# DECISION DOCUMENT

90-02 168th Street Site
Brownfield Cleanup Program
Jamaica, Queens County
Site No. C241243
November 2021


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

# DECLARATION STATEMENT - DECISION DOCUMENT

90-02 168th Street Site
Brownfield Cleanup Program
Jamaica, Queens County
Site No. C241243
November 2021

**Statement of Purpose and Basis**

This document presents the remedy for the 90-02 168th Street 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 90-02 168th Street 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;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at

a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

**2. Excavation**

Excavation and off-site disposal of:

- all on-site soils which exceed unrestricted SCOs, as defined by 6 NYCRR Part 375-6.8 in the Track 1 area of the site;
- all on-site soils which exceed restricted residential SCOs as defined by 6 NYCRR Part 375-6.8 in the upper 2 feet in the Track 4 area of the site; and
- all on-site soils exceeding protection of groundwater soil cleanup objectives (PGWSCOs).

Approximately 26,500 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 complete backfilling of the excavation and establish the designed grades at the site.

**4. Cover System**

A site cover will be required in the Track 4 area of the site to allow for restricted residential use of the site where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

**5. Vapor Intrusion Evaluation**

As a 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. Institutional Controls**

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.

**7. Site Management Plan**

A Site Management Plan is required for all portions of the Site that do not achieve a Track 1 unrestricted use cleanup, 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.
   - Engineering Controls: The cover system for the Track 4 area of the site as described in Section 4.

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;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 4 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b) Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
   - 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.

November 22, 2021

Date

Gerard Burke, Director
Remedial Bureau B

# DECISION DOCUMENT

90-02 168th Street Site
Jamaica, Queens County
Site No. C241243
November 2021

## 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=C241243

Queens Community Board 12
90-28 161st Street
Jamaica, NY 11432
Phone: 718-658-3308

Queens Public Library - Central Library

89-11 Merrick Boulevard
Jamaica, NY 11432
Phone: 718-990-0700

**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 90-02 168th Street, Jamaica, NY. The approximately 2.28-acres site is bounded to the north by 90th Avenue, to the east by 168th Street, to the west by a church complex, a religious bookstore, and residential buildings, and to the south by commercial retail buildings. The site is located in a predominantly mixed-use commercial and residential neighborhood with some religious and institutional uses.

Site Features:
The site is paved and is being used as a public parking lot. The parking lot is enclosed in chain-link fencing, with gated entrances, each with small metal and concrete attendant shelters.

Current Zoning and Land Use:
The site is located in a C4-5X (commercial) district. The site is paved and is currently used as a parking lot with three metal and concrete attendant shelters. The closest residential zone is directly to the north of the site, starting on 90th Avenue and continuing north.

Past Use of the Site:
According to Sanborn maps, the site was developed prior to 1886 with residential dwellings and stables. Commercial properties were present on the site by 1925 including a plumbing shop and paint storage shed. An auto repair shop and church were present on the northern portion of the property in the 1940s and 1950s. By 1963 all on-site structures were demolished, and the property has since been utilized for parking.

Site Geology and Hydrogeology:
The surface topography at the site is relatively level and lies at an elevation at approximately 60 feet above mean sea level. The regional surface topography slopes in a south-southeast direction. Subsurface materials consist of historic fill (including sand with coarse to fine gravel, silt, and some brick fragments) from the surface to a depth of approximately 9 feet below grade surface (bgs). The fill material is generally underlain by native material consisting of sand and silt to

approximately 102 feet bgs. Bedrock was not encountered during previous site investigations.

Groundwater is present at depths of approximately 38 feet bgs, as measured from monitoring wells on the site. Groundwater flows in a southwesterly direction towards Jamaica Bay, located approximately 3.5 miles away. Groundwater in this area of Brooklyn is not used as a source of potable water.

A site location map is attached as Figure 1.

## SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) were/was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

## SECTION 5: ENFORCEMENT STATUS

The Applicant(s) under the Brownfield Cleanup Agreement is a/are Volunteer(s). The Applicant(s) does/do 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:

| | |
|---|---|
| fluoranthene | cadmium |
| benzo(a)anthracene | lead |
| benzo(a)pyrene | mercury |
| benzo(b)fluoranthene | selenium |
| benzo(k)fluoranthene | zinc |
| chrysene | chloroform |
| phenanthrene | dieldrin |
| dibenz[a,h]anthracene | trichloroethene (TCE) |
| indeno(1,2,3-CD)pyrene | tetrachloroethene (PCE) |
| pyrene | perfluorooctane sulfonic acid |
| arsenic | perfluorooctanoic acid |

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.

