

## **A. INTRODUCTION**

This section presents the findings of the hazardous materials assessment and addresses potential issues of concern that could pose a hazard to workers, the community and/or the environment associated with the proposed and future actions.

Conditions at the proposed and future development sites resulting from previous and existing uses of the sites and the surrounding areas were determined from *Phase I Environmental Site Assessments* prepared by AKRF for: (1) the Courtlandt Corners properties; and (2) the remainder of the subject properties (exclusive of Boricua Village). The Phase I studies, conducted in April and May 2006, included: a visual inspection of properties where access was possible, a visual inspection from streets/sidewalks of inaccessible properties and all municipal gardens; a review of available records and historical maps to determine previous on-site and adjacent land uses; and an evaluation of regulatory compliance for the subject and neighboring properties. Site conditions were also reviewed based on a Phase I Environmental Site Assessment, dated December 13, 2004, and Site Investigation Report, dated May 26, 2005 prepared for the Boricua Village properties by Brinkerhoff Environmental Services, Inc. of Manasquan, New Jersey.

## **B. EXISTING CONDITIONS**

### **TOPOGRAPHY AND SUBSURFACE CONDITIONS**

The surface topography at the proposed and future development sites is generally level. Based on the U.S. Geological Survey Central Park, New York-New Jersey topographic map, the property generally lies at an elevation of approximately 30 feet above the National Geodetic Vertical Datum of 1929 (an approximation of mean sea level). The sites contain lots where structures were previously demolished, and there is a possibility that demolition debris from earlier structures was used as backfill.

Based on information from the U.S. Geological Survey, groundwater at the proposed and future development sites is located at a depth of approximately 25 feet below surface grade. Groundwater most likely flows in a northerly direction. However, actual groundwater flow at the sites can be affected by many factors including past filling activities, underground utilities, and other subsurface openings or obstructions. Groundwater in the Bronx is not used as a source of potable water.

### **PHASE I STUDIES**

The proposed and future development sites comprises a combination of vacant lots, municipal gardens, residential dwellings, commercial facilities including automotive repair facilities, and light industrial and manufacturing properties. They also include two gasoline filling stations located on Tax Block 2407, Lot 5 and Tax Block 2408, Lot 20.

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Historic Sanborn Fire Insurance Maps from 1891, 1909, 1952, 1969, 1978, and 1989 were reviewed to determine historic on-site and surrounding area usage. The maps indicated that between 1891 and 1909 the project sites were primarily residential in nature. By the mid 20th century, more commercial, manufacturing and industrial facilities were present, including automotive repair facilities and gasoline filling stations (Tax Block 2408, Lot 49 and Tax Block 2384, Lots 14 and 16). Federal and state databases reviewed identified underground storage tanks (USTs) and petroleum-related spills for both the project site and surrounding off-site areas.

The assessments conducted identified the following recognized environmental conditions on the urban renewal sites that would be affected by the proposed and future actions:

- Historic urban fill of unknown origin and quality is likely present at the subject property.
- Based on the ages of the on-site structures, asbestos-containing materials (ACMs) and lead-based paint may be present at the subject property.
- Fluorescent lights and lighting fixtures observed in the garage structure at the subject sites may include polychlorinated biphenyl (PCB) and/or mercury-containing components (including capacitors and potting compounds). Potential suspect mercury-containing fluorescent lights and suspect PCB-containing lighting fixtures do not currently present a potential hazard to human health.
- The proposed and future development sites are surrounded by lots which contain gasoline filling stations, automobile repair shops, dry cleaners, parking lots and industrial manufacturing and storage. Although these lots are outside the Boricua Village and Courtlandt Corners sites, activities on these lots have the potential to affect subsurface conditions at the sites.

