCO of 16 ppm, barium at 529 ppm (UUSCO of 410 ppm/ RRSCO of 410 ppm), cadmium at 7.95 ppm (UUSCO of 2.5 ppm/ RRSCO of 2.5 ppm), chromium at 47.8 ppm (USCO of 30 ppm/ RRSCO of 110 ppm), copper at 159 ppm (UUSCO of 50 ppm/ RRSCO of 280 ppm), lead at 8320 ppm (UUSCO of 63 ppm/ RRSCO of 400 ppm), and mercury at 7.14 ppm (UUSCO of 0.18 ppm/ RRSCO of 0.30 ppm). Perfluorooctane sulfonic acid (PFOS) was detected at a maximum concentration of 2.27 ppb compared to the UUSCO of 0.88 ppb and the RRSCO of 8.8 ppb, and perfluorooctanoic acid (PFOA), at 1.11 ppb (UUSCO of 0.66 ppb/ RRSCO of 6.6 ppb).

PCBs were not detected above UUSCOs or RRSCO on-site.

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

Groundwater - VOCs were found in groundwater at the central and northeastern portion of the Site exceeding the NYS Ambient Water Quality Standards and Guidance Values (AWQSGVs), including maximum concentrations of benzene at 6.8 ppm (AWQS of 8.8 ppb), ethylbenzene at 7.2 ppb, isopropylbenzene at 6.9 ppb, n-propylbenzene at 14 ppb, 1,2,4-trimethylbenzene at 22 ppb , and 1,2,4,5-tetramethylbenzene at 7.3 ppb (AWQS is 5 ppb each). For SVOCs, benzo(a)anthracene was detected at a maximum concentration of 0.04 ppm, benzo(a)pyrene at 0.03 ppb, benzo(b)fluoranthene at 0.03 ppb, benzo(k)fluoranthene at 0.02 ppb, chrysene at 0.02 ppb, and ideno(1,2,3-cd)pyrene at 0.02 ppb (AWQS of 0.002 ppb each). For metals lead was detected at a maximum concentration of 25.66 ppb compared to the AWQS of 25 ppb. For PFAS, PFOA was detected at a maximum concentration of 270 ppt compared to the AWGS of 6.7 ppt, and PFOS at 526 ppt (AWGS of 2.7 ppt). PFAS detected on-site is suspected to be from an upgradient source.

Pesticides and PCBs were not detected in groundwater samples collected. Although iron and manganese were also detected above AWQS they are typically naturally occurring or related to road salt application. Groundwater was sampled in the overburden soil and in bedrock. VOC contamination was only detected in the overburden while SVOCs, metals, and PFAS were detected in both the overburden and bedrock, with the maximum concentrations detected in overburden groundwater.

Groundwater contamination is likely related to on-site contaminant sources found in soil. Based on the on-site groundwater investigation, data indicates a potential for groundwater contamination to migrate off-site.

Soil Vapor, Sub-Slab, Soil Vapor, & Indoor Air - Soil vapor intrusion sampling including indoor air, sub-slab soil vapor, and soil vapor samples were collected during the remedial investigation on-site prior to all buildings being demolished. VOCs were detected in soil vapor samples across the site, with the highest detections found under the slab of the northern building. Tetrachloroethene (PCE) was detected in sub-slab vapor at 228 ug/m³, trichloroethylene (TCE) at 4.3 ug/m³, cis-1,2-dichloroethylene at 6.7 ug/m³, methylene chloride at 8.3 ug/m³, and 2,2,4 trimethylpentane at 5420 ug/m³. PCE was also detected in indoor air samples at a maximum of concentration of 0.49 micrograms per cubic meter (ug/m³), methylene chloride was detected at 17 ug/m³, and 2,2,4 trimethylpentane was detected at 1.3 ug/m³.

The soil vapor, sub-slab soil vapor and indoor air sampling conducted during the remedial investigation was not performed in accordance with New York State Department of Health's Soil Vapor Intrusion Guidance. VOCs detected in the soil vapor will need to be further evaluated for the potential of soil vapor intrusion in the Site's proposed enclosed areas. Data indicates soil vapor has the potential to migrate off-site and will need to be further evaluated.

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*.

Direct contact with contaminants in the soil is unlikely because the majority of the Site is covered with buildings and pavement. 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 the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying 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 potential exists for the inhalation of Site contaminants due to soil vapor intrusion for any future on-site redevelopment and occupancy. In addition, environmental sampling indicates soil vapor intrusion is 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 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.
- Prevent the discharge of contaminants to surface water.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation exposure to contaminants volatilizing from 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 1: Unrestricted Use Remedy.

