# DECISION DOCUMENT

West 28th Street
Brownfield Cleanup Program
New York, New York County
Site No. C231082
December 2013

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

# DECLARATION STATEMENT - DECISION DOCUMENT

West 28th Street
Brownfield Cleanup Program
New York, New York County
Site No. C231082
December 2013

**Statement of Purpose and Basis**

This document presents the remedy for the 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 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; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Excavation
All on-site soils which exceed unrestricted use SCOs, as defined by 6 NYCRR Part 375-6.8, will

be excavated and transported off-site for disposal. Approximately 14,800 cubic yards of soil will be removed from the site. As necessary, clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to establish the designed grades at the site.
The site excavation will include:

- complete removal of the underground storage tank (UST) vault and petroleum impacted soil;
- placement of sheet piles and a secant wall along the perimeters of the site to support adjacent buildings; and
- dewatering of the site during excavation below the water table and treatment of the extracted groundwater.

Contingent Remedial Elements:

Alternative Engineering and Institutional Controls
If confirmatory samples cannot establish that the unrestricted SCOs have been achieved, the remedy will achieve a Track 2 restricted residential cleanup by removing all soil on the property which exceeds restricted residential SCOs to a depth of at least 15 feet below ground surface with a demarcation barrier where necessary.

3. Institutional Controls:
In the event that a Track 1 unrestricted use cleanup is not achieved, and/or remedial action objectives for groundwater and soil vapor have not been met, imposition of an institutional control in the form of an environmental easement may be required for the controlled property that:

- requires 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);
- allows the use and development of the controlled property for restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH;
- requires compliance with the Department approved Site Management Plan.

4. Site Management Plan
In the event that a Track 1 Unrestricted Use cleanup is not achieved and/or remedial action objectives for groundwater and soil vapor have not been met, a Site Management Plan may be required, which would include 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 3 above.
This plan includes, but may not be limited to:

- descriptions of the provisions of the environmental easement including any land use or groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any buildings

developed on the site, including provision for implementing actions recommended to address potential exposures related to soil vapor intrusion;

- maintaining site access controls and Department notification;

and

- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

**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.

December 24, 2013

Date

Robert J. Cozzy, Director
Remedial Bureau B

# DECISION DOCUMENT

West 28th Street
New York, New York County
Site No. C231082
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## 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 repository:

New York Public Library
Attn: Ashley Curran
Muhlenberg Branch
209 West 23rd Street
New York, NY 10011-2379
Phone: 212-924-1585

### Receive Site Citizen Participation Information by Email

Please note that the Department's Division of Environmental Remediation (DER) is "going

paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

## SECTION 3: SITE DESCRIPTION AND HISTORY

Location:
The BCP site is located at 505 - 507 West 28th Street in New York City, New York County and has an area of approximately 0.51 acres. It is between 10th and 11th Avenues and is bounded to the north by West 28th Street and the south by West 27th Street. Commercial structures are adjacent to the east and west boundaries.

Site Features:
The site is currently vacant of operating businesses. Until recently, it included a large trailer body, sheds, and storage areas. Presently, there are no structures. The majority of the site surface is covered by a non-uniform, uneven concrete surface with the remainder having patches of asphalt paving and open soil cover with no vegetation.

Current Zoning and Land Use:
The site is zoned commercial (C6-3) and is located in a commercial and residential area of the West Chelsea section of the Borough of Manhattan.

Past Use of the Site:
The site has been occupied by several residential structures, laundry cleaning, metal works, manufacturing, motor freight storage, automobile repair and a scrap yard.

Site Geology and Hydrogeology:
Subsurface material present below the site includes historic fill from prior developments that may have been used to stabilize soil or to elevate the existing ground. The fill includes concrete, brick, cinders, and other construction debris mixed, silt, sand and gravel and is generally present from 1-10 feet below ground. Below the fill the shallow subsurface soil at the site consists of sands and silts, glacial till intermixed with lean clay. Depth to bedrock ranges from 15 to 25 feet below grade.

