DECISION DOCUMENT

Concourse Village West Apartments - South
Brownfield Cleanup Program
Bronx, Bronx County
Site No. C203092
February 2019

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

DECLARATION STATEMENT - DECISION DOCUMENT

Concourse Village West Apartments - South
Brownfield Cleanup Program
Bronx, Bronx County
Site No. C203092
February 2019

Statement of Purpose and Basis

This document presents the remedy for the Concourse Village West Apartments - South 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 Concourse Village West Apartments - South site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

A significant portion of the remedial work was completed outside of a Department-approved Remedial Action Work Plan (RAWP) or Department-issued Decision Document (DD). The remedial work completed outside of the approved RAWP/DD will be documented as such in the FER.

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.

2. Excavation

The existing on-site attendant booths will be demolished and materials which cannot be beneficially reused on site will be taken off-site for proper disposal to implement the remedy. Excavation and off-site disposal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures encountered and all on-site soils which exceed restricted-residential SCOs, as defined by 6 NYCRR Part 375-6.8 in the upper 20 feet will be performed. Approximately 7,410 cubic yards of contaminated soil and historic fill will be removed from the site to varying depths (1-20 feet, below ground surface [bgs]) for remedial purposes. However, the entire site will be excavated to 20 feet for development purposes. 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, as necessary.

3. Groundwater Treatment

In-situ groundwater treatment will be implemented to treat petroleum-related contaminants in groundwater, as necessary. A treatment agent such as a chemical oxidant or an enhanced biodegradation product, will be applied/injected into the subsurface to break down the contaminants in site groundwater. The treatment agent, method, depth of application/ injection, and areal extent of the treatment will be determined during the remedial design. Groundwater monitoring will be performed to assess the performance and effectiveness of the remedy, as appropriate.

Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve a Track 2, restricted residential cleanup and will include an environmental easement, and site management plan as described below. If soil in the top 15 feet bgs does not meet the restricted residential SCOs, as applicable, a site cover (see item 4 below) will be required, resulting in a Track 4 cleanup.

4. Cover System (Contingent Remedial Element)

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 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. 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.

6. 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 5 above.

Engineering Controls: In-situ groundwater treatment discussed in Paragraph 3 above, and if necessary, a cover system discussed in Paragraph 4 (contingent remedial element) above.

This plan includes, but may not be limited to:

o an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;

o descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;

o a provision for evaluation of the potential for soil vapor intrusion for any buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;

o 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);

o provisions for the management and inspection of the identified engineering controls;

o maintaining site access controls and Department notification; and

o 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:

o monitoring of groundwater to assess the performance and effectiveness of the remedy;

o a schedule of monitoring and frequency of submittals to the Department;

o monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c) an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical, physical or chemical components of the remedy. The plan includes, but is not limited to:

o procedures for operating and maintaining the remedy, including procedures for additional groundwater treatment as necessary;
o compliance monitoring/inspection of treatment systems (if any) to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent or other required reporting;
o maintaining site access controls and Department notification; and
o providing the Department access to the site and O&M records.

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.

February 11, 2019

Date

Gerard Burke, Director
Remedial Bureau B

DECISION DOCUMENT

Concourse Village West Apartments - South
Bronx, Bronx County
Site No. C203092
February 2019

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:

Melrose Library
910 Morris Avenue
Bronx, NY 10451
Phone: 718-588-0110

Bronx Community Board 4
Attn: Kathleen Saunders
1650 Selwyn Avenue
Suite 11A
Bronx, NY 10457

Phone: 718-299-0800

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

Location:
The site is located at 741 Concourse Village West (Block 2458, Lot 49) and 702 Grand Concourse (Block 2458, Lot 13), in a commercial and residential area of the Bronx.

Site Features:
Lot 49 is approximately 20,586 square-feet in area and contains an asphalt parking lot. A small parking attendant booth is located along the south side of that lot. Lot 13 is approximately 13,801 square-feet in area and also includes an asphalt parking lot, as well as an elevated concrete parking platform; this lot also contains a small parking attendant booth.

