DECISION DOCUMENT

The Crossing at Jamaica Station
Brownfield Cleanup Program
Queens, Queens County
Site No. C241183
July 2017

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

DECLARATION STATEMENT - DECISION DOCUMENT

The Crossing at Jamaica Station
Brownfield Cleanup Program
Queens, Queens County
Site No. C241183
July 2017

Statement of Purpose and Basis

This document presents the remedy for the The Crossing at Jamaica Station 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 The Crossing at Jamaica Station 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, and to be consistent with the requirements

of an e-designation by New York City, any future on-site buildings will include, at a minimum, a 20-mil water/vapor barrier to improve energy efficiency as an element of construction.

2. Excavation

Excavation and off-site disposal of all on-site soil which exceeds unrestricted use SCOs, as defined by 6 NYCRR Part 375-6.8. The removal of materials from the site will include: (1) excavation and off-site disposal of soil to comply with unrestricted use SCOs, plus additional soil/fill as needed for the proposed foundation; (2) removal of any petroleum storage tanks, fill ports, and vent lines encountered; and (3) removal of subsurface building materials from demolition. The remedial excavation will coincide with the development-related excavation.

Approximately 35,000 tons of contaminated soil will be removed from the site and disposed of at facilities licensed to accept such material.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) for unrestricted use may be brought in to replace the excavated soil and establish designed grades at the site, although the Volunteer does not currently anticipate the use of clean fill.

3. 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.

4. Local Institutional Controls

If no EE or SMP is needed to achieve soil, groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Article 141 of the NYCDOH code, which prohibits potable use of groundwater without prior approval.

Contingent Track 1

In the event that Track 1 unrestricted use is not achieved, including achievement of groundwater and/or soil vapor remedial objectives, the following contingent remedial elements will be required and the remedy will achieve a Track 4 restricted residential cleanup at a minimum, and will include imposition of a site cover (as a contingency if soil greater than 2 feet but less than 15 feet deep does not meet the restricted residential SCOs), an environmental easement, and a site management plan as described below.

5. Cover System

If a Track 1 cleanup is not achieved, a Track 4 remedy will include a site cover. A site cover will be required to allow for restricted residential use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material 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, cement, paved surface parking areas, sidewalks, building foundations and building slabs.

6. 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, commercial, and industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and
- require compliance with the Department approved Site Management Plan.

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 Paragraph 6 above.
   - Engineering Controls: The cover system 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;
   - a provision for evaluation of the potential for soil vapor intrusion for any buildings developed 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 2 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. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
   - monitoring of the cover system to assess the performance and effectiveness of the

remedy;

- a schedule of monitoring and frequency of submittals to the Department; and
- monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

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.

8/23/17

Date

Gerard Burke, Director
Remedial Bureau B

DECISION DOCUMENT

The Crossing at Jamaica Station
Queens, Queens County
Site No. C241183
July 2017

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, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

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:

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

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

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, Voluntary 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 approximately 58,000-square feet and is located in an urban area of Jamaica, Queens. The site is abutted to the north by Archer Avenue, a commercial building to the east, LIRR tracks to the south, and Sutphin Boulevard to the west. Underground E and J Metropolitan Transit Authority (MTA) subway tunnels are located to the north along Archer Avenue.

Site Features
Prior to demolition, the site consisted of vacant commercial buildings, and undeveloped asphalt-paved lots. These structures were demolished in May 2016.

Current Zoning and Land Use
The site is currently zoned as C6-4 (commercial with a residential overlay) within Special District DJ-Downtown Jamaica, and is subject to a NYC E-Designation for Air Quality, Window Wall Attenuation and Alternate Ventilation, Underground Gasoline Storage Tanks Testing Protocol and Exhaust Stack Location Limitations. The surrounding area is currently developed for a combination of commercial and utility right-of-ways, with some industrial and manufacturing uses further south of the site. Mixed residential and commercial buildings are located approximately 270 feet north of the site.

Past Use of the Site
Historic uses at the site include: various residential, commercial and automotive/industrial uses including a filling station between 1942 and 1951; unspecified commercial uses; automotive repair shops between 1981 and 2007; a garage, a kitchen cabinet manufacturer, and a garage door company with two buried gasoline storage tanks between 1942 and 1951; and residential, commercial, and religious uses. The site is listed in the Petroleum Bulk Storage (PBS) database for a 3,510-gallon heating oil aboveground storage tank (AST); Spill database for closed-status Spill No. 0013582; and Historic Auto Stations (EDR US HIST Auto Station) for on-site auto repair operation between 2001 and 2003.

