DECISION DOCUMENT

Broadway Triangle Site C
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224324
February 2022

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

DECLARATION STATEMENT - DECISION DOCUMENT

Broadway Triangle Site C
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224324
February 2022

Statement of Purpose and Basis

This document presents the remedy for the Broadway Triangle Site C 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 Broadway Triangle Site C 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

All soils in the upper two feet which exceed the restricted residential SCOs will be excavated and transported off-site for disposal. Approximately 2,000 cubic yards of contaminated soil will be removed from the site.

3. Cover System

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.

4. Soil Vapor Extraction (SVE)

Soil vapor extraction (SVE) will be implemented to remove and prevent off-site migration of volatile organic compounds (VOCs) from the subsurface. A horizontal SVE well will be installed into the vadose zone (the area below the ground surface but above the water table). VOCs will be physically removed from the soil by applying a vacuum to wells that have been installed into the vadose zone. The vacuum draws air through the soil matrix which carries the VOCs from soil to the SVE well. The air extracted from the SVE wells will be analyzed to determine whether treatment is needed prior to being discharged to the atmosphere.

5. Vapor Mitigation

Any on-site buildings will be required to have a sub-slab depressurization system, or other acceptable measures, to mitigate the migration of vapors into the building from soil and groundwater.

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, 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 discussed in Paragraph 3, the SVE system discussed in Paragraph 4, and the sub-slab depressurization system discussed in Paragraph 5.

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 that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 3 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:
   - A schedule for 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.

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

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 25, 2022

Date

Gerard Burke, Director
Remedial Bureau B

DECISION DOCUMENT

Broadway Triangle Site C
Brooklyn, Kings County
Site No. C224324
February 2022

SECTION 1: SUMMARY AND PURPOSE

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

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

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

SECTION 2: CITIZEN PARTICIPATION

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

DECInfo Locator - Web Application
https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C224324

Brooklyn Public Library - Bushwick Branch
340 Bushwick Avenue
Brooklyn, NY 11206
Phone: (718) 602-1348

Brooklyn Community Board 1
435 Graham Avenue
Brooklyn, NY 11211
Phone: (718) 389-0009

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 100 Throop Avenue, Brooklyn, NY and is identified on the Kings County Tax Map as Block 2269 Lots 25. The site is bounded by Gerry Street to the north, Throop Avenue to the east, Bartlett Street to the south, and an unoccupied manufacturing structure and multi-family residential structure to the west.

Site Features:
The site is 0.63 acres and is currently comprised of vacant, overgrown land with several patches of exposed concrete, likely from former on-site structures. The surrounding areas are comprised of residential and commercial uses.

Current Zoning and Land Use:
The site is zoned R7A for residential use with a C2-4 commercial overlay. The area surrounding the site consists primarily of commercial and multi-family residential properties and vacant land. The site is adjoined by the following: an unoccupied manufacturing structure and a multi-family residential structure to the west; the United Talmudical Academy and Bartlett Playground to the south (across Bartlett Street); a multi-family residential structure and vacant, overgrown land to the north (across Gerry Street); and a multi-family residential structure (formerly a filling station) to the east (across Throop Avenue).

Past Use of the Site:
The historic use of the site included residential and commercial uses. The site was developed as early as 1887 with several commercial and residential structures (including several outbuildings). Commercial uses have included a tailor, undertakers, and a club. The southern-central portion of the site was occupied by an automotive repair facility (former Lot 35) from at least 1965 to 1989. The site has been vacant since circa 2008 when all buildings were demolished.

Site Geology & Hydrogeology:

Subsurface materials at the site consist of fill materials (unsorted sand, gravel, and debris [e.g., brick, ash, concrete, and glass]) to depths ranging from 6 to 11 feet below grade surface (bgs). Fill materials overlie native brown sandy silt with trace to some clay and gravel at the northern and eastern portions and brown clay with trace silt at the southern and western-central portions. Bedrock was not encountered during previous site investigations.

Groundwater is present at depths of approximately 9 and 11 feet bgs. Groundwater flow is generally west to east. 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 Applicants under the Brownfield Cleanup Agreement are Volunteers. The Volunteers do not have an obligation to address off-site contamination. The Department has determined that this site poses a significant threat to human health and the environment and there are off-site impacts that require remedial activities; accordingly, enforcement actions are necessary.

