DECISION DOCUMENT

650 Southern Boulevard
Brownfield Cleanup Program
New York, Bronx County
Site No. C203170
March 2025

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

DECLARATION STATEMENT - DECISION DOCUMENT

650 Southern Boulevard
Brownfield Cleanup Program
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Site No. C203170
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Statement of Purpose and Basis

This document presents the remedy for the 650 Southern Boulevard 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 650 Southern Boulevard 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 or GVs, as defined by 6 NYCRR Part 375-6.8 to depths ranging from 0.5 to 12.5 feet below grade (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 4,239 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. In-Situ Chemical Oxidation

In-situ chemical oxidation (ISCO) will be implemented to treat groundwater contaminated with volatile organic compounds (VOCs) such as acetone. Klozur® SP will be injected into the subsurface at the start of remedial action to destroy the contaminants in the northern half of the site where VOCs were found to be elevated in groundwater via existing wells screened from approximately 8 to 18 ft bg.

Prior to the full implementation of this technology, a Remedial Design Work Plan will be submitted to define design parameters more clearly.

Monitoring will be required via a series of groundwater monitoring wells within and down-gradient of the treatment zone. Monitoring will be conducted for VOCs at all locations as well as for dissolved oxygen and oxidation/reduction potential within and down-gradient of the treatment zone. Existing monitoring wells will be used for monitoring the groundwater treatment, and if needed, additional wells will be installed.

5. In-Situ Chemical Reduction

In-situ chemical reduction (ISCR) will be implemented to treat chlorinated volatile organic compounds (VOCs) in groundwater post-excavation, after the ISCO injection discussed in Remedy Element 4 above. A chemical reducing agent such as Daramend® Reagent will be placed at the base of the excavation and mixed with remaining onsite soils to destroy the contaminants where chlorinated VOCs were found to be elevated in groundwater.

Prior to the full implementation of this technology, additional laboratory scale studies will be conducted, and additional geochemical data will be collected to define design parameters more clearly.

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6. Vapor Intrusion Evaluation

As part of the Track 1 remedy, a soil vapor intrusion (SVI) evaluation will be completed. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion.

7. 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 environmental easement or site management plan 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

8. Institutional Controls

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

- require the remedial party or site owner to complete and submit to the 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 Site Management Plan.

9. 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 engineering controls remain in place and effective:

- Institutional Controls: The Environmental Easement discussed in Remedy Element 8 above.
- Engineering Controls: The Monitoring Wells discussed in Remedy Elements 4 and 5 above, and potentially vapor mitigation if identified following the SVI evaluation discussed in Remedy Element 6 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;
- a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- 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 to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the NYSDEC; and
- 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 NYSDEC guidance, as appropriate. The remedy is protective of public health and the environment.

March 3, 2025

Date

R. Scott Deyette

Scott Deyette, Director
Remedial Bureau B

DECISION DOCUMENT

650 Southern Boulevard
New York, Bronx County
Site No. C203170
March 2025

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=C203170

New York Public Library - Woodstock Branch
761 E 160th St
Bronx, NY 10456
Phone: (718) 665-6255

Bronx Community Board 2
1029 East 163rd Street
Bronx, NY 10459
Phone: (718) 328-9125

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 site is located at 650 Southern Boulevard in the Hunts Point-Longwood neighborhood of the Bronx. The site occupies Block 2603, Lot 157. The site is bounded to the north by Southern Boulevard followed by a multi-story residential building, to the east by a multi-story residential building followed by Leggett Avenue, to the south by a commercial building followed by Timpson Place, and to the west by a multi-story residential building followed by Avenue St John.

Site Features: The 0.230-acre site is developed with two adjoining one-story buildings encompassing the entirety of the site.

Current Zoning and Land Use: The site is zoned as R7-1 residential and is currently developed with two adjoining one-story vacant buildings. The surrounding properties are characterized by multi-story residential and commercial buildings, some of which have industrial and manufacturing uses.

Past Use of the Site: The site was developed in the 1940s with two one-story stores. The past uses of the site included primarily commercial applications such as plumbing supply, auto repair, and most recently storage for cleaning supplies.

