

DECISION DOCUMENT

241 West 28th Street
Brownfield Cleanup Program
New York, New York County
Site No. C231139
March 2020



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

DECLARATION STATEMENT - DECISION DOCUMENT

241 West 28th Street
Brownfield Cleanup Program
New York, New York County
Site No. C231139
March 2020

Statement of Purpose and Basis

This document presents the remedy for the 241 West 28th Street site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the 241 West 28th Street site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. Remedial Design

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

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include,

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

2. Excavation

All soils in the upper two feet which exceed the restricted residential soil cleanup objectives (SCOs) will be excavated and transported off-site for disposal.

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

Approximately 3,800 cubic yards of contaminated soil will be removed from the site.

3. Backfill

On-site soil which does not exceed the above excavation criteria or the protection of groundwater SCOs for any constituent may be used anywhere beneath the cover system, including below the water table, to backfill the excavation or re-grade the site.

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. The site will be re-graded to accommodate installation of a cover system as described in remedy element 4.

4. 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.

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 groundwater.

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 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 soil cover discussed in Paragraph 4 and the vapor mitigation system discussed in paragraph 5.

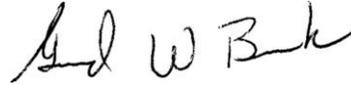
This plan includes, but may not be limited to:

- 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 4 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs)
 - provisions for the management and inspection of the identified engineering controls;
 - maintaining site access controls and Department notification; and
 - the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.
- B. a Monitoring Plan to assess performance and effectiveness of the remedy. The plan includes, but may not be limited to:
- monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

Declaration

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

March 16, 2020



Date

Gerard Burke, Director
Remedial Bureau B

DECISION DOCUMENT

241 West 28th Street
New York, New York County
Site No. C231139
March 2020

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:

New York Public Library - Muhlenberg Branch
209 West 23rd Street
New York, NY 10011
Phone: (212) 924-1585

Manhattan Community Board 5
450 Seventh Avenue, Suite 2109
New York, NY 10123
Phone: (212) 465-0907

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 29,315-square-foot (0.67-acre) site is located in the Chelsea neighborhood of Manhattan, New York, bearing the addresses 241-251 West 28th Street and 240-250 West 29th Street. The site is bounded by West 29th Street to the north, a 13-story commercial office building and a 12-story commercial office building to the east, West 28th Street to the south, and a five-story industrial building and a seven-story public institutional building to the west. The Hudson River is located about 0.75 miles west of the site.

Site Features:

The site consists of a vacant, open-air, asphalt-paved lot and an attendant kiosk surrounded by buildings to the east and west and construction fencing to the north and south.

Current Zoning and Land Use:

The current zoning designation is M1-6D, which permits residential, commercial, and industrial uses. The current surrounding parcels are a combination of residential, commercial, industrial, and institutional. The proposed use is consistent with existing zoning for the property.

Past Use of the Site:

The site has been occupied by commercial and industrial facilities as early as 1890. Past site uses included a lumber yard (circa 1890), a fur processing and cleaning company (1927-1934), an auto repair facility (circa 1934), garages with petroleum bulk storage (1930 to 2011) and parking facilities with hydraulic lifts and suspected hydraulic USTs (1920-2014).

Six 550-gallon USTs on the site were closed in place in 1999. Available records do not indicate that any remediation took place. The site was assigned a restrictive zoning designation in April 2011 for hazardous materials, air quality and noise.

Site Geology and Hydrogeology:

Subsurface stratigraphy at the site consists of historic fill underlain by native soil consisting of silt, sand, gravel, and boulders overlying bedrock. The fill extends to varying depths ranging from about 3 to 20 feet below grade and generally consists of loose, black-to-gray-to-brown, fine-to-

coarse sand, with varying amounts of gravel, silt, rock fragments, brick, tile, concrete and ash. Mica schist bedrock was encountered at depths ranging from about 21 feet below grade in the southern portion of the site to 63 feet below grade near the northeast corner.

Groundwater depth ranges from about 15.8 to 17.4 feet below grade. Site groundwater flows to the west toward the Hudson River.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, an alternative that restricts 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 under the Brownfield Cleanup Agreement is a Volunteer. The Applicant does not have an obligation to address off-site contamination. However, the Department has determined that this site does not pose a significant threat to public health or the environment; accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

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

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

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings, or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the

development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

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

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

6.1.2: RI Results

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

benzo(a)anthracene	copper
benzo(a)pyrene	lead
benzo(b)fluoranthene	mercury
benzo(k)fluoranthene	tetrachloroethene (PCE)
phenol	trichloroethene (TCE)
cadmium	methylene chloride
chromium	toluene

The contaminants of concern exceed the applicable SCGs for soil and groundwater.