Current Zoning and Land Use:
The current zoning designation for Lot 13 is R8/C8-3 (residential/commercial and industrial) and the zoning for Lot 49 is C8-3 (commercial and industrial). Both lots are currently utilized as attendant parking lots. Surrounding property usage is primarily commercial and residential. To the north of the site is a school, a church and residential apartment buildings. The property to the east is a KIPP Academy Elementary School; adjoining to the south is Bronx Live Poultry Corporation; and across Grand Concourse to the west is Franz Sigel Park, a New York City municipal park.

Past Uses of the Site:
From 1935 to 2005, uses of Lot 13 included a gasoline filling station, auto repair garages, the U-Haul Corporation, Meineke Discount Mufflers and Car Care Center, A.G. Concourse Auto Service and Reliable Parking Service, Inc. Sanborn maps from the 1930s and 1940s show four 550-gallon buried gasoline tanks on the eastern portion of the site. These tanks may still exist on-site. There was formerly a waste/used oil tank registered at the site. Spill Number 0607307 was assigned to the site in 2006 for a spill of an unspecified quantity of petroleum. The spill incident was closed in November, 2006. Lot 49 has been used as an automobile parking lot since the 1950s. Prior to the 1950s, the site was an undeveloped lot.

Site Geology and Hydrogeology:
Subsurface conditions consist of historic fill soils, underlain by glacial outwash sand deposits;

varved glacial lake deposits consisting predominately of silt and low plasticity clay; and bedrock. The fill typically consists of sand with varying amounts of ash, cinders and glass. Silts, clays and underlying clays consisted of predominantly fine grained varved glacial lake deposits below the fill layer. Based upon regional topographic and geologic maps, bedrock is estimated be approximately 80 ft. below ground surface (bgs). No evidence of perched water was observed. Saturated soil indicative of the regional groundwater table was observed at approximately 30-32 ft. bgs. Based upon regional topography groundwater is anticipated to flow in a south/southeasterly direction. The Harlem River is located approximately 0.4-miles west of the site.

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.

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:

ethylbenzene	1,2,4-trimethylbenzene
dibenz[a,h]anthracene	tetrachloroethene (PCE)
benzo(a)pyrene	trichloroethene (TCE)
benzo(a)anthracene	naphthalene
benzo(b)fluoranthene	barium
indeno(1,2,3-CD)pyrene	selenium
lead	mercury

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), and pesticides.
Based upon investigations conducted to date, the primary contaminants of concern for the Site are petroleum-related VOCs and metal and polycyclic aromatic hydrocarbons (PAHs) typical of historic fill.

Soil - Several PAHs and/or metals exceeding restricted residential use soil cleanup objectives (RRSCOs) were found at varying depths up to 16 feet, below ground surface (bgs) across the Site; although most exceedances were found in the top 8 feet or shallower (i.e., one sample some PAHs and metals exceedances in the 14-16-foot interval). Seven of the 17 sample locations showed no PAH exceedances of RRSCOs. The PAHs exceeding RRSCOs, included, but were not limited to: Benzo(a)anthracene up to 22.6 parts per million (ppm), benzo(a)pyrene up to 20.8 ppm and benzo(b)fluoranthene up to 21.3 ppm vs. RRSCO of 1 ppm for all. Metals exceedances included, but were not limited to: lead up to 2,250 ppm (RRSCO of 400 ppm), barium up to 674 ppm (RRSCO of 400 ppm) and mercury up to 2.9 ppm (RRSCO of 0.81 ppm). There were no VOCs, PCBs, or pesticide exceedances of RRSCOs. Data does not indicate any off-site impacts in soil related to this site. Site-related soil contamination does not appear to extend off-site.

Groundwater - Petroleum-related VOCs were detected above groundwater standards in the northeastern half of Lot 49, including, but not limited to, the following: 1,2,4-trimethylbenzene up to 240 parts per billion (ppb), and ethyl benzene up to 150 ppb (standard is 5 ppb for these VOCs). Dissolved naturally-occurring metals (manganese, magnesium, sodium) exceeded groundwater standards on Lot 49; selenium was also detected in two samples on the Lot 49, with a maximum concentration of 48 ppb (standard is 10 ppb). Several PAHs, including but not limited to benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, indeno(1,2,3-cd-pyrene) were detected in one sample on Lot 49, with a maximum concentration of 0.232 ppb vs.

