DECISION DOCUMENT

1099 Webster Ave Redevelopment Site
Brownfield Cleanup Program
Bronx, Bronx County
Site No. C203167
September 2025

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

DECLARATION STATEMENT - DECISION DOCUMENT

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Statement of Purpose and Basis

This document presents the remedy for the 1099 Webster Ave Redevelopment 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 (NYSDEC) for the 1099 Webster Ave Redevelopment Site and the public's input to the proposed remedy presented by NYSDEC.

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 shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

As part of the remedial design program, to evaluate the remedy with respect to green and sustainable remediation principles, an environmental footprint analysis will be completed. The environmental footprint analysis will be completed using an accepted environmental footprint analysis calculator such as SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA), SiteWise^{TM} (available in the Sustainable Remediation Forum [SURF] library) or similar NYSDEC accepted tool. Water consumption, greenhouse gas emissions, renewable and non-renewable energy use, waste reduction and material use will be estimated, and goals for the project related to these green and sustainable remediation metrics, as well as for minimizing community impacts, protecting habitats and natural and cultural resources, and promoting environmental justice, will be incorporated into the remedial design program, as appropriate. The project design specifications will include detailed requirements to achieve the green and sustainable remediation goals. Further, progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the Final Engineering Report (FER), including a comparison to the goals established during the remedial design program.

Additionally, the remedial design program will include a climate change vulnerability assessment, to evaluate the impact of climate change on the project site and the proposed remedy. Potential vulnerabilities associated with extreme weather events (e.g., hurricanes, lightning, heat stress and drought), flooding, and sea level rise will be identified, and the remedial design program will incorporate measures to minimize the impact of climate change on potential identified vulnerabilities.

2. Excavation

The existing on-site buildings will be demolished and materials which cannot be beneficially reused on site will be taken off-site for proper disposal in order to implement the remedy.

Excavation and off-site disposal of all on-site soils which exceed unrestricted SCOs, as defined by 6 NYCRR Part 375-6.8 to a depth of 3 feet below grade (ft bg) across the entirety of the site with areas of deeper excavations up to 13 ft bg. Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination. If a Track 1 cleanup is achieved, a Cover System will not be a required element of the remedy.

Approximately 4,000 cubic yards of contaminated soil will be removed from the site for remediation. Collection and analysis of confirmation and documentation samples at the remedial excavation depths will be used to verify that SCOs for the site have been achieved. If confirmation sampling indicates that SCOs were not achieved at the stated remedial depth, the Applicant must notify NYSDEC, submit the sample results and, in consultation with NYSDEC, determine if further remedial excavation is necessary. Further excavation for development will

proceed after confirmation samples demonstrate that SCOs for the site have been achieved.

To ensure proper handling and disposal of excavated material, waste characterization sampling will be completed for all identified contaminated site material. Waste characterization sampling will be performed exclusively for the purposes of off-site disposal in a manner suitable to receiving facilities and in conformance with applicable federal, state and local laws, rules, and regulations and facility-specific permits.

3. Backfill

As needed, 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.

4. 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 the subsurface. The system and any vapor intrusion monitoring must no longer be needed within 5 years of the date of the Certificate of Completion, or the remedy would result in a Track 2 restricted residential cleanup.

5. Soil Vapor Extraction

Soil vapor extraction (SVE) will be implemented to remove volatile organic compound (VOC) vapors from the subsurface and prevent off-site migration of contaminated vapor. VOCs will be physically removed from the subsurface by applying a vacuum to wells that have been installed into the vadose zone (the area below the ground but above the water table). The vacuum draws air through the soil matrix which carries the VOC vapors from the soil to the SVE well. The air extracted from the SVE wells is then treated as necessary prior to being discharged to the atmosphere. Specifics about the installation of the SVE will be determined during the remedial design. The system and any soil vapor monitoring must no longer be needed within 5 years of the date of the Certificate of Completion, or the remedy would result in a Track 2 restricted residential cleanup.

6. Local Institutional Controls

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

Conditional Track 1

The intent of the remedy is to achieve a Track 1 unrestricted use therefore, no EE or SMP is anticipated. If the remedial action objectives (RAOs) for groundwater and soil vapor intrusion are not achieved prior to completion of the Final Engineering Report, then a SMP and EE will be

required, and a Track 1 cleanup can only be achieved if no engineering controls are needed and the RAOs are achieved within 5 years of the date of the Certificate of Completion.

In the event that Track 1 unrestricted use is not achieved, the following contingent remedial elements will be required, and the remedy will achieve a Track 2 restricted residential cleanup at a minimum.

Contingent Remedial Elements

7. Institutional Controls

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

- require the remedial party or site owner to complete and submit to the NYSDEC 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 NYCDOHMH; and
- require compliance with the NYSDEC approved SMP.

8. Site Management Plan (SMP)

A SMP 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 engineering controls remain in place and effective:

- Institutional Controls: The EE discussed in Remedy Element 7 above.
- Engineering Controls: The sub-slab depressurization system discussed in Remedy Element 4 and the soil vapor extraction system discussed in Remedy Element 5 above.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and NYSDEC notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
   - monitoring of groundwater, soil vapor, and indoor air to assess the performance and effectiveness of the remedy; and
   - a schedule of monitoring and frequency of submittals to the NYSDEC.

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 systems. The plan includes, but is not limited to:
   - procedures for operating and maintaining the systems; and
   - compliance inspection of the systems 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 NYSDEC guidance, as appropriate. The remedy is protective of public health and the environment.

September 19, 2025

Date

Scott Deyette, Director
Remedial Bureau B

DECISION DOCUMENT

1099 Webster Ave Redevelopment Site
Bronx, Bronx County
Site No. C203167
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SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (NYSDEC), 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.

NYSDEC 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

NYSDEC 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 NYSDEC 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=C203167

Bronx Community Board #4
1650 Selwyn Ave., Suite 11A
Bronx, NY 10457
Phone: (718) 299-0800

The New York Public Library - Morrisania Branch
610 East 169th Street
Bronx, NY 10456
Phone: (718) 589-9268

Receive Site Citizen Participation Information By Email

Please note that NYSDEC'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 1099 Webster Ave Redevelopment Site is located in an urban area of the East Concourse section of the Bronx. The site occupies Block 2426, Lot 25 and is bounded to the north by a commercial building, to the east by Webster Avenue, to the south by East 166th Street, and to the west by multiple multi-family residential buildings followed by Clay Avenue.