A description of the subject sites and the recognized environmental conditions are provided in the following table:

**Table 10-1**  
**Site Descriptions and Environmental Issues**

| Tax Block | Tax Lot(s)                         | Urban Renewal Site(s) | Site Description                      | Environmental Issues   |
|-----------|------------------------------------|-----------------------|---------------------------------------|--|
| 2364      | 13, 15                             | 1, 2                  | Vacant Lots                           | Potential on-site contamination from off-site sources; quality of on-site fill suspect   |
| 2366      | 1                                  | 49                    | Four-story Vacant Building            | Potential on-site contamination from off-site sources  |
| 2366      | 21, 23, 25, 27, 32, 33, 34, 37, 40 | 48                    | Vacant Lots                           | Historic commercial/industrial usage; potential on-site contamination from off-site sources; quality of on-site fill suspect.  |
| 2366      | 27, 40                             | 48                    | Vacant Lots                           | Historic commercial/industrial usage; potential on-site contamination from off-site sources; quality of on-site fill material suspect. Phase II completed for Lot 27 in January 2001: 1,500 gal. UST removed; elevated levels of SVOCs and metals detected in soil. Phase II completed for Lot 40 in April 2005: Elevated levels of SVOCs and metals detected in soil. |
| 2366      | 38, 39                             | 48                    | Vacant Two-Story Residential Building | Potential on-site contamination from off-site sources.   |

**Table 10-1 (cont'd)**  
**Site Descriptions and Environmental Issues**

| <b>Tax Block</b> | <b>Tax Lot(s)</b>   | <b>Urban Renewal Site(s)</b> | <b>Site Description</b>                 | <b>Environmental Issues</b>   |
|------------------|---|------------------------------|---|---|
| 2367             | 1, 10, 50, 11, 12, 14, 15, 16, 29, 30, 30, 31, 32, 33, 35, 36, 37, 38 | 48, 59, 60                   | Vacant Lots                             | Historic commercial/industrial usage; potential on-site contamination from off-site sources; quality of on-site fill suspect  |
| 2367             | 6, 26   | 48, 60                       | Vacant Lots                             | Historic commercial/industrial usage; potential on-site contamination from off-site sources; quality of on-site fill material suspect. Phase II completed for Lot 6 in January 2001: elevated levels of SVOCs and metals detected in soil. Phase II completed for Lot 26 in April 2005: Elevated levels of SVOCs and metals detected in soil. |
| 2367             | 3   | 60                           | Vacant One-Story Building               | Historic usage as auto repair shop; potential on-site contamination from off-site sources   |
| 2367             | 8   | 60                           | Vacant One-Story Building               | Historic commercial/industrial usage; potential on-site contamination from off-site sources; Phase II completed on April 2005: Elevated levels of SVOCs and metals in soil and groundwater.   |
| 2367             | 20, 21, 22, 24  | 59                           | Vacant Multi-Story Buildings            | Historic commercial/industrial usage; potential on-site contamination from off-site sources   |
| 2378             | 38  | 5                            | Parking Lot                             | Current usage; potential on-site contamination from off-site sources; quality of on-site fill suspect   |
| 2378             | 13  | 5                            | Vacant Lot                              | Potential on-site contamination from off-site sources; quality of on-site fill suspect  |
| 2381             | 47  | 30                           | Community Garden                        | Potential on-site contamination from off-site sources; quality of on-site fill suspect  |
| 2383             | 19  | 52                           | Industrial/Commercial                   | On-site AST; historic usage; potential on-site contamination from off-site sources  |
| 2383             | 25, 27, 29, 30, 31, 33, 35, 37 39, 48                                 | 51, 53, 54                   | Vacant lots                             | Potential on-site contamination from off-site sources; quality of on-site fill suspect  |
| 2384             | 1, 5, 57, 58, 59, 60  | 62                           | Vacant lots                             | Potential on-site contamination from off-site sources; quality of on-site material suspect  |
| 2384             | 9, 10, 12, 13   | 62                           | Community Gardens                       | Potential on-site contamination from off-site sources; quality of on-site material suspect  |
| 2384             | 14, 16  | 62                           | Vacant One-Story Warehouse              | On-site UST; historic usage as an auto repair shop and industrial warehouse; potential on-site contamination from off-site sources  |
| 2384             | 20  | 62                           | Floor Supply Warehouse                  | Current usage; historic industrial usage; potential on-site contamination from off-site sources   |
| 2384             | 48, 51, 53  | 62                           | Parking Lot                             | Current usage; historic industrial usage; potential on-site contamination from off-site sources; quality of on-site fill suspect  |
| 2384             | 54  | 62                           | Vacant Three-Story Residential Building | Historic commercial usage; potential on-site contamination from off-site sources  |