Site Geology and Hydrogeology
The site is approximately 50 feet above the North American Vertical Datum (an approximation of mean sea level). Based on previous subsurface investigations, groundwater was encountered at depths of approximately 24 to 25 feet below grade, but may fluctuate seasonally and with changing

weather conditions. Regional groundwater flow is southerly towards Jamaica Bay, located approximately 3 miles south of the site. Underlying groundwater in this part of Queens is not used for potable supply purposes. As such, no potable resources would be threatened by local groundwater contamination.

According to the results of previous investigations, stratigraphy of the site, from the surface down, consists of approximately 3 to 10 feet of historical fill material (including sand, silt, crushed rock, concrete, asphalt, and brick) underlain by apparent native sand, silt, gravel, and trace clay to approximately 16 feet below grade. Bedrock was not encountered during previous investigations.

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, an alternative which allows for unrestricted use of the site was evaluated.

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

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:

benzo(a)anthracene	indeno(1,2,3-CD)pyrene
benzo(a)pyrene	lead
benzo(b)fluoranthene	tetrachloroethene (PCE)
dibenz[a,h]anthracene	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) are currently being completed at this site based on conditions observed during the RI.

Soil Removal

Remedial activities included excavation of a minimum of 2 feet of soil/fill exceeding unrestricted use Soil Cleanup Objectives (SCOs). Approximately 6,300 tons of contaminated soil were removed (i.e., from the upper 2 feet of soil).

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), and pesticides. Based upon investigations conducted to date, the primary contaminants of concern include lead and SVOCs in soil, chloroform in groundwater, and tetrachlorothene (PCE) and trichloroethene (TCE) in soil vapor.

Soil - Lead is found in shallow soil across the middle one-third of the property. The concentrations of lead found on site ranged from 460 part per million (ppm) to 1,570 ppm, which exceed the soil cleanup objective (SCO) for unrestricted use (63 ppm). SVOCs were also detected in concentrations exceeding SCOs for unrestricted use (SCOs noted in parenthesis) for benzo(a)anthracene (1 ppm) with concentrations that ranged from 1.1 ppm to 5.1 ppm, benzo(a)pyrene (1 ppm) with concentrations that ranged from 2.5 ppm to 6.9 ppm, benzo(b)fluoranthene (1 ppm) with concentrations that ranged from 1.3 ppm to 8.2 ppm, dibenz(a,h)anthracene (0.33 ppm) with concentrations that ranged from 0.49 ppm to 1.9 ppm, and indeno(1,2,3-CD)pyrene (0.5 ppm) with concentrations that ranged from 0.58 ppm to 9.4 ppm. Data does not indicate that there are off-site impacts in soil related to the site. Other contaminant classes, such as VOCs, pesticides, and PCBs were not detected at concentrations exceeding the restricted residential SCOs.

Groundwater - Chloroform is found in groundwater at discrete locations at both east and west ends of the site, exceeding groundwater standards (7 parts per billion or ppb), with a maximum concentration of 50 ppb. Three SVOCs were detected in groundwater samples and included benzo(a)pyrene up to 0.29 ppb (with no standard), benzo(k)fluoranthene up to 0.31 ppb (standard of 0.002 ppb), and indeno(1,2,3-cd)pyrene up to 0.55 ppb (standard of 0.002 ppb). Metals were detected in the unfiltered groundwater samples, with two metals (lead and sodium) exceeding groundwater standards. Lead was detected up to 29.4 ppb (standard of 25 ppb) and sodium was detected up to 415,000 ppb (standard of 200,000 ppb). Data does not indicate that there are off-

site impacts in groundwater related to the site. Other contaminant classes, such as VOCs, pesticides, and PCBs were not detected.

Soil Vapor - PCE and TCE were detected in soil vapor at concentrations up to 350 micrograms per cubic meter and 12 micrograms per cubic meter respectively. Data does not indicate that there are off-site impacts in soil vapor related to the 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 may contact contaminated soil or groundwater if they dig below the ground surface. 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 the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process which is similar to the movement of Radon gas from the subsurface into the indoor air of buildings is referred to as soil vapor intrusion. The potential exists for the inhalation of site contaminants due to soil vapor intrusion in the future on-site development. Environmental sampling indicates soil vapor intrusion 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.

RAOs for Environmental Protection

- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

RAOs for Public Health Protection

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

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

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

The selected remedy is a Track 1: Unrestricted use remedy.

The selected remedy is referred to as the Soil Remediation 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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- 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, and to be consistent with the requirements of an e-designation by New York City, any future on-site buildings will include, at a minimum, a 20-mil water/vapor barrier to improve energy efficiency as an element of construction.

