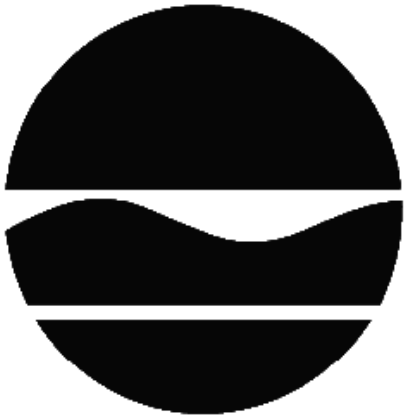
DECISION DOCUMENT

1095 Southern Blvd.
Brownfield Cleanup Program
Bronx, Bronx County
Site No. C203055
October 2013



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 1095 Southern Blvd. 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 1095 Southern Blvd. 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

The entire site will be excavated to a depth of 27.5 feet below surface grade, or 31.5 feet below

surface grade in certain areas, to accommodate the proposed site development. This will involve excavation of all on-site soil and fill material, as well as some bedrock. Approximately 9,300 cubic yards of contaminated soil and historic fill material, and approximately 1,700 cubic yards of bedrock, will be excavated and properly disposed off-site. Therefore, all on-site soils which exceed unrestricted use soil cleanup objectives, as defined by 6 NYCRR Part 375-6.8, will be excavated and transported off-site for disposal. The complete removal of contaminated soil is also expected to remove a source of contaminated soil vapor.

3. Groundwater Treatment

Due to the planned excavation depth and the typical groundwater elevations at the site, extensive dewatering will be performed to enable the excavation and foundation work. Contaminated groundwater from dewatering operations will be treated as necessary prior to discharge to the municipal sewer system. It is expected that the extensive dewatering will greatly improve groundwater quality beneath the site. The goal of the groundwater portion of the remedy is to achieve a bulk reduction in groundwater contamination to asymptotic levels. Groundwater monitoring will be performed via down-gradient monitoring wells to confirm that remedial action objectives for groundwater have been achieved. It is also expected that the dewatering of contaminated groundwater will remove a source of contaminated soil vapor.

4. Institutional Control

Enclosed sub-grade parking garages of any future on-site building are required by the New York City Mechanical Code to provide ventilation.

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 residential, restricted residential, commercial and industrial use 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 County DOH; and
- requires compliance with the Department approved Site Management Plan.

5. 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 above.

Engineering Controls: The groundwater monitoring program discussed above.

This plan includes, but may not be limited to:

- 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 new buildings developed 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 Department notification;
- 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 Department;
- monitoring for vapor intrusion for any new buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:

- maintaining site access controls and Department notification; and
- providing the Department access to the site and O&M records.

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.

October 31, 2013

Date

Robert J. Cozzy, Director
Remedial Bureau B

DECISION DOCUMENT

1095 Southern Blvd.
Bronx, Bronx County
Site No. C203055
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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 repositories:

Hunt's Point Library
877 Southern Boulevard
Bronx, NY 10456
Phone: 718-617-0338

NYS DEC Region 2
Division of Environmental Remediation
47-40 21st Street
Long Island City, NY 11101
Phone: 718-482-4921

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 site is located at 1095 Southern Boulevard in the Bronx. It is bordered by Southern Boulevard to the east, residential buildings immediately adjacent to the north and west, and a commercial building immediately adjacent to the south. Further east across Southern Boulevard are commercial properties.

Site Features:
The site is approximately 0.23 acres and is currently vacant and unused. The previous on-site building was destroyed in a fire in 2008.

Current Zoning and Land Use:
The site is currently vacant and undeveloped, following a fire in 2008 which destroyed the on-site building. The site is zoned R7-1 (residential district), with a C2-4 commercial overlay meaning that it can be used for residential, commercial, or mixed (residential plus commercial) use.

Past Use of the Site:
The site has historically been used for several commercial uses including, most recently, as a dry cleaning facility. It appears that chlorinated solvents detected on-site are related to the historical dry cleaning use.

Site Geology and Hydrogeology:
The elevation of the site is approximately 59 feet above mean sea level. Bedrock has been identified at a depth of approximately 24 feet below surface grade. The depth to groundwater beneath the site is approximately 9 feet to 11 feet below ground surface. The groundwater flow direction beneath the site is east.

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 Volunteer does not have an obligation to address off-site contamination. The Department has determined that this site poses a significant threat to human health and the environment and there are off-site impacts that require remedial activities; accordingly, enforcement actions are necessary.

