Chapter 9: Hazardous Materials

A. INTRODUCTION

This attachment addresses the potential for the presence of hazardous materials from previous and existing uses on or near the site of the proposed project, and potential risks resulting with respect to any such hazardous materials. As described in Chapter 1, "Project Description," the proposed project would result in: the development of projected development site 1 with new buildings requiring excavation and subsurface disturbance; and the partial demolition of the existing (Manhattan Mini-Storage) building on projected development site 2, followed by subsurface disturbance associated with enlargement of the existing building. Excavation, if not performed in accordance with prescribed procedures, could result in human exposures to hazardous materials. The procedures to ensure no such exposures or significant adverse impact would occur are described below.

The analysis assesses whether any changed background conditions and the differences in program elements between the proposed development program and those assessed in the 2001 *FEIS* for the project block would result in any significant adverse impacts from hazardous materials that were not previously addressed in the 2001 *FEIS*.

PRINCIPAL CONCLUSIONS

Although construction on projected development site 1 would entail extensive subsurface disturbance at a site known to have soil, groundwater and soil vapor contamination (primarily from prior petroleum uses), impacts would be avoided by performing the subsurface work in accordance with a New York State Department of Environmental Conservation (DEC) approved Remedial Action Work Plan (RAWP) which sets out procedures during construction (e.g., for handling and disposing of any contaminated soil and any encountered petroleum tanks) and requirements for the new buildings (e.g., a vapor barrier). The RAWP for the eastern portion of projected development site 1 was approved in March 2010 and its implementation is being overseen by DEC as part of New York's Brownfield Cleanup Program (BCP) pursuant to a Brownfield Cleanup Agreement (BCA) entered into by the applicant. The RAWP for the western portion of projected development site 1 (under its petroleum site program) was approved by DEC on December 20, 2011.

Redevelopment of project development site 2 would require, prior to and during interior or other demolition, addressing asbestos containing materials, lead-based paint, etc. in conformance with established regulatory requirements. Any excavation required would be conducted in accordance with established regulatory requirements. An (E) designation would be placed on Lot 36 to ensure that appropriate procedures for any necessary subsurface disturbance are followed prior to, during, and following construction.

Consistent with the findings in the 2001 *FEIS*, the proposed project would include measures to avoid the potential for any significant adverse impacts relating to hazardous materials.

B. SUMMARY OF 2001 FEIS FINDINGS

A Phase I Environmental Site Assessment (for an evaluation the land use history, a visual inspection and a review of historical and regulatory databases), completed by GCI Environmental Advisory in 1998, identified that the western portion of the project block formerly contained an automotive garage and service facility as well as an earlier iron works. An auto body repair and painting shop was located further to the east. Garages, auto service and trucking businesses are and have been located in the area surrounding the project block.

TOPOGRAPHY, GEOLOGY AND GROUNDWATER

The project block is approximately 10 to 30 feet above mean sea level, with a slope down to the west and southwest toward the Hudson River. Borings found a layer of fill (including cinders, coal, slag, ash, wood, and concrete) up to approximately 10 feet thick underlain by native deposits (silt, sand, and gravel). Groundwater was first encountered at depths of 5 to 19 feet and flows towards the Hudson River, in an approximately northwest direction.

POTENTIAL FOR SITE CONTAMINATION

The 2001 *FEIS* identified uses on the project block including: the Artkraft Strauss Sign Corp. (including metalworking, painting, and vehicular storage) at the location of a former auto service/repair facility; a United Parcel Service facility where a gas station was formerly located; a parking area used by Airborne Express vehicles where an auto repair shop was located; the Potamkin Toyota service facility, where an iron works was previously located; the Copacabana nightclub where a lumberyard and subsequently storage and garages were previously located; the Goodyear Auto Service Center (formerly part of the lumberyard and an auto service station; The Manhattan Mini-Storage facility (formerly part of the lumberyard); Dynasty Auto Body facility, formerly an auto repair shop; and the Potamkin Toyota Sales Facility (formerly part of the lumberyard).

