DECISION DOCUMENT

Cottage Place Gardens Phase 5 Parcel Site
Brownfield Cleanup Program
Yonkers, Westchester County
Site No. C360161
April 2020

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

DECLARATION STATEMENT - DECISION DOCUMENT

Cottage Place Gardens Phase 5 Parcel Site
Brownfield Cleanup Program
Yonkers, Westchester County
Site No. C360161
April 2020

Statement of Purpose and Basis

This document presents the remedy for the Cottage Place Gardens Phase 5 Parcel 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 Cottage Place Gardens Phase 5 Parcel 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. Excavation

The existing on-site buildings will be demolished and materials which can't 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 soil which exceeds the unrestricted soil cleanup objectives (SCOs), as defined by 6 NYCRR Part 375-6.8. If a Track 1 cleanup is achieved, a Cover System will not be a required element of the remedy.

Approximately 12,815 cubic yards of contaminated soil will be removed from the Phase 5 parcel to an average depth of 6 feet below ground surface (bgs). Select areas of the site will be excavated between 10 and 12 feet bgs. The soil removal is expected to achieve at least a bulk reduction in groundwater contamination to asymptotic levels through source removal and excavation dewatering (if necessary). Confirmation sampling will be conducted in accordance with DER-10 to document that any soil above bedrock left on-site meets the unrestricted SCOs.

Excavation and removal of any encountered (known or unknown) underground storage tanks (USTs), fuel dispensers, underground piping, or other structures associated with a source of contamination.

2. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation (if needed) to establish the deign grades at the site.

3. Vapor Intrusion Evaluation

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

4. Contingent Track 1

The intent of the remedy is to achieve Track 1 unrestricted use; therefore, no environmental easement or site management plan is anticipated. In the event that Track 1 unrestricted use is not achieved, including the achievement of groundwater and soil vapor remedial objectives, the following contingent remedial elements will be required and the remedy will achieve a Track 2 or Track 4 restricted residential cleanup.

Contingent Remedial Elements:

Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve a Track 4 restricted residential cleanup at a minimum and will include imposition of a site cover (as a contingency if soil greater than 2 feet but less than 15 feet deep does not meet the restricted residential SCOs), an environmental easement, and site management plan as described below. If all soil above 15 feet or bedrock meets the SCOs for restricted residential use, then a Track 2 remedy will be achieved and no cover system will be required.

A. Cover System

A site cover will be required to allow for restricted residential use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

B. Institutional Control

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

• Require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8(h)(3);

• Allow the use and development of the controlled property for restricted residential, commercial, and industrial uses 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 County DOH; and

• Require compliance with the Department-approved Site Management Plan.

C. Site Management Plan

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

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

Institutional Controls: The Environmental Easement discussed in the contingent institutional section above.

Engineering Controls: The site cover discussed in the contingent cover system section 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 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 Department notifications; 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 Department; and

• monitoring for vapor intrusion for any occupied buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

Declaration

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

4/9/20
Date

Janet E Brown
Janet Brown, Director
Remedial Bureau C

DECISION DOCUMENT

Cottage Place Gardens Phase 5 Parcel Site
Yonkers, Westchester County
Site No. C360161
April 2020

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repository:

DECInfo Locator - Web Application
https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C360161

Yonkers Public Library - Riverfront Library
One Larkin Center
Yonkers, NY 10701
Phone: 914-337-1500

Receive Site Citizen Participation Information By Email

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

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The Cottage Place Gardens Phase 5 parcel (the site) is located in an urban area within the City of Yonkers, Westchester County. The site is 1.255 acres in size and is an assemblage of one tax parcel and a portion of another. The site is located along the eastern side of Warburton Avenue at the northeast intersection of Warburton Avenue and Irving Place. The Phase 1 (C360119) parcel is located to the northwest, where the remediation has been completed. The Phase 2 (C360138) parcel is located to the southeast, where the remediation has been completed. The Phase 3 (C360150) parcel is located to the north, where the remediation has been completed. The Phase 4 (C360160) is located to the south, where the remedial action is underway.