Site Geology and Hydrogeology: The site stratigraphy from the surface down consists of an urban fill layer extending to approximately 2 feet below grade (ft bg) generally consisting of light to dark brown to gray silty sand with varying amounts of organic matter, brick, gravel, slag, coal, and gravel. The fill layer is underlain by a potentially native layer consisting of brown to gray to reddish brown fine to medium sand with varying amounts of silt, gravel, and weathered bedrock. According to the U.S. Geologic Survey, bedrock at the site is classified as the Manhattan Schist from the lower Cambrian age and was encountered at depths ranging from 11 to 17 ft bg.

Groundwater was encountered at depths ranging from approximately 8 to 12 ft bg and was measured to flow northeast across the site which deviates from the anticipated regional flow direction to the southeast, due to the proximity of a Metropolitan Transit Authority line running below and to the north of the site.

A site location map is attached as Figure 1, and a site plan 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) were 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

The Applicant under the Brownfield Cleanup Agreement is a Volunteer. The Applicant does not have an obligation to address off-site contamination. However, NYSDEC in consultation with NYSDOH 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. 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	ethylbenzene
benzene	mercury
benzo(a)anthracene	tetrachloroethene (PCE)
benzo(b)fluoranthene	toluene
chrysene	trichloroethene (TCE)
cis-1,2-dichloroethene	1,2,4-trimethylbenzene

The contaminants of concern exceed the applicable SCGs for:

- groundwater
- soil

6.2: Interim Remedial Measures

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

There were no IRMs performed at this site during the RI.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

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 was analyzed for VOCs. The primary contaminants of concern at the site include VOCs and metals in soil; VOCs and SVOCs 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 2 feet below grade (ft bg). In general, the highest concentrations were detected in the upper foot of site soils with some deeper exceedances extending up to 12 ft bg.

VOCs detected at concentrations exceeding their respective UUSCOs include acetone up to 0.11 parts per million (ppm) (UUSCO of 0.05 ppm), benzene up to 0.16 ppm (UUSCO of 0.06 ppm), ethylbenzene up to 30 ppm (UUSCO of 1 ppm), toluene up to 14 ppm (UUSCO of 0.7 ppm), and total xylene up to 300 ppm (UUSCO of 0.26 ppm).

Metals detected at concentrations exceeding their respective UUSCOs include copper up to 91 ppm (UUSCO of 50 ppm), mercury up to 0.265 ppm (UUSCO of 0.18 ppm), and nickel up to 43.5 ppm (UUSCO of 30 ppm).

Pesticides detected at concentrations exceeding their respective UUSCOs include 4,4'-DDE up to 0.00672 ppm (UUSCO of 0.0033 ppm), and 4,4'-DDT up to 0.0728 ppm (UUSCO of 0.0033 ppm).

Total PCBs were detected at concentrations up to 0.229 ppm (UUSCO of 0.1 ppm).

PFAS detected at concentrations exceeding their respective unrestricted use guidance values include perfluorooctanesulfonic acid (PFOS) up to 3.34 parts per billion (ppb) (UU guidance value of 0.88 ppb).

No SVOCs 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

VOCs detected at concentrations exceeding Class GA Ambient Water Quality Standard and Guidance Values (AWQSGVs) include acetone up to 1,000 ppb (AWQSGV of 5 ppb), benzene up to 59 ppb (AWQSGV of 1 ppb), cis-1,2-dichloroethene (DCE) up to 130 ppb (AWQSGV of 5 ppb), and vinyl chloride up to 97 ppb (AWQSGV of 2 ppb).

SVOCs detected at concentrations exceeding their respective AWQSGVs include benzo(a)anthracene up to 0.02 ppb (AWQSGV of 0.002 ppb), benzo(b)fluoranthene up to 0.04 ppb (AWQSGV of 0.002 ppb), benzo(k)fluoranthene up to 0.01 ppb (AWQSGV of 0.002 ppb), chrysene up to 0.03 ppb (AWQSGV of 0.002 ppb), indeno(1,2,3-cd)pyrene up to 0.02 ppb (AWQSGV of 0.002 ppb), and 1,4-dioxane up to 0.773 ppb (AWQSGV of 0.35 ppb).

PFAS detected at concentrations exceeding their respective AWQSGVs include perfluorooctanoic acid (PFOA) up to 59.2 parts per trillion (ppt) (AWQSGV of 6.7 ppt), and PFOS up to 108 ppt (AWQSGV of 2.7 ppt).

Aside from naturally occurring minerals such as sodium and manganese, no dissolved metals were detected above their respective AWQSGVs. No PCBs or pesticides were detected above their respective AWQSGVs.