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:

TETRACHLOROETHYLENE (PCE)	DICHLOROETHYLENE
TRICHLOROETHENE (TCE)	VINYL CHLORIDE

The contaminant(s) 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:
The contaminants of concern are chlorinated solvents, consistent with the previous use of the site for dry cleaning. Tetrachloroethylene (PCE) and its breakdown products have been detected in soil, groundwater, and soil vapor.

Soil:
Chlorinated volatile organic compounds (cVOCs) are present in soil predominantly near the eastern border of the site, in the depth range of 14 feet to 20 feet below surface grade.

Concentrations of chlorinated VOCs exceed the Unrestricted Use Soil Cleanup Objectives (UUSCOs) in 4 of 14 on-site soil borings, all on the east side of the site. In these borings, PCE was detected as high as 1,200 parts per million (ppm); trichloroethylene (TCE) as high as 120 ppm; and cis-1,2-dichloroethene (DCE) as high as 40 ppm. In comparison, the UUSCOs for these contaminants, respectively, are: 1.3 ppm, 0.47 ppm, and 0.25 ppm. Low concentrations of petroleum-related VOCs and semi-volatile organic compounds (SVOCs) were detected on site, at concentrations below the UUSCOs. Metals detected in soil at concentrations exceeding the UUSCO include: trivalent chromium at 33.8 ppm (UUSCO is 30 ppm); copper at 122 ppm (UUSCO is 50 ppm); lead at 357 ppm (UUSCO is 63 ppm); and zinc at 618 ppm (UUSCO is 109 ppm).

Groundwater:
The contaminants of concern in groundwater are cVOCs. Similar to soil, concentrations are highest in monitoring wells installed in the eastern portion of the site. PCE and its breakdown products were detected at levels exceeding NYSDEC Ambient Ground Water Quality Standards (AGWQS) in 9 of 11 on-site overburden groundwater monitoring wells, in addition to one monitoring well installed in the sidewalk to the east of the site. Contaminants include: PCE as high as 66,000 parts per billion (ppb) compared to the AGWQS of 5 ppb; TCE as high as 17,000 ppb on-site and 52,000 ppb in an off-site well, compared to AGWQS of 5 ppb; DCE as high as 63,000 ppb compared to AGWQS of 5 ppb; and vinyl chloride detected as high as 7,920 ppb on-site and 13,000 ppb in an off-site well, compared to AGWQS of 2 ppb. These contaminants were also detected in a bedrock monitoring well, at lesser concentrations (the maximum concentration detected in bedrock groundwater was TCE at 410 ppb).

Soil vapor:
The contaminants of concern are present in on-site soil vapor. PCE was detected as high as 2,800 micrograms per cubic meter (ug/m3) and TCE as high as 280 ug/m3.

Significant threat:
The site presents a significant threat to public health and the environment due to the high concentrations of chlorinated volatile organic compounds (VOCs) in on-site soil, groundwater, and soil vapor; and due to the potential off-site migration of contaminants via groundwater. An off-site investigation is underway.

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.*

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. Access to the site is restricted and contact with contaminated soil is unlikely unless persons dig below the ground surface. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into the overlying buildings and affect 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 current concern. The potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on-site redevelopment and occupancy. Off-site soil vapor intrusion sampling has not identified any exposures to date. However, additional sampling is recommended as part of the off-site portion of this project.

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.
- Prevent the discharge of contaminants to surface water.
- 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.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

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 Excavation and 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;

- 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

The entire site will be excavated to a depth of 27.5 feet below surface grade, or 31.5 feet below surface grade in certain areas, to accommodate the proposed site development. This will involve excavation of all on-site soil and fill material, as well as some bedrock. Approximately 9,300 cubic yards of contaminated soil and historic fill material, and approximately 1,700 cubic yards of bedrock, will be excavated and properly disposed off-site. Therefore, all on-site soils which exceed unrestricted use soil cleanup objectives, as defined by 6 NYCRR Part 375-6.8, will be excavated and transported off-site for disposal. The complete removal of contaminated soil is also expected to remove a source of contaminated soil vapor.

3. Groundwater Treatment

Due to the planned excavation depth and the typical groundwater elevations at the site, extensive dewatering will be performed to enable the excavation and foundation work. Contaminated groundwater from dewatering operations will be treated as necessary prior to discharge to the municipal sewer system. It is expected that the extensive dewatering will greatly improve

groundwater quality beneath the site. The goal of the groundwater portion of the remedy is to achieve a bulk reduction in groundwater contamination to asymptotic levels. Groundwater monitoring will be performed via down-gradient monitoring wells to confirm that remedial action objectives for groundwater have been achieved. It is also expected that the dewatering of contaminated groundwater will remove a source of contaminated soil vapor.