The Department will seek to identify any parties (other than the Volunteers) known or suspected to be responsible for contamination at or emanating from the site, referred to as Potentially Responsible Parties (PRPs). The Department will bring an enforcement action against the PRPs. If an enforcement action cannot be brought, or does not result in the initiation of a remedial program by any PRPs, the Department will evaluate the off-site contamination for action under the State Superfund. The PRPs are subject to legal actions by the State for recovery of all response costs the State incurs or has incurred.

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 contaminants of concern identified at this site is/are:

benzo(a)anthracene	indeno(1,2,3-cd)pyrene
benzo(a)pyrene	arsenic
benzo(b)fluoranthene	barium
benzo(k)fluoranthene	copper
chrysene	lead

mercury
antimony
magnesium
manganese
selenium
perfluorooctane sulfonic acid (PFOS)
perfluorooctanoic acid (PFOA)
tetrachloroethene (PCE)
trichloroethene (TCE)
trans-1,2-dichloroethene
cis-1,2-dichloroethene

The contaminants 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. Based upon investigations conducted to date, the primary contaminants of concern for the Site include SVOCs and metals in soil, and chlorinated VOCs in soil vapor.

Soil - SVOCs and metals were detected above their respective restricted residential soil cleanup objectives (RRSCOs). For SVOCs, the highest concentrations of benzo(a)anthracene at 3.9 parts per million (ppm) (RRSCO is 1 ppm), benzo(a)pyrene at 4.2 ppm (RRSCO is 1 ppm), benzo(b)fluoranthene at 5.4 ppm (RRSCO is 1 ppm), chrysene at 4 ppm (RRSCO is 3.9 ppm), and indeno(1,2,3-c,d)pyrene at 1.9 ppm (RRSCO is 0.5 ppm) were detected throughout the site. For metals, the highest concentrations of arsenic at 18.3 ppm (RRSCO is 16 ppm), barium at 1,570 ppm (RRSCO is 400 ppm), copper at 587 ppm (RRSCO is 270 ppm), lead at 2,050 ppm (RRSCO is 400 ppm), and mercury at 4.92 ppm (RRSCO is 0.81 ppm) were detected throughout the site. Perfluorooctanesulfonic acid (PFOS) was measured in soil at concentrations ranging from 1 part per billion (ppb) to 1.2 ppb, which is below the guidance value for restricted residential use of 44 ppb. Data does not indicate any off-site impacts related to this site.

Groundwater - Groundwater samples collected at the site exceeded the Ambient Water Quality Standards (AWQSs) for tetrachloroethene (PCE) at a maximum concentration of 92 ppb (AWQS is 5 ppb) at the downgradient side of the site. PCE was not detected in the upgradient wells. Dissolved metals exceeding AWQSs include antimony (maximum of 6.3 ppb; AWQS is 3 ppb), magnesium (maximum of 107,000 ppb; AWQS is 35,000 ppb), manganese (maximum of 963 ppb; AWQS is 300 ppb), and selenium (maximum of 12.5 ppb; AWQS is 10 ppb). PFOS and PFOA were detected above the maximum contaminant limit (MCL) of 10 parts per trillion (ppt) with PFOS at a maximum concentration of 316 ppt and PFOA at 236 ppt. Data does not indicate any off-site impacts in groundwater related to this site.

Soil Vapor - Chlorinated VOCs were detected in soil vapor samples, including trichloroethene (TCE) at a maximum concentration of 1,600 micrograms per cubic meter (ug/m3), tetrachloroethene (PCE) at a maximum concentration of 19,000 ug/m3, cis-1,2-dichloroethylene at a maximum concentration of 660 ug/m3, and trans-1,2-dichloroethene at a maximum concentration of 20 ug/m3. Data indicates there is potential for off-site impacts in soil vapor related to this site.