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

Soil Vapor

Various chlorinated VOCs were detected in soil vapor including tetrachloroethene (PCE) up to 57 micrograms per cubic meter (µg/m³), trichloroethene (TCE) up to 17.5 µg/m³, DCE up to 31.6 µg/m³, and vinyl chloride up to 0.948 µg/m³.

Various petroleum-related VOCs were detected in soil vapor including benzene up to 8.11 µg/m³, toluene up to 138 µg/m³, heptane up to 123 µg/m³, and hexane up to 340 µg/m³.

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

6.4: Summary of Human Exposure Pathways

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

People who enter the site may come into contact with site-related soil and groundwater contamination if they dig below the ground surface; however, it is not likely because buildings currently cover the entirety of the site. 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 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. Because the site is vacant, the inhalation of site-related

contaminants due to soil vapor intrusion does not represent a current concern. However, the potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on-site development. Environmental sampling indicates soil vapor intrusion from site-related contamination is not a concern for off-site buildings.

6.5: Summary of the Remediation Objectives

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

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation exposure to contaminants volatilizing from 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 with ISCO injection and ISCR application 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;
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- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- 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.

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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 or GVs, as defined by 6 NYCRR Part 375-6.8 to depths ranging from 0.5 to 12.5 feet below grade (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.

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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. In-Situ Chemical Oxidation

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Conditional Track 1

The intent of the remedy is to achieve a Track 1 unrestricted use therefore, no environmental easement or site management plan 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

8. Institutional Controls

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

- require the remedial party or site owner to complete and submit to the 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 Site Management Plan.

9. 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 engineering controls remain in place and effective:

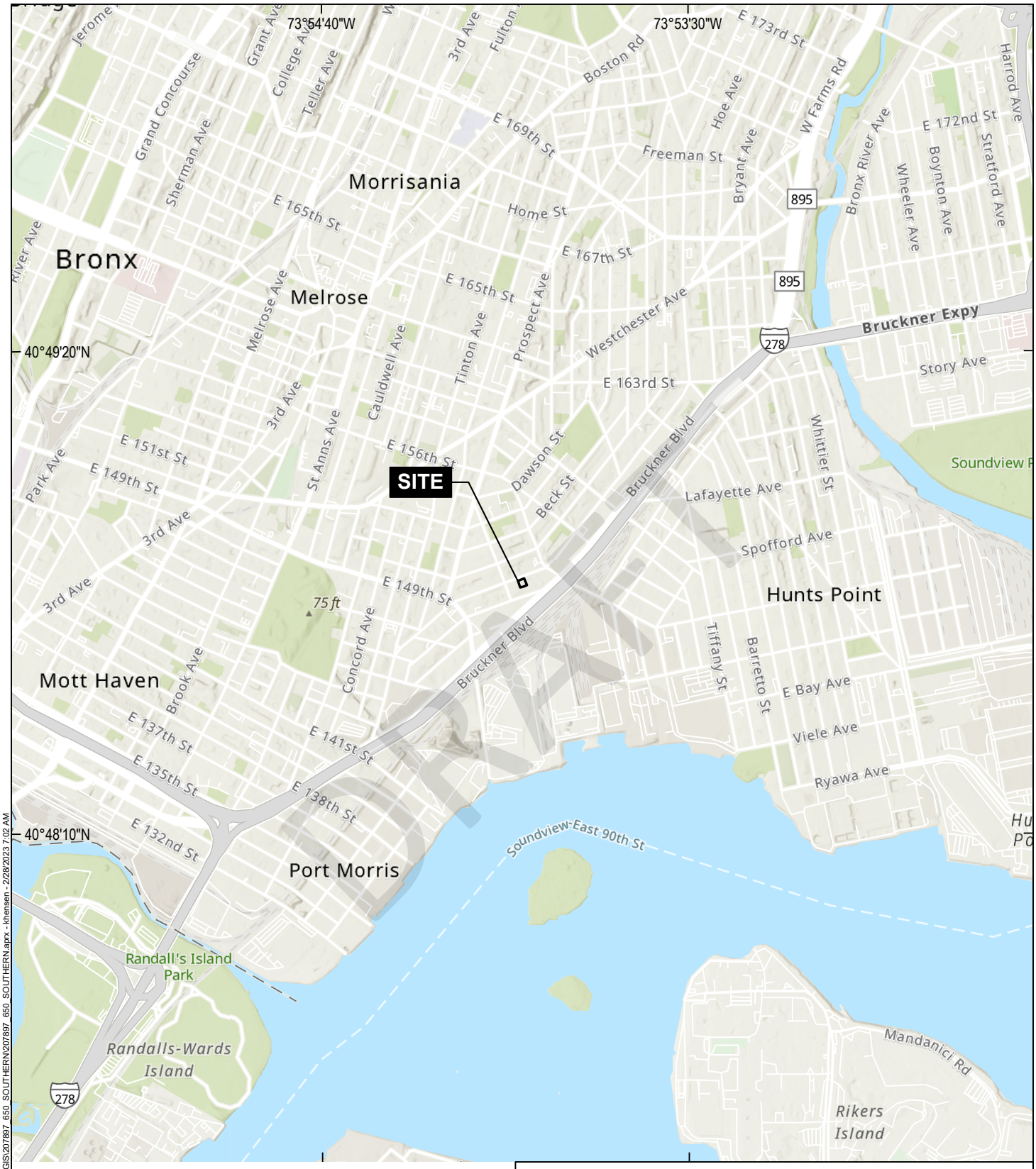
- Institutional Controls: The Environmental Easement discussed in Remedy Element 8 above.
- Engineering Controls: The Monitoring Wells discussed in Remedy Elements 4 and 5 above, and potentially vapor mitigation if identified following the SVI evaluation discussed in Remedy Element 6 above.