The selected remedy is referred to as the Excavation to Unrestricted SCOs and Groundwater Enhanced Bioremediation remedy.

The elements of the selected remedy are shown in Figures 2, 3, and 4 and are described 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;
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- 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 shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) 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(TM) (available in the Sustainable Remediation Forum [SURF] library) or similar DEC 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

- a. Excavation and off-site disposal of all on-site soils which exceed unrestricted SCOs, as defined by 6 NYCRR Part 375-6.8. If a Track 1 cleanup is achieved, a Cover System will not be a required element of the remedy. Approximately 14,000 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 indicates 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.
- b. 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.
- c. Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

3. Backfill

Backfill 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. Groundwater Remedy

In-situ enhanced biodegradation will be employed to treat detected petroleum and chlorinated hydrocarbon VOCs in groundwater in an area to be determined following removal of soil and collection of post soil remediation groundwater sampling as described under remedial element 2. The biological breakdown of contaminants through aerobic respiration will be enhanced by the placement of an oxygen release compound (ORC), or similar material into the subsurface. A remedial design will be submitted to

the DEC for review, prior to implementation, and will include quantity of ORC and the placement location.

5. Vapor Intrusion Evaluation

As part of the Track 1 remedy, a soil vapor intrusion evaluation will be completed. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion.

6. Local Institutional Controls

If no EE or SMP is needed to achieve soil, groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Chapter 873, Article VII of the Laws of Westchester County, which prohibits potable use of groundwater without prior approval.

7. Contingent Remedy Elements

The intent of the remedy is to achieve a Track 1 unrestricted use, therefore, no EE or SMP is anticipated. If the soil vapor intrusion (SVI) evaluation is not completed prior to completion of the Final Engineering Report, then a SMP and EE will be required to address the SVI evaluation and implement actions as needed. In the event that Track 1 unrestricted use is not achieved, including achievement of soil, groundwater and soil vapor remedial objectives, the following contingent remedial elements will be required, and the remedy will achieve Track 2 restricted residential cleanup.

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, cleanup at a minimum.

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 DEC 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, commercial or 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 County DOH; and
- Require compliance with the DEC approved Site Management Plan.

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 7 above.

Engineering Controls: Groundwater monitoring wells will be installed to evaluate the effectiveness of the excavation and groundwater remedies discussed in Remedy Elements 2 and 4 above. Additional groundwater remedies may be required if bulk reduction of contaminants to asymptotic levels are not achieved. Contingent upon the results of the Soil Vapor Intrusion Evaluation, discussed in Remedy Element 5 above, an active sub-slab depressurization system will be installed. (e.g., sub-slab depressurization system or groundwater treatment)

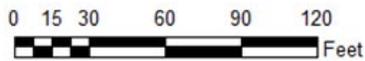
This plan includes, but may not be limited to:

- An Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- A provision should redevelopment occur to ensure no soil exceeding protection of groundwater concentrations will remain below storm water retention basin or infiltration structures.
- Descriptions of the provisions of the environmental easement including any land use and/or groundwater use restrictions;
- A provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the Site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- Provisions for the management and inspection of the identified engineering controls;
- Maintaining Site access controls and DEC 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 DEC;
- Monitoring for vapor intrusion for any buildings on the Site, as may be required by the Institutional and Engineering Control Plan discussed above.