Additional uses in the surrounding area with a potential to have resulted in hazardous materials included the Consolidated Edison Power House on the block to the north, and numerous auto service/repair facilities including many documented (and potentially additional undocumented) petroleum underground storage tank (USTs) on the project block and 173 reported petroleum spills within a 0.25-mile of the project block

Additional hazardous materials were known or suspected to be present inside the project site buildings (all but one of which have subsequently been demolished after properly addressing these concerns) including the following in the remaining (mini-storage) building:

- lighting ballasts that may contain PCBs;
- lamps that may contain small amounts of mercury;
- building surfaces suspected to contain lead-based paint (LBP);
- suspect asbestos-containing materials (ACMs) including insulation, roofing materials, and floor coverings; and

SUBSURFACE INVESTIGATION

Given the identified potential for subsurface contamination, a Phase II subsurface investigation was conducted in 1998, consisting of 32 borings with laboratory analysis of 53 soil samples.

This testing revealed widespread high levels of petroleum constituents, as well as somewhat elevated levels of certain metals (lead, mercury, and arsenic) in fewer locations. PCBs were not detected above applicable guidelines. Groundwater testing indicated only low levels of some contaminants but testing was limited. The results were reported to DEC and a spill number was assigned (98-10172). Subsequently, additional soil and groundwater investigation found that levels of certain volatile organic compounds (VOCs) including benzene were well above DEC Groundwater Quality Criteria.

PROBABLE IMPACTS

With the project proposed in the 2001 *FEIS*, implementation of the following measures would avoid the potential for any significant adverse impacts relating to hazardous materials. First, demolition of the on-site buildings would be in compliance with applicable regulatory requirements relating to ACM, LBP and PCBs. Then, soil excavation would have been conducted under DEC-approved Remedial Action Work Plans (RAWPs) and Health and Safety Plans (HASPs) including: additional soil testing on parcels not then tested; a remedial plan for all contaminated soils known or unexpectedly encountered; removal and closure of all known and unexpectedly encountered USTs in accordance with applicable regulatory requirements; closure of the active-status DEC spill and any other spill; dewatering in accordance with applicable New York City Department of Environmental Protection requirements (following pre-treatment, if necessary).

C. CHANGES TO EXISTING CONDITIONS SINCE 2001 FEIS

PROJECTED DEVELOPMENT SITE 1

Since the 2001 *FEIS*, all buildings on this site have been demolished, site investigation has been completed, and cleanup is underway under different DEC programs:

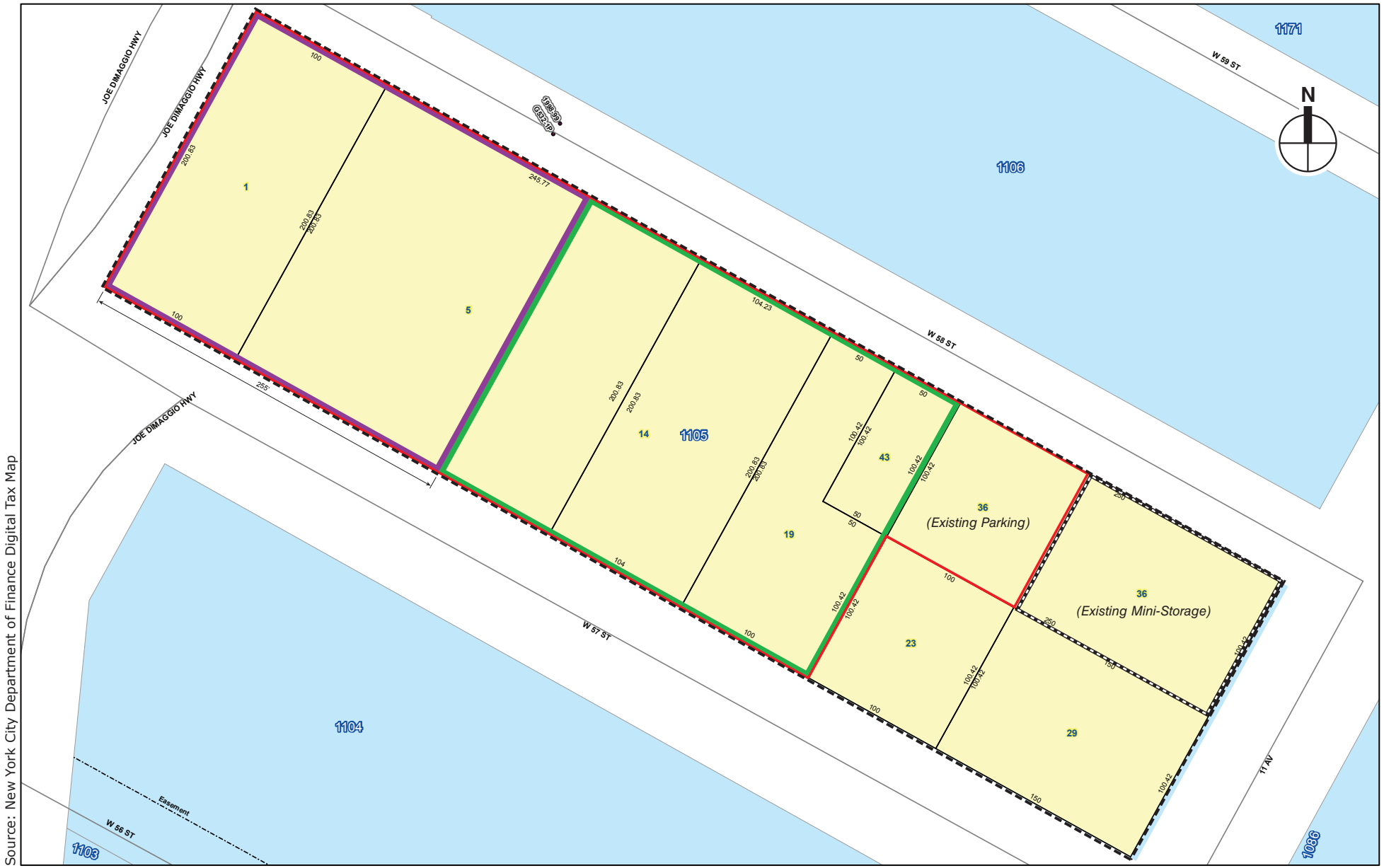
- Lot 1 and western portion of Lot 5 (DEC "West Block #57 Project"—see **Figure 9-1**) under a Consent Order (#R2-5000-10-08) and a Stipulation Agreement for Spill Number 9810172; and
- Eastern portion of Lot 5 and Lots 14, 19 and 43 (DEC "Mid Block #57 Project"—see **Figure 9-1**) under the DEC Brownfield Cleanup Program (Site C231062).

The parking area on the western portion of Lot 36 (west-adjacent to the Manhattan Mini-Storage building) is not part of either of these programs but testing was conducted as part of the 1998 *Remedial Investigation*.

WEST BLOCK (WITH THE EXCEPTION OF THE MINI STORAGE FACILITY)

A 2003 *UST Closure Report* documented the removal of 31 USTs (other USTs were known to still remain) in accordance with the 2001 DEC-approved *Revised Remedial Action Plan*. Approximately 10,200 gallons of petroleum/water mixture and six 55-gallon drums of residual waste were disposed of as well as approximately 452 cubic yards (CY) of petroleum contaminated soil. Endpoint soil sampling indicated levels of VOCs, SVOCs, and metals above the (then-used) DEC Technical and Administrative Guidance Memorandum (TAGM) 4046 Recommended Soil Cleanup Objectives (RSCOs). Remaining petroleum-contaminated soils were slated to be addressed during future remedial activities. Additional soil, soil vapor and groundwater sampling in 2007 found a small area (20 ft by 20 ft) with levels of

7.2.12



625 WEST 57TH STREET

NYSDEC BCP Site Boundaries

Figure 9-1

tetrachloroethene (also known as tetrachloroethylene, perchloroethene, PCE or "perc") above the 6 NYCRR Subpart 375.6 Unrestricted Use Soil Cleanup Objectives (UUSCOs) and groundwater standards. VOCs were detected in soil vapor at concentrations that would require mitigation beneath a future building according to the NYSDOH Soil Vapor Guidance.