Site Features: The 0.85-acre site is currently developed with two (2) single-story connected buildings operating as a repair garage and automotive machine shop with an open-air commercial parking lot on the southern third of the site.

Current Zoning and Land Use: The site is zoned as an R7X residential district, with a C2-4 commercial overlay. The property is currently utilized for commercial purposes, with tenants including an auto garage/machine shop, an auto dealer, mechanic/transmission rebuilding facility, and an auto mechanic/muffler and transmission repair shop. All tenancies are on a month-to-month basis. The surrounding properties are characterized by multi-story residential and commercial buildings, some of which have industrial and manufacturing uses. The site is also located within a NYS Environmental (EN) Zone (Census Tract 139), and a Disadvantaged Community.

Past Use of the Site: Site history indicates the current site building was developed in the 1920s and originally encompassed the entire lot. The southern one-third of the building was destroyed by fire and subsequently demolished in the late 1990s and has been used as a parking lot since. The past uses of the site include auto repair garages, automotive machine shops, auto body repair shops, Sheffield Farms Dairy (garage, storage, and fleet repair), a retail auto parts store, restaurants, and retail stores.

Site Geology and Hydrogeology: The site stratigraphy from the surface down consists of an urban fill layer extending to approximately 5 feet below grade (ft bg) and is underlain predominantly by fine-to-medium sand and silt with varying amounts of fine gravel.

Groundwater was observed at approximately 9 to 10.5 ft bg and was measured to flow south-southeast.

A site location map is attached as Figure 1 and a site layout is attached as Figure 2.

SECTION 4: LAND USE AND PHYSICAL SETTING

NYSDEC 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 restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) 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) against 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

One or more of the Applicants under the Brownfield Cleanup Agreement is a Participant. The Participants have an obligation to address on-site and off-site contamination. 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
- indoor air
- sub-slab 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. NYSDEC 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:

acetone
arsenic
barium
benzene
benzo(a)anthracene
benzo(a)pyrene
benzo(b)fluoranthene
benzo(k)fluoranthene
chloroform
chrysene
cis-1,2-dichloroethene
cyclohexane
dibenz[a,h]anthracene
ethylbenzene
heptane
hexane
indeno(1,2,3-cd)pyrene
lead
mercury
perfluorooctane sulfonic acid (PFOS)
perfluorooctanoic acid (PFOA)
tetrachloroethene (PCE)
toluene
trichloroethene (TCE)
xylene (mixed)
1,2-dichlorobenzene
2,2,4-trimethylpentane

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.

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, per- and polyfluoroalkyl substances (PFAS), and 1,4- dioxane. Soil vapor and indoor air were analyzed for VOCs. The primary contaminants of concern at the site include VOCs, SVOCs, and PFAS in soil; metals and PFAS in groundwater; and chlorinated and petroleum-related VOCs in soil vapor.

Soil
Exceedances of the unrestricted use soil cleanup objectives (UUSCOs) were primarily found in the historic fill layer which extends to approximately 5 feet below grade (ft bg). In general, the highest concentrations were detected in the upper 2 feet of site soils with some deeper exceedances extending up to 12 to 14 ft bg.

VOCs detected at concentrations exceeding their respective UUSCOs include acetone up to 0.26 parts per million (ppm) (UUSCO of 0.05 ppm), ethylbenzene up to 1.7 ppm (UUSCO of 1 ppm), 1,2-dichlorobenzene up to 3.4 ppm (UUSCO of 1.1 ppm), tetrachloroethene (PCE) up to 18 ppm (UUSCO of 1.3 ppm), trichloroethene (TCE) up to 1.1 ppm (UUSCO of 0.47 ppm), cis-1,2-dichloroethene (DCE) up to 1.0 ppm (UUSCO of 0.25 ppm), and toluene up to 2.7 ppm (UUSCO of 0.7 ppm).

SVOCs detected at concentrations exceeding their respective UUSCOs include benzo(a)anthracene up to 7.79 ppm (UUSCO of 1 ppm), benzo(a)pyrene up to 6.63 ppm (UUSCO of 1 ppm), benzo(b)fluoranthene up to 6.63 ppm (UUSCO of 1 ppm), benzo(k)fluoranthene up to 5.62 ppm (UUSCO of 0.8 ppm), chrysene up to 6.72 ppm (UUSCO

of 1 ppm), dibenzo(a,h)anthracene up to 1.56 ppm (UUSCO of 0.33 ppm), and indeno(1,2,3-cd)pyrene up to 4.17 ppm (UUSCO of 0.5 ppm).

Metals detected at concentrations exceeding their respective UUSCOs include arsenic up to 113 ppm (UUSCO of 13 ppm), barium up to 438 ppm (UUSCO of 350 ppm), copper up to 155 ppm (UUSCO of 50 ppm), lead up to 362 ppm (UUSCO of 63 ppm), and mercury up to 0.481 ppm (UUSCO of 0.18 ppm).

Pesticides detected at concentrations exceeding their respective UUSCOs include 4,4'-DDE up to 0.0037 ppm (UUSCO of 0.0033 ppm), and 4,4'-DDT up to 0.00613 ppm (UUSCO of 0.0033 ppm).

PFAS detected at concentrations exceeding their respective Unrestricted Use Soil Guidance Values (UUGV) include perfluorooctanoic acid (PFOA) up to 1.42 parts per billion (ppb) (UUGV of 0.66 ppb), and perfluorooctanesulfonic acid (PFOS) up to 10.2 ppb (UUGV of 0.88 ppb).

No PCBs or 1,4-dioxane were detected above their respective UUSCOs.

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

Groundwater

Dissolved metals detected at concentrations exceeding their respective AWQSGVs include manganese up to 329 ppb (AWQSGV of 300 ppb), and selenium up to 12.1 ppb (AWQSGV of 10 ppb), both of which are naturally occurring elements and are not considered to be site-specific contaminants of concern.