The surface geology of Manhattan generally includes very thin layers of unconsolidated glacial deposits underlain by bedrock. Groundwater at the site is encountered at approximately 8 to 11 feet below ground surface. Regional groundwater flow direction is westerly toward the Hudson River which is approximately 1,500 feet 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, an alternative which allows for unrestricted use of the site was evaluated.

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

## SECTION 5: ENFORCEMENT STATUS

The Applicant 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 contaminant(s) of concern identified at this site is/are:

1,2,4-trimethylbenzene
1,3,5-Trimethylbenzene
benzo(a)pyrene
benzo(b)fluoranthene
benzo(k)fluoranthene
benzo(a)pyrene
xylene (total)
Chrysene
lead
mercury
tetrachlorethene (PCE)
trichloroethene (TCE)
dichloroethene (DCE)

The contaminants of concern exceed the applicable SCGs for:

- groundwater
- soil
- soil vapor intrusion

## 6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

The following IRM(s) has/have been completed at this site based on conditions observed during the RI.

Underground Storage Tank Removal IRM

On August 1, 2013, an excavation confirmed the presence of two 550-gallon underground gasoline storage tanks (USTs) within a concrete vault. Both USTs were completely encased in concrete and filled with water. The contents of both USTs and related piping were removed using a vacuum truck and disposed of at a licensed facility. No perforations or defects to either

tank were identified. No impacts were observed as the cover fill and concrete were removed from around the tanks. Both USTs were exhumed and disposed of off-site. The southern, eastern, and bottom portions of the concrete vault were left in place to maintain structural integrity of the adjacent building and sidewalk/roadway. The excavation was backfilled with concrete, imported recycled concrete aggregate (RCA) and excavated historic fill which can be removed if necessary for the final site remedy.

## 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:
Recent investigations found no evidence of significant VOC contamination. Trimethylbenzenes and xylenes were present in one of the 21 soil samples at concentrations above their unrestricted use SCOs, but well below residential use SCOs. PAHs were observed in about half of the samples at concentrations indicative of historic fill. Metals are also present in soil at concentrations typical of historic fill and urban background. However, mercury concentrations ranged from non-detect to 69.6 parts per million (ppm). The unrestricted use SCO for mercury is 0.18 ppm; restricted residential is 0.81 ppm.

Groundwater:
Cis-1,2-dichloroethene (DCE) was found in groundwater samples from two wells near the north-west corner of the site at concentrations up to 260 ppb. DCE has been documented in up-gradient groundwater and is not due to an on-site source.

Soil Vapor:
The presence of chlorinated VOCs in soil vapor and groundwater presents the possibility of vapor intrusion to future on-site buildings. The maximum concentrations of tetrachloroethene (PCE) and trichloroethene (TCE) were detected along the west boundary at the respective concentrations of 308 micrograms per cubic meter (ug/m3) and 828 ug/m3.

Four USTs were reported to be present on the site. Two USTs were exhumed in August 2013 and disposed of off-site. The presence of the other two tanks has yet to be confirmed.

## 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 fenced and covered by concrete, people will not come into contact with site related soil and groundwater contamination unless they dig below the surface. 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 its water from a different source not affected by this contamination. Volatile organic compounds may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air or buildings, is referred to as soil vapor intrusion. Because the site is vacant, the inhalation of site related contaminants due to soil vapor intrusion does not represent a concern for the site in its current condition.

### 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.

**RAOs for Environmental Protection**

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

**Soil Vapor**

**RAOs for Public Health Protection**

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

## SECTION 7: ELEMENTS OF THE SELECTED REMEDY

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

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

The selected remedy is referred to as the complete site excavation with dewatering 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;