Site Location



Site Location Map

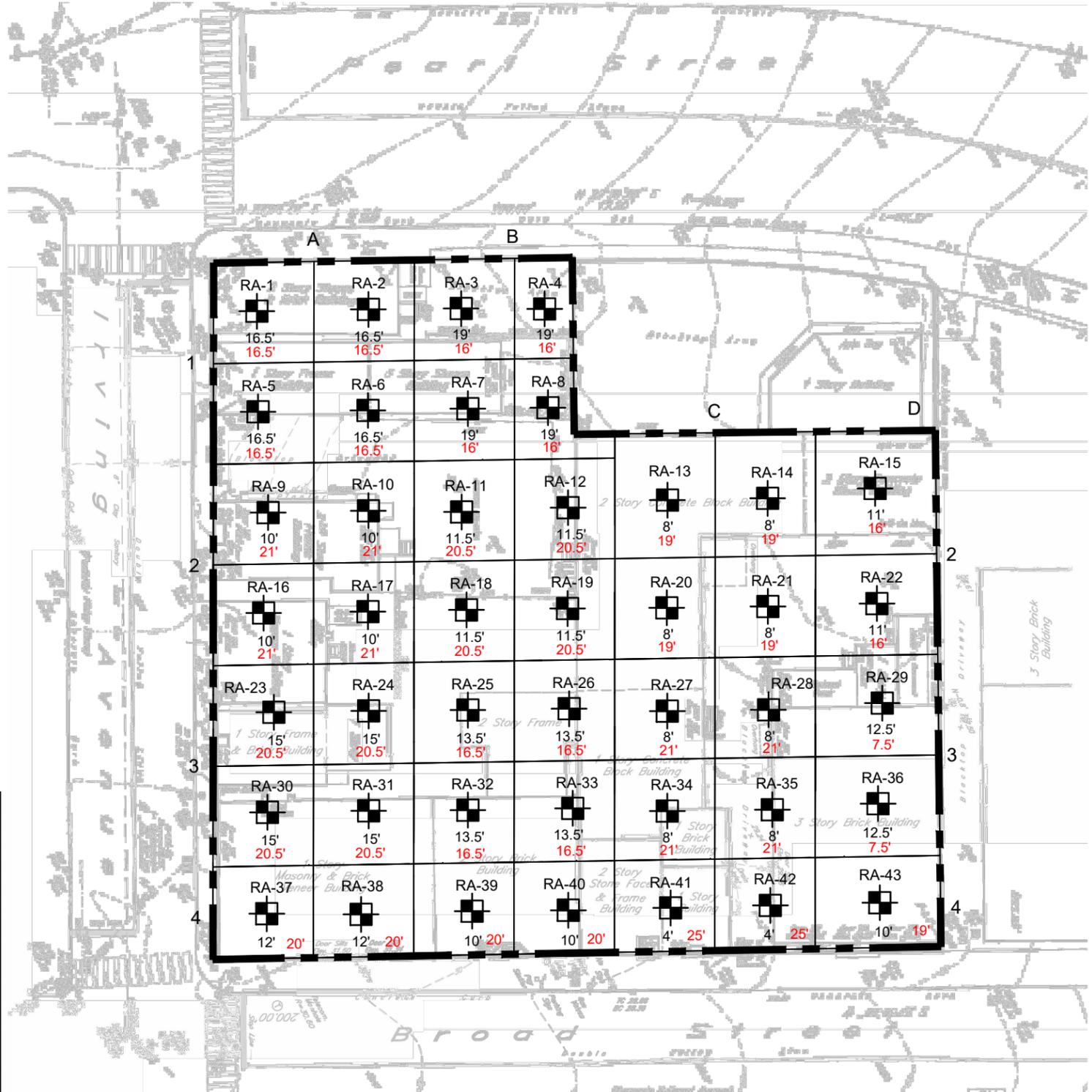
Broad Street Irving Ave Cleaners Site
Village of Port Chester, Westchester County
Site No. C360213

Figure 1

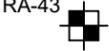
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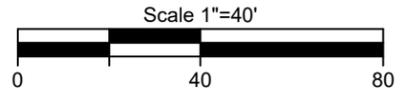


GRID	GRADE ELEV (FT AMSL)	TARGET ELEV (FT-AMSL)	CUT THICKNESS (FT)
A-1	33	16.5	16.5
A-2	31	21	10
A-3	35.5	20.5	15
A-4	32	20	12
B-1	35	16	19
B-2	32	20.5	11.5
B-3	30	21	9
B-4	30	20	10
C-2	27	19	8
C-3	29	21	8
C-4	29	25	4
D-2	27	16	11
D-3	20	7.5	12.5
D-4	29	19	10



LEGEND:

-  - PROPERTY BOUNDARY
-  - END-POINT SAMPLE
-  - PROPOSED EXCAVATION CUT THICKNESS
-  - PROPOSED EXCAVATION ELEVATION



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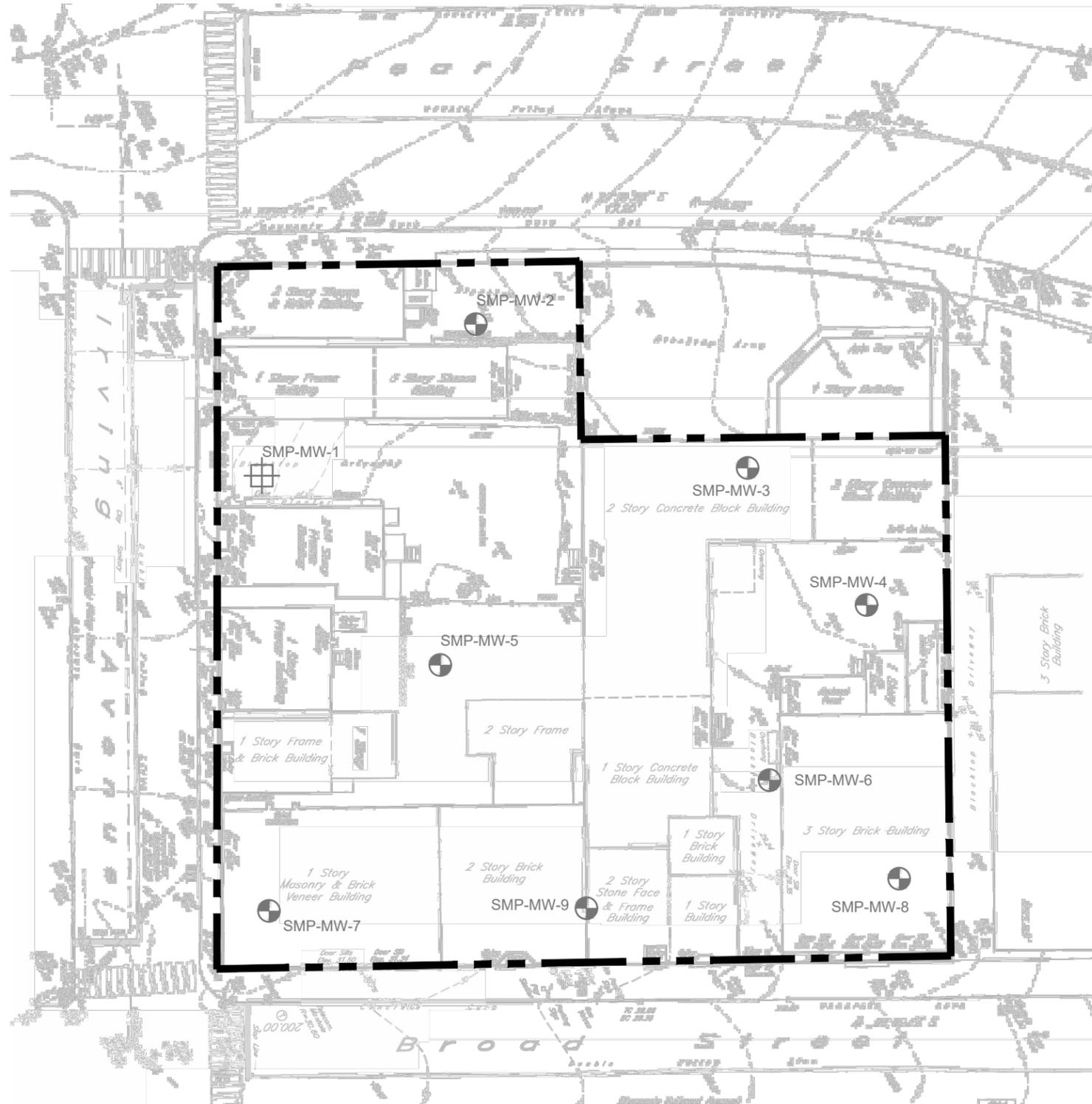
project:
 BROAD STREET - IRVING AVENUE CLEANERS SITE
 131 IRVING AVENUE
 PORT CHESTER, NEW YORK

title:
 PROPOSED EXCAVATION PLAN
 AND END-POINT SAMPLING

job no: 11246
 drawing no:

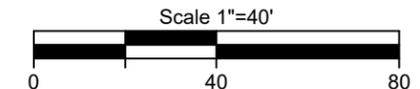
Figure 2

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LEGEND:

-  - PROPERTY BOUNDARY
-  - PROPOSED MONITORING WELL AND APPROX. LOCATION
-  - PROPOSED MULTI-LEVEL SCREENED MONITORING WELL