PFAS detected at concentrations exceeding their respective AWQSGVs include PFOA up to 30.3 parts per trillion (ppt) (AWQSGV of 6.7 ppt), and PFOS up to 44.2 ppt (AWQSGV of 2.7 ppt).

No PCBs, pesticides, SVOCs, VOCs, or 1,4-dioxane were detected above their respective AWQSGVs.

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

Soil Vapor and Indoor Air

Various chlorinated VOCs were detected in soil vapor including PCE up to 418 micrograms per cubic meter (µg/m³), TCE up to 485 µg/m³, and methylene chloride up to 4.5 µg/m³. Chlorinated VOCs did not exceed applicable air guideline values in the indoor air.

Various petroleum-related VOCs were detected in soil vapor including benzene up to 66.4 µg/m³, cyclohexane up to 478 µg/m³, ethylbenzene up to 66 µg/m³, heptane up to 3,000 µg/m³, hexane up to 603 µg/m³, toluene up to 388 µg/m³, 1,2,4-trimethylbenzene up to 71.3 µg/m³, 2,2,4-trimethylpentane up to 381 µg/m³, and total xylenes up to 621 µg/m³. Elevated levels of

petroleum VOCs were detected within the indoor air; however, these were attributed to indoor sources associated with the on-going activities within the machine shop.

Data indicates that there is a potential for off-site impacts in soil vapor related to this site; however, access for off-site sampling was denied by the adjacent property owner.

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 buildings and 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 the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential for soil vapor intrusion to occur on-site will be evaluated should the site building be re-occupied and/or if new construction occurs. Additional evaluation is needed to determine whether actions are needed to address soil vapor intrusion off-site.

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.
- 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 Conditional Track 1 remedy.

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

The elements of the selected remedy, as shown in Figures 3 and 4 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

shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

As part of the remedial design program, to evaluate the remedy with respect to green and sustainable remediation principles, an environmental footprint analysis will be completed. The environmental footprint analysis will be completed using an accepted environmental footprint analysis calculator such as SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA), SiteWise^{TM} (available in the Sustainable Remediation Forum [SURF] library) or similar NYSDEC accepted tool. Water consumption, greenhouse gas emissions, renewable and non-renewable energy use, waste reduction and material use will be estimated, and goals for the project related to these green and sustainable remediation metrics, as well as for minimizing community impacts, protecting habitats and natural and cultural resources, and promoting environmental justice, will be incorporated into the remedial design program, as appropriate. The project design specifications will include detailed requirements to achieve the green and sustainable remediation goals. Further, progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the Final Engineering Report (FER), including a comparison to the goals established during the remedial design program.

Additionally, the remedial design program will include a climate change vulnerability assessment, to evaluate the impact of climate change on the project site and the proposed remedy. Potential vulnerabilities associated with extreme weather events (e.g., hurricanes, lightning, heat stress and drought), flooding, and sea level rise will be identified, and the remedial design program will incorporate measures to minimize the impact of climate change on potential identified vulnerabilities.

2. Excavation

The existing on-site buildings will be demolished and materials which cannot be beneficially reused on site will be taken off-site for proper disposal in order to implement the remedy.

Excavation and off-site disposal of all on-site soils which exceed unrestricted SCOs, as defined by 6 NYCRR Part 375-6.8 to a depth of 3 feet below grade (ft bg) across the entirety of the site with areas of deeper excavations up to 13 ft bg. Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination. If a Track 1 cleanup is achieved, a Cover System will not be a required element of the remedy.

Approximately 4,000 cubic yards of contaminated soil will be removed from the site for remediation. Collection and analysis of confirmation and documentation samples at the remedial excavation depths will be used to verify that SCOs for the site have been achieved. If confirmation sampling indicates that SCOs were not achieved at the stated remedial depth, the Applicant must notify NYSDEC, submit the sample results and, in consultation with NYSDEC, determine if further remedial excavation is necessary. Further excavation for development will proceed after confirmation samples demonstrate that SCOs for the site have been achieved.

To ensure proper handling and disposal of excavated material, waste characterization sampling will be completed for all identified contaminated site material. Waste characterization sampling will be performed exclusively for the purposes of off-site disposal in a manner suitable to receiving facilities and in conformance with applicable federal, state and local laws, rules, and regulations and facility-specific permits.

3. Backfill

As needed, 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.

4. 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 the subsurface. The system and any vapor intrusion monitoring must no longer be needed within 5 years of the date of the Certificate of Completion, or the remedy would result in a Track 2 restricted residential cleanup.

5. Soil Vapor Extraction

Soil vapor extraction (SVE) will be implemented to remove volatile organic compound (VOC) vapors from the subsurface and prevent off-site migration of contaminated vapor. VOCs will be physically removed from the subsurface by applying a vacuum to wells that have been installed into the vadose zone (the area below the ground but above the water table). The vacuum draws air through the soil matrix which carries the VOC vapors from the soil to the SVE well. The air extracted from the SVE wells is then treated as necessary prior to being discharged to the atmosphere. Specifics about the installation of the SVE will be determined during the remedial design. The system and any soil vapor monitoring must no longer be needed within 5 years of the date of the Certificate of Completion, or the remedy would result in a Track 2 restricted residential cleanup.

6. Local Institutional Controls

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

Conditional Track 1

The intent of the remedy is to achieve a Track 1 unrestricted use therefore, no EE or SMP is anticipated. If the remedial action objectives (RAOs) for groundwater and soil vapor intrusion are not achieved prior to completion of the Final Engineering Report, then a SMP and EE will be required, and a Track 1 cleanup can only be achieved if no engineering controls are needed and the RAOs are achieved within 5 years of the date of the Certificate of Completion.

In the event that Track 1 unrestricted use is not achieved, the following contingent remedial elements will be required, and the remedy will achieve a Track 2 restricted residential cleanup at a minimum.

Contingent Remedial Elements

7. Institutional Controls

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

- require the remedial party or site owner to complete and submit to the NYSDEC 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 NYCDOHMH; and
- require compliance with the NYSDEC approved SMP.