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.

Nature and Extent of Contamination:

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

Soil:

No volatile organic compounds (VOCs) were detected above restricted residential soil cleanup objectives (RRSCOs).

Site soil contamination is primarily associated with historic fill present across all or most the site. Polycyclic aromatic hydrocarbons (PAHs), a type of semi-volatile organic compounds (SVOCs) that are a by-product of fossil fuel combustion, were observed within the historic fill. Eight PAHs were detected above RRSCOs, including phenol at 0.66 parts per million (ppm) (RRSCO is 0.33 ppm), benzo(a)anthracene at 52 ppm (RRSCO is 1 ppm), benzo(a)pyrene at 34 ppm (RRSCO is 1 ppm), benzo(b)fluoranthene at 51 ppm (RRSCO is 1 ppm) and benzo(k)fluoranthene at 52 ppm (RRSCO is 1 ppm).

The metals cadmium (11 ppm), chromium (130 ppm), copper (470 ppm), lead (1,200 ppm) and mercury (2 ppm) were detected in one or more locations above their respective RRSCOs of 4.3 ppm, 110 ppm, 270 ppm, 400 ppm and 0.81 ppm.

No PCBs or pesticides were detected above their respective RRSCOs.

Soil samples were collected and analyzed for 1,4-dioxane and PFAS. 1,4-Dioxane was not detected in any soil samples. Up to fourteen of the NYSDEC 21-list PFAS compounds were detected in 12 soil samples. Total detected perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) concentrations ranged from 0.000054 ppm and .000156 ppm.

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

Groundwater:

Four VOCs; tetrachloroethene (PCE) (9.6 parts per billion (ppb)), trichloroethene (TCE) (13 ppb), chloroform (51 ppb) and toluene (72 ppb) were detected above their respective ambient water quality guidance values and groundwater values (AWGS/GVs) of 5 ppb, 5 ppb, 7 ppb and 5 ppb.

Phenol (8.5 ppb) was the only SVOC detected above its AWGS/GV of 1 ppb.

PCBs were not detected in any of the groundwater samples collected during the RI.

1,4-Dioxane was not detected in any groundwater samples. Up to sixteen of the NYSDEC 21-compound list of PFAS were detected in six samples. Total PFOA and PFOS concentrations were detected from 144 parts per trillion (ppt) to 198 ppt.

Only naturally occurring metals were detected above their AWGS/GVs.

The data do not indicate any off-site impacts in groundwater related to this site.

Soil Vapor:

Three VOCs; PCE (1,370 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)), TCE (602 $\mu\text{g}/\text{m}^3$) and methylene chloride (268 $\mu\text{g}/\text{m}^3$) were detected in on-site soil vapor at the maximum concentrations stated. It is noted that PCE and TCE were each detected on one location just above their respective AWGS/GV and none of these VOCs were detected in soil samples obtained from the site and therefore suggest an off-site source of the soil vapor impacts.

6.4: Summary of Human Exposure Pathways

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

Direct contact with contaminants in the soil is unlikely because the majority of the site is covered with pavement. Contaminated groundwater at the site is not used for drinking or other purposes and the site 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 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 there is no onsite building, inhalation of site contaminants in indoor air due to soil vapor intrusion does not represent a concern for the site in its current condition. However, the potential exists for the inhalation of site contaminants due to soil vapor intrusion offsite and for any future onsite development.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

Soil

RAOs for Public Health Protection

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

Soil Vapor

RAOs for Public Health Protection

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

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

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

The selected remedy is a Track 4: Restricted use with site-specific soil cleanup objectives remedy. The selected remedy is referred to as the restricted residential use via excavation and sub-slab depressurization remedy. The elements of the selected remedy, as shown in Figure 2, are as follows:

1. Remedial Design

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

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

- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Excavation

All soils in the upper two feet which exceed the restricted residential SCOs will be excavated and transported off-site for disposal.

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

Approximately 3,800 cubic yards of contaminated soil will be removed from the site.

3. Backfill

On-site soil which does not exceed the above excavation criteria or the protection of groundwater SCOs for any constituent may be used anywhere beneath the cover system, including below the water table, to backfill the excavation or re-grade the site.

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. The site will be re-graded to accommodate installation of a cover system as described in remedy element 4.

4. 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.

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 groundwater.