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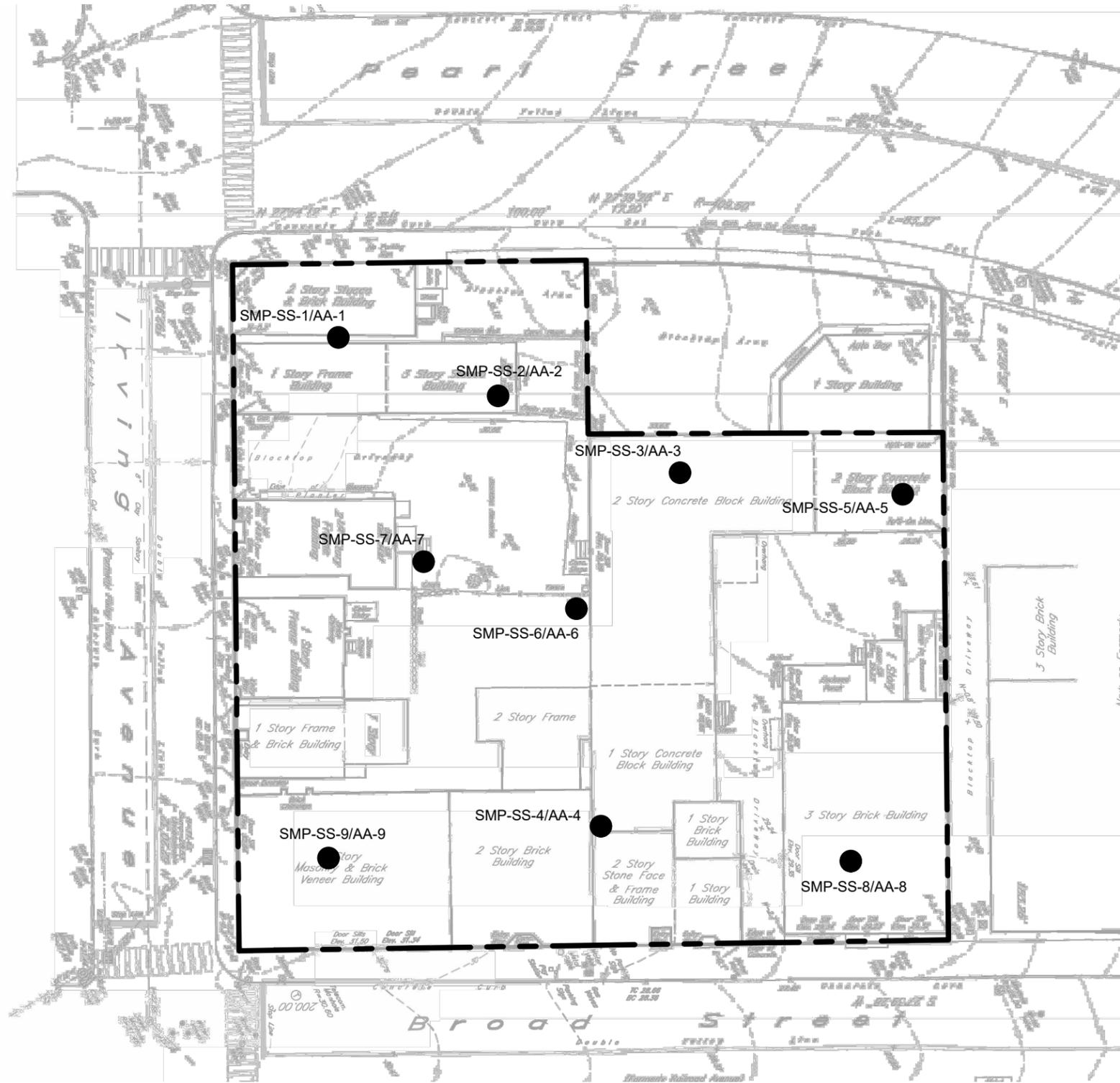
project:
 BROAD STREET - IRVING AVENUE CLEANERS SITE
 131 IRVING AVENUE
 PORT CHESTER, NEW YORK

title:
 PROPOSED WELL LOCATION PLAN

job no: 11246
 drawing no:

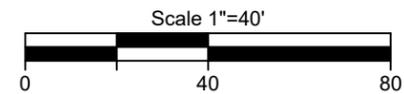
Figure 3

N:\ACAD\11246\CAD\RWP\11246 FIG-2.1 SITE PLAN.DWG 11/24/25 01:30:36PM. a1an.ward, LAYOUT:SS VAPOR PLAN



LEGEND:

- PROPERTY BOUNDARY
- PROPOSED SUB-SLAB VAPOR AND INDOOR AIR SAMPLING POINT



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title:
 PROPOSED POST REMEDIAL SUB-SLAB
 VAPOR SAMPLING PLAN

job no: 11246
 drawing no:

Figure 4