8. Site Management Plan (SMP)

A SMP 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 engineering controls remain in place and effective:

- Institutional Controls: The EE discussed in Remedy Element 7 above.
- Engineering Controls: The sub-slab depressurization system discussed in Remedy Element 4 and the soil vapor extraction system discussed in Remedy Element 5 above.

This plan includes, but may not be limited to:

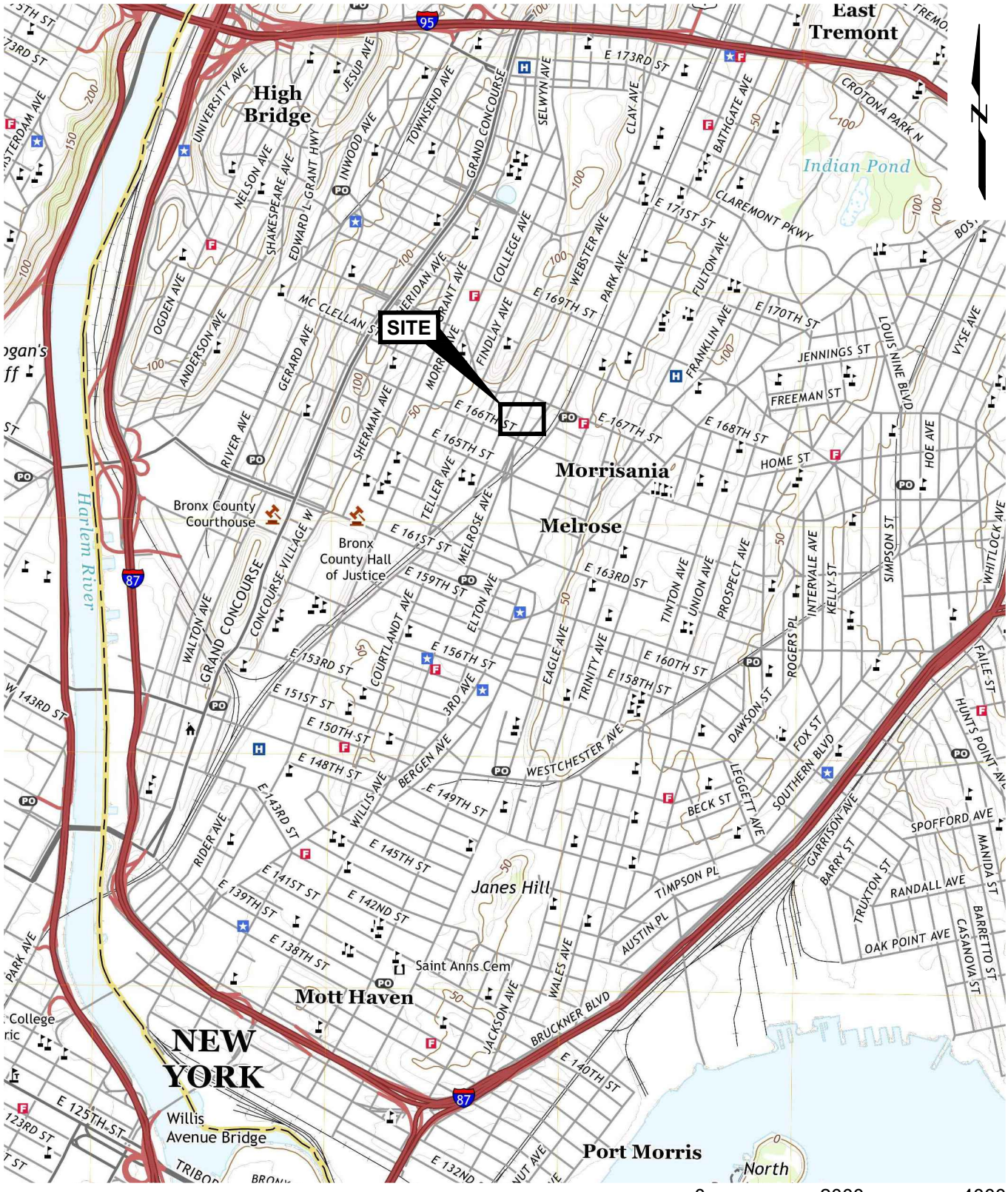
- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and NYSDEC notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of groundwater, soil vapor, and indoor air to assess the

performance and effectiveness of the remedy; and
- a schedule of monitoring and frequency of submittals to the NYSDEC.