6. 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 4, restricted residential cleanup at a minimum and will include an environmental easement, and site management plan as described below.

7. Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted residential as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and
- require compliance with the Department approved Site Management Plan.

8. Site Management Plan

A Site Management Plan is required, which includes the following:

- A. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Site Management Plan and the Environmental Easement discussed in Paragraph 7 above.

Engineering Controls: The soil cover discussed in Paragraph 4 and the vapor mitigation 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 4 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs)
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

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

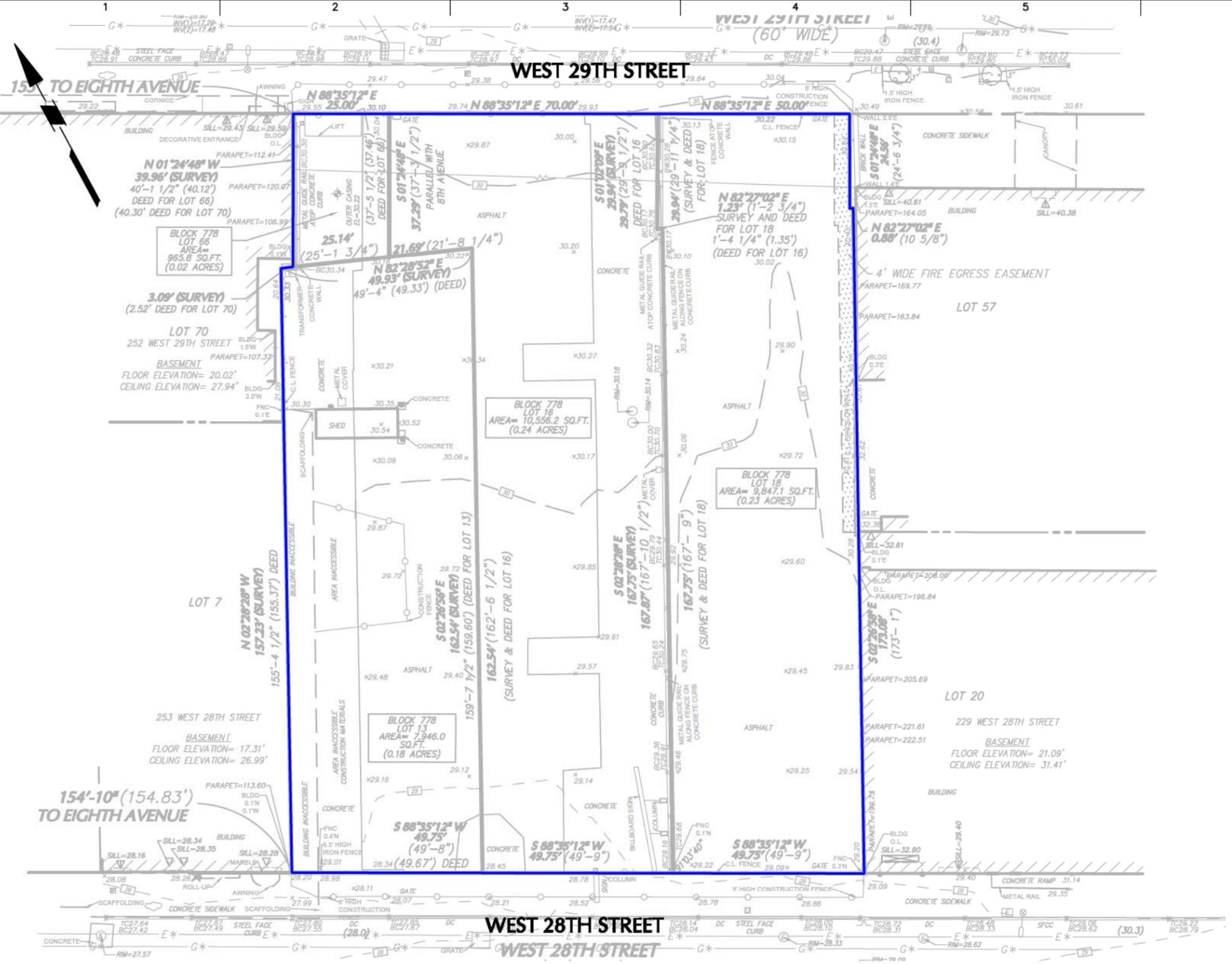
6/2016
1994 2019

Figure 1 Site Location 241 West 28th Street

241 West 28th Street



approximate site boundary



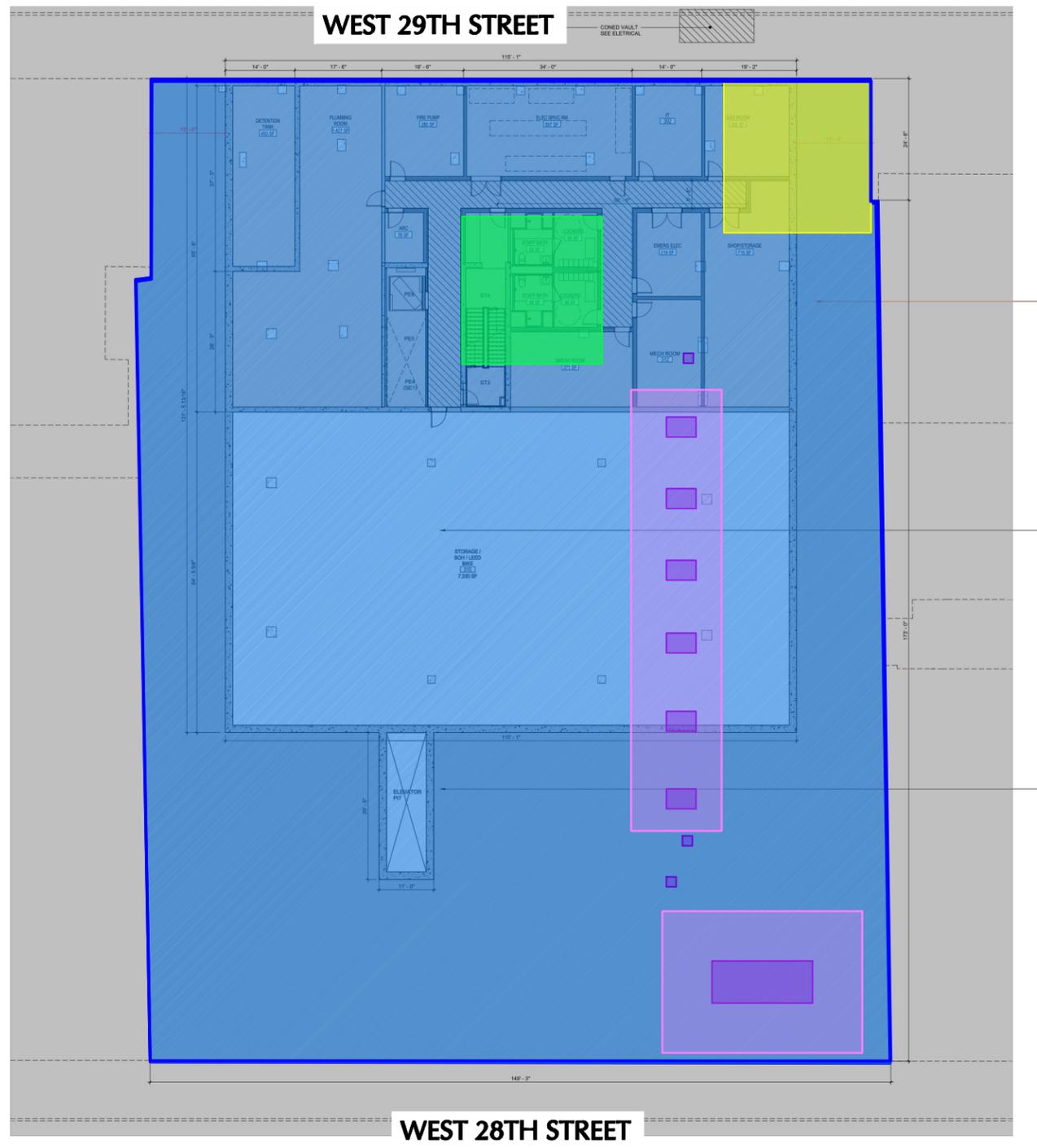
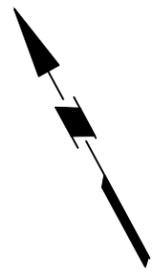
LEGEND:
 APPROXIMATE SITE BOUNDARY

- NOTES:
1. BASE MAP TAKEN FROM LANGAN DRAFT TOPOGRAPHIC, BOUNDARY AND UTILITY SURVEY DRAWING TITLED "170017001-V-EX0101" DATED MARCH 13, 2019.
 2. ELEVATIONS ON THIS FIGURE ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88). 1.1 FT ABOVE US&CS DATUM (MEAN SEA LEVEL AT SANDY HOOK, NJ, 1929)

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.