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

## 6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), per- and polyfluoroalkyl substances (PFAS), and pesticides. Soil vapor was sampled for VOCs. Based on the investigations conducted to date, the primary contaminants of concern are SVOCs and metals in soil and groundwater, and VOCs in soil vapor.

Soil - SVOC exceedances of the unrestricted use soil cleanup objectives (UUSCOs) included fluoranthene at a maximum concentration of 620 parts per million (ppm) compared to the UUSCO of 30 ppm, benzo(a)anthracene at a maximum concentration of 220 ppm (UUSCO is 1 ppm), benzo(a)pyrene at a maximum concentration of 190 ppm(UUSCO is 1 ppm), benzo(b)fluoranthene at a maximum concentration of 240 ppm (UUSCO is 1 ppm), benzo(k)fluoranthene at a maximum concentration of 46 ppm (UUSCO is 0.8 ppm), chrysene at a maximum concentration of 150 ppm (UUSCO is 1 ppm), phenanthrene at a maximum concentration of 570 ppm (UUSCO is 100 ppm), dibenzo(a,h)anthracene at a maximum concentration of 24 ppm (UUSCO is 0.33 ppm), indeno(1,2,3-cd)pyrene at a maximum concentration of 130 ppm (UUSCO is 0.5 ppm), and pyrene at a maximum concentration of 440 ppm (UUSCO is 100 ppm).

Metal exceedances included arsenic (max. of 96.1 ppm; UUSCO is 13 ppm), cadmium (max. of 10.5 ppm; UUSCO is 2.5 ppm), lead (max. of 1740 ppm; UUSCO is 63 ppm), mercury (max. of 9.84 ppm; UUSCO is 0.18 ppm), and zinc (max. of 3890 ppm; UUSCO is 109 ppm).

Perfluorooctanesulfonic acid (PFOS) was also detected in one soil boring at 0.931 parts per billion (ppb) compared to the applicable unrestricted use guidance value of 0.88 ppb.

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

Groundwater - Exceedances of the NYSDEC Ambient Groundwater Quality standards (AWQS) included chloroform (max of 31 ppb; AWQS 7 ppb), dieldrin (max of 0.021 ppb; AWQS 0.004 ppb), perfluorooctanoic acid (PFOA) (max of 38.6 parts per trillion (ppt); Maximum

Contaminant Level (MCL) [drinking water standard] of 10 ppt), and PFOS (max of 34.2 ppt; MCL 10 ppt). There are no public water supply wells within a half a mile and there is a municipal prohibition for use of groundwater at the site.

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

Soil Vapor - Multiple VOCs were detected in the soil vapor including trichloroethene (max. of 71.5 micrograms per cubic meter, or ug/m3) and tetrachloroethene (max. of 113 ug/m3).

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.*

Direct contact with contaminants in the soil is unlikely because the majority of the site is covered with pavement. 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 the indoor air quality. This process is referred to as soil vapor intrusion. Because there is no on-site building, 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 and occupancy. Environmental sampling indicates soil vapor intrusion from site contaminants is not a concern for off-site structures.

### 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.

**Soil Vapor**

**RAOs for Public Health Protection**

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

## SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Multiple Cleanup Tracks remedy.

The selected remedy is referred to as the Soil Excavation and Partial Cover System 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;
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- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

**2. Excavation**

Excavation and off-site disposal of:

- all on-site soils which exceed unrestricted SCOs, as defined by 6 NYCRR Part 375-6.8 in the Track 1 area of the site;
- all on-site soils which exceed restricted residential SCOs as defined by 6 NYCRR Part 375-6.8 in the upper 2 feet in the Track 4 area of the site; and
- all on-site soils exceeding protection of groundwater soil cleanup objectives (PGWSCOs).

Approximately 26,500 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 complete backfilling of the excavation and establish the designed grades at the site.

**4. Cover System**

A site cover will be required in the Track 4 area of the site to allow for restricted residential use of the site where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

**5. Vapor Intrusion Evaluation**

As a 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. Institutional Controls**

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.