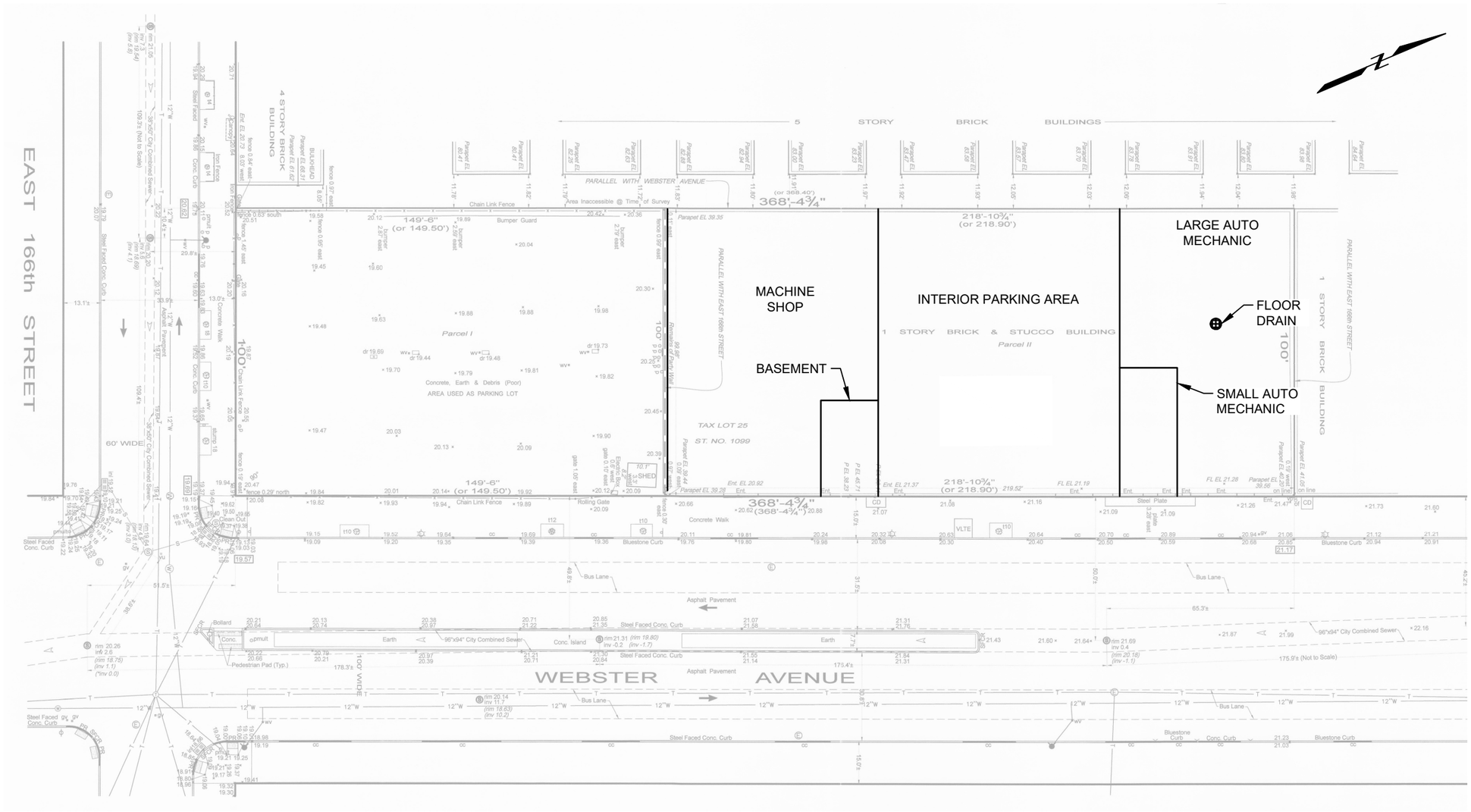
c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of the active vapor mitigation systems. The plan includes, but is not limited to:
- procedures for operating and maintaining the systems; and
- compliance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



SOURCE:
USGS TOPOGRAPHICAL MAP OF CENTRAL PARK, NY NJ 2019
(www.ngmdb.usgs.gov/topoview).

Remedial Action Work Plan 1099 Webster Avenue Bronx, New York	GEI Consultants	SITE LOCATION MAP
Mega Development Group Long Island City, New York	Project 2203948	January 2025 Fig. 1

CASILLAS, DAVID B:\Working\mega development\2203948 ten 99 development project nysdec bcp\00_CAD\Figures\RAWP\2203948_RIWP_SLM (dec).dwg - 1/23/2025



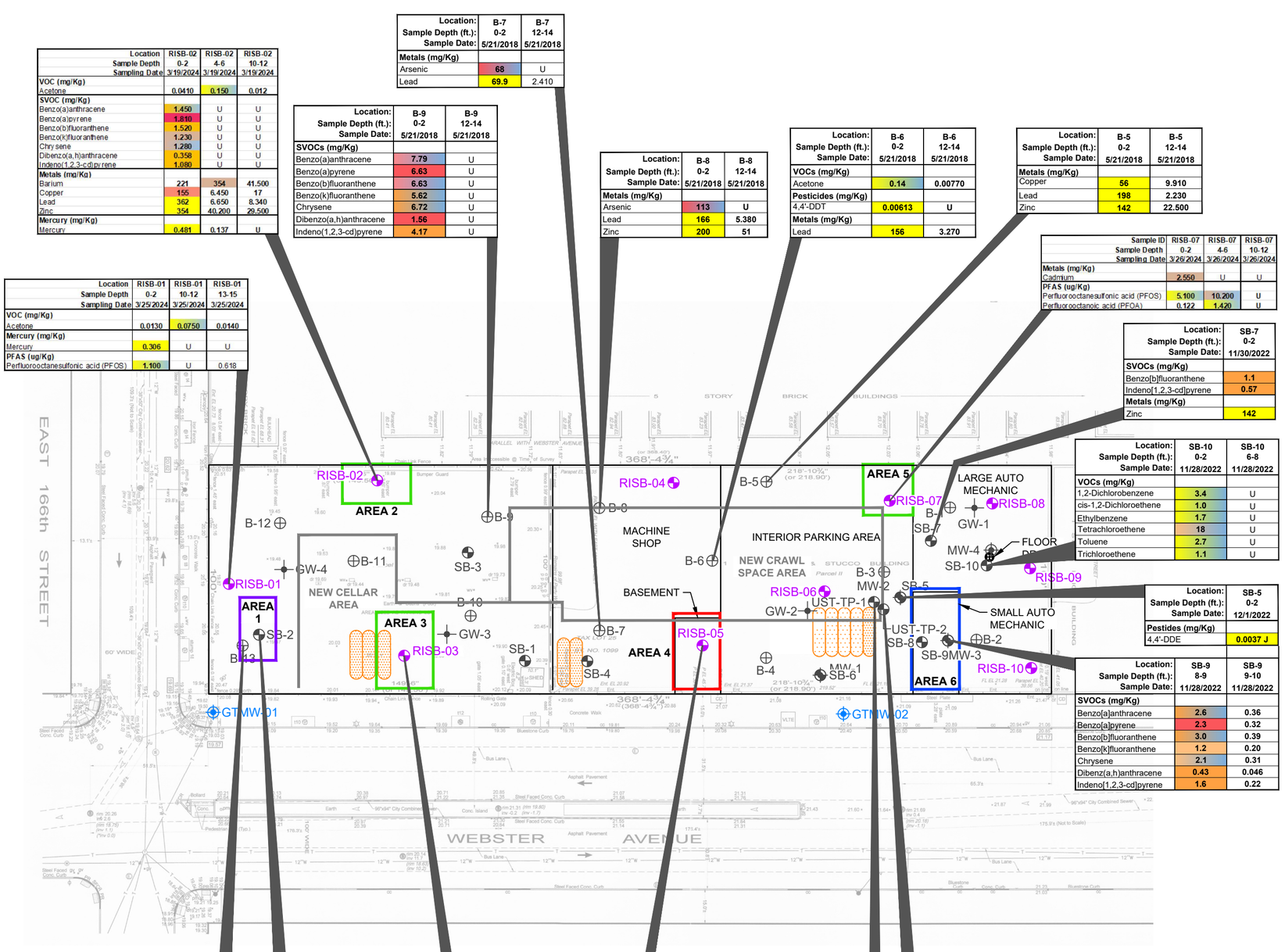
SOURCES:

1. FIGURE BASED ON *SURVEY NO. 67417, CITY OF NEW YORK, COUNTY: BRONX, TAX BLOCK: 2426, TAX LOT: 25* PREPARED BY MONTROSE SURVEYING CO., LLP, SCALE: 1" = 20', DATE: 08-10-22.

0 40 80

SCALE: 1" = 40'

Remedial Action Work Plan 1099 Webster Avenue Bronx, New York	GEI Consultants	SITE PLAN
Mega Development Group Long Island City, New York	Project 2203948	January 2025 Fig. 2



Location: Sample Depth (ft.): Sample Date:	B-7 0-2 5/21/2018	B-7 12-14 5/21/2018
Metals (mg/Kg)		
Arsenic	68	U
Lead	69.9	2.410

Location: Sample Depth (ft.): Sample Date:	B-9 0-2 5/21/2018	B-9 12-14 5/21/2018
SVOCs (mg/Kg)		
Benzo(a)anthracene	7.79	U
Benzo(a)pyrene	6.63	U
Benzo(b)fluoranthene	6.63	U
Benzo(k)fluoranthene	5.62	U
Chrysene	6.72	U
Dibenzo(a,h)anthracene	1.56	U
Indeno(1,2,3-cd)pyrene	4.17	U

Location: Sample Depth (ft.): Sample Date:	B-8 0-2 5/21/2018	B-8 12-14 5/21/2018
Metals (mg/Kg)		
Arsenic	113	U
Lead	166	5.380
Zinc	200	51

Location: Sample Depth (ft.): Sample Date:	B-6 0-2 5/21/2018	B-6 12-14 5/21/2018
VOCs (mg/Kg)		
Acetone	0.14	0.00770
Pesticides (mg/Kg)		
4,4'-DDT	0.00613	U
Metals (mg/Kg)		
Lead	156	3.270

Location: Sample Depth (ft.): Sample Date:	B-5 0-2 5/21/2018	B-5 12-14 5/21/2018
Metals (mg/Kg)		
Copper	56	9.910
Lead	198	2.230
Zinc	142	22.500

Location Sample Depth Sampling Date	RISB-02 0-2 3/19/2024	RISB-02 4-6 3/19/2024	RISB-02 10-12 3/19/2024
VOC (mg/Kg)			
Acetone	0.0410	0.150	0.012
SVOC (mg/Kg)			
Benzo(a)anthracene	1.450	U	U
Benzo(a)pyrene	1.810	U	U
Benzo(b)fluoranthene	1.520	U	U
Benzo(k)fluoranthene	1.230	U	U
Chrysene	1.280	U	U
Dibenzo(a,h)anthracene	0.358	U	U
Indeno(1,2,3-cd)pyrene	1.080	U	U
Metals (mg/Kg)			
Barium	221	354	41.500
Copper	155	6.450	17
Lead	362	6.650	8.340
Zinc	354	40.200	29.500
Mercury (mg/Kg)			
Mercury	0.481	0.137	U

Location Sample Depth Sampling Date	RISB-01 0-2 3/25/2024	RISB-01 10-12 3/25/2024	RISB-01 13-15 3/25/2024
VOC (mg/Kg)			
Acetone	0.0130	0.0750	0.0140
Mercury (mg/Kg)			
Mercury	0.306	U	U
PFAS (ug/Kg)			
Perfluorooctanesulfonic acid (PFOS)	1.100	U	0.618

Sample ID Sample Depth Sampling Date	RISB-07 0-2 3/26/2024	RISB-07 4-6 3/26/2024	RISB-07 10-12 3/26/2024
Metals (mg/Kg)			
Cadmium	2.550	U	U
PFAS (ug/Kg)			
Perfluorooctanesulfonic acid (PFOS)	5.100	10.200	U
Perfluorooctanoic acid (PFOA)	0.122	1.420	U

Location: Sample Depth (ft.): Sample Date:	SB-7 0-2 11/30/2022
SVOCs (mg/Kg)	
Benzo[b]fluoranthene	1.1
Indeno[1,2,3-cd]pyrene	0.57
Metals (mg/Kg)	
Zinc	142

Location: Sample Depth (ft.): Sample Date:	SB-10 0-2 11/28/2022	SB-10 6-8 11/28/2022
VOCs (mg/Kg)		
1,2-Dichlorobenzene	3.4	U
cis-1,2-Dichloroethene	1.0	U
Ethylbenzene	1.7	U
Tetrachloroethene	18	U
Toluene	2.7	U
Trichloroethene	1.1	U

Location: Sample Depth (ft.): Sample Date:	SB-5 0-2 12/1/2022
Pestides (mg/Kg)	
4,4'-DDE	0.0037 J

Location: Sample Depth (ft.): Sample Date:	SB-9 8-9 11/28/2022	SB-9 9-10 11/28/2022
SVOCs (mg/Kg)		
Benzo[a]anthracene	2.6	0.36
Benzo[a]pyrene	2.3	0.32
Benzo[b]fluoranthene	3.0	0.39
Benzo[k]fluoranthene	1.2	0.20
Chrysene	2.1	0.31
Dibenz(a,h)anthracene	0.43	0.046
Indeno[1,2,3-cd]pyrene	1.6	0.22

Location: Sample Depth (ft.): Sample Date:	B-13 0-2 5/21/2018	B-13 12-14 5/21/2018
VOCs (mg/Kg)		
Acetone	0.072	0.26
Metals (mg/Kg)		
Copper	57.5	27.6
Lead	242	4.21
Mercury	0.401	U