Site Features: The site is developed with three occupied multi-story brick apartment buildings and one vacant single-story concrete block structure that has historically been utilized as a gasoline station and motor repair facility. The three multi-story buildings have half-basements (not full height) where utilities enter the buildings. The building that was formerly utilized as a gasoline station and motor repair facility was located on the westernmost portion of the site fronting Warburton Avenue. The building was demolished during the Interim Remedial Measure (IRM) for this portion of the site, but the foundation slab remains. The remainder of the site consists of landscaped areas, and concrete and asphalt walkways and access-ways.

Current Zoning and Land Use: The site is zoned M - Apartments Medium Density and is currently being used as an apartment complex. The surrounding parcels are zoned for a mix of commercial (C) and high-density residential apartments (A).

Past Use of the Site: A majority of the site has consisted of a portion of the Cottage Place Gardens public housing apartment complex since its construction in the 1940s. Prior to this time, the Cottage Place Gardens complex was developed with multiple single and multi-family dwellings, stores and a garage since as early as 1886. The westernmost portion of the site was used as an auto repair facility/gasoline station from at least 1951 until 2016. Prior to that time the site was occupied by a dwelling.

Site Geology and Hydrogeology: The site is comprised of fill material that typically consists of fine to coarse sand, containing little to some gravel, various amounts of silt, and occasional cobbles, brick, porcelain, ash, coal, concrete, glass and metal. The thickness of the fill deposit ranges from four feet to 10 feet below the ground surface. Native soil underlying the fill material consists of sand that contains little to some silt and trace to little amounts of gravel. Underlying

the sand deposit is glacial till. Groundwater was measured at depths that ranged from four feet below the ground surface on the westernmost portion of the property and 9.5 feet to 16.5 feet on remaining eastern portions of the property. Inferred groundwater flow direction is from the southeast towards the northwest.

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(s) under the Brownfield Cleanup Agreement is a/are Volunteer(s). The Applicant(s) does/do not have an obligation to address off-site contamination. Although the Department has determined that this site does not pose a significant threat to public health or the environment, petroleum contamination may potentially be emanating from the site. The Department will seek to identify any parties (other than the Volunteer) known or suspected to be responsible for this contamination, referred to as Potentially Responsible Parties (PRPs). The Department will bring an enforcement action against the PRPs. If an enforcement action cannot be brought or does not result in the initiation of a remedial program by any PRPs, the Department will evaluate the off-site contamination for action under the Spill Fund. The PRPs are subject to legal actions by the State for recovery of all response costs the State incurs or has incurred.

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. There was no soil vapor sampling conducted during the RI since there were no

contaminants in the groundwater or soil that appear on the NYSDOH's Soil Vapor Intrusion (SVI) matrices. However, a soil vapor evaluation will be performed as part of the site remedy. 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

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:

benzene
ethylbenzene
toluene
xylene (mixed)
benzo(a)anthracene
benzo(a)pyrene
benzo(b)fluoranthene
benzo(k)fluoranthene
chrysene
Zinc
dibenz[a,h]anthracene
fluoranthene
indeno(1,2,3-CD)pyrene
phenol
DDD
DDE
DDT
lead
mercury

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.

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

IRM - Building Demolition and Tank Removal

Between March 2019 and April 2019, the former gas station was demolished, an above ground storage tank (AST) and various drums and containers were removed, and a temporary asphalt binder was placed over a small area behind the former building in the lower western portion of the site. No endpoint samples were collected during the IRM since this area will be excavated during the full remediation of the site.

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:

Near-surface (0.5 inches to 2 feet), sub-surface (5 feet and deeper) soil and groundwater samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), and pesticides. There were no surface soil samples (0-2 inches) taken at the site since most of the soil to be removed was under foundations or asphalt, and the proposed remedy will remove all soils from ground surface to depth. Based upon investigations conducted, the primary contaminants of concern were benzene, toluene, ethylbenzene, and xylene (VOCs), polycyclic hydrocarbons (PAHs/SVOCs), 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT (pesticides); and zinc, lead, total chromium, and mercury (metals).