6.4: Summary of Human Exposure Pathways

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

The site is completely fenced and secured which restricts public access. Persons who enter the site may come in contact with contaminants in soil by walking on, digging through, or otherwise disturbing the soil. People are not drinking contaminated groundwater because the area is served by a public water supply that is not affected by site contamination. Volatile organic compounds in the soil vapor (air spaces within the soil) can move into buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Because the site is vacant and unoccupied, soil vapor intrusion is not a current concern. The potential exists for inhalation of site-related contaminants due to soil vapor intrusion for any future on-site redevelopment and building occupancy. Environmental sampling indicates soil vapor intrusion is a potential concern off-site and further investigation is warranted.

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

- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated 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 Track 4: Restricted use with site-specific soil cleanup objectives remedy.

The selected remedy is referred to as the Soil Excavation, Soil Vapor Extraction, and Cover System remedy.

The elements of the selected remedy, as shown in Figures 2 and 3, 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.

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4. Soil Vapor Extraction (SVE)

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5. Vapor Mitigation

Any on-site buildings will be required to have a sub-slab depressurization system, or other acceptable measures, to mitigate the migration of vapors into the building from soil and groundwater.

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- 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, which includes the following:

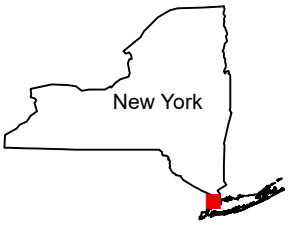
a) an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
   - Institutional Controls: The Environmental Easement discussed in Paragraph 6.
   - Engineering Controls: The cover system discussed in Paragraph 3, the SVE system discussed in Paragraph 4, and the sub-slab depressurization system discussed in Paragraph 5.

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 that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 3 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:
   - A schedule for 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.

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

QUADRANGLE LOCATION



N

1,000 0 1,000'

Title:

SITE LOCATION MAP

BROADWAY TRIANGLE SITE C
BROOKLYN, NY

Prepared for:

THROOP CORNERS COMMUNITY LLC

ROUX

Compiled by: B.V.	Date: 11/18/21
Prepared by: M.S.R.	Scale: AS SHOWN
Project Mgr: B.V.	Project: 3805.0001Y000
File: 3805.0001Y102.1.mxd	