Location: Sample Depth (ft.): Sample Date:	SB-2 8-10 12/1/2022
VOCs (mg/Kg)	
Acetone	0.14
Metals (mg/Kg)	
Nickel	32.2

Location Sample Depth Sampling Date	RISB-03 4-6 3/19/2024	RISB-03 10-12 3/19/2024
Metals (mg/Kg)		
Barium	438	92.300

Sample ID Sample Depth Sampling Date	RISB-05 10-12 3/25/2024	RISB-05 13-15 3/25/2024
Metals (mg/Kg)		
Lead	171	3.760

Location: Sample Depth (ft.): Sample Date:	UST-TP-2 11/30/2022
Metals (mg/Kg)	
Zinc	327

Location: Sample Depth (ft.): Sample Date:	UST-TP-1 11/30/2022
Metals (mg/Kg)	
Zinc	347

LEGEND:

- RI SOIL BORING
- SOIL BORING (2022)
- SOIL BORING (2018)
- FLOOR DRAIN
- UST ANOMALY (2018)

Analyte	NYSDEC Unrestricted Use SCO	NYSDEC - Residential Use SCO	NYSDEC - Restricted Residential Use SCO	NYSDEC - Commercial Use SCO	NYSDEC - Industrial Use SCO	NYSDEC - Protection Of GW
VOCs (mg/Kg)						
1,2-Dichlorobenzene	1.1	100	100	500	1,000	1.1
Acetone	0.05	100	100	500	1,000	0.05
cis-1,2-Dichloroethene	0.25	59	100	500	1,000	0.25
Ethylbenzene	1	30	41	390	780	1
Tetrachloroethene	1.3	5.5	19	150	300	1.3
Toluene	0.7	100	100	500	1,000	0.7
Trichlorethene	0.47	10	21	200	400	0.47
SVOCs (mg/Kg)						
Benzo[a]anthracene	1	1	1	5.6	11	1
Benzo[a]pyrene	1	1	1	1	1.1	22
Benzo[b]fluoranthene	1	1	1	5.6	11	1.7
Benzo[k]fluoranthene	0.8	1	3.9	56	110	1.7
Chrysene	1	1	3.9	56	110	1
Dibenz(a,h)anthracene	0.33	0.33	0.33	0.56	1.1	1,000
Indeno[1,2,3-cd]pyrene	0.5	0.5	0.5	5.6	11	8.2
Pesticides (mg/Kg)						
4,4'-DDE	0.0033	1.8	8.9	62	120	17
4,4'-DDT	0.0033	1.7	7.9	47	94	136
Metals (mg/Kg)						
Arsenic	13	16	16	16	16	16
Barium	350	350	400	400	10,000	820
Cadmium	2.5	2.5	4.3	9.3	60	7.5
Copper	50	270	270	270	10,000	1,720
Lead	63	400	400	1,000	3,900	450
Mercury	0.18	0.81	0.81	2.8	5.7	0.73
Nickel	30	140	310	310	10,000	130
Zinc	109	2,200	10,000	10,000	10,000	2,480
PFAS (ug/Kg)						
Perfluorooctanesulfonic acid	0.88	8.8	44	440	440	3.7
Perfluorooctanoic acid	0.66	6.6	33	500	600	1.1

NOTES:

TWO 2018 UST ANOMALY PREVIOUSLY DEPICTED IN THE NORTHEAST CORNER OF THE EXTERIOR PARKING AREA (2018 Phase II ESA) WERE RELOCATED TO THE MACHINE SHOP, BASED ON 2022 GEOPHYSICAL SURVEY AND FIELD OBSERVATION OF UST VENTS

mg/Kg = MILLIGRAMS/KILOGRAM OR PARTS PER MILLION (ppm)

VOC = VOLATILE ORGANIC COMPOUND

SVOC = SEMI-VOLATILE ORGANIC COMPOUND

NYSDEC = NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SCO = SOIL CLEANUP OBJECTIVES

U = UNDETECTED ANALYTE

COLORED HIGHLIGHTS DENOTE EXCEEDANCES OF RESPECTIVE SCOS

PROJECT REMEDIAL AREAS:

THE ENTIRE SITE WILL BE EXCAVATED TO 3 FEET BELOW GRADE, APART FROM NOTED AREAS 1 THROUGH 6.

- AREA 1 - SOIL TO BE REMOVED TO 11 FEET BELOW GRADE
- AREA 2 - SOIL TO BE REMOVED TO 7 FEET BELOW GRADE
- AREA 3 - SOIL TO BE REMOVED TO 7 FEET BELOW GRADE
- AREA 4 - SOIL TO BE REMOVED TO 13 FEET BELOW GRADE
- AREA 5 - SOIL TO BE REMOVED TO 7 FEET BELOW GRADE
- AREA 6 - SOIL TO BE REMOVED TO 10 FEET BELOW GRADE

ASSUMES THAT ACETONE IDENTIFIED AT DEPTH (10 TO 14 FEET) IN SOME SOUTHERN SAMPLES (B-13, SB-2, AND RISB-01) WILL BE REGARDED BY NYSDEC AS A LABORATORY CONTAMINANT.

SOURCES:

1. FIGURE BASED ON *SURVEY NO. 67417, CITY OF NEW YORK, COUNTY: BRONX, TAX BLOCK: 2426, TAX LOT: 25* PREPARED BY MONTROSE SURVEYING CO., LLP, SCALE: 1" = 20', DATE: 08-10-22.
2. UST ANOMALIES FROM FROM *FIGURE 2: GEOPHYSICAL SURVEY POTENTIAL USTs, PROPERTY LOCATED AT 1099-1135 WEBSTER AVENUE, BRONX, NEW YORK,* PREPARED BY ENVIRONMENTAL STUDIES CORPORATION, SCALE: 1" = 50'.

