DECISION DOCUMENT

580 Gerard Former Post Office Vehicle Repair Shop
Brownfield Cleanup Program
Bronx, Bronx County
Site No. C203142
June 2022

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

DECLARATION STATEMENT - DECISION DOCUMENT

580 Gerard Former Post Office Vehicle Repair Shop
Brownfield Cleanup Program
Bronx, Bronx County
Site No. C203142
June 2022

Statement of Purpose and Basis

This document presents the remedy for the 580 Gerard Former Post Office Vehicle Repair Shop site a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the 580 Gerard Former Post Office Vehicle Repair Shop site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. Remedial Design

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

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- 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

The existing on-site building will be demolished and materials which can't 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:

- soil exceeding the 6 NYCRR Part 371 hazardous criteria for lead;
- 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.

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 unrestricted cleanup is achieved, a Cover System will not be a required element of the remedy.

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

Approximately 20,500 cubic yards of contaminated soil will be removed from the site.

3. Backfill

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

4. Excavation Dewatering and Treatment

The proposed maximum depth of excavation (27 ft bgs) is below the static water table (which is encountered at approximately 21-24 bgs); therefore, dewatering is anticipated. Extracted groundwater will either be containerized for off-site licensed or permitted disposal consistent with applicable local, state, and federal regulation rules and regulations, or will be discharged to the local combined sewer system in compliance with all municipal requirements and permits, including pre-treatment if necessary.

5. In-Situ Chemical Oxidation

In-situ chemical oxidation will be implemented to treat VOCs in groundwater. A chemical oxidant will be injected into the subsurface to destroy contaminants in the northeastern portion of the site where gasoline-related compounds were elevated in groundwater. The final design for the in-situ groundwater treatment will be provided as a separate remedial design including the selection of the chemical oxidant, location and dosage, and post-treatment monitoring.

6. 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.

Conditional Track 1
The intent of the remedy is to achieve a Track 1 unrestricted use, therefore, no environmental easement or site management plan is anticipated. If the soil vapor intrusion (SVI) evaluation is not completed prior to completion of the Final Engineering Report, then a Site Management Plan (SMP) and Environmental Easement (EE) will be required to address the SVI evaluation and implement actions as needed; if a mitigation or monitoring action is needed, a Track 1 cleanup can only be achieved if the mitigation system or other required action is no longer needed within 5 years of the date of the Certificate of Completion.

In the event that Track 1 unrestricted use is not achieved, including achievement of groundwater and soil vapor remedial objectives, the following contingent remedial elements will be required, and the remedy will achieve Track 2 restricted residential use.

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 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 6 above.
   - Engineering Controls: the vapor mitigation systems as discussed in paragraph 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;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification;
- 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; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

a) 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 to assess the performance and effectiveness of the remedy; and
   - a schedule of monitoring and frequency of submittals to the Department.

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

Declaration

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

June 15, 2022

Date

Gerard Burke, Director
Remedial Bureau B

DECISION DOCUMENT

580 Gerard Former Post Office Vehicle Repair Shop
Bronx, Bronx County
Site No. C203142
June 2022

SECTION 1: SUMMARY AND PURPOSE

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

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

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

SECTION 2: CITIZEN PARTICIPATION

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

DECInfo Locator - Web Application
https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C203142

Bronx Community Board 4
1650 Selwyn Avenue, Suite 11A
Bronx, NY 10457
Phone: (718) 299-0800

Macomb's Bridge Library - NYPL
2633 Adam Clayton Powell, Jr. Blvd
New York, NY 10039
Phone: (718) 665-6255

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

Site Location: The site is located at 580 Gerard Avenue in the Bronx. The site is located in a mixed industrial, commercial and residential neighborhood, and is situated on the block bounded by Gerard Avenue to the west, E. 151st Street to the north, Walton Avenue to the east, and E. 150th Street to the south.

Site Features: The site is a rectangular-shaped parcel of land that is currently improved with a 31,200-square foot, one-story garage building with offices. The building has a small partial basement located along the Gerard Avenue side of the building. The building is currently unoccupied and will be demolished to allow for future remedial activities to be performed.

Current Zoning and Land Use: The site is currently zoned R7A Residential with a C2-4 Commercial overlay. The surrounding properties include a single-story warehouse/garage building to the north; a two-story mixed-use building used as a storage facility and its associated parking lot to the west across Gerard Avenue; a single-story warehouse/garage building to the south across E. 150th Street; and single-family residential buildings to the east.