2. Excavation

Excavation and off-site disposal of all on-site soil which exceeds unrestricted use SCOs, as defined

by 6 NYCRR Part 375-6.8. The removal of materials from the site will include: (1) excavation and off-site disposal of soil to comply with unrestricted use SCOs, plus additional soil/fill as needed for the proposed foundation; (2) removal of any petroleum storage tanks, fill ports, and vent lines encountered; and (3) removal of subsurface building materials from demolition. The remedial excavation will coincide with the development-related excavation.

Approximately 35,000 tons of contaminated soil will be removed from the site and disposed of at facilities licensed to accept such material.

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3. 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.

4. Local Institutional Controls

If no EE or SMP is needed to achieve soil, groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Article 141 of the NYCDOH code, which prohibits potable use of groundwater without prior approval.

Contingent Track 1

In the event that Track 1 unrestricted use is not achieved, including achievement of groundwater and/or soil vapor remedial objectives, the following contingent remedial elements will be required and the remedy will achieve a Track 4 restricted residential cleanup at a minimum, and will include imposition of a site cover (as a contingency if soil greater than 2 feet but less than 15 feet deep does not meet the restricted residential SCOs), an environmental easement, and a site management plan as described below.

5. Cover System

If a Track 1 cleanup is not achieved, a Track 4 remedy will include a site cover. A site cover will be required to allow for restricted residential use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material 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, cement, paved surface parking areas, sidewalks, building foundations and building slabs.

6. 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, commercial, and industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and
- require compliance with the Department approved Site Management Plan.