**Table 10-1 (cont'd)**  
**Site Descriptions and Environmental Issues**

| <b>Tax Block</b>  | <b>Tax Lot(s)</b> | <b>Urban Renewal Site(s)</b> | <b>Site Description</b>           | <b>Environmental Issues</b>  |
|---|-------------------|------------------------------|-----------------------------------|--|
| 2404  | 1, 9, 10          | 14, 15                       | Vacant Lot                        | Potential on-site contamination from off-site sources; quality of on-site fill suspect   |
| 2404  | 2                 | 15                           | Vacant three-story building       | Potential on-site contamination from off-site sources  |
| 2406  | 28, 29            | 34                           | Community Gardens                 | Potential on-site contamination from off-site sources; quality of on-site material suspect   |
| 2407  | 5                 | 46                           | Automotive Repair Shop            | Current usage; on-site USTs and ASTs   |
| 2407  | 8                 | 46                           | Parking Lot associated with Lot 5 | Potential on-site contamination from off-site sources; quality of on-site material suspect   |
| 2407  | 10, 11, 12        | 46                           | Parking Lot                       | Current usage; historic usage as an auto repair shop; potential on-site contamination from off-site sources; quality of on-site material suspect |
| 2407  | 31, 32            | 45                           | Vacant Lot                        | Potential on-site contamination from off-site sources; quality of on-site material suspect   |
| 2408  | 1                 | 57                           | Vacant Lot                        | Potential on-site contamination from off-site sources; quality of on-site material suspect   |
| 2408  | 6, 7, 8, 9        | 56                           | Community Garden                  | Potential on-site contamination from off-site sources; quality of on-site material suspect   |
| 2408  | 10                | 56                           | Multi-Story Building              | Historic usage as an awning manufacture; potential on-site contamination from off-site sources; quality of on-site material suspect              |
| 2408  | 12, 16            | 56                           | Backyard of Residential Building  | Potential on-site contamination from off-site sources  |
| 2408  | 13, 14, 25        | 56                           | Community Gardens                 | Potential on-site contamination from off-site sources; quality of on-site material suspect   |
| 2408  | 20                | 56                           | Gasoline Station/Auto Repair Shop | Current usage; on-site USTs and AST; historic industrial usage   |
| 2408  | 27, 29, 31        | 56                           | Construction Storage Yard         | Historic commercial/industrial usage; potential on-site contamination from off-site sources; quality of on-site fill suspect                     |
| 2408  | 28                | 56                           | Vacant Multi-Story Building       | Historic commercial/industrial usage; potential on-site contamination from off-site sources  |
| 2408  | 35                | 64                           | Two-story Industrial Building     | Current usage; historic industrial usage; potential on-site contamination from off-site sources  |
| 2408  | 41                | 64                           | Vacant Lot                        | Potential on-site contamination from off-site sources; quality of on-site material suspect   |
| 2408  | 45                | 64                           | One-Story Industrial Building     | Current usage; historic usage as an auto repair shop; potential on-site contamination from off-site sources                                      |
| 2408  | 46                | 64                           | Vacant Lot                        | Historic usage as auto repair shop; potential on-site contamination from off-site sources; quality of on-site fill suspect                       |
| 2408  | 51, 52            | 64                           | Vacant lot                        | Potential on-site contamination from off-site sources; quality of on-site fill suspect   |
| 2408  | 53                | 64                           | Boiler Repair Shop                | Current usage; potential on-site contamination from off-site sources; quality of on-site fill suspect  |
| <b>Note:</b> AST = Aboveground Storage Tank; UST = Underground Storage Tank; SVOC = Semi-Volatile Organic Compound. |                   |                              |                                   |  |

As described below under “The Future With the Proposed and Future Actions,” an (E) designation or other similar mechanism such as a restrictive declaration will be placed on all of these sites (except where (E) Designations were previously assigned) to ensure that testing and remediation, if necessary, is performed.

### **C. THE FUTURE WITHOUT THE PROPOSED AND FUTURE ACTIONS**

Without the Proposed and future actions, the project sites would remain underutilized, and subsurface conditions would be largely the same as they are now. There would be a low potential for disturbance of hazardous materials, but there would be little or no remediation of hazardous materials.