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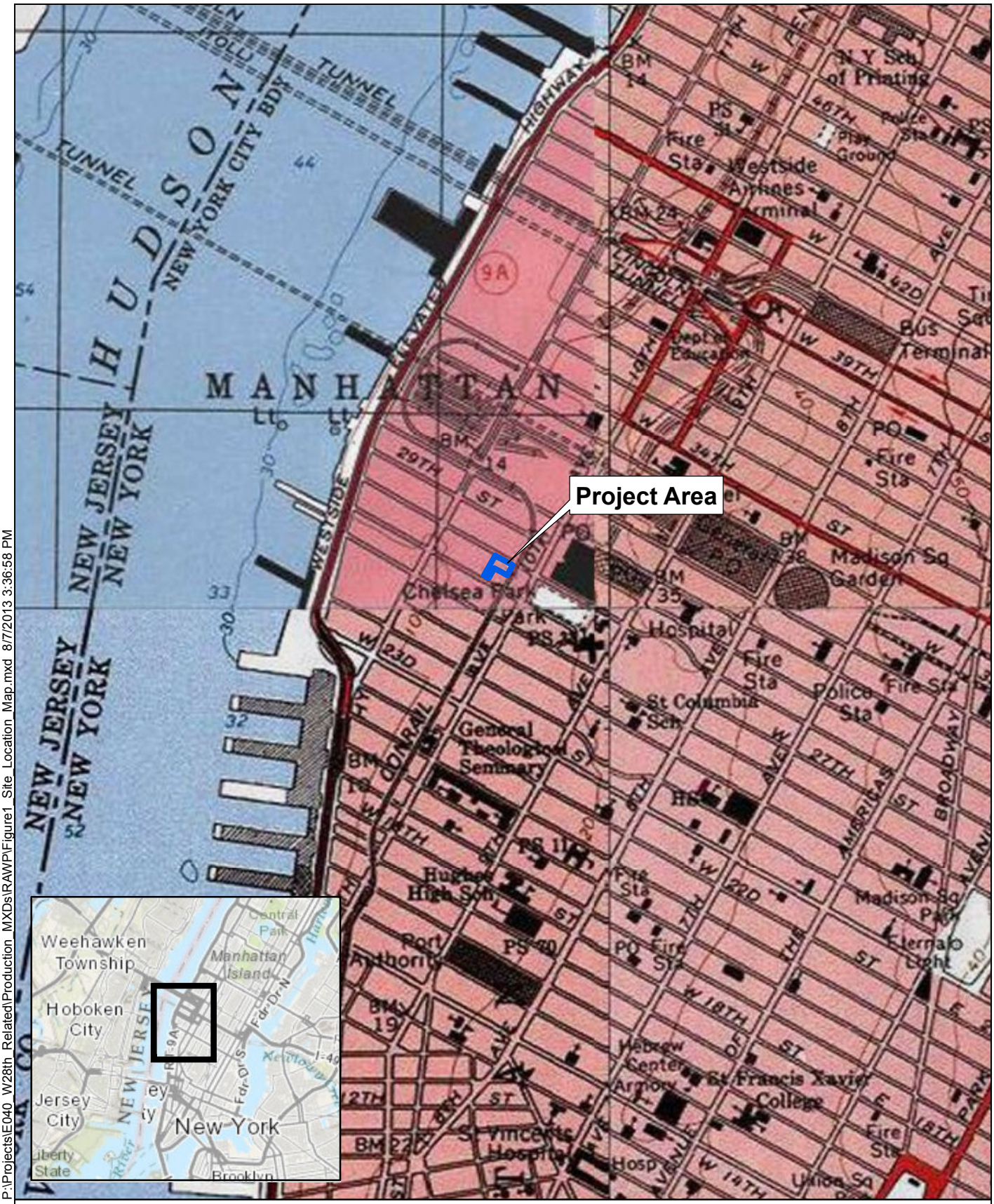
- maintaining site access controls and Department notification;

and

- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

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New York, New York 10006
www.integral-corp.com

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Feet

Sources:
USGS 7.5' Topographic Quadrangles Jersey City, NY-NJ and Brooklyn, NY

**Figure 1.**
Site Location Map
514-520 West 28th Street, New York, NY
Remedial Action Work Plan

**DRAFT**

W. 28th St.

LOT 43

Vacant

Vacant

Shed

LOT 42

High Line Elevated Park

Storage

LOT 27

Residential

Residential

Residential

Mixed Residential
and Commercial

Residential

10th Ave.