The near-surface soil showed exceedances of the unrestricted soil cleanup objectives (SCOs) for one pesticide and two metals. The pesticide, 4,4’-DDE, was detected at 0.0053 parts per million (ppm), compared to its SCO of 0.0033 ppm. The two metals, zinc and lead, were detected at concentrations of 318 ppm (SCO of 109 ppm) and 143 ppm (SCO of 63 ppm), respectively. The subsurface soil showed exceedances of the unrestricted SCOs for VOCs, SVOCs (PAHs), pesticides, and metals. The VOCs detected above standards were benzene at a maximum concentration of 0.48 ppm compared to its SCO of 0.06 ppm, ethylbenzene at 9.6 ppm (1 ppm SCO), toluene at 2.8 ppm (0.7 ppm SCO), and xylene at 4.7 ppm (0.26 ppm SCO). The PAHs (SVOCs) detected above standards were benzo(a)anthracene at a maximum concentration of 54

ppm (SCO of 1 ppm), benzo(a)pyrene at a maximum of 46 ppm (SCO of 1 ppm), benzo(b)fluoranthene at a maximum of 56 ppm (SCO of 1 ppm), benzo(k)fluoranthene at a maximum of 14 ppm (SCO of 0.8 ppm), chrysene at a maximum of 44 ppm (SCO of 1 ppm), dibenzo(a,h)anthracene at a maximum of 5.3 ppm (SCO of 0.33 ppm), flouranthene at a maximum of 110 ppm (SCO of 100 ppm), and indeno(1,2,3-cd)pyrene at a maximum of 28 ppm (SCO of 0.5 ppm). The pesticides detected above standards were 4,4'-DDD at 0.00351 (SCO of 0.0033 ppm), 4,4'-DDE at a maximum concentration of 0.0108 ppm (SCO of 0.0033 ppm), and 4,4'-DDT at 0.00331 (SCO of 0.0033 ppm). The metal constituents detected above standards were lead at a maximum concentration of 1,410 ppm (SCO of 63 ppm), and mercury at a maximum of 0.69 ppm (SCO of 0.18 ppm). Similar concentrations were found off-site at the Phase 1,2,3, and 4 parcels, which can be attributed to the presence of historic fill throughout the area, rather than migration from the Phase 5 parcel.

Groundwater was sampled from six on-site monitoring wells during the investigation. The VOCs detected above standards were benzene at a maximum concentration of 58 parts per billion (ppb), compared to its standard of 1 ppb; ethylbenzene at a maximum of 440 ppb (standard of 5 ppb), isopropylbenzene at 60 ppb (standard of 5 ppb), toluene at a maximum of 300 ppb (standard of 5 ppb), and xylene at a maximum of 940 ppb (standard of 5 ppb). There were five PAHs (SVOCs) detected above standards: benzo(a)anthracene at a maximum concentration of 0.42 ppb, benzo(b)fluoranthene at a maximum of 0.62, benzo(k)fluoranthene at a maximum of 0.24, chrysene at a maximum of 0.46 ppb, and indeno(1,2,3-cd)pyrene at a maximum of 0.29 ppb, all with a standard of 0.002 ppb. Total PAH concentrations ranged from 0.79 ppb to 20.85 ppb. The other SVOC constituent detected above standards was naphthalene at 68 ppb, with a standard of 10 ppb. Total chromium, detected at a maximum concentration of 290 ppb (50 ppb standard), total lead at a maximum of 599 ppb (25 ppb standard), and total mercury at 4.76 (0.7 ppb standard), were the metal constituents detected above standards. These samples were not filtered, and the results may be higher due to suspended solids in the samples. Although no groundwater samples were collected from off-site, sampling results near the site boundary indicate the potential for off-site migration of petroleum-related contaminants dissolved in groundwater.

In 2018, several monitoring wells were sampled for PFAS and 1,4-dioxane as part of the Department's Emerging Contaminants initiative. Perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) were reported at concentrations of up to 53.9 and 85.4 parts per trillion (ppt), respectively, exceeding the 10 ppt screening levels for groundwater for each, and US EPA's health advisory level of 70 ppt for PFOS, in one instance.

As stated in Section 6.1, there were no soil vapor samples collected on the Phase 5 parcel.