Past Use of the Site: From 1908, the site was vacant until the current on-site building was constructed in 1950 for use as a vehicle maintenance and storage facility for the U.S. Post Office. The Post Office was the tenant from 1950 until 2000. From 2001 through 2007, the building was utilized for automotive service, vehicle repair and parking. After 2007, the site was occupied by a construction company for general office use and storage. As of 2011, the building was vacant.

The site is registered in the NYSDEC Petroleum Bulk Storage (PBS) database under (facility ID nos. 2-333212 and 2-476021), and there are three closed spills (nos. 9007668, 9213223 and 1205845). In addition, the Post Office was a large quantity generator of hazardous waste at this site under RCRA Facility ID NY5180010451. The Post Office was listed as a small quantity generator under RCRA Facility ID NYD982727885 at this site from 1992 until 2009, even though the Post Office vacated in about 2000. Finally, a tenant named Autorama Enterprises of Bronx, using the 610 Gerard Avenue address, was listed as a generator at the site under ID

NYR000100255.

Site Geology and Hydrogeology: Based on the environmental and geotechnical soil borings completed, the site is underlain by historic fill material (brown to dark brown fine to coarse sand with varying amounts of silt, gravel, cobble, brick, slag, and concrete) ranging in thickness of 7 to 14 feet throughout most of the site, with the deeper fill in the southern portion of the site. This fill layer is underlain by native soil consisting of brown to reddish brown fine to medium sand with varying amounts of course sand, silt, gravel, and cobble. Refusal was encountered at depths ranging from 9 to 30 feet throughout the site.

The depth to groundwater in the monitoring wells was between approximately 21 and 24 feet measured from top of casing (ft toc). Water-level measurements indicate that groundwater flows to the north-northwest toward the Harlem River.

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 residential use (which allows for restricted-residential use, 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 Applicant under the Brownfield Cleanup Agreement is a Volunteer. The Applicant does not have an obligation to address off-site contamination. However, the Department has determined that this site does not pose a significant threat to public health or the environment; accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

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

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

The RI is intended to identify the nature (or type) of contamination which may be present at a site

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

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

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

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

6.1.2: RI Results

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

1,2,4-trimethylbenzene
1,3,5-trimethylbenzene
benzo(a)pyrene
benzo(b)fluoranthene
lead
perfluorooctane sulfonic acid
perfluorooctanoic acid
tetrachloroethene (PCE)
trichloroethene (TCE)

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

- groundwater

- soil

6.2: Interim Remedial Measures

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

The following IRM(s) has/have been completed at this site based on conditions observed during the RI.

IRM Hydraulic Lift Removal

The scope of work for the IRM, which commenced in April 2022, includes removal of the larger in-ground hydraulic lift located in the southeastern portion only using an excavator. Hydraulic lift removal includes dismantling and off-site removal of all underground structures including lift pistons, hydraulic oil reservoirs, subsurface piping, and control boxes that may be encountered. The pistons and reservoirs will be cleaned as necessary for disposal. This work will be documented in the Final Engineering Report.

A non-remedial action consisting of foundation element for the new building as required pursuant to section 421-a of the Real Property Tax Law will be installed in the general location of the hydraulic lift once removed, while the existing building remains in-place.

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 on the investigations done to date, the primary contaminants of concern for the site include VOCs, SVOCs, and metals in soil, and VOCs in groundwater and soil vapor.

Soil - The highest concentrations of VOCs on-site were detected in the northern section of the site at 23 - 25 feet below grade. 1,2,4-Trimethylbenzene was found at a maximum concentration of 96 parts per million (ppm), which exceeds the applicable protection of groundwater soil cleanup objectives (PGSCO) of 3.6 ppm. 1,3,5-Trimethylbenzene was found at a maximum concentration of 40 ppm (PGSCO is 8.4 ppm). The highest concentrations of SVOCs on-site were detected in the southwestern section of the site. Benzo(a)pyrene was found at maximum concentrations of 5 ppm, which exceeds the applicable unrestricted use soil cleanup objective (UUSCO) of 1 ppm. Benzo(b)fluoranthene was found at a maximum concentration of 5.6 ppm (UUSCO is 1 ppm). Lead was detected in multiple locations on the southern half of the site at a maximum concentration

of 1,110 ppm (UUSCO is 63 ppm). No emerging contaminants were detected above their respective unrestricted guidance values.

