

DECISION DOCUMENT

Greenpoint Marina
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224190
February 2019



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

DECLARATION STATEMENT - DECISION DOCUMENT

Greenpoint Marina
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224190
February 2019

Statement of Purpose and Basis

This document presents the remedy for the Greenpoint Marina 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 Greenpoint Marina 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

An area with anomalously high concentrations of copper in the northern part of the site will be excavated to a minimum of 7 feet below grade.

Approximately 200 cubic yards of soil will be excavated and disposed off-site. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation and establish the designed grades at the site.

3. 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.

4. Monitored Natural Attenuation

Groundwater contamination remaining after active remediation will be addressed with monitored natural attenuation (MNA). Groundwater will be monitored to assess the effectiveness of the remedy and for MNA indicators, which will provide an understanding of the biological activity breaking down the contamination. Active remediation will be proposed if it appears that natural processes alone will not address the contamination. The contingency remedial action will depend on the information collected.

5. 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 NYCDOH;
- requires compliance with the Department approved Site Management Plan.

6. 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 above.
- Engineering Controls: The cover system discussed above.

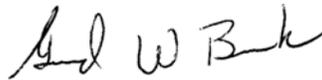
This plan includes, but may not be limited to:

- 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 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:
- a schedule of monitoring and frequency of submittals to the Department; and
 - 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 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.

February 26, 2019



Date

Gerard Burke, Director
Remedial Bureau B

DECISION DOCUMENT

Greenpoint Marina
Brooklyn, Kings County
Site No. C224190
February 2019

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:

Brooklyn Public Library - Greenpoint Branch
107 Norman Avenue
Brooklyn, NY 11222
Phone: 718-349-8504

Brooklyn Community Board 1
435 Graham Avenue
Brooklyn, NY 11211
Phone: (718)-389-0009

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 site is located at 43-57 West Street and 2-24 Oak Street in an urban area characterized by industrial and warehouse buildings, commercial space and residential property in the Greenpoint neighborhood of Brooklyn. It is identified on New York City tax maps as Block 2567, Lot 1 and Block 2570, Lot 36. The site also includes northern half of Oak Street and the southern half of Noble Street between West Street and the East River. The site is bounded by Noble Street to the north, West Street to the east, the East River to the west, and the Former Consolidated Freightways Truck Terminal (which is also in the BCP as Site C224191) to the south.

Site Features: The site is 3.98 acres in size and comprises the upland portions of Block 2567, Lot 1 (43-57 West Street) and Block 2570, Lot 36 (2-24 Oak Street). Improvements to the site include asphalt- and concrete-paved areas in the southwestern and eastern portions of the site, and a rip-rap stabilized shoreline. Five buildings associated with historic operations were destroyed in a fire in 2006. Currently, the only remaining structure is a former coal silo located on the western portion of the site.

Current Zoning and Land Use: The site is zoned as R6 and R8 residential with a C2-4 commercial use overlay. The site is currently used for equipment storage including scaffolding, garbage containers, cranes, HVAC equipment, granite, and flatbed trucks.

Past Use of the Site: The site was previously used as a shipyard beginning in 1887, a machine shop between 1905 and 1916, milling between 1922 and 2005, and coal storage in 1965.

Geology and Hydrogeology: The property is underlain by historic fill consisting of black to gray to brown, medium- to fine-grained sand with varying amounts of gravel, silt, brick fragments, slag, ash, cobbles, and boulders. Fill extends to depths of 3 to 10 feet below grade surface (bgs). Foundation remnants were observed beneath the surface in the western part of the property. Native material consisting of light brown to tan, fine- to medium-grained sand with trace silt and clay was observed beneath the fill layer in the eastern and western portions of the site. A layer of river sediment, consisting of grayish black organic clay and clayey silt, was encountered beneath the fill layer in the central portion of the site. The bedrock formation underlying the site is of the Harland formation and consists of schist and granite. The assumed depth to component bedrock is about 80 to 110 feet below bgs.

Groundwater elevations recorded during the remedial investigation ranged from 5 to 7 feet bgs. Groundwater flows west toward the East River.

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, alternatives (or an alternative) that restrict(s) 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) were/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

One or more of the Applicants under the Brownfield Cleanup Agreement is a Participant. The Participant(s) has/have an obligation to address on-site and off-site contamination. Accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

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

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

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

The analytical data collected on this site includes data for:

- groundwater
- soil
- sediment
- 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:

- | | |
|------------------------|-------------------------|
| benzo(a)anthracene | copper |
| benzo(a)pyrene | mercury |
| benzo(b)fluoranthene | trichloroethene (TCE) |
| benzo[k]fluoranthene | tetrachloroethene (PCE) |
| chrysene | carbon tetrachloride |
| indeno(1,2,3-CD)pyrene | 1,1,1-trichloroethane |
| lead | petroleum products |

The contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil
- soil vapor intrusion

6.2: Interim Remedial Measures

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

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

Removal of underground storage tanks and petroleum-impacted soil

Interim remedial measure (IRM) cleanup activities included:

- Decommissioning and removal of seven registered underground storage tanks (USTs);
- Excavation, to the extent practicable, of grossly-impacted soil;
- Removal of residual light, non-aqueous phase liquid (LNAPL) in the form of floating petroleum from the open excavation;
- Collection of documentation soil samples from the base and sidewall of the excavation;
- Backfilling of excavations;
- Installation of monitoring wells after excavation is complete for continued monitoring and potential recovery of residual LNAPL; and
- Implementation of a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) during all ground intrusive activities, which establish procedures for the protection of on-site workers and residents and which include required air monitoring as well as dust and odor suppression measures.

The IRM is currently being implemented. Documentation sampling results from the IRM will be reported in the Final Engineering Report.

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), herbicides and pesticides. Soil vapor samples were analyzed for VOCs. Based on investigations conducted to date, the primary contaminants of concern at the site are VOCs, SVOCs and metals.

Soil - During the Remedial Investigation (RI), soil exhibiting petroleum impacts (staining, odor, and elevated field instrument readings) was observed at depths ranging from approximately 2 to 10 feet below ground surface in the southwest portion of the site near the USTs. SVOCs were detected at concentrations exceeding the restricted residential use soil cleanup objectives (RRSCOs) within the historic fill layer throughout the site. SVOCs include: benzo(a)anthracene detected at a maximum concentration of 18.5 parts per million (ppm), benzo(a)pyrene at a maximum concentration of 13 ppm, benzo(b)fluoranthene at a maximum concentration of 9.69 ppm, and chrysene at a maximum concentration of 14.9 ppm. The RRSCO for all these SVOCs is 1 ppm. Preliminary results from the documentation samples from the IRM excavation area

show that the following SVOCs have been detected at concentrations above their RRSCOs: benzo(a)anthracene detected at a maximum concentration of 10.4 ppm, benzo(a)pyrene at a maximum concentration of 9.18 ppm, benzo(b)fluoranthene at a maximum concentration of 7.42 ppm, chrysene at a maximum concentration of 7.62 ppm, dibenzo(a,h)anthracene at a maximum concentration of 9.46 ppm and indeno(1,2,3-cd)pyrene at a maximum concentration of 3.28 ppm. Documentation sampling results from the IRM will be reported in the Final Engineering Report.

During the RI, metals were identified throughout the site. In shallow soil, lead was detected at a maximum concentration of 607 ppm compared to the RRSCO of 400 ppm; mercury was detected at a maximum concentration of 4.47 ppm compared to the RRSCO of 0.81 ppm; and copper was detected at a maximum concentration of 1,540 ppm compared to the RRSCO of 270 ppm. No pesticides, herbicides or PCBs were detected at concentrations exceeding their respective RRSCO. The SVOCs and metals present in the soil appear to be associated with the historic uses and the quality of fill placed at the site. Data does not indicate any off-site impacts in soil related to this site.

Off-site sediment - Polycyclic Aromatic Hydrocarbons (PAHs) were detected in two of the six off-site sediment samples collected from the intertidal zone along the East River shoreline, including: benzo(a)anthracene detected at a maximum concentration of 4.30 ppm, benzo(a)pyrene at a maximum concentration of 3.20 ppm, benzo(b)fluoranthene at a maximum concentration of 3.90 ppm, benzo(k)fluoranthene at a maximum concentration of 1.9 ppm, chrysene at a maximum concentration of 4.30 ppm, dibenzo(a,h)anthracene at a maximum concentration of 0.5 ppm and indeno(1,2,3-cd)pyrene at a maximum concentration of 1.10 ppm. The sum of the PAHs concentrations is 19.2 ppm in one of the six off-site sediment samples, which falls within the Class B sediment category (i.e., slightly to moderately contaminated). Based on these results, no remediation is required for off-site sediment.

Groundwater - During the 2015 and 2016 remedial investigation, LNAPL and oily sheen was observed around the area of the USTs and was delineated. In groundwater, VOCs, SVOCs and metals were detected at concentrations exceeding Ambient Water Quality Standards (AWQSs). Trichloroethylene (TCE) was the only VOC detected in groundwater. TCE was found at a maximum concentration of 5.4 parts per billion (ppb), slightly above its AWQS of 5 ppb, on the eastern (upgradient) portion of the site. SVOCs were detected at concentrations exceeding AWQS throughout the site, including: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene and indeno[1,2,3-cd]pyrene detected at maximum concentrations of 0.651 ppb, 0.789 ppb, 0.48 ppb, 0.617 ppb, 0.629 ppb and 0.366 ppb respectively, compared to their AWQS of 0.002 ppb. The naturally occurring metals magnesium, manganese, and sodium were detected in groundwater at concentrations above their respective AWQS. Lead was detected at a maximum concentration of 46 ppb compared to the AWQS of 25 ppb. Data does not indicate any off-site impacts in groundwater related to this site.

Soil vapor - Chlorinated solvent VOCs were identified in on-site soil vapor. PCE and TCE were detected throughout the site and their concentrations were highest in the central portion of the site. The maximum concentration of PCE and TCE detected in soil vapor samples were 52 micrograms per cubic meter (ug/m³), and 100 ug/m³, respectively. Carbon tetrachloride was detected in at a maximum concentration of 53 ug/m³ in soil vapor. 1,1,1-Trichloroethane (1,1,1-

TCA) was detected as high as 2,300 ug/m³ in soil vapor in the eastern part of the site. 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*.

The site is completely 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. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds in the groundwater and/or soil 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. Because there are no occupied on-site buildings, inhalation of site contaminants in indoor air due to soil vapor intrusion does not represent a concern for the site in its current condition. However, the potential exists for the inhalation of site contaminants due to soil vapor intrusion for future on-site development. In addition, sampling indicates soil vapor intrusion 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

- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated 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 Track 4: Restricted use with site-specific soil cleanup objectives remedy.

The selected remedy is referred to as the Excavation and Site Cover remedy.

The elements of the selected remedy, as shown in Figures 2 through 5, 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;
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- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Excavation

A hot-spot area with anomalously high concentrations of copper in the northern part of the site will be excavated to a minimum of 7 feet below grade.

Approximately 200 cubic yards of soil will be excavated and disposed off-site. Clean fill meeting

the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation and establish the designed grades at the site.

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- 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 NYCDOH;
- requires compliance with the Department approved Site Management Plan.

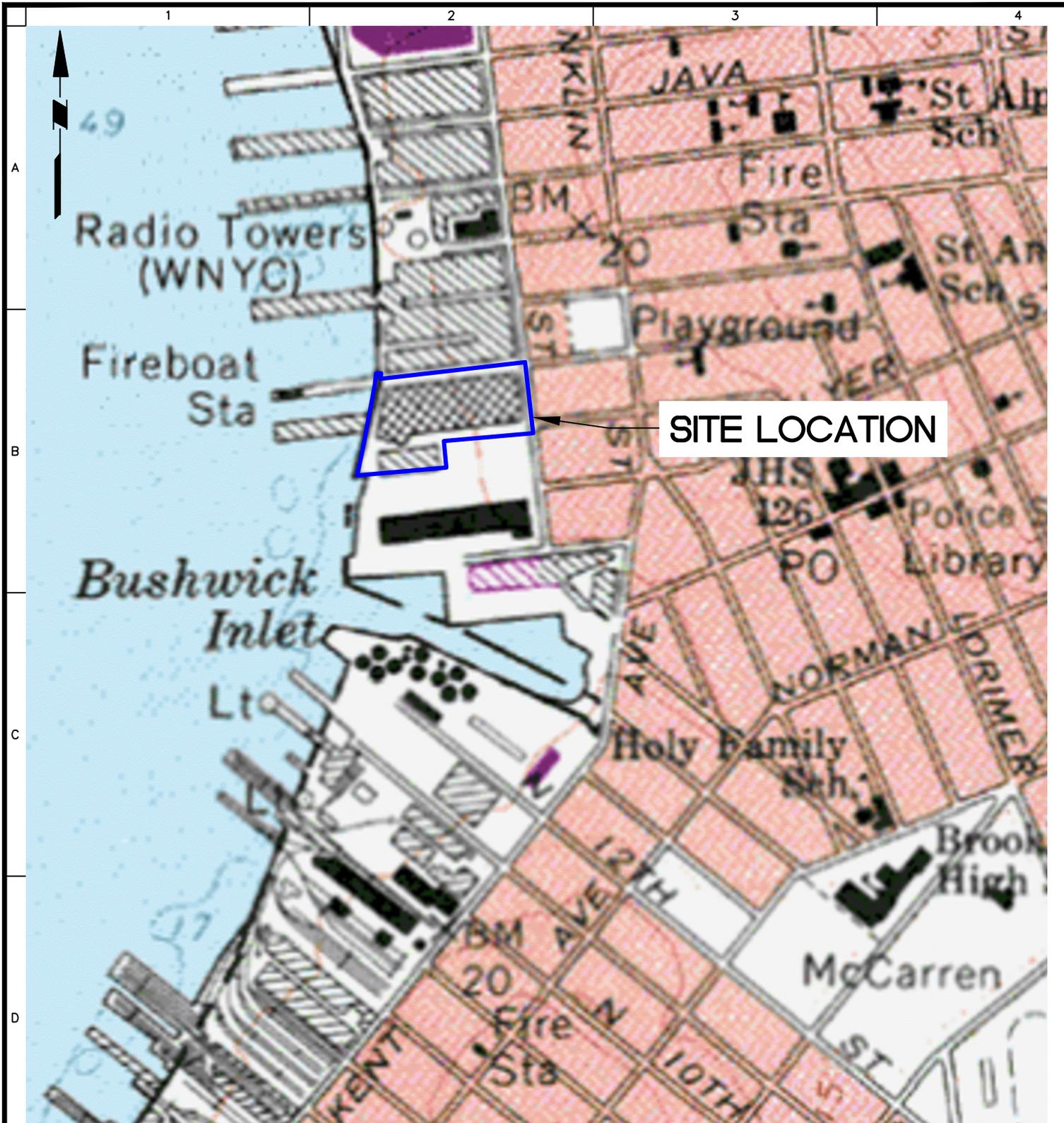
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- a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
 - Institutional Controls: The Environmental Easement discussed above.
 - Engineering Controls: The cover system discussed above.

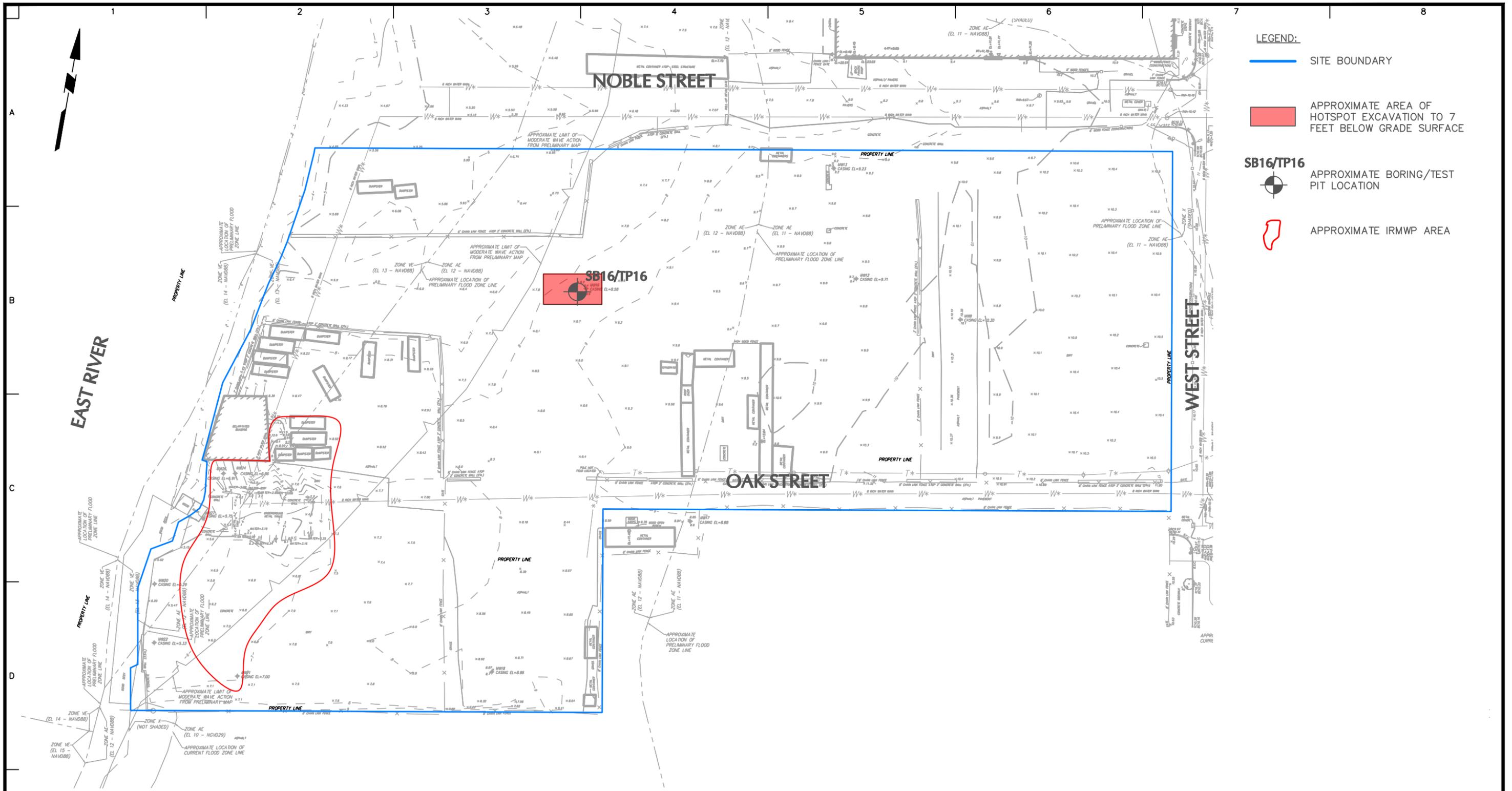
This plan includes, but may not be limited to:

- 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 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:
- a schedule of monitoring and frequency of submittals to the Department; and
 - monitoring for vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

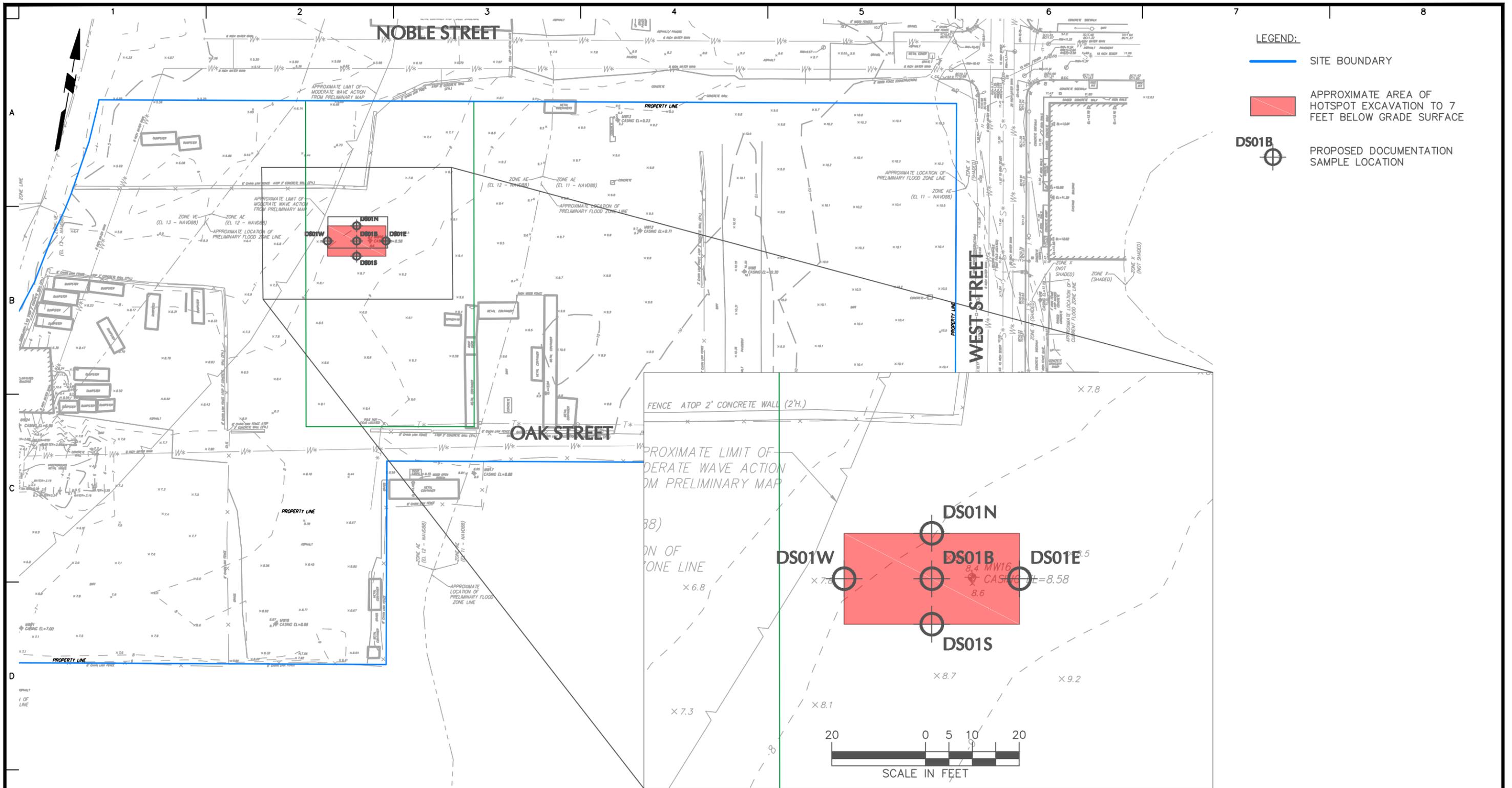


NOTES:
 BASE MAP TAKEN FROM USGS 7.5-MINUTE SERIES
 BROOKLYN QUADRANGLE, 1995 AND USGS
 7.5-MINUTE SERIES JAMAICA QUADRANGLE, 1994.

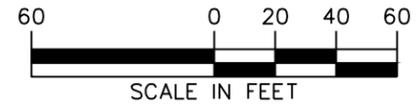
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| <p>Project</p> <p>GREENPOINT MARINA</p> <p>BLOCK No. 2567, LOT No. 1 BLOCK No. 2570, LOT No. 36</p> <p>GREENPOINT</p> <p>BROOKLYN NEW YORK</p> | <p>Figure Title</p> <p>SITE LOCATION MAP</p> | <p>Project No. 170267701</p> <p>Date 10/11/2017</p> <p>Scale NTS</p> <p>Drawn By MLR</p> <p>Checked By JA</p> <p>Submission Date</p> | <p>Figure No.</p> <p>1</p> <p>Sheet 1 of 15</p> |
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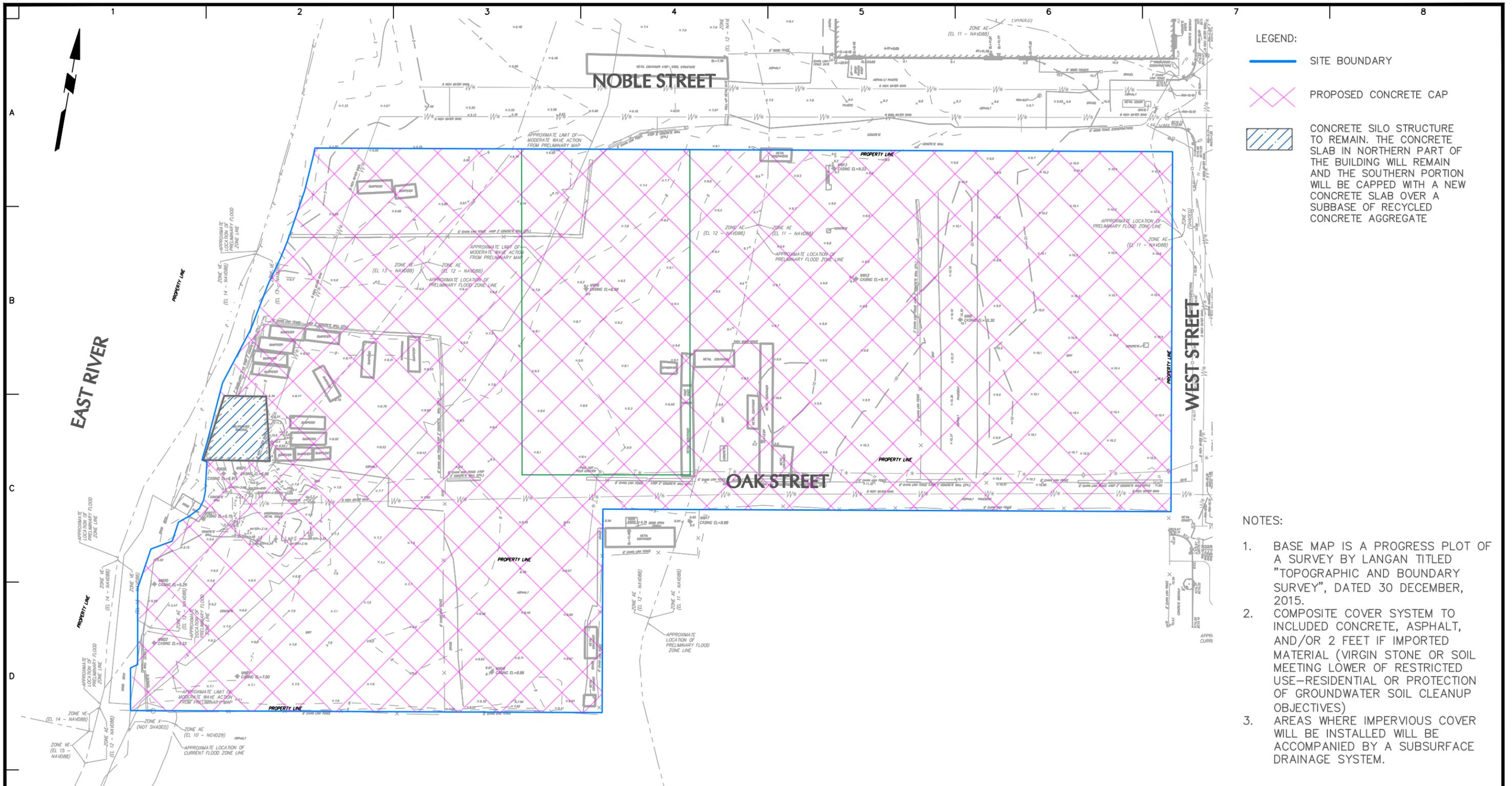
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| Project | Figure Title | Project No. | Figure No. |
| GREENPOINT MARINA | ALTERNATIVE II - TRACK 4 CLEAN UP | 170267701 | 2 |
| | | BLOCK No. 2567, LOT No. 1 BLOCK No. 2570, LOT No. 36 GREENPOINT | |
| BROOKLYN NEW YORK | | Date | |
| | | 11/6/2017 | |
| | | Scale | |
| | | AS SHOWN | |
| | | Drawn By | Checked By |
| | | JDL | JA |
| | | Submission Date | |
| | | | Sheet 10 of 15 |



- LEGEND:**
- SITE BOUNDARY
 - APPROXIMATE AREA OF HOTSPOT EXCAVATION TO 7 FEET BELOW GRADE SURFACE
 - DS01B** PROPOSED DOCUMENTATION SAMPLE LOCATION



| | | | | |
|--|---|--------------|--------------------------|------------------|
| GREENPOINT MARINA BLOCK No. 2567, LOT No. 1 BLOCK No. 2570, LOT No. 36 GREENPOINT BROOKLYN NEW YORK | Project | Figure Title | Project No. 170267701 | Figure No. |
| | ALTERNATIVE II- DOCUMENTATION SAMPLE LOCATION PLAN | | Date 11/6/2017 | 3 |
| | | | Scale AS SHOWN | |
| | | | Drawn By JDL | Checked By JA |
| | | | Submission Date | Sheet 11 of 15 |



- LEGEND:**
- SITE BOUNDARY
 - PROPOSED CONCRETE CAP
 - CONCRETE SILO STRUCTURE TO REMAIN. THE CONCRETE SLAB IN NORTHERN PART OF THE BUILDING WILL REMAIN AND THE SOUTHERN PORTION WILL BE CAPPED WITH A NEW CONCRETE SLAB OVER A SUBBASE OF RECYCLED CONCRETE AGGREGATE

- NOTES:**
1. BASE MAP IS A PROGRESS PLOT OF A SURVEY BY LANGAN TITLED "TOPOGRAPHIC AND BOUNDARY SURVEY", DATED 30 DECEMBER, 2015.
 2. COMPOSITE COVER SYSTEM TO INCLUDED CONCRETE, ASPHALT, AND/OR 2 FEET IF IMPORTED MATERIAL (VIRGIN STONE OR SOIL MEETING LOWER OF RESTRICTED USE-RESIDENTIAL OR PROTECTION OF GROUNDWATER SOIL CLEANUP OBJECTIVES)
 3. AREAS WHERE IMPERVIOUS COVER WILL BE INSTALLED WILL BE ACCOMPANIED BY A SUBSURFACE DRAINAGE SYSTEM.

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 Langan Engineering and Environmental Services, Inc.
 Langan CT, Inc.
 Langan International LLC
 Collectively known as Langan

Project
GREENPOINT MARINA
 BLOCK No. 2567, LOT No. 1
 BLOCK No. 2570, LOT No. 36
 GREENPOINT
 BROOKLYN NEW YORK

Figure Title
COMPOSITE COVER SYSTEM PLAN

| | |
|-------------------------------|----------------|
| Project No. 170267701 | Figure No. |
| Date 12/21/2018 | 12 |
| Scale AS SHOWN | |
| Drawn By/Checked By JDL/JA | |
| Submission Date | Sheet 12 of 15 |