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.*

Access to the site is unrestricted. However, contact with contaminated soil or groundwater is unlikely unless they dig below the ground surface. Contaminated groundwater at the site is not

used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion (SVI). The potential for soil vapor intrusion will be evaluated for current and future onsite buildings with actions taken to address exposures. Sampling indicates site related soil vapor intrusion is not a concern for offsite buildings. However, offsite buildings may be evaluated for potential soil vapor intrusion concerns associated with other nearby sites also undergoing environmental investigations.

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 groundwater contamination.

Soil

RAOs for Public Health Protection

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

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater 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: Unrestricted use remedy.

The selected remedy is referred to as the Excavation to Unrestricted Soil Cleanup Objectives (SCOs) remedy.

The elements of the selected remedy, as shown in Figures 2-4, are as follows:

1. Excavation

The existing on-site buildings, including slabs, will be demolished and materials which can't 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 soil which exceeds the unrestricted soil cleanup objectives (SCOs), as defined by 6 NYCRR Part 375-6.8. If a Track 1 cleanup is achieved, a Cover System will not be a required element of the remedy.

Approximately 12,815 cubic yards of contaminated soil will be removed from the Phase 5 parcel at depths typically ranging from 5-10 feet below ground surface (bgs). Select areas of the site will be excavated between 10 and 12 feet bgs. The soil removal is expected to achieve at least a bulk reduction in groundwater contamination to asymptotic levels through source removal and excavation dewatering (if necessary). Confirmation sampling will be conducted in accordance with DER-10 to document that any soil above bedrock left on-site meets the unrestricted SCOs.

Excavation and removal of the two identified USTs adjacent to Building 12, as well as any unknown underground storage tanks (USTs), fuel dispensers, underground piping, or other structures associated with a source of contamination will be performed.

2. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation (if needed) to establish the design grades at the site.

3. Vapor Intrusion Evaluation

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

4. Conditional Track 1

The intent of the remedy is to achieve Track 1 unrestricted use; therefore, no environmental easement or site management plan is anticipated. However, if the soil vapor intrusion (SVI) evaluation is not completed, bulk reduction in groundwater concentrations acceptable to the Department and/or unrestricted SCOs are not achieved prior to completion of the Final Engineering Report, then a Site Management Plan and Environmental Easement (EE) will be required. If the SVI evaluation indicates mitigation or monitoring is needed, a Track 1 cleanup can only be achieved if the mitigation system or other required action is no longer needed within 5 years of the date of the Certificate of Completion. Bulk reduction of groundwater concentrations to asymptotic levels acceptable to the Department and/or achievement of UUSCOs must also be demonstrated within 5 years. If no EE or SMP is needed to achieve soil or soil vapor remedial action objectives, and bulk reduction in groundwater concentrations to asymptotic levels acceptable to the Department has been achieved, but concentrations still remain above standards, the site may still be eligible for a Track 1 cleanup, and the following local use restriction will be relied upon to prevent ingestion of groundwater: Chapter 873, article VII of the Laws of Westchester County, which prohibits potable use of groundwater without prior approval.

In the event that Track 1 unrestricted use is not achieved, including the achievement of soil, groundwater and/or soil vapor remedial objectives, the following contingent remedial elements will be required, and the remedy will achieve a Track 2 or Track 4 restricted residential cleanup, as appropriate.

Contingent Remedial Elements:

Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve a Track 4 restricted residential cleanup at a minimum and will include imposition of a site cover (as a contingency if soil greater than 2 feet but less than 15 feet deep does not meet the restricted residential SCOs), an environmental easement, and site management plan as described below. If all soil above 15 feet or bedrock meets the SCOs for restricted residential use, then a Track 2 remedy will be achieved, and no cover system will be required.

A. Cover System

A site cover will be required to allow for restricted residential use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but

are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

B. Institutional Control

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

• Require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8(h)(3);

• Allow the use and development of the controlled property for restricted residential, commercial, and industrial uses 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 County DOH; and

• Require compliance with the Department-approved Site Management Plan.

C. Site Management Plan

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

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

Institutional Controls: The Environmental Easement discussed in paragraph B above.

Engineering Controls: The site cover discussed in paragraph A above, groundwater monitoring and any engineering controls that may be required during/following the five-year conditional Track 1 evaluation period (e.g., sub-slab depressurization system, active groundwater treatment).