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

Groundwater - The highest concentrations of VOCs on-site were detected in the northern section of the site at concentrations exceeding Ambient Water Quality Standards (AWQS). 1,2,3-Trimethylbenze was found at a maximum concentration of 360 parts per billion (ppb), compared to the AWQS of 5 ppb. 1,3,5-Trimethylbenzene was present at a maximum concentration of 140 ppb (AWQS is 5 ppb). The emerging contaminants Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) were detected in the northern and central regions of the site at maximum concentrations of 18.2 parts per trillion (ppt) and 22.9 ppt, respectively compared to the maximum contaminant level (drinking water standard) of 10 ppt each.

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

Soil Vapor and Sub-Slab Soil Vapor - VOCs were detected at elevated concentrations in soil vapor. Tetrachloroethylene (PCE) was at a maximum concentration of 86 micrograms per cubic meter (ug/m3) in soil vapor in the northern portion of the site and trichloroethylene (TCE) was detected at a maximum concentration of 47 ug/m3 in soil vapor at the eastern edge of the site. As a result of this TCE detection, supplemental soil vapor intrusion sampling was conducted. TCE was detected beneath the on-site building in proximity to the elevated TCE soil vapor sample at 0.23 ug/m3 in sub-slab soil vapor, and PCE was detected at highest concentrations of 13 ug/m3 in soil vapor. No indoor air samples were collected since the on-site building 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.*

The site is covered by a vacant building and pavement so people are not expected to come in contact with site contaminants in soil. However, persons who enter the site could contact contaminants in the soil by digging or otherwise disturbing the soil. Contaminated groundwater is not used for drinking and the site and surrounding areas are 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 the site is vacant, inhalation of site contaminants in indoor air due to soil 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. Environmental sampling indicates soil vapor intrusion from site contamination is not 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.

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 1: Unrestricted use remedy.

The selected remedy is referred to as the Excavation and Soil Vapor Intrusion Evaluation remedy.

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

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the

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

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- 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

The existing on-site building will be demolished and materials which can't 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:

- soil exceeding the 6 NYCRR Part 371 hazardous criteria for lead;
- 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.

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 unrestricted cleanup is achieved, a Cover System will not be a required element of the remedy.

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

Approximately 20,500 cubic yards of contaminated soil will be removed from the site.

3. Backfill

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

4. Excavation Dewatering and Treatment

The proposed maximum depth of excavation (27 ft bgs) is below the static water table (which is encountered at approximately 21-24 bgs); therefore, dewatering is anticipated. Extracted

groundwater will either be containerized for off-site licensed or permitted disposal consistent with applicable local, state, and federal regulation rules and regulations, or will be discharged to the local combined sewer system in compliance with all municipal requirements and permits, including pre-treatment if necessary.

5. In-Situ Chemical Oxidation

In-situ chemical oxidation will be implemented to treat VOCs in groundwater. A chemical oxidant will be injected into the subsurface to destroy contaminants in the northeastern portion of the site where gasoline-related compounds were elevated in groundwater. The final design for the in-situ groundwater treatment will be provided as a separate remedial design including the selection of the chemical oxidant, location and dosage, and post-treatment monitoring.

6. 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.

Conditional Track 1

The intent of the remedy is to achieve a Track 1 unrestricted use, therefore, no environmental easement or site management plan is anticipated. If the soil vapor intrusion (SVI) evaluation is not completed prior to completion of the Final Engineering Report, then a Site Management Plan (SMP) and Environmental Easement (EE) will be required to address the SVI evaluation and implement actions as needed; if a mitigation or monitoring action is needed, a Track 1 cleanup can only be achieved if the mitigation system or other required action is no longer needed within 5 years of the date of the Certificate of Completion.

In the event that Track 1 unrestricted use is not achieved, including achievement of groundwater and soil vapor remedial objectives, the following contingent remedial elements will be required, and the remedy will achieve Track 2 restricted residential use.

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 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 6 above.
- Engineering Controls: the vapor mitigation systems as discussed in paragraph 5 above.