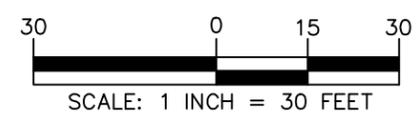
 Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. 21 Penn Plaza, 360 West 31st Street, 8th Floor New York, NY 10001 T: 212.479.5400 F: 212.479.5444 www.langan.com	Project 241 WEST 28TH STREET BLOCK No. 778, LOT No. 13 NEW YORK NEW YORK	Figure Title SITE PLAN	Project No. 170017004 Date 06/26/2019 Drawn By KA Checked By PM	Figure No. 2 Sheet 2 of 13
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- LEGEND:**
- APPROXIMATE SITE BOUNDARY
 - APPROXIMATE EXTENT OF SITE-WIDE EXCAVATION TO ABOUT 2 FEET BGS TO ALLOW FOR A 2-FOOT-THICK COVER SYSTEM, SEE NOTE 3
 - APPROXIMATE LOCATION OF SUSPECTED USTs
 - APPROXIMATE EXTENT OF LOCALIZED EXCAVATION SURROUNDING USTs TO ABOUT 6 TO 8 FEET BGS, SEE NOTE 4
 - APPROXIMATE EXTENT OF LOCALIZED EXCAVATION AROUND RI BORING EB-5 TO ABOUT 10 TO 12 FEET BGS, SEE NOTE 5
 - APPROXIMATE EXTENT OF LOCALIZED EXCAVATION AROUND RI BORING EB-2 TO ABOUT 8 TO 10 FEET BGS, SEE NOTE 6

- NOTES:**
1. BASE MAP TAKEN FROM COOKFOX ARCHITECTS DRAWING A-100, "FLOOR PLAN CELLAR," DATED JULY 24, 2019.
 2. THE CURRENT DEVELOPMENT PLAN FEATURES A PARTIAL CELLAR BENEATH THE NORTHERN TOWER AND CENTRAL PODIUM AND MINIMAL EXCAVATION BENEATH THE SOUTHERN TOWER TO SUPPORT INSTALLATION OF FOUNDATION ELEMENTS.
 3. SITE-WIDE EXCAVATION TO REMOVE CONTAMINATED HISTORIC FILL MATERIAL WILL EXTEND TO ABOUT 2 FEET BELOW GRADE SURFACE (BGS) TO DEMOLISH REMNANT BUILDING FOUNDATIONS, ACCOMODATE INSTALLATION OF AN ACTIVE SUB-MEMBRANE DEPRESSURIZATION (SMD) SYSTEM, AND INSTALL A SITE-WIDE COMPOSITE COVER.
 4. LOCALIZED UNDERGROUND STORAGE TANK (UST) REMOVAL EXCAVATIONS WILL BE PERFORMED TO ABOUT 6 TO 8 FEET BGS, TO THE EXTENT PRACTICABLE, TO REMOVE FORMER USTs AND ASSOCIATED IMPACTED MATERIAL IDENTIFIED DURING REMOVAL.
 5. LOCALIZED EXCAVATION WILL BE PERFORMED SURROUNDING REMEDIAL INVESTIGATION (RI) BORING EB-5 TO ABOUT 10 TO 12 FEET BGS, TO THE EXTENT PRACTICABLE, WHERE PETROLEUM-LIKE ODORS WERE APPARENT.
 6. LOCALIZED EXCAVATION WILL BE PERFORMED TO REMOVE SEMIVOLATILE ORGANIC COMPOUND (SVOC)-IMPACTED MATERIAL SURROUNDING RI BORING EB-2 TO ABOUT 8 TO 10 FEET BGS, TO THE EXTENT PRACTICABLE, WHERE TOTAL SVOCs WERE PREVIOUSLY DETECTED ABOVE 500 PARTS PER MILLION (PPM).
 7. APPROXIMATE UST LOCATIONS WERE TAKEN FROM NOVA GEOPHYSICAL'S GEOPHYSICAL SURVEY REPORT DATED MARCH 2, 2012.
 8. ADDITIONAL EXCAVATION TO REMOVE ON-SITE SOURCES OF CONTAMINATION MAY BE PERFORMED, AS NECESSARY.

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LANGAN
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Project
241 WEST 28TH STREET
 BLOCK No. 778, LOT No. 13
 NEW YORK NEW YORK

Figure Title
EXTENT OF REMEDIAL EXCAVATION

Project No.
 170017004
 Date
 03/13/2020
 Drawn By
 ERA
 Checked By
 PM

Figure No.
3