Industrial

Commercial and
Office Buildings

Residential

Offices

W. 27th St.

Site Boundary

Tax Lots

Inactive Diesel Underground
Storage Tank, 550-gallon

0 30 60
Feet

N

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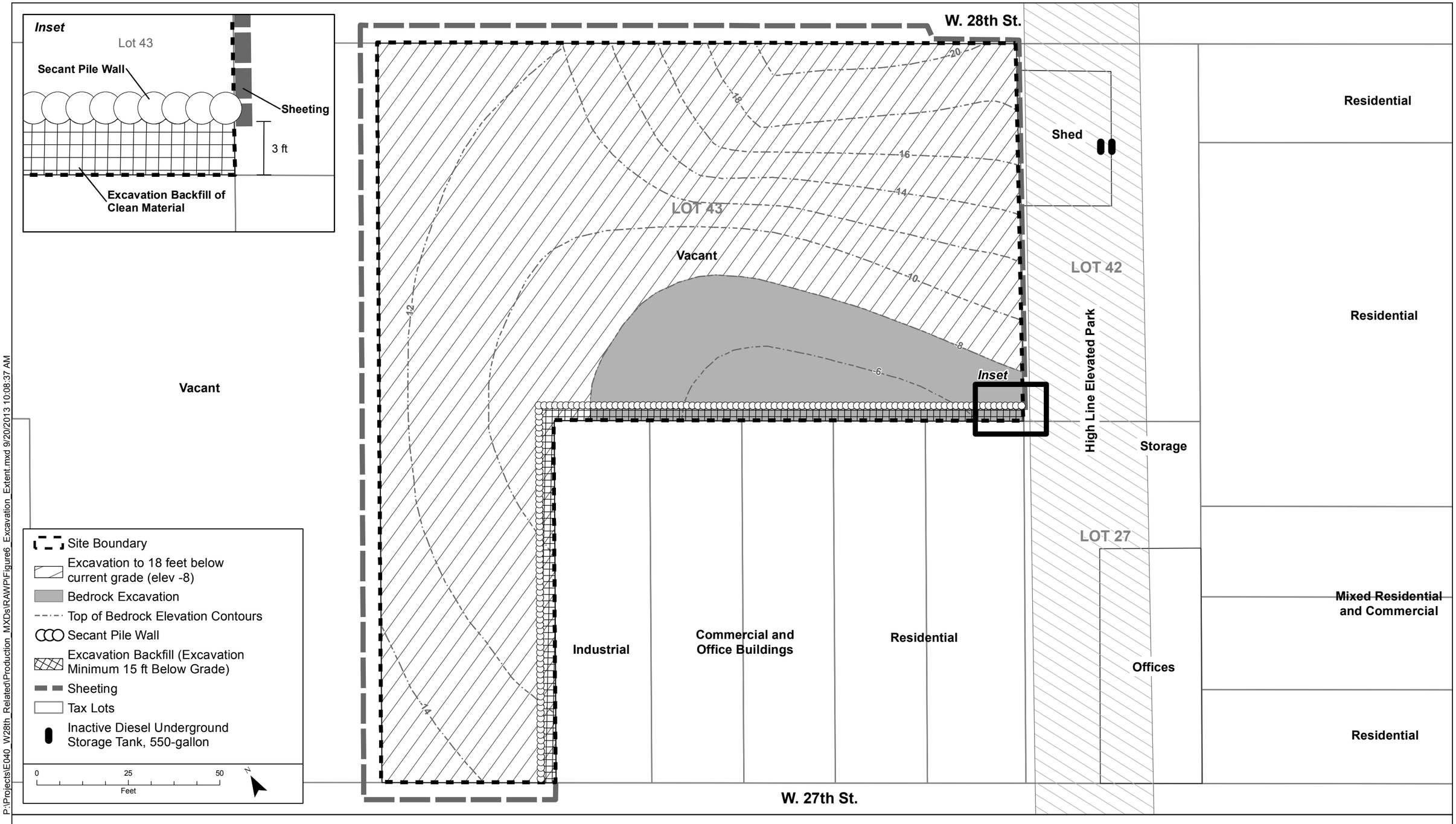
**Figure 2.**
Site Plan
514-520 West 28th Street, New York, NY
Remedial Action Work Plan

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Note:
1. Excavation backfill accomplished by using 3 ft x 5 ft sheeted pits.

DRAFT

**Figure 6.**
Extent of Excavation for Alternatives I and II
514-520 West 28th Street, New York, NY
Remedial Action Work Plan