the standard of 0.002 ppb for all of these parameters. Napthalene was detected at 24 ppb in one sample vs. the standard of 10 ppb. Groundwater samples on Lot 13 had a total lead concentration up to 44.4 ppb vs. the standard of 25 ppb. Low level petroleum constituents, including, but not limited to, 1,2,4-trimethylbenzene (1,2,4-TMB) were found in one sample on Lot 13. 1,2,4-TMB was found at 17 ppb vs. a standard of 5 ppb, with three other petroleum-related VOCs at less than 10 ppb (vs. standard of 5 ppb). Dissolved naturally-occurring metals (manganese, magnesium, sodium) exceeded groundwater standards on Lot 13. PCBs and pesticides were not detected in groundwater on either lot. Contaminated groundwater does not appear to extend off-site.

Soil Vapor - Petroleum-related VOCs were detected in soil vapor across the Site at concentrations below 200 micrograms per cubic meter (ug/m^3). Additionally, tetrachloroethylene (PCE) was detected at 56 ug/m^3, and trichloroethylene (TCE) at 15 ug/m^3. Data do not indicate off-site soil vapor intrusion is a concern for off-site buildings.

Although none were encountered during the remedial investigation underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination may exist.

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 contaminants in soil if they dig below the surface. People are not drinking the contaminated groundwater because the area is 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 overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for the inhalation of site contaminants due to soil vapor intrusion for future on-site buildings. 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.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

Soil Vapor

RAOs for Public Health Protection

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

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

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

The selected remedy is a Track 2: Restricted use with generic soil cleanup objectives remedy.

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

The elements of the selected remedy, as shown in Figures 2A and 2B, are as follows:

A significant portion of the remedial work was completed outside of a Department-approved Remedial Action Work Plan (RAWP) or Department-issued Decision Document (DD). The remedial work completed outside of the approved RAWP/DD will be documented as such in the FER.

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.

2. Excavation

The existing on-site attendant booths will be demolished and materials which cannot be beneficially reused on site will be taken off-site for proper disposal to implement the remedy. Excavation and off-site disposal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures encountered and all on-site soils which exceed restricted-residential SCOs, as defined by 6 NYCRR Part 375-6.8 in the upper 20 feet will be performed. Approximately 7,410 cubic yards of contaminated soil and historic fill will be removed from the site to varying depths (1-20 feet, below ground surface [bgs])for remedial purposes. However, the entire site will be excavated to 20 feet for development purposes. 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, as necessary.

3. Groundwater Treatment

In-situ groundwater treatment will be implemented to treat petroleum-related contaminants in groundwater, as necessary. A treatment agent such as a chemical oxidant or an enhanced biodegradation product, will be applied/injected into the subsurface to break down the contaminants in site groundwater. The treatment agent, method, depth of application/ injection, and areal extent of the treatment will be determined during the remedial design. Groundwater monitoring will be performed to assess the performance and effectiveness of the remedy, as appropriate.

Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve a Track 2, restricted residential cleanup and will include an environmental easement, and site management plan as described below. If soil in the top 15 feet bgs does not meet the restricted residential SCOs, as applicable, a site cover (see item 4 below) will be required, resulting in a Track 4 cleanup.

4. Cover System (Contingent Remedial Element)

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 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. 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.

6. 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 5 above.
Engineering Controls: In-situ groundwater treatment discussed in Paragraph 3 above, and if necessary, a cover system discussed in Paragraph 4 (contingent remedial element) above.
This plan includes, but may not be limited to:

- o an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- o descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- o a provision for evaluation of the potential for soil vapor intrusion for any buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- o 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);
- o provisions for the management and inspection of the identified engineering controls;
- o maintaining site access controls and Department notification; and

o 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:

o monitoring of groundwater to assess the performance and effectiveness of the remedy;

o a schedule of monitoring and frequency of submittals to the Department;

o monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c) an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical, physical or chemical components of the remedy. The plan includes, but is not limited to:

o procedures for operating and maintaining the remedy, including procedures for additional groundwater treatment as necessary;

o compliance monitoring/inspection of treatment systems (if any) to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent or other required reporting;

o maintaining site access controls and Department notification; and

o providing the Department access to the site and O&M records.