**7. Site Management Plan**

A Site Management Plan is required for all portions of the Site that do not achieve a Track 1

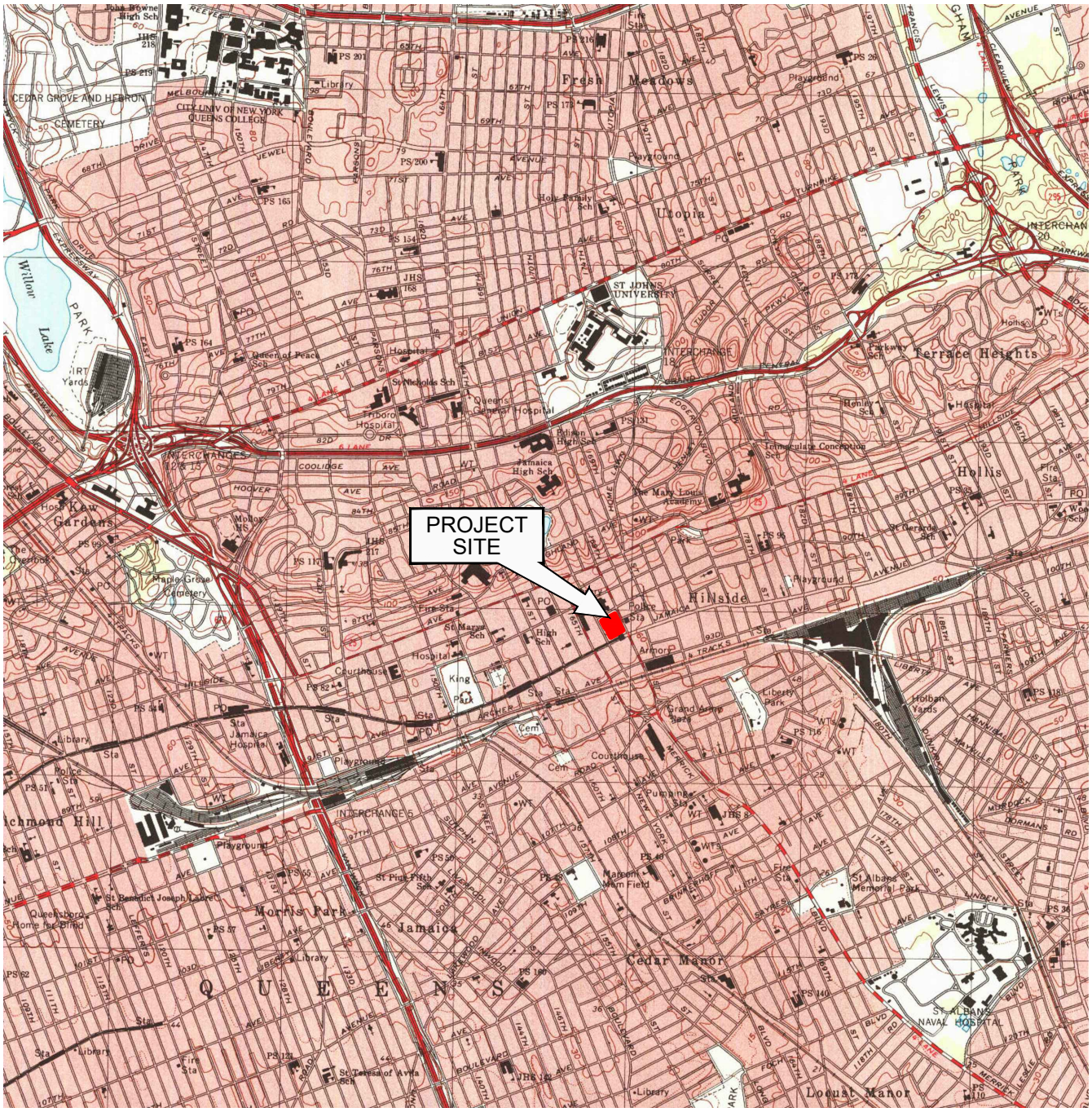
unrestricted use cleanup, which includes the following:

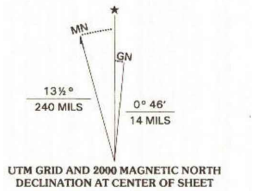
a) an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
   - Institutional Controls: The Environmental Easement discussed in Paragraph 6.
   - Engineering Controls: The cover system for the Track 4 area of the site as described in Section 4.

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;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 4 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b) Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
   - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.