FIGURE 1

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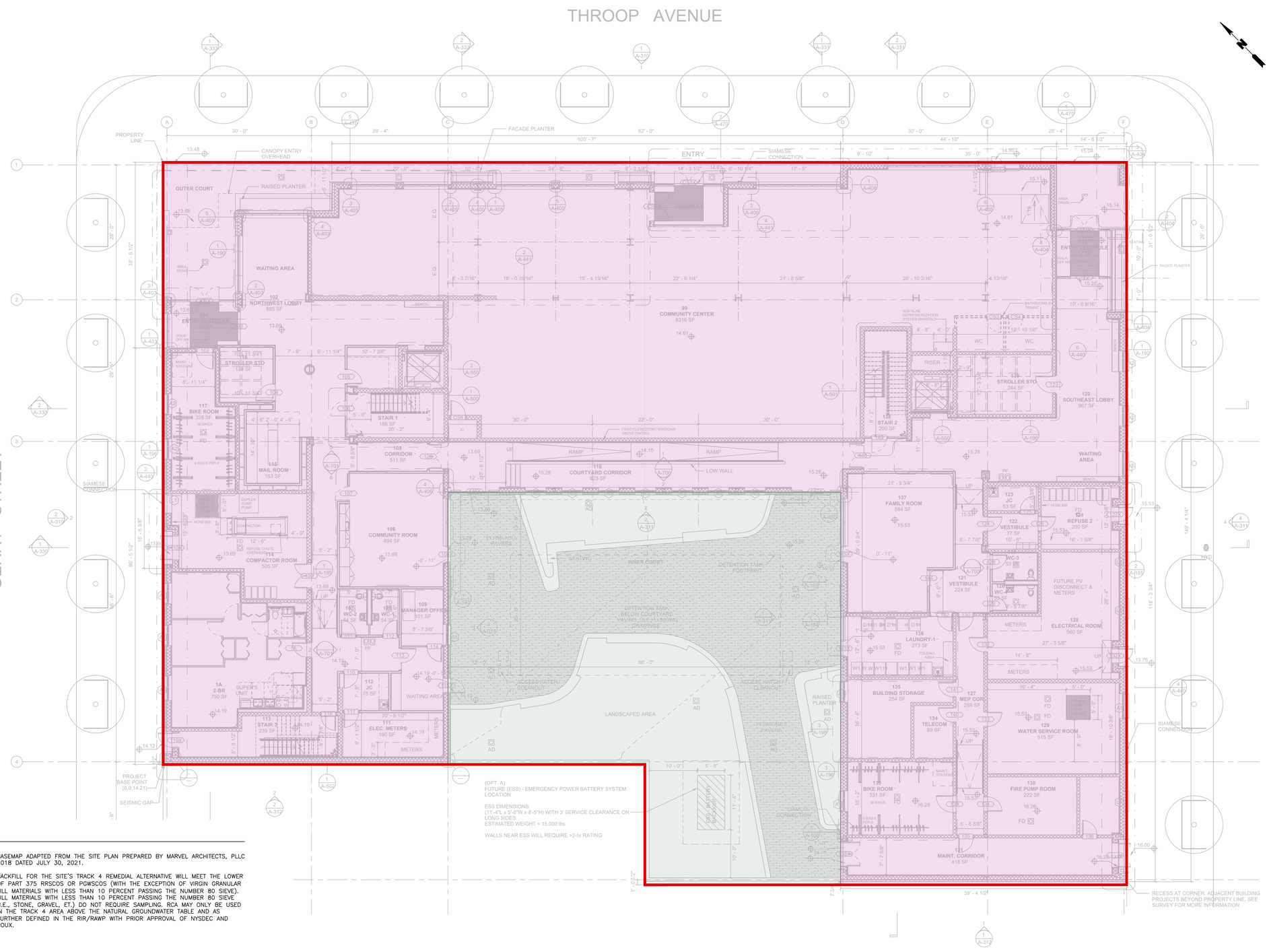
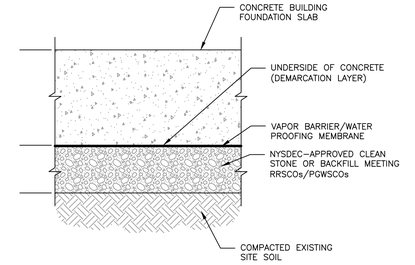
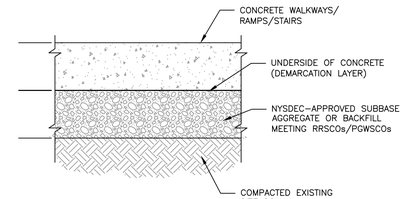




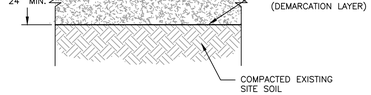
1 PROPOSED SITE COVER SYSTEM: CONCRETE BUILDING FOUNDATION

SCALE: NOT TO SCALE



2 PROPOSED SITE COVER SYSTEM: EXTERIOR PAVED WALKWAYS/RAMPS/STAIRS

SCALE: NOT TO SCALE



3 PROPOSED SITE COVER SYSTEM: EXTERIOR LANDSCAPED AREAS

SCALE: NOT TO SCALE

LEGEND

- CONCRETE BUILDING FOUNDATION WITH VAPOR BARRIER AND SSDS (SEE DETAIL 1 AND NOTE 2)
- PAVEMENT OR AT LEAST 2-FEET OF CLEAN FILL (SEE DETAILS 2 AND 3 AND NOTE 2)
- BCP SITE BOUNDARY

BCP – BROWNFIELD CLEANUP PROGRAM

RIR/RAWP – REMEDIAL INVESTIGATION REPORT/REMEDIAL ACTION WORK PLAN

NYSDEC – NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

PGWSCOs – PROTECTION OF GROUNDWATER SOIL CLEANUP OBJECTIVES

RCA – RECYCLED CONCRETE AGGREGATE

RRSCOs – RESTRICTED RESIDENTIAL SOIL CLEANUP OBJECTIVES

SSDS – SUB-SLAB DEPRESSURIZATION SYSTEM

10' 0 10'