FIGURE 1

N
W E
S

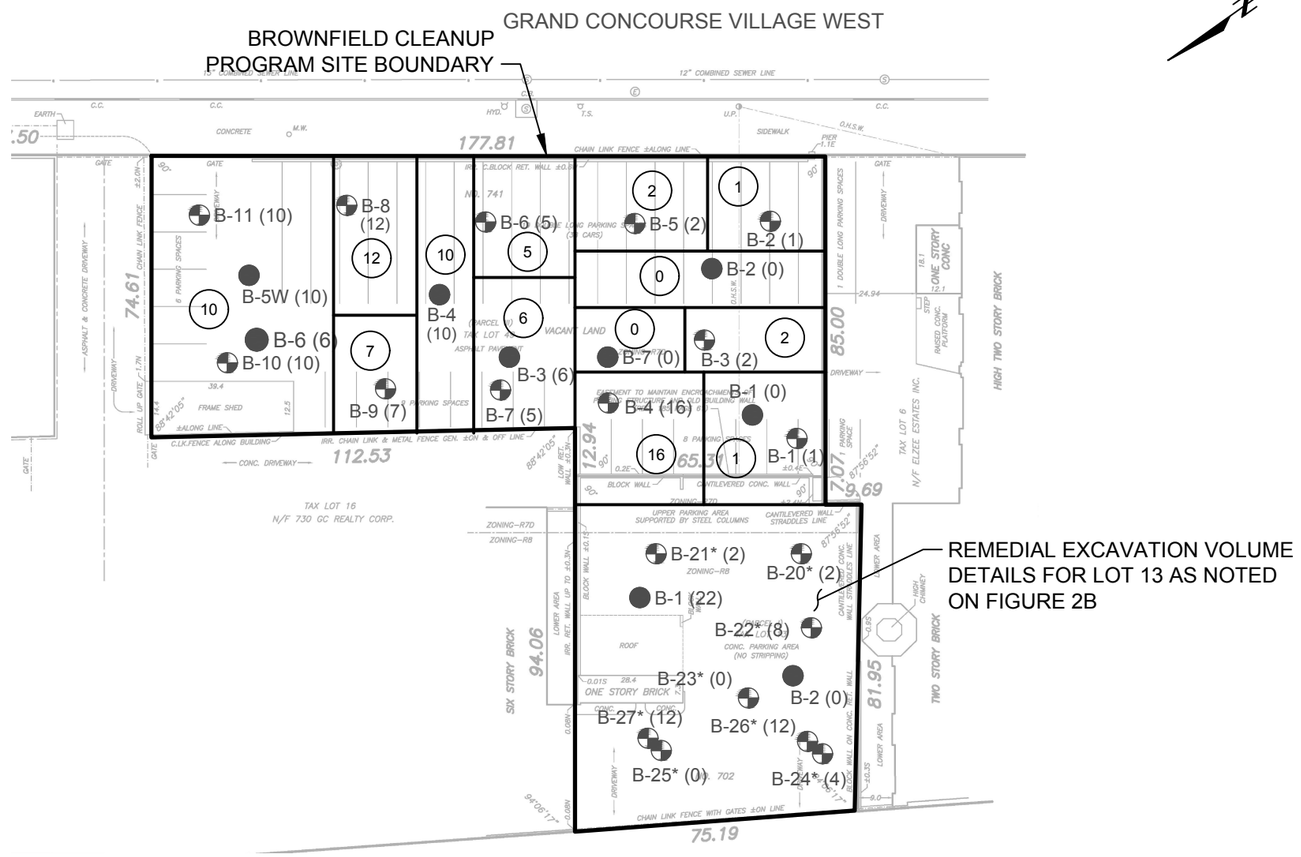
0 75 150
Feet

Site Location Map

Consourse Village West - South
New York City, Bronx County
Site No. C203092

DEPARTMENT OF ENVIRONMENTAL CONSERVATION • NEW YORK STATE •

Proposed Remedial Excavation Depth (FT)	Area Length (FT)	Area Width (FT)	Cubic Feet (CF)	Cubic Yards (CY)
10	74.5	48	35,760	1,324
12	42	22	11,088	411
7	31	22	4,774	177
10	73	15	10,950	406
5	32	27	4,320	160
6	39	27	6,318	234
2	25	35	1,750	65
1	25	30	750	28
2	17	36	1,224	45
16	35	34	19,040	705
1	35	31	1,085	40
Total Proposed Remedial Excavation Volume				3,595 CY