UTM GRID AND 2000 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET


QUADRANGLE LOCATION

| | | |
|---|---|---|
| 1 | 2 | 3 |
| 4 | | 5 |
| 6 | 7 | 8 |

1 Central Park
2 Flushing
3 Sea Cliff
4 Brooklyn
5 Lynbrook
6 Coney Island
7 Far Rockaway
8 Lawrence

ADJOINING 7.5' QUADRANGLE NAMES

FIG-1

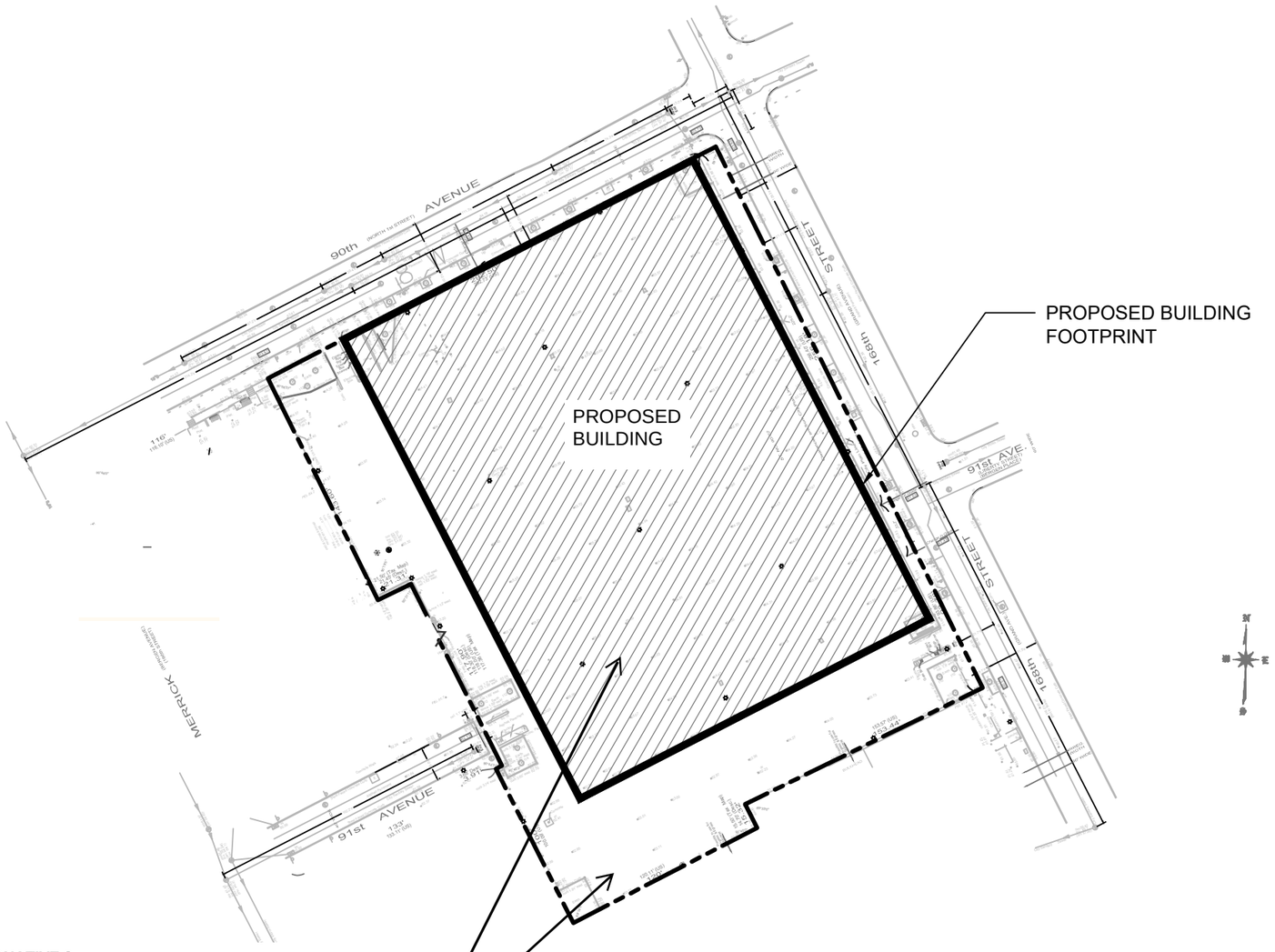
90-02 168TH STREET
QUEENS, NY

SITE LOCATION MAP

SESI
CONSULTING ENGINEERS
SOILS / FOUNDATIONS
SITE DESIGN
ENVIRONMENTAL
12A MAPLE AVE. PINE BROOK, N.J. 07058 PH: 973-808-9050

DRAWN BY: yy
CHECKED BY: FL
SCALE: N.T.S.
DATE: 04/15/2021
JOB NO.: 10831

N:\ACAD\10831\CAD\RAWP\10831 – FIG–1.1 – SITE LOCATION PLAN.DWG 04/13/21 09:29:11AM, jenny, LAYOUT:FIG–1.1




**ALTERNATIVE 3**

TRACK 1 EXCAVATION AREA
(EXCAVATION TO 10 FT INSIDE BUILDING FOOTPRINT)

TRACK 4 EXCAVATION AREA
(EXCAVATION TO 2 FT OUSTIDE BUILDING FOOTPRINT)

LEGEND:

- SITE BOUNDARY
- PROPOSED BUILDING FOOTPRINT

SCALE: 1"=80'

0 80 160

REFERENCE:
SITE INFORMATION AND PLAN PREPARED BY MONTROSE SURVEYING CO. LLP.. DATED JUNE 14, 2019.



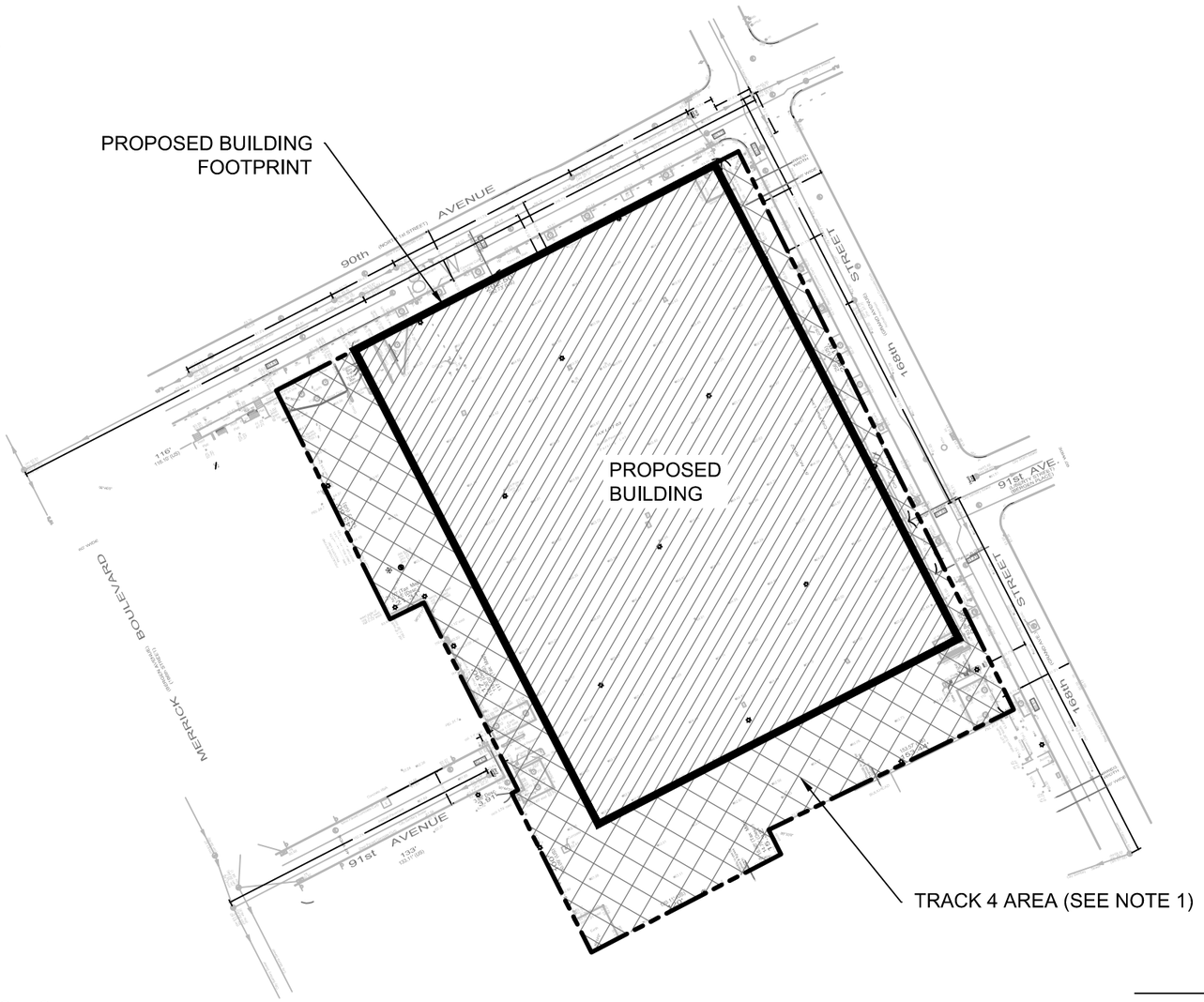
SESI CONSULTING ENGINEERS
SOILS / FOUNDATIONS
SITE DESIGN
ENVIRONMENTAL
12A MAPLE AVE. PINE BROOK, N.J. 07058 PH: 973-808-9050

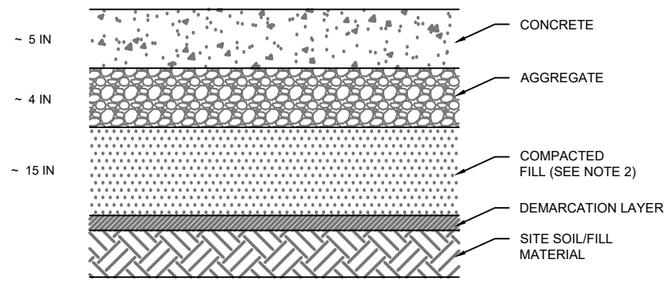
dwg by: JLB
chk by: EK
scale: AS NOTED
date: 05/172021

project:
REMEDIAL ACTION WORK PLAN
90-02 168TH STREET JAMAICA
QUEENS, NY

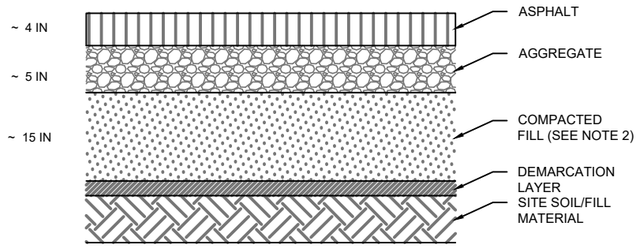
title:
REMEDIAL EXCAVATION PLAN

job no: 10831
drawing no:
FIG-2

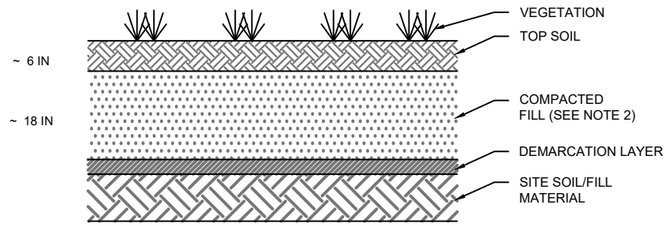



CONCRETE/SIDEWALK DETAIL
NTS




ASPHALT COVER DETAIL
NTS




SOIL/VEGETATED COVER DETAIL
NTS

NOTES:

1. TRACK 4 AREA WILL BE EXCAVATED TO 2 FT. BELOW GRADE SURFACE (BGS) AND A COVER SYSTEM WILL BE INSTALLED. THE TYPE OF COVER SYSTEM TO BE INSTALLED WILL BE EITHER A VEGETATED, CONCRETE, OR ASPHALT COVER SYSTEM. SEE COVER SYSTEM DETAILS FOR TYPICAL COVER SYSTEM CROSS-SECTIONS.
2. FILL MATERIAL MEETING NYS RESTRICTED RESIDENTIAL SOIL CLEAN UP OBJECTIVES (RRSCO's) WILL BE USED FOR COVER SYSTEM CONSTRUCTION.

LEGEND:

- SITE BOUNDARY
- PROPOSED BUILDING FOOTPRINT
- TRACK 4 AREA - EXCAVATION TO 2 FT BGS AND INSTALLATION OF COVER SYSTEM

SCALE: 1"=80'

0 80 160



REFERENCE:
SITE INFORMATION AND PLAN PREPARED BY MONTROSE SURVEYING CO. LLP.. DATED JUNE 14, 2019.

SESI CONSULTING ENGINEERS
SOILS / FOUNDATIONS
SITE DESIGN
ENVIRONMENTAL
12A MAPLE AVE. PINE BROOK, N.J. 07058 PH: 973-808-9050

dwg by: JLB
chk by: EK
scale: AS NOTED
date: 09/16/2021

project: 90-02 168TH STREET QUEENS, NY

title: COVER SYSTEM PLAN

job no: 10831
drawing no: FIG-3