4. Institutional Control

Enclosed sub-grade parking garages of any future on-site building are required by the New York City Mechanical Code to provide ventilation.

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 residential, restricted residential, commercial and industrial use 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 County DOH; and
- requires compliance with the Department approved Site Management Plan.

5. 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 above.
Engineering Controls: The groundwater monitoring program discussed above.

This plan includes, but may not be limited to:

- 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 new buildings developed 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 Department notification;
- 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 Department;
- monitoring for vapor intrusion for any new buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:

- maintaining site access controls and Department notification; and
- providing the Department access to the site and O&M records.

Figure 1: Site Location Map

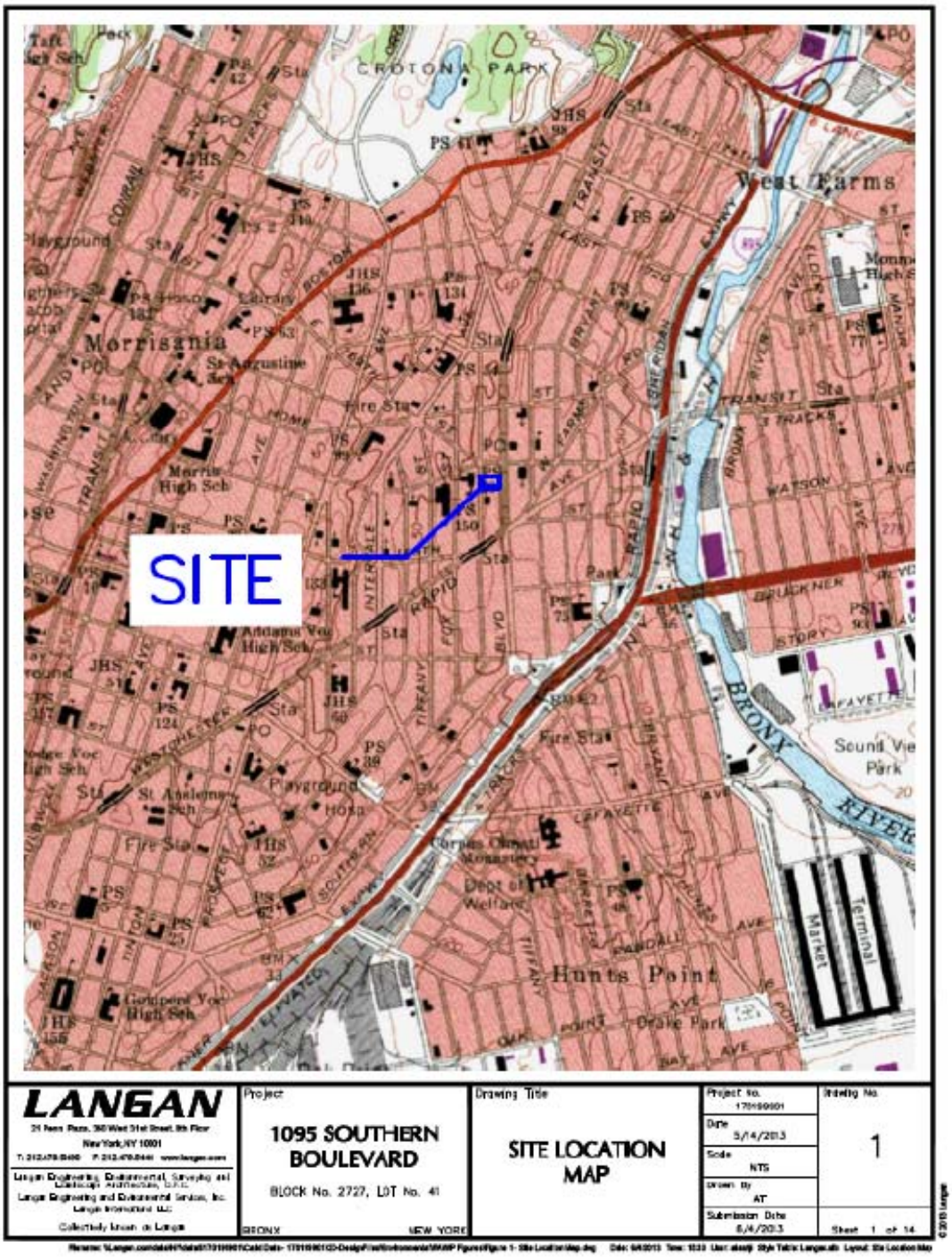

Figure 2: Proposed Remedy