LEGEND

- GTA ENGINEERING GEOTECHNICAL SOIL BORING
- GEI REMEDIAL INVESTIGATION SOIL BORING LOCATION
- GEI SUPPLEMENTAL REMEDIAL INVESTIGATION SOIL BORING LOCATION
- * DENOTES SOIL BORING AT LOCATION ENCOUNTERED SHALLOW REFUSAL DUE TO UNDERLYING STOCKPILED MATERIAL
- (....) DENOTES LOWEST DEPTH BELOW GROUND SURFACE WHERE HISTORIC FILL WAS OBSERVED DURING FIELD ACTIVITIES OR WHERE SOIL IMPACTS EXCEEDING SOIL CLEANUP OBJECTIVES WERE DOCUMENTED
- (10) PROPOSED REMEDIAL EXCAVATION DEPTH

0 40 80
SCALE: 1" = 40'

NOTE:
1. LOT 13 IS AN ELEVATED PARKING STRUCTURE (ELEVATION + 72.50) THAT HAS HAD THE VOID SPACE BENEATH THE STRUCTURE BACKFILLED WITH STOCKPILED MATERIAL AS STRUCTURAL SUPPORT. THE BASE OF STOCKPILED MATERIAL IS APPROXIMATELY LEVEL WITH THE GROUND SURFACE ELEVATION OF LOT 49 (ELEVATION +52.50) .

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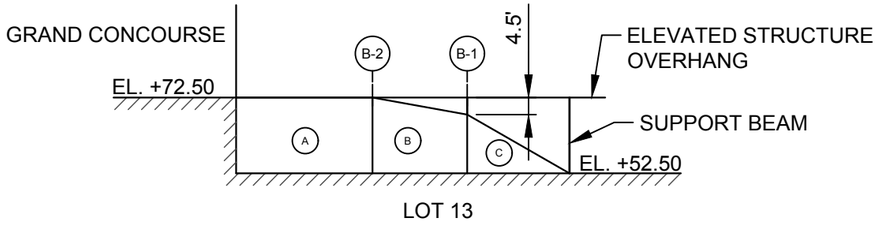
Project 1700655

FIGURE 2A



SIDE PROFILE OF HISTORIC FILL STOCKPILE LOCATED BELOW LOT 13 ELEVATED PARKING STRUCTURE

SCALE: 1"=40'

ASSUMPTIONS:

- LENGTH OF STOCKPILE IS 75' (AS SURVEYED)
- MATERIAL HAS BEEN PLACED FLUSH WITH ADJACENT WALLS (IDENTIFIED AS CONC. RET. WALL AND CANTILEVERED WALL ON SITE SURVEY)
- 4.5' VOID @ B1 SLOPES AS SHOWN. ANGLE OF REPOSE LOW (10°)