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 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;

• provision for in-situ groundwater treatment if concentrations in groundwater do not reduce to acceptable levels;

• provisions for the management and inspection of the identified engineering controls;

• maintaining site access controls and Department notifications; 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 Department; and

• monitoring for vapor intrusion for any occupied buildings 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, inspection, and reporting of any mechanical or physical components of vapor mitigation and/or groundwater treatment system(s), if any. The plan includes, but is not limited to:

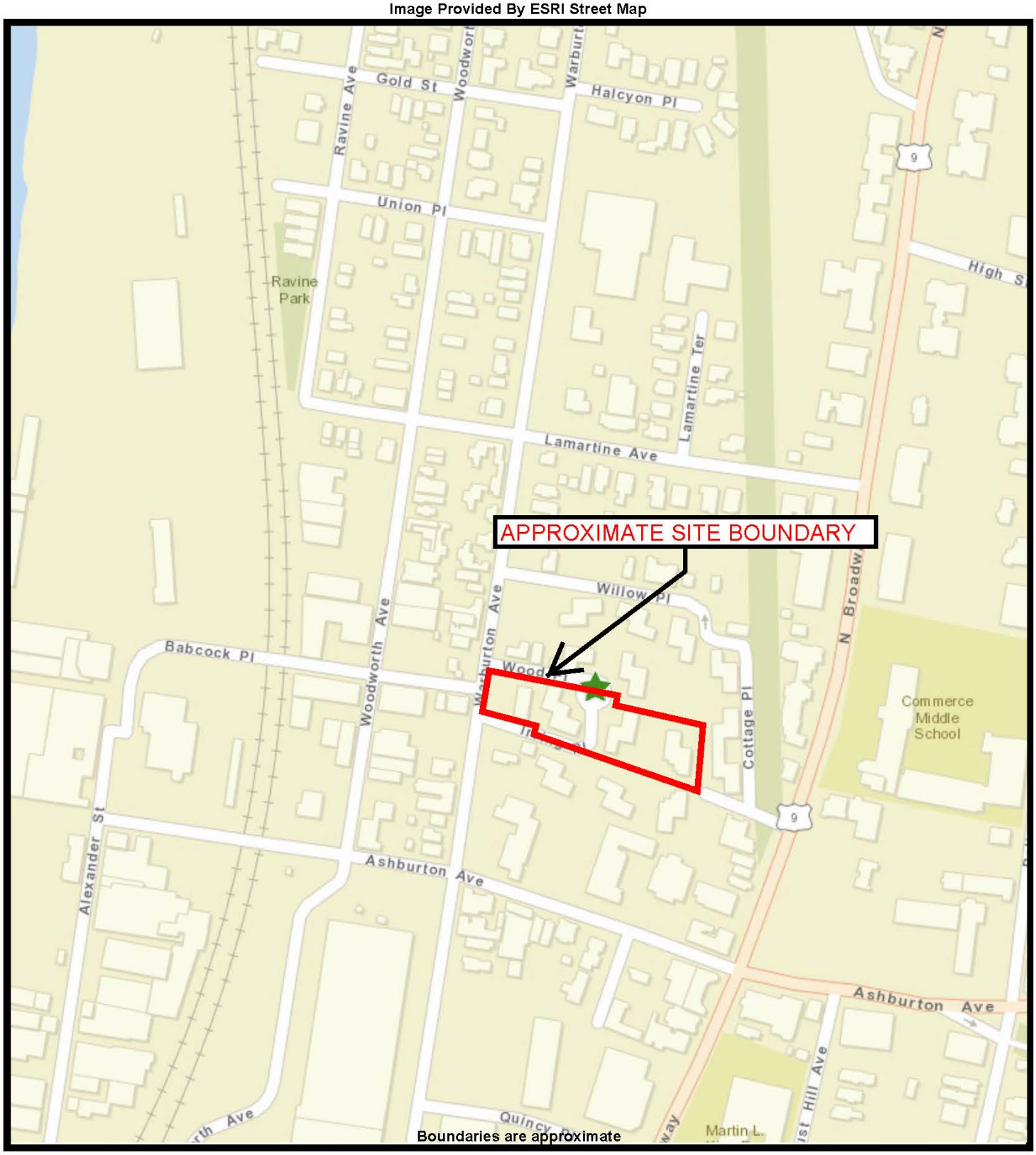
• procedures for operating and maintaining the system(s)/contingent groundwater treatment, if any;

• compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting;

• maintaining site access controls and Department notification; and

• providing the Department access to the site and O&M records.