### **D. THE FUTURE WITH THE PROPOSED AND FUTURE ACTIONS**

Demolition, excavation, and construction activities could disturb hazardous materials and increase pathways for human exposure. Consequently, the potential for adverse impacts due to the presence of subsurface contamination, as well as asbestos-containing materials (ACMs) and lead-based paint in the proposed and future development sites’ buildings, would be avoided by ensuring that construction activities are performed in accordance with the following protocols:

- Prior to construction, subsurface soil and groundwater testing would be conducted to investigate areas where known or potential adverse environmental conditions were identified by the Phase I studies (i.e., the Tax Lots identified with environmental conditions). Areas where contamination is discovered would be delineated and remediated in accordance with all applicable regulations prior to, or in conjunction with, proposed development activities.
- Numerous tanks are known to be present within the project area, which would be removed in accordance with applicable regulations along with any associated petroleum-contaminated soil, prior to, or as part of initial excavation activities for the project. Any associated groundwater contamination would be addressed, as required by NYSDEC’s Petroleum Spill Program.
- Properties with community gardens that are to remain as such as part of the proposed and future actions would also be tested and, based on the results, remediated as necessary. Remediation of the community gardens would likely consist of the replacement and/or addition of clean surface soil.
- An (E) Designation will be placed on all subject sites (except where (E) Designations were previously assigned). Appropriate environmental testing and remediation in consultation with New York City Department of Environmental Protection (NYCDEP) would be required before issuance of construction permits for these properties. This would include the preparation and submittal of a sampling and testing program for approval by the NYCDEP.
- Prior to any subsurface testing, a Sampling Protocol and Health and Safety Plan (HASP) for the testing would be submitted to the NYCDEP for review and approval. Specific testing locations would be selected once access is provided to all the subject sites and once the details of the development plans are established.
- Prior to any demolition activities, a comprehensive asbestos survey of all structures would be conducted that included the sampling of all suspect materials to confirm the presence or absence of asbestos. Based on the findings of the survey, the identified ACMs would be removed and disposed of using an appropriate Health and Safety Plan (HASP) and in accordance with all federal, state, and local regulations.

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- Any demolition activities with the potential to disturb lead-based paint would be performed in accordance with the applicable Occupational Safety and Health Administration regulation (OSHA 29 CFR 1926.62 - Lead Exposure in Construction).
- All material that needs to be disposed of (e.g., miscellaneous debris, tires, contaminated soil and excess fill) would be disposed of off-site in accordance with applicable federal, state, and local requirements.
- To minimize the potential for impacts to the community and construction workers, all demolition, excavation, and construction work involving soil disturbance would be performed under an Environmental Construction Health and Safety Plan (CHASP). The CHASP, which would be subject to approval by NYCDEP, would specify dust control, air monitoring and other appropriate testing and/or monitoring as well as detail appropriate measures to be implemented (including notification of regulatory agencies) if underground storage tanks, contaminated soil or contaminated groundwater contamination, or other unforeseen environmental conditions are encountered.
- To address the remediation of known or potential environmental conditions that may be encountered during proposed construction and development activities, a Remedial Action Plan (RAP) will be prepared. The purpose of this RAP is to present measures for managing contaminated on-site soil and groundwater and removing any potential unknown underground petroleum storage tanks in accordance with applicable federal, state and local regulations. Contaminated soil management includes guidelines for temporary on-site stockpiling and off-site transportation and disposal. The RAP will be submitted to the DEP for review and approval.
- To protect human health, the NYCDEP-approved RAP and CHASP prepared by Brinkerhoff Environmental Services, Inc. for the Boricua Village Site (dated January 2006) will be implemented as part of development.
- If dewatering is required for construction, testing would be performed to ensure compliance with NYCDEP sewer discharge requirements. If necessary, pre-treatment would be conducted prior to the water discharge to the City's sewer system, as required by NYCDEP permit/approval requirements.
- Where site soil does not meet guidelines for unrestricted use, areas of exposed soil (e.g., areas not to be covered by buildings or pavement) would be capped with at least two feet of imported clean soil.

With the implementation of these protocols (which would be stipulated in a restrictive declaration or other similar control mechanism), no significant adverse impacts related to hazardous materials would result from demolition and/or construction activities related to the proposed and future actions. Following construction, there would be no further potential for significant adverse impacts. \*