A = ▭

BASE x HEIGHT x LENGTH = (36') (20') (75') = 54,000CF = 2,000CY

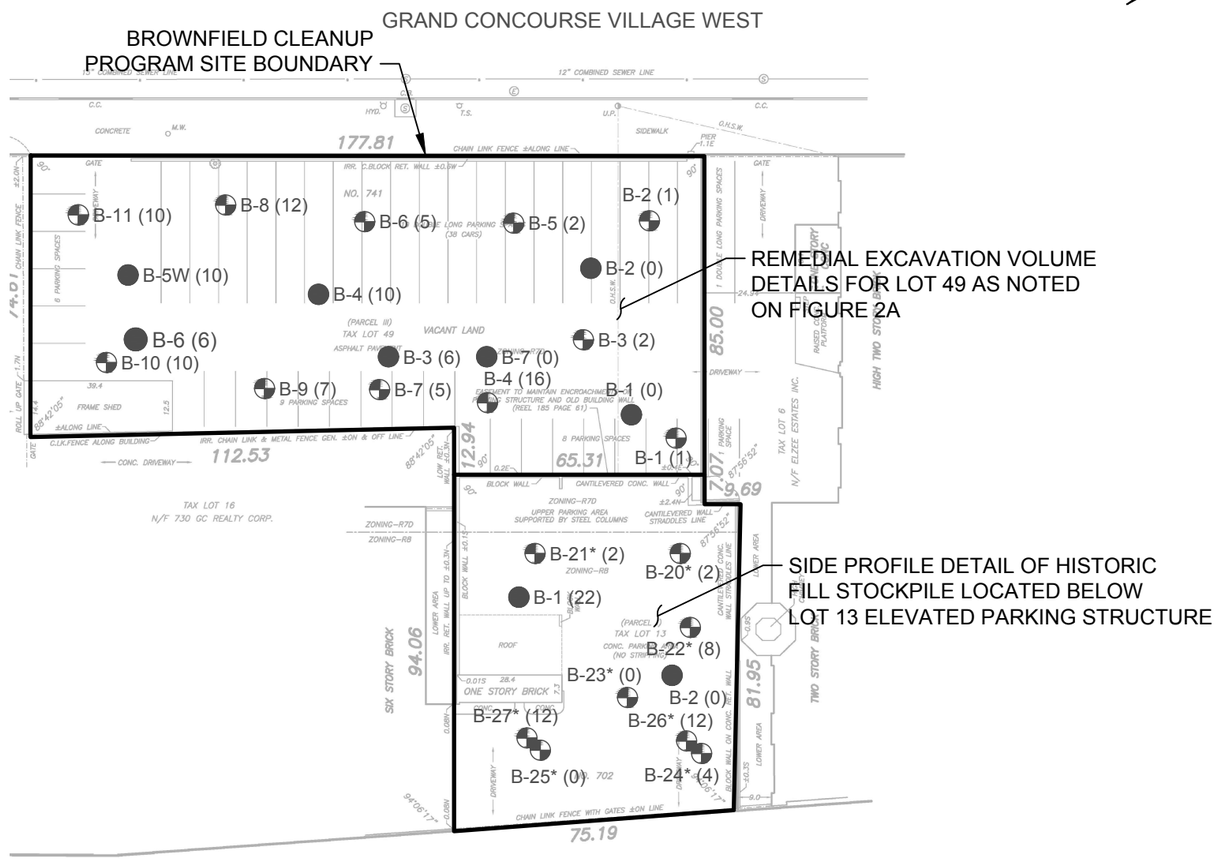
B = ▭ + ◺

BASE x HEIGHT x LENGTH + 1/2 (BASE x HT) (LENGTH)
(25')(15.5')(75') + 1/2 (25' x 4.5') (75') = 33,281.25CF
= 1,235CY

C = ◺

1/2 (BASE x HEIGHT) x (LENGTH) = 1/2 (27' x 15.5') x (75) = 15,693.75 CF
= 580CY

TOTAL HISTORIC FILL = 3,815CY



LEGEND

- ● GTA ENGINEERING GEOTECHNICAL SOIL BORING
- ◓ GEI REMEDIAL INVESTIGATION SOIL BORING LOCATION
- ◓ GEI SUPPLEMENTAL REMEDIAL INVESTIGATION SOIL BORING LOCATION
- * DENOTES SOIL BORING AT LOCATION ENCOUNTERED SHALLOW REFUSAL DUE TO UNDERLYING STOCKPILED MATERIAL
- (....) DENOTES LOWEST DEPTH BELOW GROUND SURFACE WHERE HISTORIC FILL WAS OBSERVED DURING FIELD ACTIVITIES OR WHERE SOIL IMPACTS EXCEEDING SOIL CLEANUP OBJECTIVES WERE DOCUMENTED

0 40 80
SCALE: 1" = 40'

NOTE:
1. LOT 13 IS AN ELEVATED PARKING STRUCTURE (ELEVATION + 72.50) THAT HAS HAD THE VOID SPACE BENEATH THE STRUCTURE BACKFILLED WITH STOCKPILED MATERIAL AS STRUCTURAL SUPPORT. THE BASE OF STOCKPILED MATERIAL IS APPROXIMATELY LEVEL WITH THE GROUND SURFACE ELEVATION OF LOT 49 (ELEVATION +52.50) .

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