DECISION DOCUMENT

Elton Crossing (Melrose C Family)
Brownfield Cleanup Program
Bronx, Bronx County
Site No. C203073
June 2015

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

DECLARATION STATEMENT - DECISION DOCUMENT

Elton Crossing (Melrose C Family)
Brownfield Cleanup Program
Bronx, Bronx County
Site No. C203073
June 2015

Statement of Purpose and Basis

This document presents the remedy for the Elton Crossing (Melrose C Family) 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 Elton Crossing (Melrose C Family) site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Excavation

All on-site soils which exceed restricted-residential SCOs, as defined by 6 NYCRR Part 375-6.8, will be excavated to a minimum depth of two feet below the final site grade and transported off site for proper disposal.

Deeper excavations will also be conducted below two feet, as necessary, in areas where source material may be present as follows: 1) along the west edge of the site to remove a floor drain and associated appurtenances (elevated pesticides concentrations in floor drain sediments) will be removed; 2) near the southwest corner of the site excavation will be performed to address a geophysical anomaly; and 3) near the eastern corner of the site petroleum contaminated soil will be removed to address odors and visual staining observed during investigation of the site. Approximately 2,300 cubic yards of soil will be removed from the site.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) may be brought in to replace the excavated soil and establish the designed grades at the site.

The site will be re-graded to accommodate installation of a cover system as described in remedy element 3. On-site soil which does not exceed the above excavation criteria may be used above the water table (beneath the cover system) to backfill the excavation or re-grade the site.

3. Cover System

A site cover will be required to allow for restricted residential use of the site. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

4. Institutional Control

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

- requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allows the use and development of the controlled property for restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or City DOH; and
- requires compliance with the Department approved Site Management Plan.

5. 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 4 above.
Engineering Controls: The cover system discussed in Paragraph 3 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 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; 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 for vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

Declaration

The remedy conforms to 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.

June 30, 2015

Date

Robert Cozzy, Director
Remedial Bureau B

DECISION DOCUMENT

Elton Crossing (Melrose C Family)
Bronx, Bronx County
Site No. C203073
June 2015

SECTION 1: SUMMARY AND PURPOSE

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

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

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

SECTION 2: CITIZEN PARTICIPATION

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

New York Public Library - Melrose Branch
Attn: Kathleen Carrasco
910 Morris Avenue
Bronx, NY 10451
Phone: 718-588-0110

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 includes eight lots and a section of Melrose Crescent between East 161st Street and East 162nd Street in the Bronx, New York. The site is irregular in shape, and is bound to the north by East 162nd Street, to the east by Elton Avenue, to the south by East 161st Street, and to the west by vacant lots and residential/commercial buildings.

Site Features:
The total site is approximately 0.732 acres with one vacant one-story 9,200-square foot building with a partial cellar that covers all of Lot 19 and part of an adjacent on-site lot along East 162nd Street. The site is located in a predominantly developed area consisting of residential, educational, commercial, and industrial buildings.

Current Zoning and Land Use:
The entire site has been vacant since 1989 with some portions vacant since the 1970s. All of the lots that make up the site are within a residential R7-2 zone. R7-2 is a medium-density apartment house district. A portion of the site is also within a C1-4 commercial overlay which allows for businesses that serve local retail needs. The surrounding area is largely multi-unit residential buildings, small retail stores and schools.

Past Use(s) of the Site:
Some of the lots that make up the site contained multi-story residences with cellars that likely contained petroleum storage tanks. Along with other commercial entities, the lots that make up the site also contained possible sources of contamination including an automobile garage, a factory, a metal works, a funeral home, a glass works, a plumbing and heating company and a glazer.

Site Geology and Hydrogeology:
Groundwater on-site is approximately 15 to 17 feet below grade in bedrock and flows north-northeasterly.

The site is located at approximately 30 feet above mean sea level (MSL). The topography of the site is relatively flat, but slopes gently to the east in the immediate area. According to the results of earlier investigations, soil at the site consists of six to 15 feet of fill comprising sand, silt, gravel, rock, ash, debris, wood, brick, asphalt, and concrete, sometimes underlain by approximately one foot of sand, clay, and gravel on top of bedrock. Bedrock is nine to 17 feet below grade across the site.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, an alternative that restricts the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the Remedial Investigation (RI) to 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, the Department has determined that this site does not pose a significant threat to public health or the environment; accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil

- soil vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminants of concern identified at this site are:

benzo(a)anthracene	chrysene
benzo(a)pyrene	DDT
benzo(b)fluoranthene	dieldrin
dibenzo[a,h]anthracene	barium
indeno(1,2,3-cd)pyrene	lead

The contaminants of concern exceed the applicable SCGs for:

- 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 lots that make up the site have had industrial and commercial activities commonly known for negative environmental impacts at other sites. Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, and PCB/pesticides. Based on the data available, it appears that much of the contamination at the site is present in the top six feet and is present at concentrations similar to typical urban background and historic fill Historic fill-related PAHs were found in excess of their respective restricted residential SCOs in numerous locations. Several metals were also detected at concentrations above their respective restricted residential soil cleanup objectives (RRSCOs). The metals are also likely attributed to the historic fill.

Soil
SVOCs were detected in 20 of the 27 soil samples. Six polycyclic aromatic hydrocarbons (PAHs), benzo(a)anthracene (6.23 parts per million [ppm]), benzo(a)pyrene (6.87 ppm), benzo(b)fluoranthene (7.47 ppm), chrysene (6.49 ppm), dibenzo(a,h)anthracene (1.34 ppm), and indeno[1,2,3-cd]pyrene (4.12 ppm), were detected up to the stated maximum concentrations in one or more soil samples above their respective RRSCOs.

The metals barium (2,900 ppm) and lead (2,760 ppm) detected at the maximum concentrations stated, exceeded their respective RRSCOs in ten and six samples, respectively. The pesticides 4,4'-DDT (10.4 ppm), dieldrin (20.3 ppm) and chlordane (19.4 ppm) were detected in excess of their respective RRSCOs of 7.9 ppm, 0.2 ppm and 4.2 ppm.

There are also three potential source areas: 1) along the west edge of the site there is a floor drain with elevated pesticides concentrations in floor drain sediments; 2) near the southwest corner of the site there is a geophysical anomaly; and 3) near the eastern corner of the odors and visual staining was observed in subsurface soil during investigation of the site

Groundwater
There is no overburden groundwater on-site. Three bedrock wells were constructed and sampled. The VOC, chloroform was detected just above its SCG of 7 parts per billion (ppb) at 9.5 ppb in one location, however it is not a site-related contaminant. No other VOCs were detected above their respective SCGs. SVOCs, PCBs and pesticides were non-detectable or below their respective SCG. The metals observed in groundwater above standards are naturally occurring and not a site-related contaminant.

Soil Vapor
Soil vapor and ambient air sample analytical results identified several VOCs at low concentrations in the six soil vapor samples. PCE was detected in five locations at a maximum concentration of 111 $\mu g/m^3$.

Based on the available data, it does not appear that contamination has migrated off-site in any environmental media.

Special Resources Impacted/Threatened:
No resources are threatened. The Harlem River is about 1.1 miles to the west and the Bronx River is 1.4 miles to the east. The area is served by public water.

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 are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. The site is fenced, which restricts public access. However, persons who enter the site could contact contaminants in the soil by walking on the site, digging or otherwise disturbing the soil. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential for the inhalation of site contaminants due to soil vapor intrusion for any future on-site redevelopment and occupancy needs to be evaluated prior to re-occupying the site. Sampling indicates that soil vapor intrusion is not a concern for off-site properties.

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:

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.

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 4: Restricted use with site-specific soil cleanup objectives remedy.

The selected remedy is referred to as the Excavation to Track 4 Restricted Residential Use 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;
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- allows the use and development of the controlled property for restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
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- requires compliance with the Department approved Site Management Plan.

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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 4 above.
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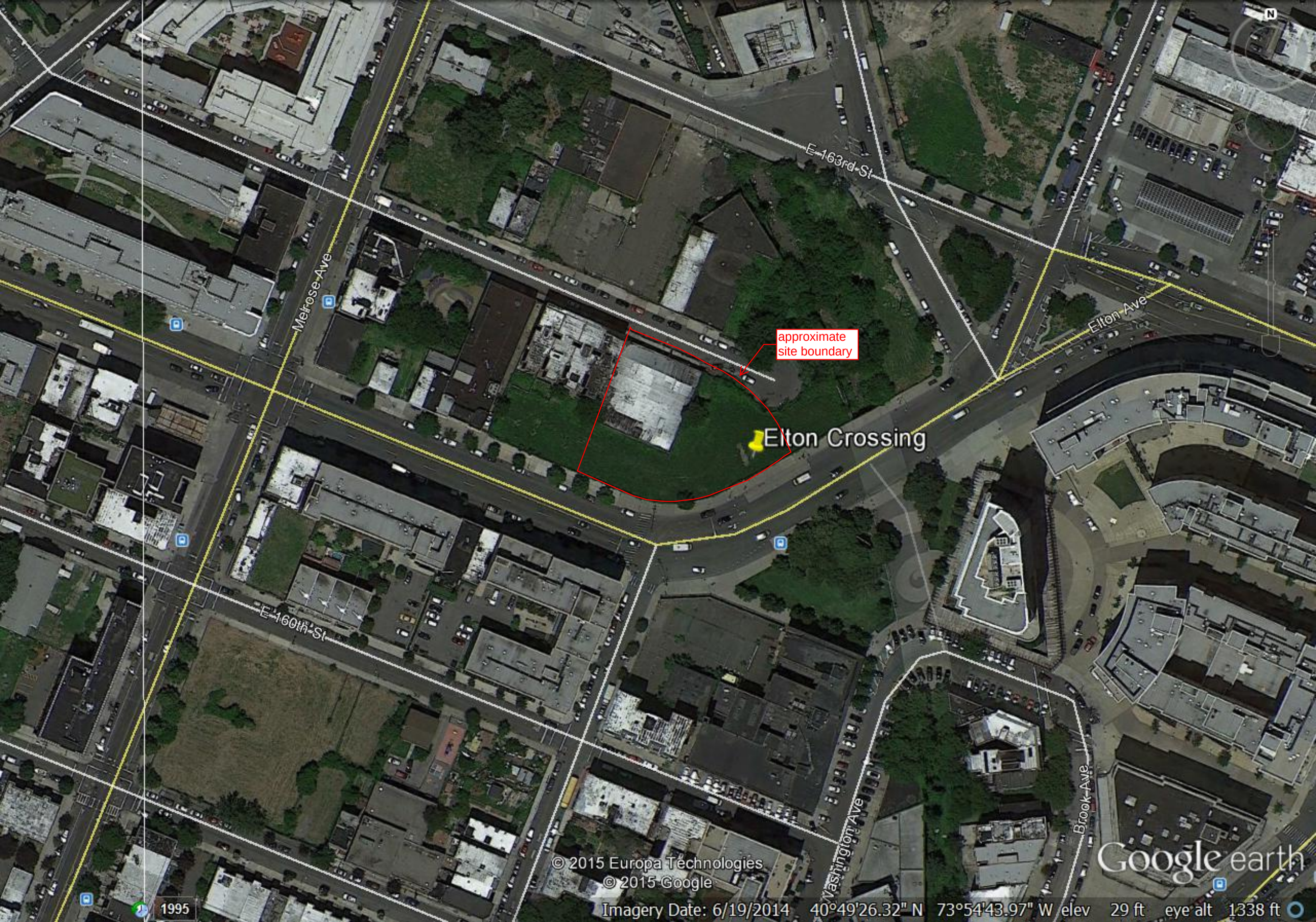
This plan includes, but may not be limited to:

- 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 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; 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 for vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.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Melrose Ave
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Elton Crossing
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Washington Ave
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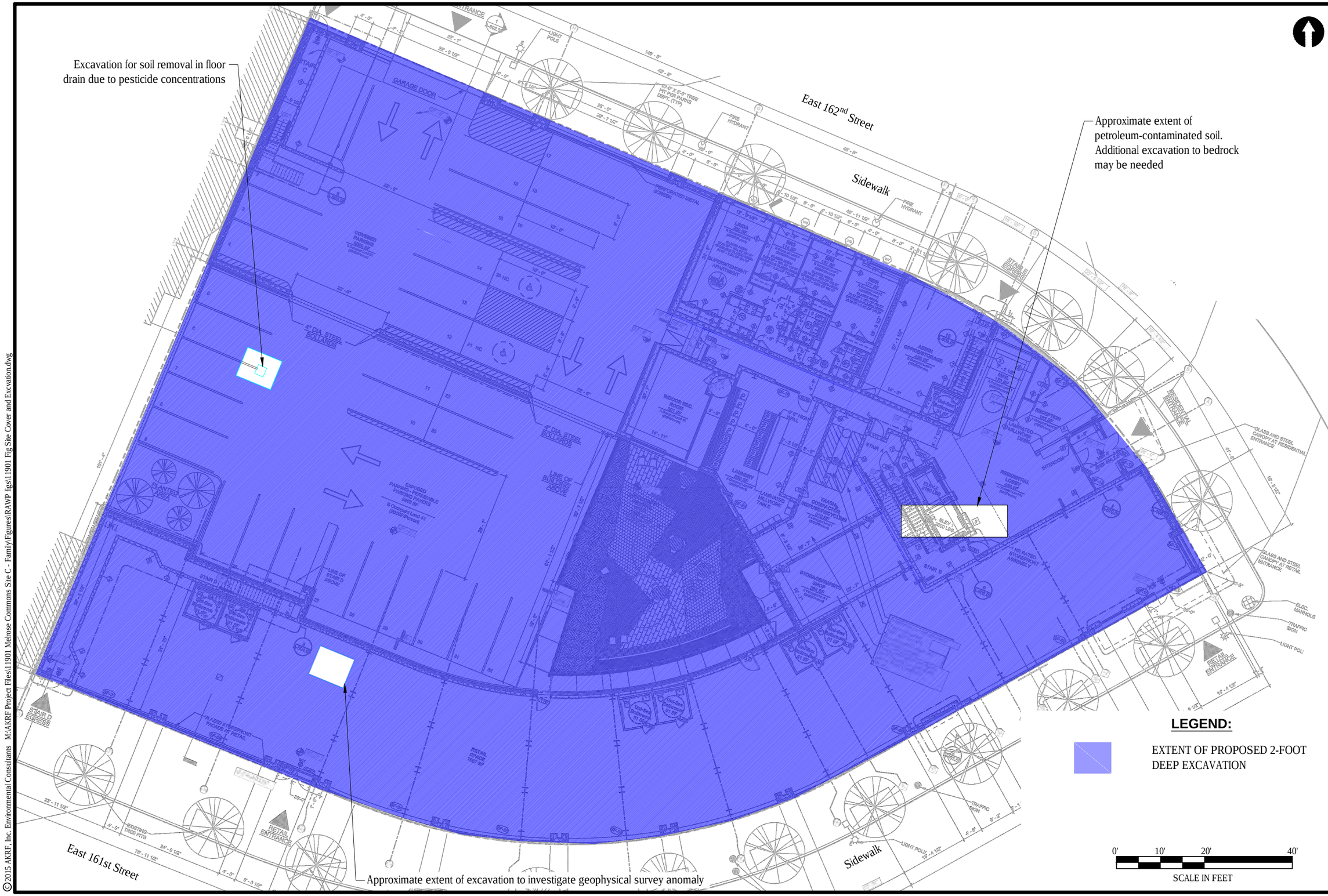

AKRF
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Elton Crossing/Site C - Family
899 Elton Avenue
Bronx, New York

PROPOSED REMEDIAL SITE EXCAVATION PLAN

DATE	6.26.2015
PROJECT NO.	11901
SCALE	as shown
FIGURE	2