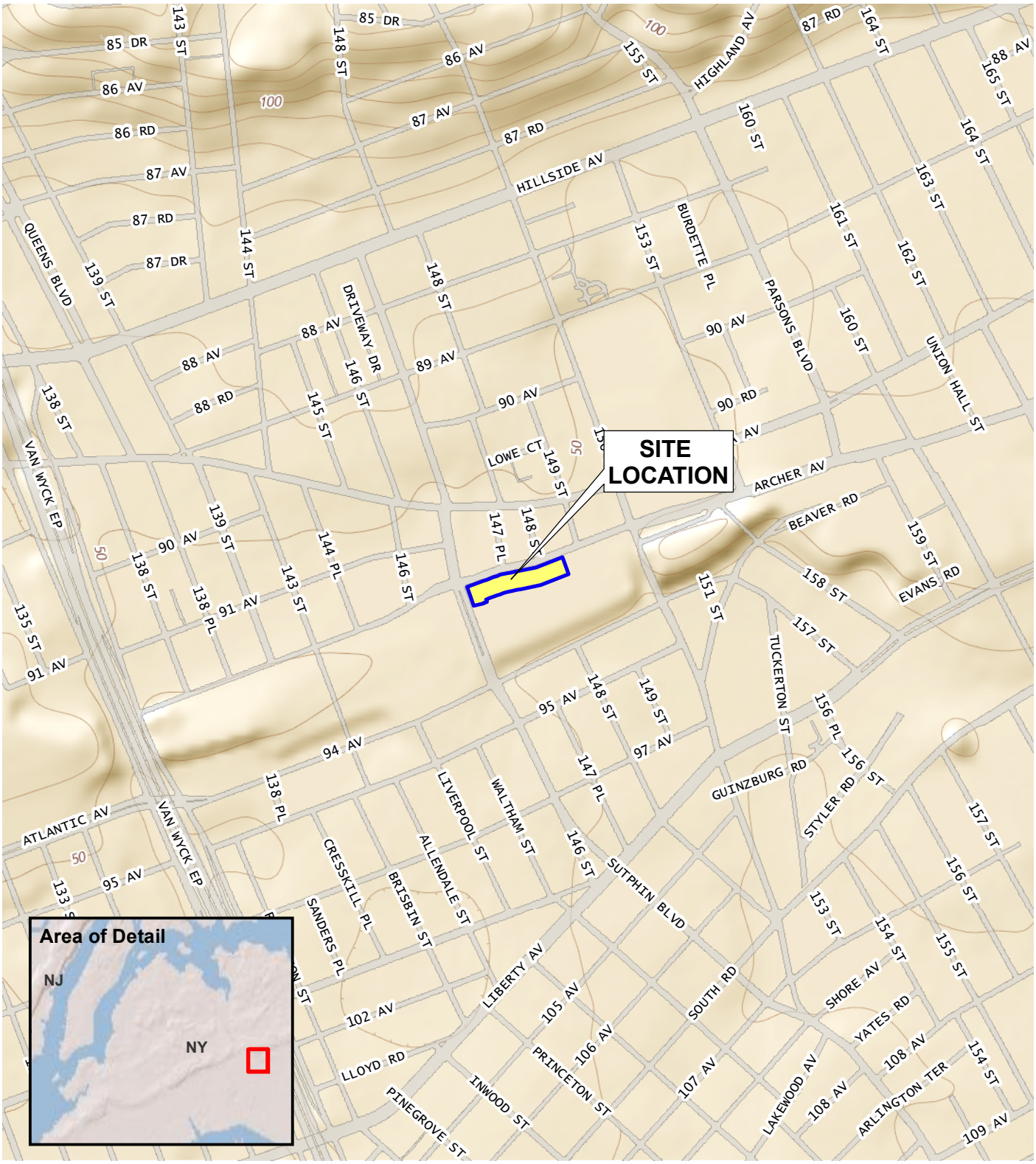
7. Site Management Plan

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 Paragraph 6 above.
   - Engineering Controls: The cover system 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;
   - a provision for evaluation of the potential for soil vapor intrusion for any buildings developed 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 2 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. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
   - monitoring of the cover system to assess the performance and effectiveness of the remedy;
   - a schedule of monitoring and frequency of submittals to the Department; and
   - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.



SOURCE
USGS 7.5 Minute Topographic Map
Jamaica Quad 2013

0 800 1,600
Feet

The Crossing at Jamaica Station
Queens, New York

SITE LOCATION

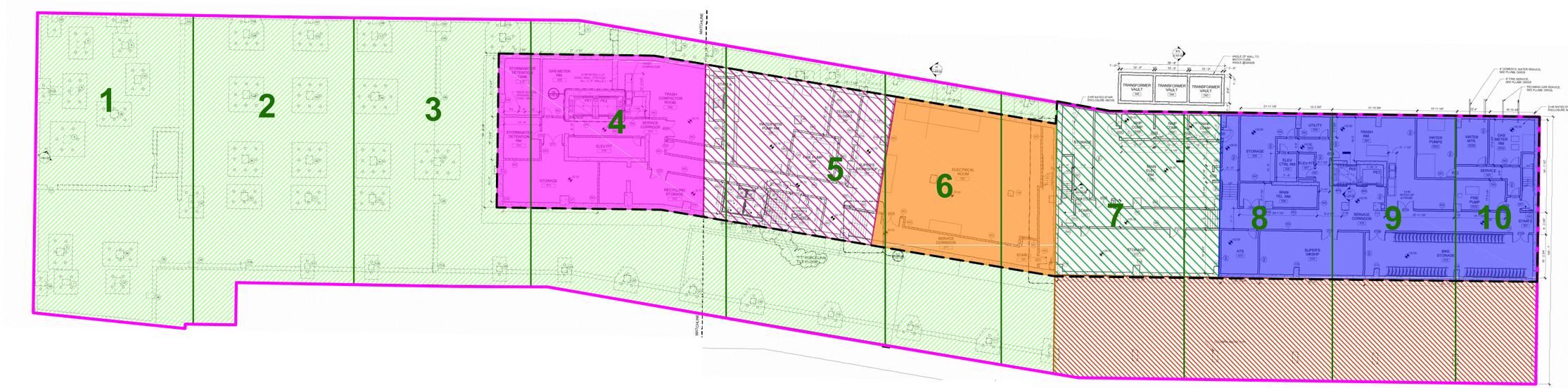
AKRF
Environmental Consultants
440 Park Avenue South, New York, N.Y. 10016

DATE
2/18/2016

PROJECT No.
12146

FIGURE
1

ARCHER AVENUE



LEGEND

- BCP SITE BOUNDARY
- EXTENT OF EXCAVATION TO APPROXIMATELY 4' BELOW GRADE
- EXTENT OF EXCAVATION TO APPROXIMATELY 6' BELOW GRADE
- EXTENT OF EXCAVATION TO APPROXIMATELY 16' BELOW GRADE
- EXTENT OF EXCAVATION TO APPROXIMATELY 17' BELOW GRADE
- EXTENT OF EXCAVATION TO APPROXIMATELY 18' BELOW GRADE
- EXTENT OF EXCAVATION TO APPROXIMATELY 21' BELOW GRADE
- EXTENT OF EXCAVATION TO APPROXIMATELY 23' BELOW GRADE
- 1 ALPHANUMERIC GRID

0 20 40 80
SCALE IN FEET

Source: FX Fowle Architects, "The Crossing at Jamaica Station, High-Rise Building - Cellar Floor Plan", Drawing No.: A-101.00, Revision Date 8.15.2016.

AKRF
Environmental Consultants
440 Park Avenue South, New York, NY 10016

The Crossing at Jamaica Station
Queens, New York

PROPOSED REMEDIAL SITE EXCAVATION PLAN

DATE
7/13/2017

PROJECT NO.
12146

SCALE
as shown

FIGURE
2