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;
- a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- 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 to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the NYSDEC; and
- monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.



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MAP SOURCE: ESRI
SITE COORDINATES: 40°48'46"N, 73°54'02"W

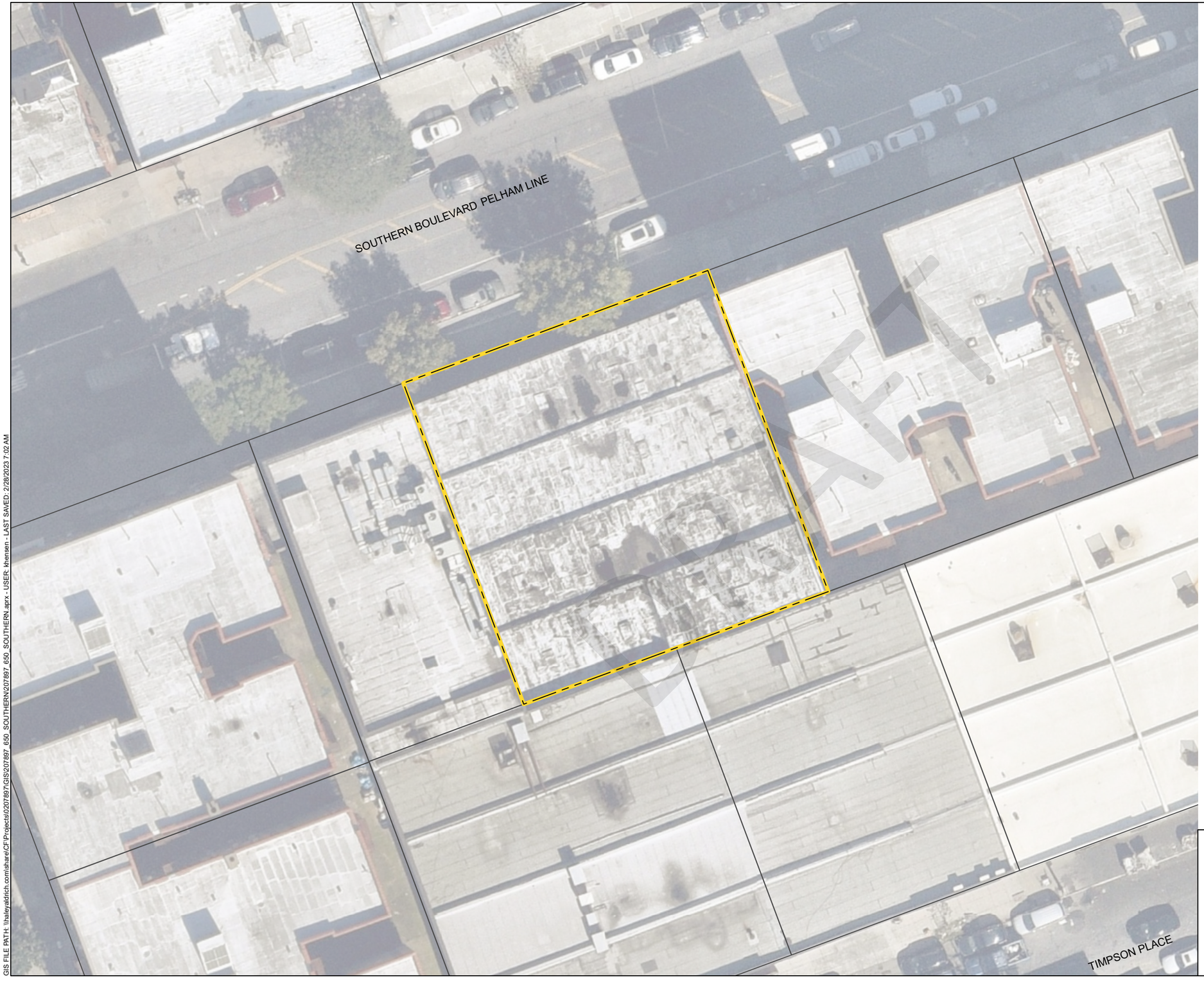
HALEY ALDRICH

REMEDIAL INVESTIGATION WORK PLAN
650 SOUTHERN BOULEVARD
BRONX, NEW YORK

PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
AUGUST 2023

FIGURE 1



LEGEND

SITE BOUNDARY

PARCEL BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. ASSESSOR PARCEL DATA SOURCE: NYC DEPARTMENT OF CITY PLANNING

3. AERIAL IMAGERY SOURCE: NEARMAP, 27 SEPTEMBER 2022

N

0 30 60

SCALE IN FEET

HALEY ALDRICH

650 SOUTHERN BOULEVARD
BRONX, NEW YORK

SITE PLAN

MARCH 2023

FIGURE 2

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LEGEND

- RI SOIL BORING WITH UUSCO EXCEEDANCE
- SITE BOUNDARY
- PARCEL BOUNDARY

EXCAVATION DEPTH IN FEET BELOW GROUND SURFACE (FT BGS)

- .5 FT BGS
- 6 FT BGS
- 8 FT BGS
- 9 FT BGS
- 11 FT BGS
- 11.5 FT BGS
- 12 FT BGS
- 12.5 FT BGS