0 40 80

SCALE: 1" = 40'

Remedial Action Work Plan
1099 Webster Avenue
Bronx, New York

Mega Development Group
Long Island City, New York

GEI Consultants

PROPOSED REMEDIAL EXCAVATION AND SOIL SAMPLE EXCEEDANCES

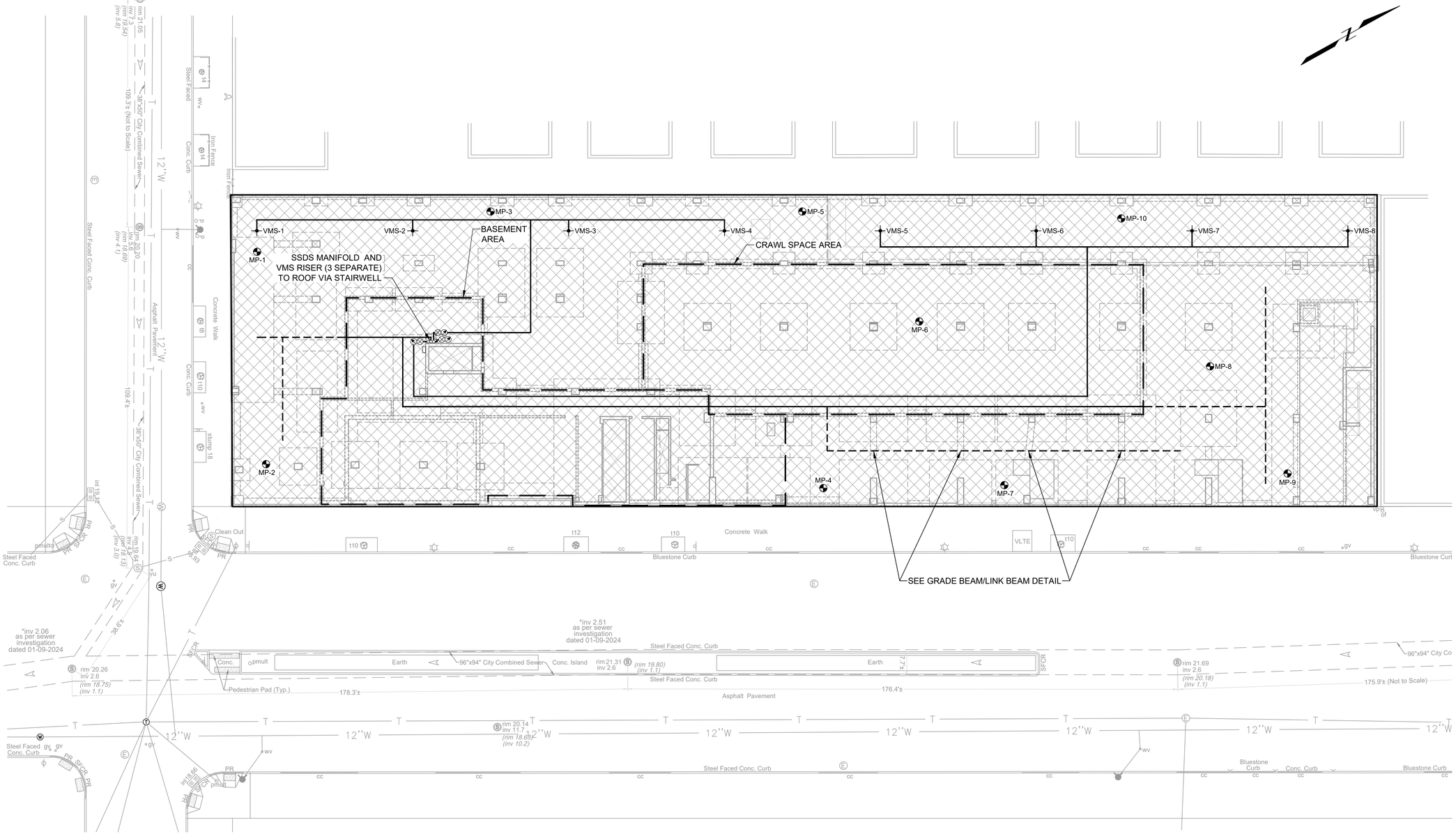
Project 2203948 | September 2025 | Fig. 3

LEGEND:

- MP-1 — VACUUM MONITORING POINT
- SSDS AND VMS PIPING - 4" SCH 40 PVC PERFORATED VENT PIPE
- SSDS AND VMS PIPING - 4" SCH 40 PVC, OR GALVANIZED STEEL (ABOVE GRADE) SOLID VENT PIPE
- AREA BOUNDARY (CRAWL SPACE AREA, BASEMENT AREA)
- SSDS AND VMS PIPING - GALVANIZED STEEL RISER PIPE
- VAPOR BARRIER LOCATION
- VMS WELL

NOTES:

A 20 MIL VAPOR BARRIER (DRAGO WRAP OR EQUIVALENT) WILL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.



VAPOR BARRIER LAYOUT

SCALE: 1/16" =1'-0"

0 16 32

SCALE, FEET

Attention: 0 1" If this scale bar does not measure 1" then drawing is not original scale.	*DRAFT*	*Designed:* SC *Drawn:* TM/DE *Checked:* SC *Approved:* SC *P.E. No:* PE# *GEI Project* VALUE	GEI Consultants *GEI CONSULTANTS, INC., P.C.* *1000 NEW YORK AVENUE* *SUITE 6* *HUNTINGTON STATION, NY 11746* *(631)760-9300*	MEGA DEVELOPMENT, LLC 1099 WEBSTER AVENUE BRONX, NEW YORK	**SUB-SLAB DEPRESSURIZATION SYSTEM AND VAPOR MITIGATION SYSTEM DESIGN** 1099 WEBSTER AVENUE BRONX, NEW YORK	NO: 0 — DATE: 5/20/2025 — ISSUE/REVISION: DRAFT — APP: SC	SHEET NAME: **VAPOR BARRIER LAYOUT**	SHEET NO.: M-01 DWG. NO.: Fig. 4

HEROT: PAULA \\geiconsultants.com\data\data_storage\Working\mega development\2203948 ten 99 development project nysdec bcp\00_CAD\Design\SSD\2_M-01_VB_Layout.dwg - 5/20/2025