In March 2011, six additional 550-gallon USTs were removed along with 237 tons of petroleum and chlorinated solvent impacted soil and approximately 3,591 gallons of petroleum/water mixture. This work was documented in the Interim Remedial Measure (IRM) Underground Storage Tank Closure Report, dated May 18, 2011. Saturated petroleum impacted soil was excavated from two to four feet beneath the water table. Endpoint soil sampling indicated levels of VOCs, SVOCs, and metals above the UUSCOs but were slated to be addressed during future remedial activities. The chlorinated solvent impacted soil previously identified was excavated and disposed of offsite.

An additional 41 soil, 17 soil gas and 17 groundwater samples were collected and analyzed in 2010/11 to further delineate contamination and to assist in the development of a Remedial Action Work Plan (RAWP).

Based on these findings, the RAWP (which has been submitted to and approved by DEC) requires:

- Excavation and off-site disposal of remaining petroleum-contaminated soil "hotspot" areas;
- Monitoring of airborne VOCs and particulates in accordance with a DEC-approved Community Air Monitoring Plan (CAMP) during soil disturbing activities;
- Monitoring of airborne VOCs and particulates in accordance with a DEC-approved Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) during soil disturbing activities;
- As a precautionary measure, installation of a sub-slab vapor barrier under the proposed building and installation/operation of a sub slab depressurization system (SSDS) beneath all portions of the building where the slab is above the water table.

MID-BLOCK

A February 2010 *Remedial Action Work Plan* (RAWP) prepared by Remedial Engineering, P.C. includes a summary of a 2007 *Remedial Investigation* (RI) which included three rounds of soil and groundwater sampling (23 borings with laboratory analysis of 12 soil vapor samples, 23 soil samples and 12 groundwater samples) with additional sampling in 2008 and 2009 to refine the delineation of contamination. Petroleum-related soil contamination in excess of the 6 NYCRR UUSCOs and Restricted Residential Soil Cleanup Objectives (RRSCOs) was found. Metals in excess of the UUSCOs and RRSCOs were found but attributed to urban fill rather than site releases. Tetrachloroethene was detected in soil vapor and groundwater and groundwater contained detections of VOCs in excess of the New York State Ambient Water Quality Standards and Guidance Values (AWQSGVs).

Based on these findings, the RAWP (subsequently approved by DEC on March 5, 2010) requires:

- Excavation and off-site disposal of soil impacted from historic releases exceeding the UUSCOs;

- Groundwater remediation during construction consisting of dewatering, treatment and off-site disposal, and in situ treatment;
- Monitoring of airborne VOCs and particulates in accordance with a DEC-approved Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) during soil disturbing activities;
- Implementation of proper dust and odor suppression techniques during soil disturbing activities;
- Importation of materials to be used for backfill and cover in compliance with: (a) Subpart 375 – 6.7d, and (b) all Federal, State and local rules and regulations;
- Implementation of a Stormwater Pollution Prevention Plan;
- Screening for indications of contamination (by visual means, odor, and monitoring with PID) during soil disturbing activities;
- Collection and analysis of post excavation end-point soil samples;
- Appropriate disposal of all material removed from the site in accordance with applicable regulatory requirements;
- Submission of a Final Engineering Report (FER) documenting compliance with the RAWP
- Installation of a vapor barrier below the proposed building bottom slab and outside foundation walls to prevent potential water and vapor migration;
- Post remediation groundwater monitoring for a minimum of two years;
- Installation, operation and maintenance of an active ventilation system in the building basement per New York City Department of Building (DOB) requirements;
- If groundwater monitoring is required by DEC following completion of the implementation of the RAWP, development and implementation of a Site Management Plan describing the requirements for groundwater monitoring (e.g., locations, frequency, analytical parameters, reporting and response actions); and
- If a Site Management Plan is required by DEC, DEC will also likely require recording of an Environmental Easement, including some combination of requirements for plans to address: Institutional and Engineering Controls; monitoring; operation and maintenance; and reporting;