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. EXCAVATION DEPTHS AND AREAS ARE ESTIMATED BASED ON ANALYTICAL RESULTS FROM THE 2024 REMEDIAL INVESTIGATION. ACTUAL EXCAVATION DEPTHS WILL BE CONTINGENT UPON SITE CONDITIONS.

3. SB-02 WAS COLLECTED IN A PARTIAL CELLAR AND REPRESENTS MATERIAL COLLECTED AT APPROXIMATELY 9.5 FEET BELOW CURRENT SIDEWALK GRADE.

4. ASSESSOR PARACEL DATA SOURCE: NYC DEPARTMENT OF CITY PLANNING

5. AERIAL IMAGERY SOURCE: NEARMAP, 8 MARCH 2024

N

0 30 60

SCALE IN FEET

HALEY ALDRICH

650 SOUTHERN BOULEVARD
BRONX, NEW YORK

ALTERNATIVE I EXCAVATION PLAN

DECEMBER 2024

FIGURE 3

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LEGEND

- 2024 PDI SOIL BORING/MONITORING WELL
- 2024 RI Soil Boring/Monitoring Well
- EXISTING MONITORING WELL
- PROPOSED INJECTION LOCATION
- PROPOSED IN SITU CHEMICAL REDUCTANT (ISCR) AREA
- SITE BOUNDARY
- PARCEL BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. THE ISCR APPLICATION AREA IS ESTIMATED AND MAY VARY BASED ON SITE CONDITIONS.

3. ASSESSOR PARCEL DATA SOURCE: NYC DEPARTMENT OF CITY PLANNING

4. AERIAL IMAGERY SOURCE: NEARMAP, 8 MARCH 2024

N

0 30 60

SCALE IN FEET

HALEY ALDRICH

650 SOUTHERN BOULEVARD
BRONX, NEW YORK

PROPOSED ISCR APPLICATION AREA AND INJECTION LOCATIONS

JANUARY 2025

FIGURE 4

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