Image Provided By ESRI Street Map



N

Not to Scale

Figure 1

SITE LOCATION MAP
COTTAGE PLACE GARDENS
PHASE 5 PARCEL
WESTCHESTER COUNTY, NEW YORK

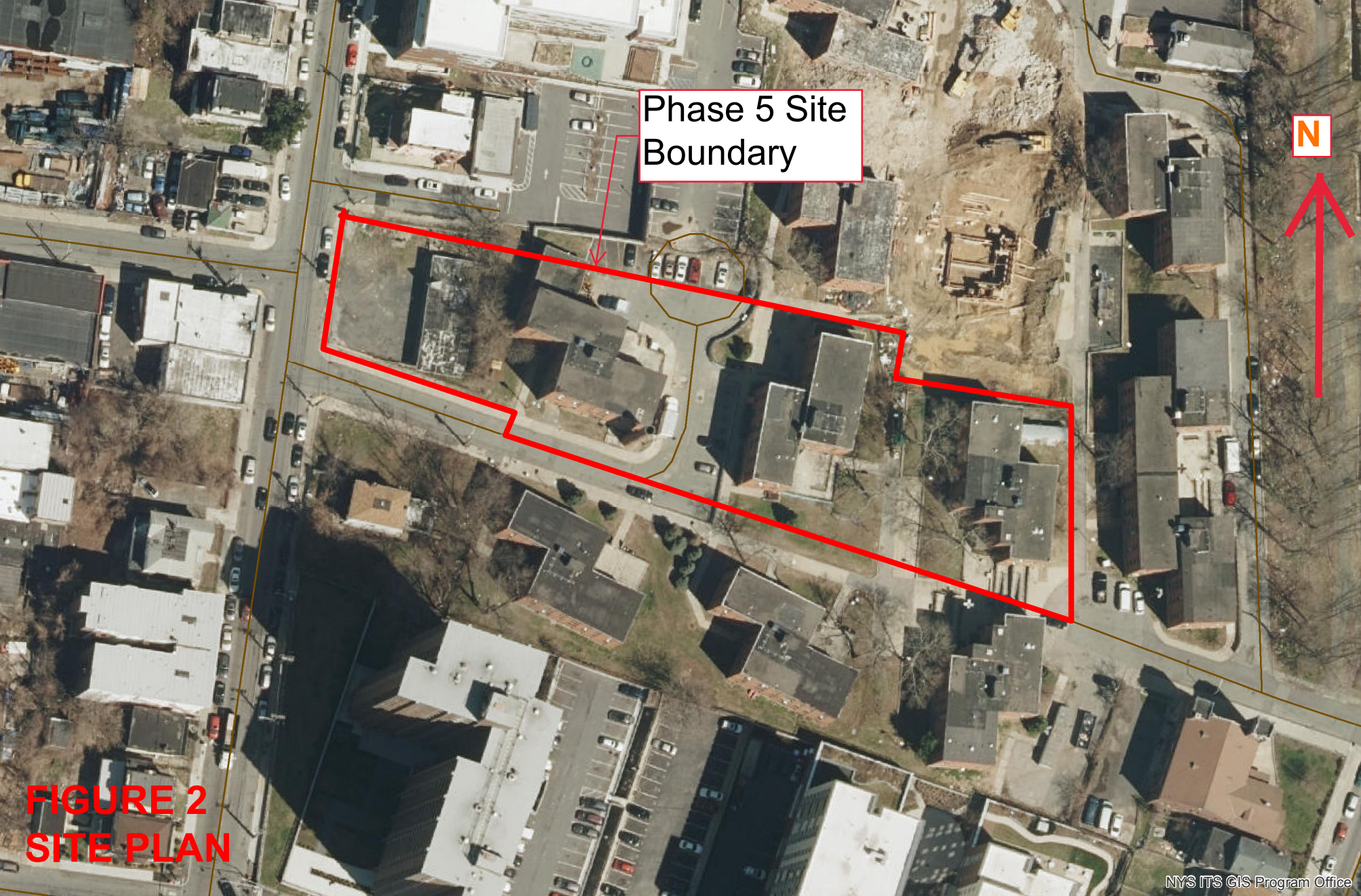


FIGURE 2
SITE PLAN

FIGURE 3
Excavation Depths

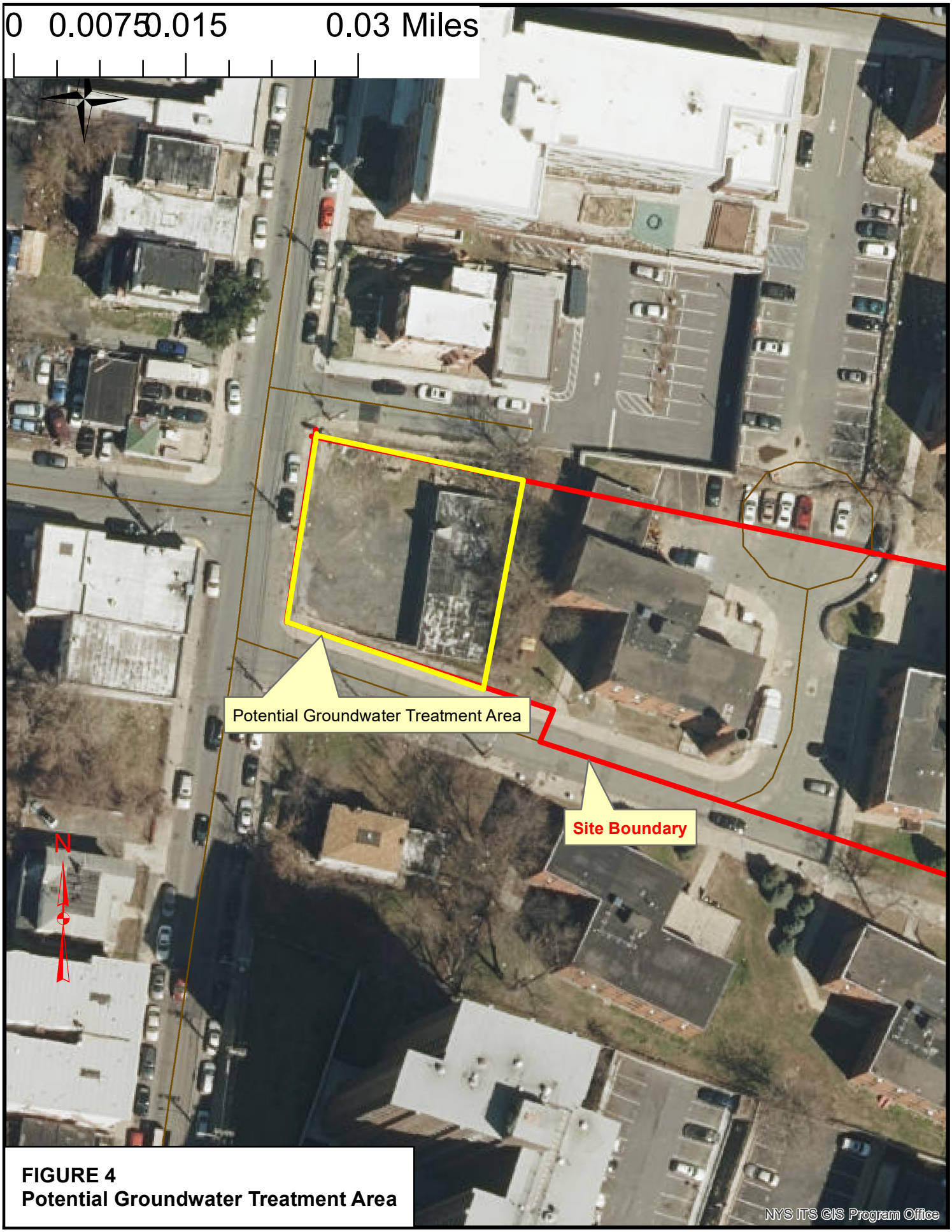


FIGURE 4
Potential Groundwater Treatment Area