NOTE

1. BASEMAP ADAPTED FROM THE SITE PLAN PREPARED BY MARVEL ARCHITECTS, PLLC 2018 DATED JULY 30, 2021.
2. BACKFILL FOR THE SITE'S TRACK 4 REMEDIAL ALTERNATIVE WILL MEET THE LOWER OF PART 375 RRSCOS OR PGWSCOS (WITH THE EXCEPTION OF VIRGIN GRANULAR FILL MATERIALS WITH LESS THAN 10 PERCENT PASSING THE NUMBER 80 SIEVE). FILL MATERIALS WITH LESS THAN 10 PERCENT PASSING THE NUMBER 80 SIEVE (I.E., STONE, GRAVEL, ET.) DO NOT REQUIRE SAMPLING. RCA MAY ONLY BE USED IN THE TRACK 4 AREA ABOVE THE NATURAL GROUNDWATER TABLE AND AS FURTHER DEFINED IN THE RIR/RAWP WITH PRIOR APPROVAL OF NYSDEC AND ROUX.

NO.	DATE	REVISION DESCRIPTION	INT.

STATE OF NEW YORK · CHARLES J. MCGUCKIN · 069509 · LICENSED PROFESSIONAL ENGINEER

PROJ. ENGINEER: C.M.		DRAWN BY: G.M.	
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ROUX

Roux Environmental Engineering and Geology, D.P.C.
209 SHAFTER STREET ISLANDIA NEW YORK 11749
(631) 232-2600

PROJECT NAME:
BROADWAY TRIANGLE SITE C
BROOKLYN, NEW YORK

PROJECT FOR:
THROOP CORNERS COMMUNITY LLC

TITLE:
REMEDIAL ALTERNATIVE 2:
TRACK 4
RESTRICTED RESIDENTIAL USE
VIA COMPOSITE COVER SYSTEM

DRAWING NO.
2
DRAWING _ OF _

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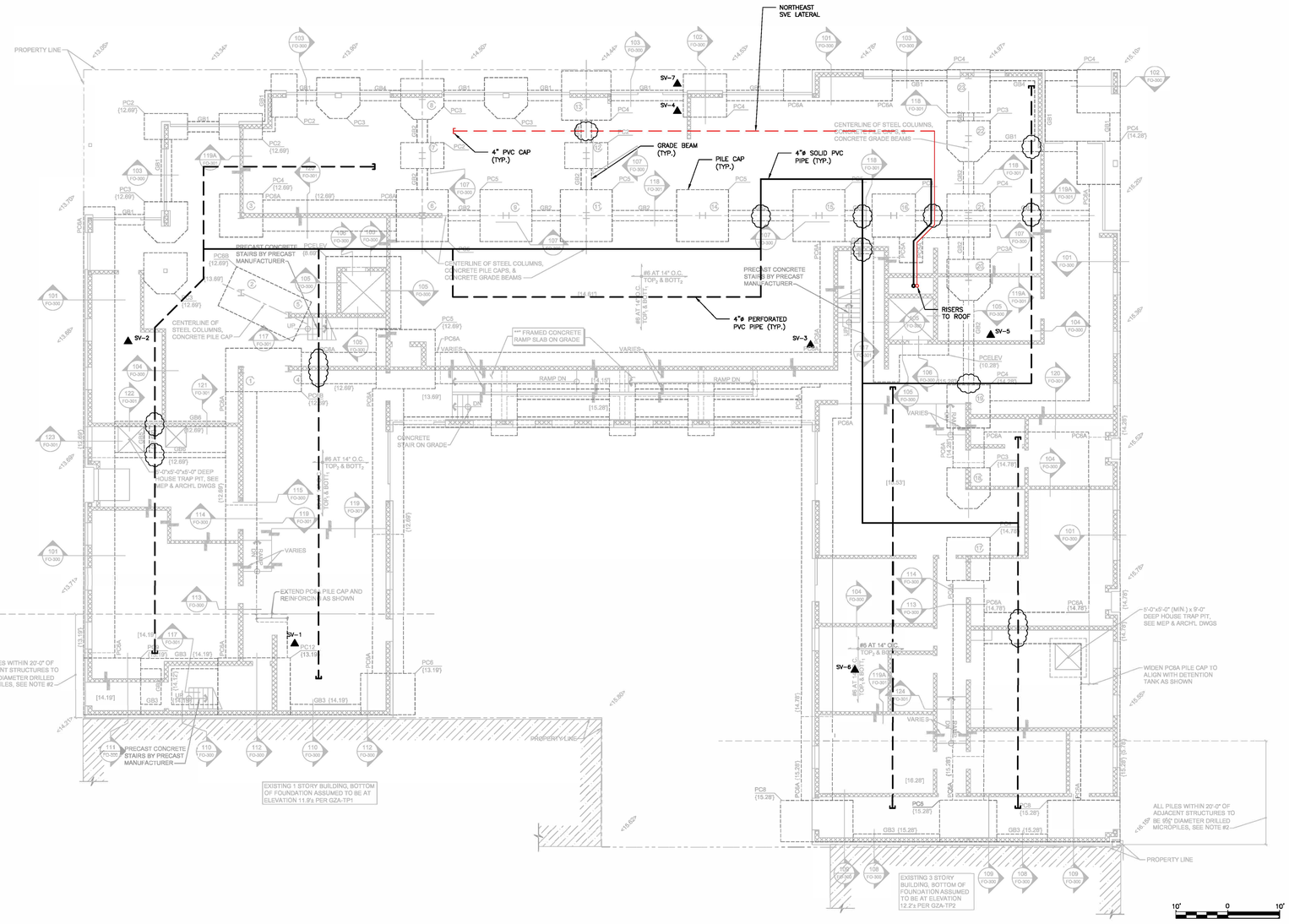

