

DECISION DOCUMENT

2560-2580 Boston Road
Brownfield Cleanup Program
Bronx, Bronx County
Site No. C203171
December 2025



**Department of
Environmental
Conservation**

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

DECLARATION STATEMENT - DECISION DOCUMENT

2560-2580 Boston Road
Brownfield Cleanup Program
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Statement of Purpose and Basis

This document presents the remedy for the 2560-2580 Boston Road 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 2560-2580 Boston Road 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 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™ (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 buildings 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:

- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
- soils which exceed the protection of groundwater soil cleanup objectives (PGWSCOs), as defined by 6 NYCRR Part 375-6.8 for those contaminants found in site groundwater above standards; and
- 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 the Restricted Residential Soil Cleanup Objectives (RRSCOs) as defined by 6 NYCRR Part 375-6.8 in the upper 15 feet. If a Track 2 cleanup is achieved, a Cover System will not be a required element of the remedy.

Approximately 15,500 cubic yards of contaminated soil will be removed from the site. Collection and analysis of confirmation and documentation samples at the remedial excavation depths will be used to verify that SCOs for the site have been achieved. If

confirmation/documentation 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.

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

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

4. Groundwater Extraction and Treatment

Groundwater extraction and treatment will be implemented to treat contaminants in groundwater and to facilitate remedial excavation. The groundwater extraction system will be designed and installed so that the capture zone is sufficient to allow excavation below the static water table. Extracted groundwater will be treated and discharged to the local sewer system in compliance with all municipal requirements, including permits from NYCDEP and/or pre-treatment if warranted.

Monitoring for contaminants of concern will be required within the source areas, as well as upgradient and downgradient of the source excavation.

5. In-Situ Chemical Oxidation

In-situ chemical oxidation (ISCO) will be implemented to treat contaminants in groundwater. A chemical oxidant will be injected into the subsurface to destroy the contaminants in an approximately 2,370 square foot area located in the northern portion of the site and a 10,300 square foot area in the southern portion of the site where gasoline-related compounds were elevated in groundwater via mixing of treatment chemicals during backfilling of the source areas.

Monitoring for contaminants of concern will be required upgradient, downgradient and within the treatment areas.

6. Institutional Control

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.

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 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 monitoring well network discussed in Remedy Elements 4 and 5 above.

This plan includes, but may not be limited to:

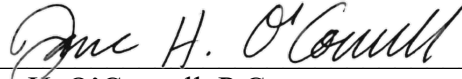
- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
 - descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
 - a provision for evaluation of the potential for soil 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 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 groundwater and soil vapor/indoor air to assess the performance and effectiveness of the remedy;
 - a schedule of monitoring and frequency of submittals to 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.

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.

12/5/2025

Date



Jane H. O'Connell, P.G.

Remedial Remediation Engineer

DECISION DOCUMENT

2560-2580 Boston Road
Bronx, Bronx County
Site No. C203171
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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 comment 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=C203171>

New York Public Library - Allerton Branch
2740 Barnes Avenue
Bronx, NY 10467
Phone: (718) 881-4240

Bronx Community Board 11
1741 Colden Ave
Bronx, NY 10462
Phone: (718) 892-6262

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

Location: The site is located at 2560-2580 Boston Road within an urbanized area of the Bronx, New York, and is identified on the Bronx County Tax Map as Tax Block 4440, Lots 16, 30, and 32. Block 4440 is bordered by Boston Road to the north, Matthews Avenue to the east, multi-family housing to the south and Barnes Avenue to the west.

Site Features: Lot 16 is currently occupied by an active one-story supermarket with a full basement used for food storage and an associated asphalt-paved parking lot. The southern half of Lot 30 is developed with a vacant two-story building with a full cellar that was most recently used as an attorney's office and was also historically used as a daycare. The northern half of Lot 30 contains a private outdoor space. Lot 32 is improved with a vacant one-story building that was most recently used as an office with an associated garage that was used for general storage. An about 6-foot-high, 6-foot-by-10-foot cellar is also present in the northwestern part of the building. The northern corner of Lot 32 is paved and adjoins the sidewalks along Boston Road and Matthews Avenue.