This plan includes, but may not be limited to:

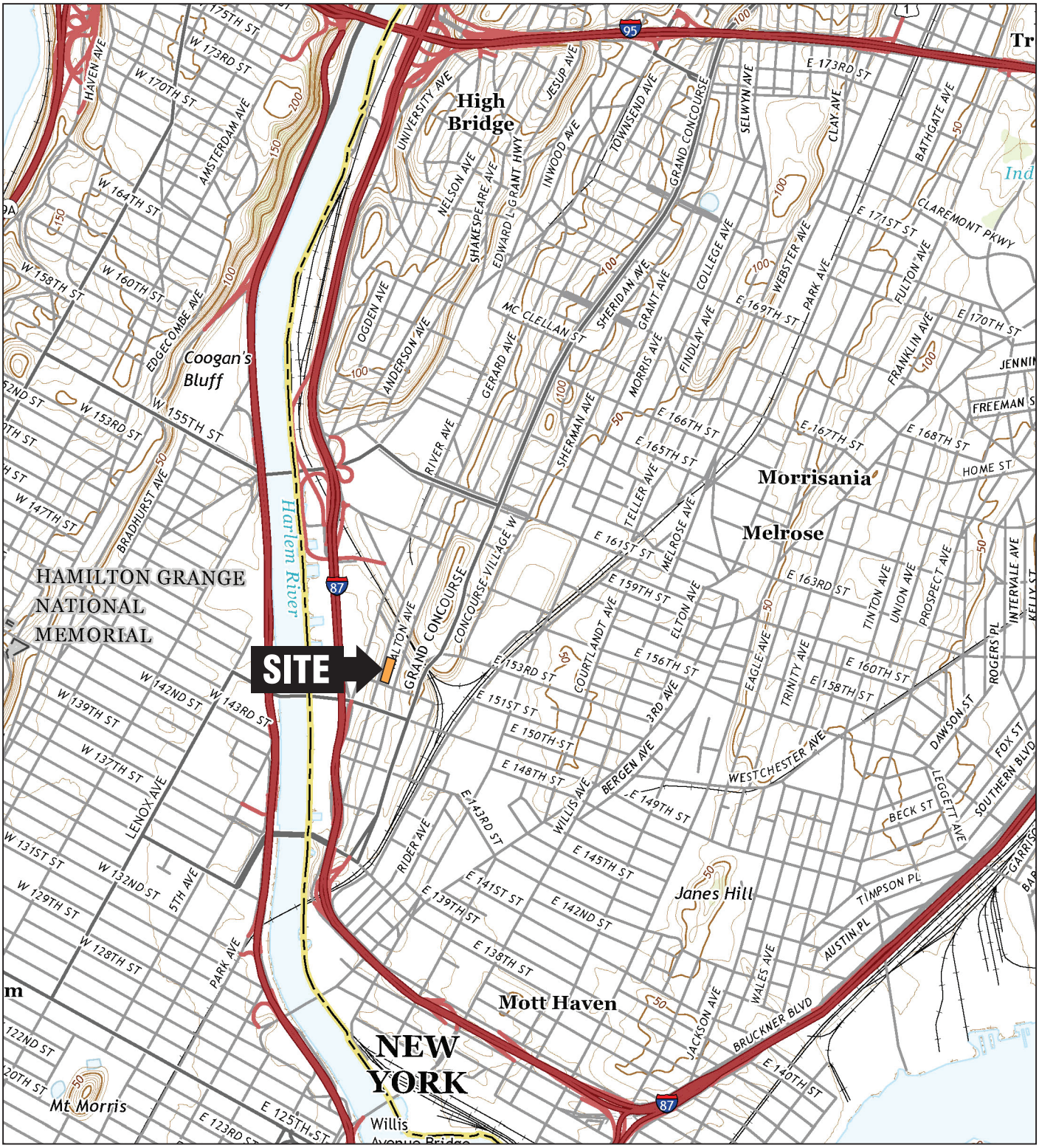
- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification;
- 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; 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

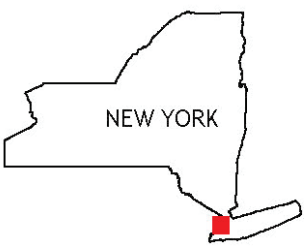
- monitoring of groundwater and soil vapor to assess the performance and effectiveness of the remedy; and
- a schedule of monitoring and frequency of submittals to the Department.