LOT 36 PARKING AREA

A total of five soil samples were analyzed from borings at three locations as part of the 1998 Remedial Investigation. Levels were indicative of historic fill found elsewhere on the block with no detections of volatile organic compounds, though one sample had very high levels of semivolatile organic compounds.

PROJECTED DEVELOPMENT SITE 2

Given the age of the building currently occupied by Manhattan Mini-Storage asbestos-containing materials (ACM) and lead-based paint (LBP) are likely present. Electrical components and lighting fixtures may contain PCBs or mercury. Other chemicals may be present associated with building maintenance or in storage. No subsurface sampling has been conducted (because of the presence of the building and the existing tenant/uses) but there is a potential for subsurface contamination based on the project site history.

D. THE FUTURE WITHOUT THE PROPOSED PROJECT

In the future without the proposed project, the project site would be developed with as-of-right building(s) which would require a similar amount of subsurface disturbance to the proposed project. Development of the site in accordance with the measures and programs specified in the 2001 *FEIS* as modified by the RAWPs for projected development site would avoid the potential for any significant adverse impacts.

E. PROBABLE IMPACTS OF THE PROPOSED PROJECT

The proposed project would entail subsurface disturbance of a site known to have soil, groundwater and soil vapor contamination. Impacts would be avoided by performing the following:

- For Projected Development Site 1 (with the exception of the portion that is within Lot 36), compliance with the DEC-approved RAWPs (see Section C above) for the West Block and Mid-Block sites.
- For the remainder of Projected Development Site 1 (i.e., the parking area on Lot 36 west-adjacent to Manhattan Mini-Storage[1]) and Projected Development Site 2 (including the Manhattan Mini-Storage building—the remainder of Lot 36[2]), all interior work and any required demolition would be in compliance with applicable regulatory requirements relating to, for example, asbestos-containing materials, lead-based paint, PCBs, mercury and other waste disposal. An (E) designation would be placed on Lot 36 (see April 17, 2012 correspondence in Appendix A, "Agency Correspondence"), i.e., a designation on the City's zoning text/maps, to ensure that appropriate procedures for any necessary subsurface disturbance are followed prior to, during and following construction. Specifically, the New York City Office of Environmental Remediation (OER) could determine that additional subsurface testing beyond that previously conducted is warranted, and such testing would need to be conducted in accordance with an OER approved Investigation Work Plan and Health and Safety Plan. Based on the results of the previous testing and any such additional testing, the applicant would then prepare a RAWP which would be submitted to OER for approval. The (E) designation would require that an approved RAWP be obtained in order to receive building permits prior to conducting soil disturbance. The (E) designation would also require that a Notice of Satisfaction be obtained (subsequent to the applicant submitting a Closure Report to OER documenting proper performance of all required procedures) before seeking Certificates of Occupancy for any newly constructed structures or a change of the existing structure to residential use.

With the implementation of these measures, no significant adverse impacts related to hazardous materials would result from construction activities on the project site, and following construction, there would be no potential for significant adverse impacts. ✷

[1] The portion of Lot 36 bounded by the north, west, and south lot lines of Lot 36 and a line parallel to and 150 feet west of the Lot 36 lot line along Eleventh Avenue.

[2] The portion of Lot 36 bounded by the north, east, and south lot lines of Lot 36 and a line parallel to and 100 feet east of the Lot 36 west lot line.