Current Zoning and Land Use: Following the recent zoning map amendment granted following City Environmental Quality Review, the site is now situated within a residential district (R7-2) with a commercial overlay (C2-4). R7 districts are characterized by medium-density apartment house districts generally found in the Bronx, the Upper West Side of Manhattan and Brighton Beach, Brooklyn. With regard to the commercial overlay, according to the New York City Planning Commission, "C1-1 through C1-5 and C2-1 through C2-5 districts are commercial overlays mapped within residential districts along streets that serve local retail needs. They are found extensively throughout the city's lower- and medium-density areas and occasionally in higher density districts." Land use within a half-mile radius includes residential, commercial, light industrial, institutional uses, and parks. The nearest ecological receptor is the Bronx River, located about 0.6 miles west of the site.

The proposed use is consistent with applicable zoning laws and maps.

Past Use of the Site: A review of historical records revealed that the site has been located in a densely developed urban area, characterized by commercial, residential, and industrial uses since the 1930s. The site has historically been used for various residential and commercial purposes.

Lot 16 was improved with a one-story building in the west-central part of the lot, with the remainder of the lot being used as an auto sales yard (Zodda Motor Sales) since at least 1949 through the early 1960s. The present-day supermarket was built on Lot 16 in 1965, with the associated parking lot occupying the remainder of the lot.

Lot 30 was improved with the present-day residential and commercial building as early as 1929. An aboveground storage tank (AST) is present in the western part of the building's cellar. A subsurface anomaly indicative of an underground storage tank (UST) was also encountered in the southeastern part of Lot 30 during a July 2023 Limited Subsurface Investigation (LSI) performed and cut piping was noted in the vicinity. The building is currently vacant and was historically used as a residence, an attorney's office, and a daycare.

Lot 32 was improved with a one-story office building as early as 1934. The building has historically been occupied by a mobile auto radio service (1949), an electrician (1956), an aluminum sales factory (1965), a dog training facility (1971), and a cleaning/contracting/building maintenance service (1992 - 2024). According to the owner of Lot 32, a convenience store with a fuel pump was present in the 1930s and 1940s, and the one-story building was used as an auto repair shop in the 1970s and 1980s.

Site Geology and Hydrogeology: The site elevation is about 130 feet above mean sea level. The regional topographic gradient of the surrounding area gently slopes southwest towards the Bronx River. The site is underlain by urban fill, predominantly consisting of brown to orangish-brown fine-grained sand with varying amounts of silt, gravel, brick, asphalt, and concrete, that extends to between about 3 to 14 feet below grade surface (bgs). Fill was observed to be shallowest in the western part of the site and deepest in the northcentral part of the site. Gray and/or brown fine sand with varying amounts of silt and gravel was observed below the uncontrolled fill layer. The top of competent bedrock was encountered at depths varying from about 9 feet to 43 feet bgs. Groundwater was observed between 10.5 and 15.5 feet bgs in soil borings and monitoring wells installed across the site. Groundwater elevations are highest in the southwestern/western parts of the site and groundwater flows to the northeast.

A site location map is attached as Figure 1 and a site plan is attached as 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, alternatives (or an alternative) that restrict 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 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 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
- indoor air
- sub-slab vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

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

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. 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 contaminant(s) of concern identified at this site is/are:

1,2,4-trimethylbenzene	xylene (mixed)
1,3,5-trimethylbenzene	benzo(a)anthracene
ethylbenzene	benzo(a)pyrene
naphthalene	benzo(b)fluoranthene
butylbenzene	benzo(k)fluoranthene
n-propylbenzene	chrysene
sec-butylbenzene	indeno(1,2,3-cd)pyrene

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

- groundwater
- soil
- indoor air

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, sub-slab soil vapor, and indoor air samples were analyzed for VOCs. Based upon investigations conducted to date, the primary contaminants of concern include petroleum VOCs in soil, groundwater, and soil vapor.

Soil – VOCs were compared to the restricted residential soil cleanup objectives (RRSCOs) and/or protection of groundwater soil cleanup objectives (PGSCO) for those contaminants found in groundwater exceeding SCGs. These include maximum concentrations of 1,2,4-trimethylbenzene (TMB) at 540 parts per million, or ppm (RRSCO is 52 ppm, PGSCO is 3.6 ppm), 1,3,5-TMB at 180 ppm (RRSCO is 52 ppm, PGSCO is 8.4 ppm), ethylbenzene at 100 ppm (RRSCO is 41 ppm, PGSCO is 1 ppm), naphthalene at 45 ppm (PGSCO is 12 ppm), n-butylbenzene at 25 ppm (PGSCO is 12 ppm), n-propylbenzene at 92 ppm (PGSCO is 3.9 ppm), sec-butylbenzene at 12 ppm (PGSCO is 11 ppm), and total xylenes at 210 ppm (RRSCO is 100 ppm, PGSCO is 1.6 ppm). These VOCs are indicative of petroleum releases and were found in the southern portion of the site. SVOC exceedances include maximum concentrations of benzo(a)anthracene at 30 ppm (RRSCO is 1 ppm), benzo(a)pyrene at 27 ppm (RRSCO is 1 ppm), benzo(b)fluoranthene at 37 ppm (RRSCO is 1 ppm), benzo(k)fluoranthene at 10 ppm (RRSCO is 3.9 ppm), chrysene at 28 ppm (RRSCO is 3.9 ppm), and indeno(1,2,3-cd)pyrene at 15 ppm (RRSCO is 0.5 ppm). Maximum concentrations for metals include arsenic at 19.4 ppm (RRSCO is 16 ppm), barium at 868 ppm (RRSCO is 400 ppm), and copper at 274 ppm (RRSCO is 270 ppm). No PCBs or pesticides exceeded RRSCOs. No PFAS exceeded the restricted residential use soil guidance values.

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

Groundwater – VOCs were detected in groundwater at concentrations above the Ambient Water Quality Standards and Guidance Values (AWQSGVs), including maximum concentrations of 1,2,4-TMB at 1,600 parts per billion (ppb), 1,3,5-TMB at 470 ppb, ethylbenzene at 1,400 ppb, n-butylbenzene at 23 ppb, n-propylbenzene at 300 ppb, sec-butylbenzene at 19 ppb, m,p-xylene at 2,900 ppb, and o-xylene at 1,300 ppb (AWQSGV for each of these is 5 ppb) and naphthalene at 230 ppb (AWQSGV is 10 ppb). SVOCs include maximum concentrations of phenol at 3.9 ppb (AWQSGV is 1 ppb) and 1,4-dioxane at 0.443 ppb (AWQSGV is 0.35 ppb). Dissolved metals exceeding AWQSGVs include sodium, iron, manganese, and magnesium. These are naturally occurring elements and are not considered to be site-specific contaminants of concern. Perfluorooctanoic acid (PFOA) was reported at maximum concentration of 108 parts per trillion, or ppt (AWQSGV 6.7 ppt) and perfluorooctanesulfonic acid (PFOS) was reported at a maximum concentration of 77.4 ppt (AWQSGV 2.7 ppt). No PCBs or pesticides were detected above AWQSGVs.

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

Soil Vapor, Sub-Slab Soil Vapor & Indoor Air – VOCs detected in soil vapor include maximum concentrations of 2,2,4-trimethylpentane at 2,330,000 micrograms per cubic meter (ug/m^3), cyclohexane at 11,000 ug/m^3 , n-heptane at 26,600 ug/m^3 , n-hexane at 88,500 ug/m^3 , and total xylenes at 18,650 ug/m^3 . Co-located sub-slab vapor and indoor air samples collected from the

on-site buildings detected maximum concentrations of 2,2,4-trimethylpentane at 14.7 ug/m³ in sub-slab vapor and 142 ug/m³ in the indoor air. The structure that this sample was taken from is vacant.

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

6.4: Summary of Human Exposure Pathways

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

People are not expected to come in contact with contaminated soil or groundwater as the site mostly covered with buildings and hardscape, and access to vacant parcels is restricted. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in soil vapor (air spaces within the soil) may move into buildings and affect 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. Soil vapor intrusion does not represent a concern for the site in its current condition; however, the potential exists for people to inhale site contaminants in indoor air due to soil vapor intrusion for any future on-site buildings. Environmental sampling indicates soil vapor intrusion from site contamination 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 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 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 remedy with generic soil cleanup objectives.

The selected remedy is referred to as the Soil Excavation, Groundwater Treatment and Dewatering remedy.

The elements of the selected remedy, as shown in Figures 3 and 4, 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™ (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 buildings 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:

- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
- soils which exceed the protection of groundwater soil cleanup objectives (PGWSCOs), as defined by 6 NYCRR Part 375-6.8 for those contaminants found in site groundwater above standards; and
- 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 the Restricted Residential Soil Cleanup Objectives (RRSCOs) as defined by 6 NYCRR Part 375-6.8 in the upper 15 feet. If a Track 2 cleanup is achieved, a Cover System will not be a required element of the remedy.

Approximately 15,500 cubic yards of contaminated soil will be removed from the site. Collection and analysis of confirmation and documentation samples at the remedial excavation depths will be used to verify that SCOs for the site have been achieved. If confirmation/documentation 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.

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

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

4. Groundwater Extraction and Treatment

Groundwater extraction and treatment will be implemented to treat contaminants in groundwater and to facilitate remedial excavation. The groundwater extraction system will be designed and installed so that the capture zone is sufficient to allow excavation below the static water table. Extracted groundwater will be treated and discharged to the local sewer system in compliance with all municipal requirements, including permits from NYCDEP and/or pre-treatment if warranted.

Monitoring for contaminants of concern will be required within the source areas, as well as upgradient and downgradient of the source excavation. A groundwater contour map is attached as Figure 3 and the post excavation groundwater monitoring wells are shown on Figure 4.

5. In-Situ Chemical Oxidation

In-situ chemical oxidation (ISCO) will be implemented to treat contaminants in groundwater. A chemical oxidant will be injected into the subsurface to destroy the contaminants in an approximately 12,670 square foot area located in the northern and southern portions of the site where gasoline-related compounds were elevated in groundwater via mixing of treatment chemicals during backfilling of the source areas.

Monitoring for contaminants of concern will be required upgradient, downgradient and within the treatment areas. The groundwater treatment areas are shown in Figure 5.

6. Institutional Control

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.

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 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.

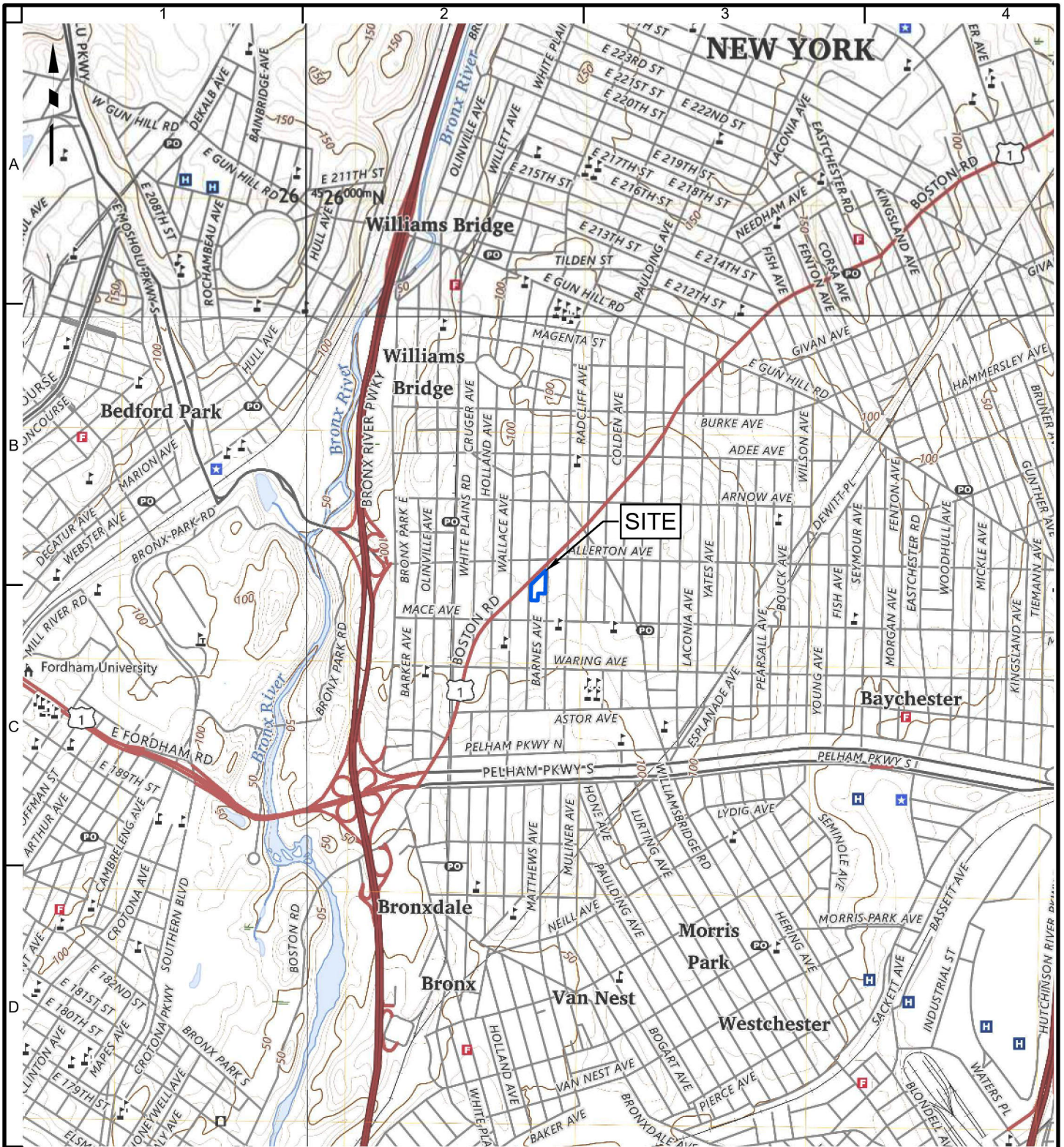
7. Site Management Plan

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 monitoring well network discussed in Remedy Elements 4 and 5 above.

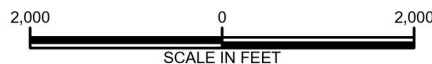
This plan includes, but may not be limited to:

- 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 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 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 groundwater and soil vapor/indoor air to assess the performance and effectiveness of the remedy;
 - a schedule of monitoring and frequency of submittals to 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.



Legend

Site Boundary



Notes:

1. Basemap adapted from United States Geological Survey (USGS) 7.5-Minute Series Topographical Maps, Flushing, Central Park, Yonkers, and Mount Vernon, Quadrangles.

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Langan International LLC
Collectively known as Langan

Project

**2560-2580 BOSTON
ROAD**

BLOCK No. 4440, LOT Nos. 16, 30, & 32
BRONX

BRONX COUNTY

NEW YORK

Figure Title

**SITE LOCATION
MAP**

Project No.

170684201

Date

8/20/2024

Scale

1"=2,000'

Drawn By

MG

Figure No.

1

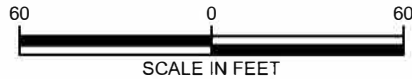


- Legend**
- Site Boundary
 - 4440 Tax Block
 - 16 Tax Parcel

Notes:
1. Aerial imagery provided through Langan's subscription to NearMap.com, flown 6/14/2024.
2. Parcel data provided by the New York City Department of City Planning.

E

WARNING: It is a violation of the NYS Education Law Article 145 for any person, unless acting under the direction of a licensed professional engineer, land surveyor or geologist, to alter this item in any way.



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Project
**2560-2580 BOSTON
ROAD**

BLOCK No. 4440, LOT Nos. 16, 30, & 32
BRONX

BRONX COUNTY

NEW YORK

Figure Title

SITE PLAN

Project No.
170684201

Date
8/20/2024

Scale
1"=60'

Drawn By
GS

Figure No.

2



Legend

- Site Boundary
- Tax Block
- Tax Parcel
- Approximate Location of Treatment Area on Lot 32
- Approximate Location of Treatment Area on Lot 16

Notes:
1. Aerial imagery provided through Langan's subscription to NearMap.com, flown 6/14/2024.
2. Parcel data provided by the New York City Department of City Planning.
3. All features shown are approximate.

E

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Project
**2560-2580 BOSTON
ROAD**
BLOCK No. 4440, LOT Nos. 16, 30, & 32
BRONX

BRONX COUNTY NEW YORK

Figure Title
**GROUNDWATER
TREATMENT AREA
LOCATION PLAN**

Project No.
170684201
Date
9/16/2025
Scale
1"=60'
Drawn By
GS

Figure No.

4