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

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



QUADRANGLE LOCATION



SOURCE:
USGS; 2019, Central Park, NY-NJ
7.5 Minute Topographic Quadrangle

N

0 2000'

Title:

SITE LOCATION MAP

580 GERARD AVENUE
BRONX, NEW YORK

Prepared for:

SB GERARD AVENUE LLC

ROUX

Compiled by: J.L.	Date: 01OCT21
Prepared by: B.H.C..	Scale: AS SHOWN
Project Mgr: J.L.	Project: 3523.0001Y000
File: 3523.0001Y107.01.CDR	

FIGURE 1

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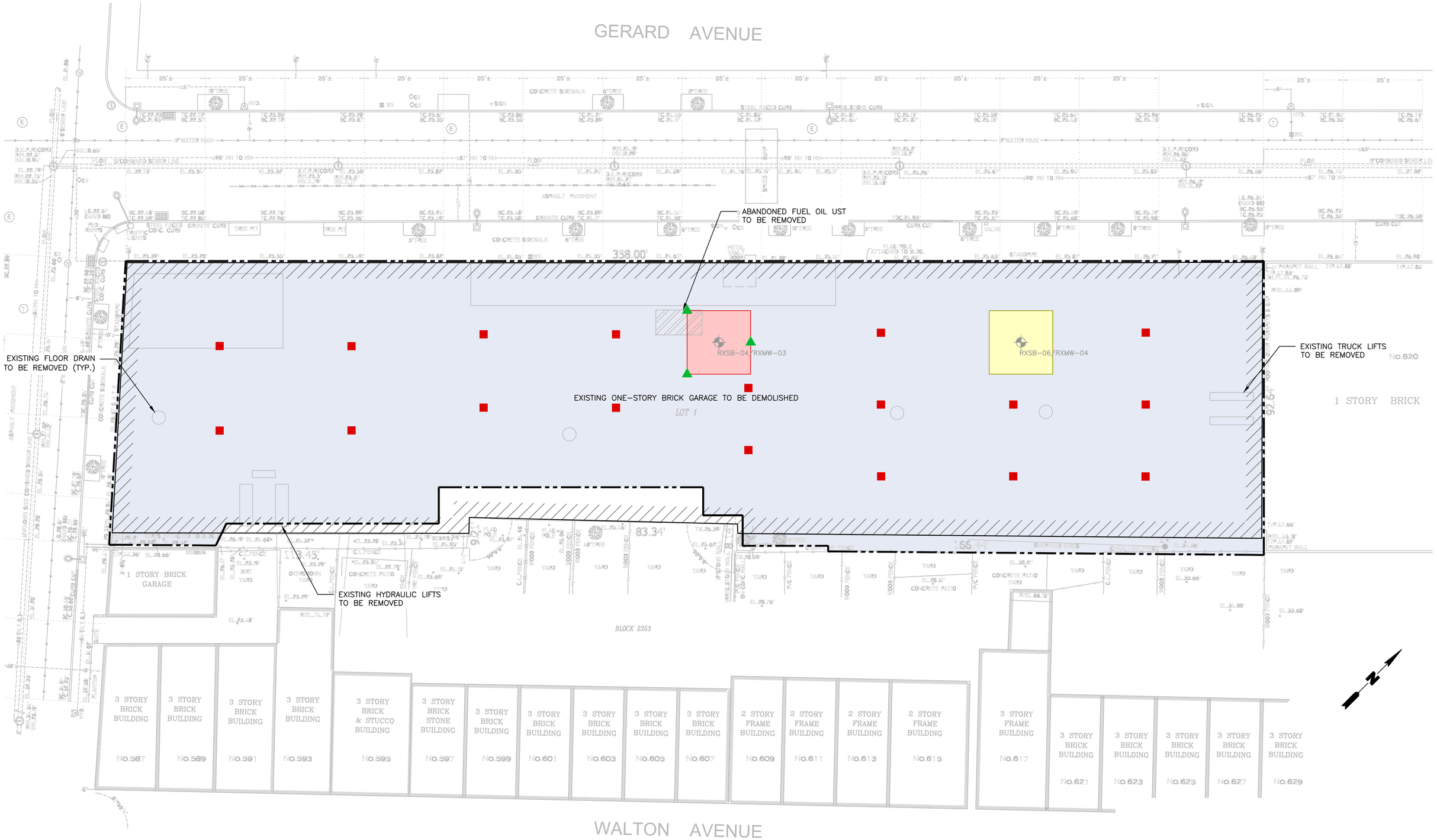