LEGEND

SV–1 ▲ LOCATION AND DESIGNATION OF SOIL VAPOR MONITORING POINT

GRADE BEAM

LOCATION OF FOUNDATION GRADE BEAM/PILE CAP CROSSING. 6–INCH STEEL SLEEVE TO BE INSTALLED IN EACH LOCATION TO ALLOW FOUNDATION PENETRATION

SUB–SLAB DEPRESSURIZATION SYSTEM NOTES

1. CONTRACTOR SHALL COORDINATE WITH PLUMBING, MECHANICAL, CIVIL AND ELECTRICAL CONTRACTORS FOR ALL UTILITY CROSSINGS.
2. THE PERFORATED PIPE MAY BE ROUTED AROUND OR UNDERNEATH ANY UTILITY LINES (SEWER, WATER, GAS), AS REQUIRED AND AS APPROVED BY THE ENGINEER.
3. ALL PENETRATIONS THROUGH THE SLAB ON GRADE (SOG) SHALL BE SEALED USING APPROVED SEALANT.
4. REFER TO ARCHITECT DETAILS FOR SPECIFICATIONS REGARDING VAPOR BARRIER OR APPROVED EQUAL.
5. THIS SUB–SLAB DEPRESSURIZATION SYSTEM WAS DESIGNED TO MINIMIZE GRADE BEAM AND PILE CAP CROSSINGS. FIELD VERIFICATION OF LOCATIONS SHOULD BE MADE TO ENSURE CROSSINGS ARE MINIMIZED.

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212.616.0420

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C/O: **UNIFIED NEIGHBORDHOOD PARTNERS, LLC**
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PASSIVE HOUSE CONSULTANT
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DAGHER ENGINEERING
29 Broadway - 21st floor, New York, NY 10006

LOW VOLTAGE
DAGHER ENGINEERING
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GEOTECHNICAL/CIVIL ENGINEER
GZA GEOENVIRONMENTAL OF NEW YORK
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LANDSCAPE DESIGNER
TBD

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ENVIRONMENTAL CONSULTANT
ROUX
209 Shafter Street, Islandia NY 11749

NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	
	04-23-2021	50% DD	2
	05-28-2021	100% DD	3
	07-30-2021	50% CD	4

07/29/2021

DOB STAMP ZONE

1906
THROOP CORNERS

100 THROOP AVENUE, BROOKLYN, NY 11206

SUB-SLAB DEPRESSURIZATION SYSTEM SITE PLAN

SCALE: AS INDICATED

DRAWING #:
3
___ of ___

DOB JOB: