Chapter 8: Hazardous Materials

A. INTRODUCTION

This chapter addresses the potential for the presence of hazardous materials in soil, groundwater and soil vapor resulting from previous and existing uses both at the Project Area (Brooklyn Tax Block 679, Lot 1; Block 683, Lot 1; Block 687, Lot 1; Block 691, Lots 1 and 44; Block 695, Lots 1, 20, and 37–43; Block 706, Lots 1, 20, 24, and 101; Block 710, Lot 1~~, and a small portion of Block 662, Lot 1~~) and in the surrounding area associated with the Proposed Actions identified in the reasonable worst-case development scenario (RWCDS).

This assessment is based on the October 2012 *Phase I Environmental Site Assessment* (ESA) and the December 2017 *Phase I ESA Update*, both prepared by AKRF, Inc. (AKRF). The ESA included the findings of a reconnaissance of the Project Area, an evaluation of readily available historical information, and selected environmental databases and electronic records in accordance with American Society for Testing and Materials (ASTM) Standard E1527-13.

Measures are proposed to remediate contamination and reduce exposure to future occupants and workers. The measures would be included as part of the Proposed Actions and would preclude the potential for significant adverse impacts related to hazardous materials.

An assessment of potential hazardous materials impacts was performed for the Project Area, where ground disturbance and/or renovation/conversion and enlargements of existing structures are expected to occur as a result of the Proposed Actions.

As described in the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, a hazardous material is defined as any substance that poses a threat to human health or to the environment. Such substances include, but are not limited to metals, volatile organic compounds (VOCs), commonly found in petroleum products and solvents; semi-volatile organic compounds (SVOCs), typically associated with fuel oil, coal and ash; and polychlorinated biphenyls (PCBs), usually associated with transformers and utilities. Hazardous materials also include substances used in building materials and fixtures, such as asbestos-containing material (ACM), lead-based paint (LBP), and mercury.

The presence of hazardous material does not necessarily indicate a threat to human health or the environment; a means of an exposure pathway, the presence of a receptor, and an unacceptable dose must also be present to cause a threat. During construction on development sites, hazardous materials could be disturbed through excavation, extraction of groundwater, or the demolition or renovation of existing structures. The most likely routes of human exposure from the hazardous materials evaluated are the inhalation of VOCs, the ingestion of particulate matter containing SVOCs or metals, or dermal (skin) contact with hazardous materials that can be released during soil-disturbing activities.

PRINCIPAL CONCLUSIONS

Based on the findings of this assessment, the potential for significant adverse impacts related to hazardous materials resulting from the Proposed Actions would be precluded through the placement of (E) Designations, as warranted, for all privately owned lots where soil disturbing activities are anticipated under the Proposed Actions. An (E) Designation for hazardous materials requires, prior to change of use or redevelopment requiring ground disturbance, that the fee-owner of the property conduct a Phase I ESA, subsurface testing and remediation, where appropriate, to the satisfaction of the New York City Mayor's Office of Environmental Remediation (OER). The New York City Department of Buildings (DOB) permits associated with such actions cannot be issued without OER approval. The OER review would ensure protection of human health and the environment from known or suspected hazardous materials.

B. METHODOLOGY

As described in the *CEQR Technical Manual*, the purpose of a hazardous materials assessment is to determine whether a proposed action could lead to potential increased human exposure to hazardous materials and whether the increased exposure could lead to significant public health impacts or environmental impacts. The objective of this analysis is to determine which, if any, of the Project Area lots may have been adversely affected by current or historical uses on-site, adjacent to, or within 400 feet of the sites, and would have soil disturbing activities anticipated under the Proposed Actions.

Hazardous materials, as defined in the *CEQR Technical Manual*, are substances that pose a threat to human health and the environment including, but not limited to, heavy metals, VOCs, SVOCs, methane, PCBs, pesticides, and hazardous wastes. Historical building materials, such as asbestos and lead-based paint, are also considered in the hazardous materials assessment.

The Project Area was evaluated for potential impacts due to hazardous materials by: (1) reviewing historical Sanborn fire insurance maps; (2) reviewing an environmental regulatory database summary for the site and nearby properties; and (3) conducting site reconnaissance to determine current occupants/use and any indications of historical or current hazardous materials use or storage (e.g., underground storage tank [UST] fill caps). See **Appendix D**, "Hazardous Materials," for the Phase I ESA Update, which includes the regulatory database report and historic Sanborn maps.

SANBORN FIRE INSURANCE MAP REVIEW

Historical and recent Sanborn maps from circa 1888 through 2007 were reviewed to assess site and nearby activities and operations listed in *Hazardous Materials Appendix 1* of the *CEQR Technical Manual*. The review included identifying historical vehicle uses (fueling operations, garages with gasoline tanks, auto repair shops, etc.) and/or industrial uses (manufacturing, coal storage, chemical laboratories, metal works, printing facilities, substations, foundries, paint manufacturers, junk yards, rail yards, etc.).

DATABASE REVIEW

A set of standard federal and state regulatory databases (per ASTM E1527-13) indicating the potential for hazardous materials was reviewed, including the following:

- National Priority List (NPL) – The NPL is the Environmental Protection Agency's (EPA) compilation of sites that probably require remedial action under the Superfund Program. NPL sites can pose a significant risk of stigmatizing surrounding properties and thus impacting property values.
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) – CERCLIS is a compilation of sites which the EPA has investigated, or plans to investigate, pursuant to the Superfund Act of 1980 (CERCLA). As such, some of these sites may ultimately present concerns and others may not (but could still pose a perceived threat, thus affecting property values).
- Emergency Response Notification System (ERNS) – This federal database records and stores information on certain reported releases of petroleum and other potentially hazardous substances.
- Toxic Chemical Release Inventory System (TRIS) – The TRIS contains information reported by a variety of industries on their annual estimated releases of certain chemicals.
- Permit Compliance System of Toxic Wastewater Discharges (WWD) – This database includes certain sites which discharge wastewater containing potentially hazardous chemicals.
- Air Discharge Facilities Index (ADF) – This federal database includes information on certain air emission sources.
- EPA Civil Enforcement Docket – This database tracks civil judiciary cases filed on behalf of the EPA by the Department of Justice.
- Hazardous material spills (SPILLS) – This database includes releases reported to the NYSDEC, including tank test failures (for USTs only) and tank failures.
- Resource Conservation and Recovery Act Notifiers (RCRA) – This database lists sites which have filed notification forms regarding hazardous waste activity, including the following: treatment, storage, and disposal facilities (TSDs); small-quantity (SQG) and large-quantity generators (LQG); and transporters regulated under RCRA. The discussion below includes any CORRACTS listings of facilities which are subject to corrective action under RCRA.
- Chemical Bulk Storage (CBS) – The New York CBS is a list of facilities that store regulated non-petroleum substances in aboveground tanks with capacities greater than 185 gallons and/or in underground tanks of any size.
- Solid Waste Facilities (SWF) – This database includes certain landfills, incinerators, transfer stations, recycling centers, and other sites which manage solid waste.
- Petroleum Bulk Storage (PBS) and Major Oil Storage Facilities (MOSF) – The PBS database lists facilities that registered having either aboveground or underground petroleum tanks with total storage exceeding 1,100 gallons. Facilities with more than 400,000 gallons appear on the MOSF database.
- State Inactive Hazardous Waste Disposal Sites (SHWS) – This program (also known as State Superfund) lists information regarding a variety of sites likely requiring cleanup.
- Brownfield Sites – a listing of sites that are abandoned, idled, or underused industrial and commercial sites where expansion or redevelopment is complicated by real or perceived environmental contamination. This database includes a compilation of sites in the NYS Voluntary Cleanup Program, NYC Voluntary Cleanup Program, NYS Brownfield Cleanup Program, and NYS Environmental Restoration Program.

- Historic Utility Sites – This database lists power generating stations, manufactured gas plants, gas storage facilities, maintenance yards, and other gas and electric utility sites.

SITE RECONNAISSANCE

The Project Area and nearby properties were observed in an attempt to verify and potentially supplement literature and database records, and to identify any existing environmental conditions and note any potential evidence of historical conditions.

At the time of the reconnaissance, the Project Area was occupied by offices, retail stores, warehouses, manufacturing, storage areas, vacant commercial space, woodworking, artist studios, a school for disabled people, and open space (areas of landscaping, overgrown vegetation, parking and loading docks). Portions of each building within the Project Area were unoccupied.

Some painted surfaces, potentially including lead-based paint, were noted to be in poor condition (with chipped or flaking paint) in each of the buildings within the Project Area. Suspect ACM, including thermal pipe insulation, floor tiles, boiler insulation, and window caulking were also noted throughout the buildings. Some suspect ACM were noted to be damaged. Numerous transformers, including suspect oil-filled transformers, were observed on the roofs of the Project Area buildings. Elevators in all Project Area buildings were cable-driven (electrical).

C. EXISTING CONDITIONS

TOPOGRAPHY AND HYDROGEOLOGY

Based on U.S. Geological Survey mapping, the highest point of the Project Area is located approximately 10 feet above mean sea level and the lowest point is at sea level, as the western boundary is the Gowanus Bay. The relatively flat property is located on the northwest side of the Borough of Brooklyn. The general slope of the surrounding area is northwest toward the Bay Ridge Channel. The dominant soil underneath the Project Area is classified by New York City Reconnaissance Soil Survey as Pavement and Buildings primarily consisting of urban fill complex with slopes of 0–8 percent. Previous studies of the Project Area indicate that urban fill materials consisting of mixed soils, ash, and construction debris are known to be present under the Project Area at thicknesses of up to 8 feet. This urban fill has previously exhibited elevated levels of metal and other contaminants. The fill is underlain by sediments including glacial deposits, gravel, clay, and crystalline bedrock. Based on USGS mapping, bedrock is expected approximately 200 feet below grade, with depth increasing form north to south.

Previous studies encountered groundwater approximately 6 to 13.5 feet below grade. A December 2008 quarterly groundwater monitoring report indicated groundwater flow to the south-southwest, but noted that this direction was inconsistent with previous quarterly monitoring events (reports for these prior events were not provided to AKRF). Based on surface topography and proximity to Gowanus Bay, groundwater would be expected to flow in a westerly to northwesterly direction. Nonetheless, the groundwater depth and flow direction are likely influenced by historical filling activities, tides, and other factors beyond the scope of this assessment. Groundwater in Brooklyn is not used as a source of potable water (the municipal water supply uses upstate reservoirs).

REGULATORY DATABASE RECORDS

The regulatory database records indicated multiple facilities listed within or adjacent to the Project Area with some potential to have affected environmental conditions within the Project Area,

including: CERCLIS No Further Remedial Action Planned (NFRAP), TRIS, Permit Compliance System of Toxic WWD, ADF, RCRA Hazardous Waste Generator, PBS, CBS, and SPILLS.

OVERVIEW OF HISTORICAL USES

Historical uses of the northern portion of the Project Area have been industrial since at least 1926 and included paint manufacturing, printing, and a power plant. The southern portion of the Project Area has been used for industrial purposes since at least 1888 and included oil refining, chemical manufacturing, asbestos manufacturing, auto repair, a filling station, printing, and rail yard operations. The historical uses were associated with storage of acids, paints and petroleum. The Project Area was served by railroads starting in 1888, with railroad access further expanded by 1951. Railroads no longer serve the Project Area buildings.

The majority of the Project Area was developed with the current structures by 1926. Buildings 1, 25, and 26 were constructed by 1906. Buildings 2–10, 19–22, 24, 26 and the Power Plant were constructed between 1906 and 1926. Building 23 and a filling station were constructed between 1926 and 1951. The filling station was replaced by an auto repair facility by 1995.

Notable observations from the historical maps, summarized by Block, included the following, listed in **Table 8-1** below:

Table 8-1
Historical Uses of the Project Area

Block	Year	Project Area Sanborn Map Description
679	1888	Vacant
	1906	Largely vacant, two buildings labeled Bush Terminal Company are shown at the location of Building 9.
	1926	Buildings 9 and 10 and the Power Plant occupied by Bush Terminal Co., with Buildings 9 and 10 identified as loft buildings (i.e., various manufacturing occupancies). Two gasoline USTs and a garage were shown at the western end of Building 9. Railroad tracks were located in the open space north of Building 9, leading up to Building 10. An ash pocket and a transformer station were identified adjacent to the Power Plant.
	1951	Building conditions remain similar to the 1926 Sanborn map.
	1965	Building conditions remain similar to the 1951 Sanborn map.
	1978	Building conditions remain similar to the 1965 Sanborn map.
	1988	Building conditions remain similar to the 1978 Sanborn map.
	1995	Building conditions remain similar to the 1988 Sanborn map, except for removal of two transformers shown on the 1988 map from the transformer station.
	2007	Building conditions remain similar to the 1995 Sanborn map.
683	1888	Vacant
	1906	Vacant
	1926	Buildings 7 and 8 occupied by Bush Terminal Co. and identified as loft buildings (i.e., various manufacturing occupancies). Railroad tracks were located in the open space between Buildings 7 and 8.
	1951	Building conditions remain similar to the 1926 Sanborn map.
	1965	Building conditions remain similar to the 1951 Sanborn map.
	1978	Building conditions remain similar to the 1965 Sanborn map.
	1988	Building conditions remain similar to the 1978 Sanborn map.
	1995	Building conditions remain similar to the 1988 Sanborn map with the exception of a building extension added east of Building 7 and 8 identified as a loft and post office.
	2007	Building conditions remain similar to the 1995 Sanborn map.

Table 8-1 (cont'd)
Historical Uses of the Project Area

687	1888	Vacant
	1906	Vacant
	1926	Buildings 5 and 6 occupied by Bush Terminal Co. and identified as loft buildings (i.e., various manufacturing occupancies). Railroad tracks were located in the open space between Buildings 5 and 6.
	1951	Building conditions remain similar to the 1926 Sanborn map.
	1965	Building conditions remain similar to the 1951 Sanborn map.
	1978	Building conditions remain similar to the 1965 Sanborn map.
	1988	Building conditions remain similar to the 1978 Sanborn map.
	1995	Building conditions remain similar to the 1988 Sanborn map.
	2007	Building conditions remain similar to the 1995 Sanborn map.
691	1888	Vacant with one railroad line ending at the center of the block.
	1906	Largely vacant, occupied by two storage sheds at the current location of Building 3.
	1926	Buildings 3 and 4 occupied by Bush Terminal Co. and identified as loft buildings (i.e., various manufacturing occupancies). Railroad tracks were located in the open space between Buildings 3 and 4.
	1951	Building conditions remain similar to the 1926 Sanborn map.
	1965	Building conditions remain similar to the 1951 Sanborn map.
	1978	Building conditions remain similar to the 1965 Sanborn map.
	1988	Building conditions remain similar to the 1978 Sanborn map.
	1995	Building conditions remain similar to the 1988 Sanborn map.
	2007	Building conditions remain similar to the 1995 Sanborn map.
695	1888	Largely vacant with four railroad lines traversing and ending within the block. Two stores were located on Lot 43.
	1906	Vacant on northern half with southern portion occupied by a building labeled Compound, shown at the location of Building 1. Lots 37–43 each had at least one multi-story building with a storefront with each building occupying only a portion of its respective lot. Lot 43 had two buildings with storefronts and a separate stable.
	1926	Buildings 1 and 2 occupied by Bush Terminal Co. and identified as loft buildings (i.e., various manufacturing occupancies). Railroad tracks and a small storage building were located in the open space between Buildings 1 and 2. A building on Lot 37 occupied the entire lot. Lots 38-41 remained unchanged. Lot 42 was developed with a one-story storage building. Two stores and a feed building at the end of a railroad are shown on Lot 43.
	1951	Building conditions remain similar to the 1926 Sanborn map with the following exceptions: The building in the open space between Buildings 1 and 2 was removed and a building identified as mechanical assembling was added. The building on Lot 37 was designated as a printing facility. The buildings on Lots 39 and 40 occupied the entirety of the respective lots. A building on Lot 43 was removed.
	1965	Building conditions remain similar to the 1951 Sanborn map with the exception of a parking garage added on Lot 43.
	1978	Building conditions remain similar to the 1965 Sanborn map.
	1988	Building conditions remain similar to the 1978 Sanborn map with the exception of Lot 37 being labeled for generic commercial use.
	1995	Building conditions remain similar to the 1988 Sanborn map.
	2007	Building conditions remain similar to the 1995 Sanborn map with the exception of Lots 38-42 being designated for generic commercial use.

Table 8-1 (cont'd)
Historical Uses of the Project Area

706	1888	Occupied by Phenix Chemical Works and H.W. Johns Manufacturing Co., including several acid chambers and acid stills, an acetic acid house, a felt roofing factory, an asbestos factory, paint mills, sulphur burners, vitriol tanks, acid farms and platinum pans. Southeastern portion occupied by Bush & Denslow Manufacturing Company (an oil refinery spanning Blocks 706 and 710), including a crude oil tank, refined oil tanks, bleaching tanks, distillate tanks, agitator tanks, and naphtha tanks.
	1906	Occupied by Brooklyn Rapid Transit Engine and Dynamo Room and H.W. Johns-Manville Manufacturing Co. asbestos factory, which included crude oil tanks, oil and benzene storage, engines and dynamos, a brass foundry, a machine shop, coal storage and 18 boilers. Southeastern portion occupied by Bush Terminal Company buildings (including Building 25), F. S. Sanford Coal Co. and Bush Docks Freight Station with multiple railroad sidings and coal storage.
	1926	Occupied by buildings of the Bush Terminal Co. Buildings 19, 20, and 22 were shown as lofts. A railroad track bisected the Southern Parcel from west to east with railroad sidings terminating at Building 20. Building 25 was shown as a warehouse with 6 boilers. Buildings 21 and 24 were labeled as a service station freight terminal. The location of current Building 23 was vacant land. A gasoline UST was identified north-adjacent to Building 22.
	1951	Occupied by buildings of the Bush Terminal Co. Buildings 19, 20, 22, and railroad tracks were similar to the 1926 map. The northern portion of Building 25 (warehouse and boilers) was demolished. A concrete tunnel was shown connecting Buildings 19 and 20 to the area where Building 26 now exists. Buildings 21, 23, and 24 were shown as lofts. A filling station and a building with no labeled use were shown along 39th Street and east of Building 22. A gasoline tank was identified north-adjacent to Building 22.
	1965	Building conditions remain similar to the 1951 Sanborn map.
	1978	Building conditions remain similar to the 1965 Sanborn map with the exception of a new building shown at the filling station along 39th Street.
	1988	Building conditions remain similar to the 1978 Sanborn map.
	1995	Building conditions remain similar to the 1988 Sanborn map with the exception of replacement of the filling station formerly located along 39th Street with an auto repair shop.
	2007	Building conditions remain similar to the 1995 Sanborn map; however, a gasoline UST was no longer shown north-adjacent to Building 22 and railroad tracks were no longer located at the southeastern corner of Building 20.
710	1888	Occupied by Bush & Denslow Manufacturing Company (an oil refinery spanning Blocks 706 and 710), including bleaching tanks, distillate tanks, agitator tanks, spent acid tanks, naphtha tanks, and tar tanks.
	1906	Occupied by two large buildings with no labeled use.
	1926	Occupied by a building at the location of Building 26, labeled as the Holcomb Rubber Co. warehouse. A railroad track bisected the Southern Parcel from west to east, with railroad sidings terminating at Building 20.
	1951	Building conditions remain similar to the 1926 Sanborn map; however, Building 26 was extended and labeled Bush Terminal Co. Railroad tracks were no longer shown between Buildings 26 and 24.
	1965	Building conditions remain similar to the 1951 Sanborn map.
	1978	Building conditions remain similar to the 1965 Sanborn map.
	1988	Building conditions remain similar to the 1978 Sanborn map.
	1995	Building conditions remain similar to the 1988 Sanborn map.
	2007	Building conditions remain similar to the 1995 Sanborn map.

Currently, the study area includes primarily commercial and industrial developments. Based on the age of the majority of structures on the Project Area, building materials are likely to include ACM, LBP, and/or PCBs. At currently vacant sites, such materials and/or buried petroleum storage tanks may also remain from the debris of former structures in the subsurface.

Historical uses of potential of environmental concern (uses requiring assessment as noted in *Hazardous Materials Appendix 1* of the *CEQR Technical Manual*) are principally associated with the following uses and activities on the Project Area or an adjacent site:

- Auto-related uses (including auto repair and a filling station) or industrial uses (including paint manufacturing, printing, oil refining, chemical manufacturing, asbestos manufacturing, rail yards, and a printing plant) or utility uses;
- USTs or leaking USTs;
- Spills of petroleum or chemicals; and
- Aboveground storage tanks (ASTs).

D. THE FUTURE WITHOUT THE PROPOSED ACTIONS

In the future without the Proposed Actions (No Action Scenario), the Project Area is assumed to either remain unchanged from existing conditions, or become occupied by uses that are as-of-right under existing zoning (see Chapter 1, "Project Description"). Although the Project Area does not currently present a hazard to people or the environment, any construction involving soil disturbance could potentially increase pathways for human exposure to any subsurface hazardous materials present. Such soil disturbance would likely not be conducted in accordance with all of the procedures (e.g., for conducting testing before commencing excavation and implementation of health and safety plans during construction) described in the following section. However, should petroleum tanks and/or petroleum spills be identified (e.g., during excavation for new foundations), legal requirements (including those of NYSDEC) would need to be followed, as would applicable regulatory requirements prior to demolition relating to ACMs and relating to disturbance and handling of suspect LBP. Off-site disposal of excess soil/fill would also need to be conducted in accordance with federal and state requirements. Overall, in the No Action Condition, the amount of soil disturbance would likely be less than in the future with the Proposed Actions, but the controls on its performance would not be as stringent as under the Proposed Actions, as described below.

E. THE FUTURE WITH THE PROPOSED ACTIONS

In the future with the Proposed Actions, existing buildings in the project area would be renovated and re-tenanted as well as the development of new buildings, which could increase pathways for human exposure. Hazardous materials (E) Designations would be placed on the Project Area lots, which would have soil disturbance during construction activities under the Proposed Actions as they could have been adversely affected by current or historical uses at, adjacent to, or within 400 feet of that site. The Project Area lots with soil disturbance under the Proposed Action are as follows:

- Building 11 (Block 679, Lot 1);
- Building 21 (Block 706, Lots 1 (portion), ~~and~~ 20, 24 (portion), and 101); and
- The Gateway Building (Block 695, Lots 37 to 43).

As noted above, construction-related activities anticipated for the Proposed Actions could increase pathways for exposure to hazardous materials. However, the possibility of impacts to the health and safety of workers, the community, and future occupants would be reduced by performing renovations and construction in accordance with the measures identified below:

- Prior to redevelopment, further investigation would be performed for each building, where necessary. Because a Phase I ESA and Phase I Update in accordance with ASTM Standard E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Practice* have already been completed, this would start with preparation of a subsurface investigation protocol for agency review. The scope of the investigation would be determined by reviewing the findings of the Phase I ESA and Phase I ESA Update specific to the work area. Upon approval of the protocol, the investigation (typically including laboratory analysis of soil, groundwater, and soil vapor samples from the work area) would be implemented and a report prepared for the agency along with the proposed remediation plan (i.e., measures to be implemented prior to or as part of construction to avoid impacts to the health and safety of workers, the community, and future occupants) which would include a construction health and safety plan.
- Any renovation or demolition activities with the potential to disturb LBP would be performed in accordance with the applicable Occupational Safety and Health Administration regulation (OSHA 29 CFR 1926.62—*Lead Exposure in Construction*).
- Prior to any renovation or demolition activities with the potential to disturb suspect ACMs, an asbestos survey would be conducted to determine whether these materials are ACMs. If these materials prove to contain asbestos, they would be properly removed and disposed of in accordance with all state and federal regulations.
- Unless there is labeling or test data that indicates that florescent lights, other electrical equipment, and hydraulic fluid are not mercury- and/or PCB-containing, if disposal is required, it would be performed in accordance with applicable federal, state, and local regulations and guidelines.
- All excavated soil requiring off-site disposal would be managed in accordance with applicable regulatory requirements. All soil and any other materials intended for off-site disposal would be tested in accordance with the requirements of the intended receiving facility. Transportation of material leaving the site for off-site disposal would be in accordance with federal, state, and local requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc. All on-site petroleum storage tanks (and any unforeseen tanks encountered during redevelopment) would be properly closed and removed in accordance with applicable requirements.
- If dewatering is required for construction, testing would be performed to ensure compliance with New York City Department of Environmental Protection (DEP) sewer discharge permit/approval requirements and, if necessary, pre-treatment world be conducted prior to discharge to the sewer.

To ensure the measures above are implemented, as warranted, an (E) Designation for hazardous materials would be placed on the privately owned sites identified in **Table 8-2** as part of the proposed rezoning. Recommendations for (E) Designations are based on whether the sites may have been adversely affected by current or historical uses at, adjacent to, or within 400 feet. In determining whether a site is recommended for an (E) Designation, current site conditions were given priority, followed by the adjacent site use or history, and finally the conditions within a 400-foot radius.

Table 8-2
(E) Designation Listing

Block	Lot	Environmental Concern Prompting (E) Designation
679	1	Previous industrial use and tanks; Soil excavation anticipated for development
695	37	Previous industrial use; Soil excavation anticipated for development
	38	Previous industrial use; Soil excavation anticipated for development
	39	Previous industrial use; Soil excavation anticipated for development
	40	Previous industrial use; Soil excavation anticipated for development
	41	Previous industrial use; Soil excavation anticipated for development
	42	Previous industrial use; Soil excavation anticipated for development
	43	Previous industrial use; Soil excavation anticipated for development
706	1 (portion)	Previous industrial use and tanks; Soil excavation anticipated for development
	20	Previous industrial use and tanks; Soil excavation anticipated for development
	24 (portion)	Previous industrial use and tanks; Soil excavation anticipated for development
	101	Previous industrial use and tanks; Soil excavation anticipated for development

The (E) Designation would require that, prior to redevelopment, the property owner complete a current Phase I ESA in accordance with the ASTM E1527-13; and implement a soil, soil vapor, and groundwater testing protocol, and remediation where appropriate, to the satisfaction of OER before issuance of construction-related DOB permits (pursuant to Section 11-15 of the *Zoning Resolution*—Environmental Requirements). The (E) Designation also mandates construction-related health and safety plans, which must be approved by OER.

F. CONCLUSION

The Proposed Actions would include the placement of hazardous materials (E) Designations for all privately owned projected development sites with soil disturbance, as listed in **Table 8-2**. The implementation of these measures would preclude the potential for significant adverse impacts associated with the Proposed Actions. ✷