LEGEND

- BCP SITE BOUNDARY
- PROPOSED LIMITS OF EXCAVATION TO A MINIMUM OF 16 FT BLS OR DEEPER TO MEET NYSDEC UUSCOs
- EXISTING BUILDING
- CHROMIUM HOT SPOT EXCAVATION TO 27 FT BLS OR BEDROCK
- IN-SITU CHEMICAL OXIDATION AREA/VOC HOT SPOT EXCAVATION AREA TO 27 FT BLS
- PROPOSED BOTTOM CONFIRMATION SAMPLE
- PROPOSED SIDEWALL CONFIRMATION SAMPLE
- RXSB-04/RXMW-03 — RI SOIL BORING AND GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

BCP	BROWNFIELD CLEANUP PROGRAM
BLS	BELOW LAND SURFACE
NYSDEC	NEW YORK STATE DEPARTMENT OF ENNRIONMENTAL CONSERVATION
RI	REMEDIAL INVESTIGATION
UUSCOs	PART 375 UNRESTRICTED USE SOIL CLEANUP OBJECTIVES
VOCs	VOLATILE ORGANIC COMPOUNDS

NOTES

1. FOLLOWING EXCAVATION TO 16 FT BLS, EXCAVATION BOTTOM CONFIRMATION SAMPLES WILL BE COLLECTED AT A RATE OF 1 SAMPLE PER 1,500 SQUARE FEET. SAMPLES WILL BE ANALYZED FOR THE FULL SUITE OF PART 375 PARAMETERS AND EMERGING CONTAMINANTS OF CONCERN. SIDEWALL CONFIRMATION SAMPLES ARE NOT REQUIRED BASED ON EXCAVATION EXTENDING TO BCP SITE BOUNDARY.
2. IN THE CHROMIUM HOT SPOT EXCAVATION AREA, SIDEWALL SAMPLES WILL BE COLLECTED AT A RATE OF 1 SAMPLE PER 30 LINEAR FEET. BOTTOM CONFIRMATION SAMPLES WILL BE COLLECTED AT A RATE OF 1 SAMPLE PER 900 SQUARE FEET IF BEDROCK IS NOT ENCOUNTERED.
3. A WORK PLAN FOR IMPLEMENTATION OF IN-SITU CHEMICAL OXIDATION (ISCO) WILL BE PROVIDED TO NYSDEC UNDER SEPARATE COVER. THE WORK PLAN WILL INCLUDE POST-ISCO SAMPLING TO EVALUATE THE PERFORMANCE OF THE REMEDY FOR GROUNDWATER AND FOR SOIL WITHIN THE VOC HOT SPOT EXCAVATION AREA.
4. BACKFILL WILL MEET NYSDEC UUSCOS. FILL MATERIALS WITH LESS THAN 10 PERCENT PASSING THE NUMBER 80 SIEVE (I.E. STONE, GRAVEL, ETC.) DO NOT REQUIRE SAMPLING.
5. TEMPORARY DEWATERING FOR HOT SPOT EXCAVATION, CONSTRUCTION OF ELEVATOR PITS, FOOTINGS, AND OTHER FOUNDATION COMPONENTS SHALL COMPLY WITH FEDERAL, STATE, AND LOCAL RULES AND REGULATIONS. EXTRACTED GROUNDWATER SHALL EITHER BE CONTAINERIZED FOR OFF-SITE LICENSED OR PERMITTED DISPOSAL OR TREATED ON-SITE AND DISCHARGED TO THE CITY SEWER SYSTEM UNDER APPROPRIATE PERMITS.
6. A VAPOR BARRIER SYSTEM (MINIMUM THICKNESS OF 20 MIL) SHALL BE INSTALLED UNDER THE BUILDING FOUNDATION'S SLAB AND UP THE FOUNDATION WALLS.

20' 0 20'

Title:

REMEDIAL ALTERNATIVE 1: TRACK 1 CLEANUP

580 GERARD AVENUE
BRONX, NEW YORK

Prepared for:

SB GERARD AVENUE LLC

ROUX

Compiled by: N.P.	Date: 30AUG21	FIGURE 9
Prepared by: G.M.	Scale: AS SHOWN	
Project Mgr: J.L.	Project: 3523.0001Y000	
File: 3523.0001Y107.02.DWG		

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