Chapter 10: Hazardous Materials

A. INTRODUCTION

This chapter addresses the potential for the presence of hazardous materials at the rezoning area (the "site") resulting from previous and existing uses at the site and adjacent properties. This chapter also assesses potential risks from the proposed action with respect to any such hazardous materials.

The proposed action would entail the demolition of the existing parking structure and the redevelopment of the site for Flushing Commons, a mixed-use development. The redevelopment of the site would include excavation and subsurface disturbance to allow for the construction of below grade space and foundations for the new Flushing Commons buildings. In addition, as described in Chapter 1, "Project Description," the remainder of the rezoning area would be developed as the Macedonia Plaza Project, a mixed-use building that would include residential units, community facility and retail space.

A Phase I Environmental Site Assessment (Phase I) was prepared for the site by AKRF Inc. dated October 17, 2005. The Phase I covered the entire block but did not include interior access to the Macedonian African Methodist Episcopal Church (AME Church) building. The Phase I included the following:

- an inspection of the outdoor facilities to assess current site conditions and identify evidence of potential site contamination;
- an interview with a New York City Department of Transportation (NYCDOT) official familiar with the operations of the parking facility; an interview with an official of the Economic Development Corporation (NYCEDC); and an interview with an official of the Macedonian AME Church; and
- review of New York State Department of Environmental Conservation (NYSDEC) and U.S. Environmental Protection Agency (EPA) records on releases or spills of toxic materials; known hazardous waste disposal sites; facilities that emit hazardous materials to the air or the sewer system; and facilities that store petroleum or other chemicals or generate, treat, or store hazardous wastes;
- review of electronic New York City Department of Buildings (NYCDOB) files and City Directories for pertinent information, including historic and current petroleum tanks;
- review of historic topographic and fire insurance (Sanborn®) maps and aerial photographs;
- review of existing data on the geology and hydrogeology of the area;
- review of a previous Phase I for the project site, dated October 2001, prepared by Lawler, Matusky & Skelly Engineers, LLP.

A Subsurface Investigation (Phase II) report dated May 2006 was prepared for the site. The scope of the Phase II was in accordance with a December 19, 2005 Sampling Protocol prepared by AKRF, Inc. and approved by the New York City Department of Environmental Protection

(NYCDEP). The approved scope included a geophysical survey to identify the location of any underground storage tanks. However, this survey cannot usefully be performed until the site's large number of metal objects (e.g., meters and lamp posts) have been removed. The geophysical survey will be conducted after the parking lot is closed. The Phase II included the following:

- utilization of a direct push drill rig to complete eleven subsurface borings;
- collection of two soil samples for laboratory analysis from each of the eleven borings; and
- collection of groundwater samples from two of the soil boring locations on the eastern half of the site.

B. PRINCIPAL CONCLUSIONS

No significant adverse impacts would occur in relation to the demolition and excavation for the proposed action. Once the proposed Flushing Commons and Macedonia Plaza projects are constructed, there would be no further potential for adverse impacts.

C. EXISTING CONDITIONS

LAND USE HISTORY

A review of the Sanborn maps shows that the site was being actively developed in the mid to late 1890s, with the 1896 Sanborn showing a partial development at the site and the 1897 Sanborn showing the site largely built out. The site had been partially developed by 1896, and was mainly occupied by residences and various commercial and institutional properties (a public school and the AME Church). By 1897, most of the remaining vacant land at the site had been developed. By 1917, the site had begun a transformation from predominantly residential to commercial uses—a trend that continued until the current parking facility was constructed in 1964-65. 38th Avenue bisected the site prior to the construction of the parking facility. The parking facility has remained in the same general configuration from its construction to the present time.

Generally, the surrounding area has historically been occupied by commercial and residential uses, with some additional parking lots/garages. A police precinct with underground storage tanks is located on the east-adjacent block.

TOPOGRAPHY, GEOLOGY AND GROUNDWATER

The ground elevation at the site varies from approximately 35 to 55 feet above mean sea level, sloping down from the east to the northwest. The Phase II borings encountered less than one foot of historic fill material beneath the asphalt. The fill contained some debris including brick and concrete. The native soil consisted of loose sand and gravel with denser silt and sand materials.

Groundwater was encountered at approximately 45 to 48 feet below grade on the eastern side of the site during the Phase II borings. Sampling could not be completed to the depths required to reach the groundwater table on the western half of the site (beneath the low-clearance parking structure). Based on the site topography and data from excavation at the west-adjacent construction site, it is expected that groundwater would be encountered at shallower depths closer to the western site boundary (perhaps as shallow as approximately 30 feet below grade). Groundwater likely flows in a westerly or northwesterly direction.

POTENTIAL FOR SITE CONTAMINATION

The following paragraphs summarize the findings from the Phase I and Phase II studies.

CURRENT CONDITIONS

The site contained locked maintenance and storage space beneath the ramps of the parking structure. According to the NYCDOT official, standard maintenance equipment, paint, and metal were stored in the enclosed storage space. No other materials were stored on the site.

PETROLEUM PRODUCTS AND UNDERGROUND STORAGE TANKS

The Phase I revealed no evidence that historic underground petroleum storage tanks were present beneath the site, and no petroleum storage is associated with the current municipal parking facility. However, there remains some potential that undocumented underground fuel oil tanks, historically associated with former commercial and industrial structures on the site, could have remained after buildings were demolished (although the lack of significant demolition debris in the borings makes this a low potential). The Phase II did not reveal any evidence of petroleum-related contamination in the soil beneath the site. The eleven boring samples were distributed throughout the site including the portion of the site that would be developed with the Macedonia Plaza project.

FILL MATERIALS

Relatively little fill material was present (generally less than one foot) in all on-site Phase II sampling locations underlying the site. Based on laboratory analysis, as would be expected, the fill contained levels of some metals, particularly mercury and chromium, above natural background levels. The levels of these metals only slightly exceeded the most stringent state regulatory guidelines, and are not indicative of hazardous waste. No other contaminants were detected above regulatory guidelines in the fill or native soils.

GROUNDWATER

The groundwater beneath the site contained levels of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals above Class GA (drinking water) standards in the two samples analyzed, but groundwater in this part of Queens is not used for potable supply. These compounds included MTBE (a gasoline additive utilized in the last twenty-five years) and chlorinated solvents (used by many commercial or industrial users). Given the lack of these contaminants in any soil samples beneath the site, it is likely these contaminants are related to off-site sources. Should dewatering be required during construction, both samples met NYCDEP's municipal sewer discharge criteria, although additional testing would be performed before discharging to the sewer system.

ASBESTOS AND LEAD-BASED PAINT

Asbestos was once commonly used in many building products because of its fire resistance and thermal properties. In 1995, regulatory records indicate that 8,000 pounds of lead-containing wastes were removed from the project site, likely related to lead-based paint abatement activities. It was not verified, however, that all lead-based paint had been removed from the project site. Although the Phase I did not include asbestos or lead-paint surveys, given the age of the parking structure, it is possible that both are still present.

POLYCHLORINATED BIPHENYLS CONTAINING EQUIPMENT

Polychlorinated biphenyls (PCBs) are frequently present in transformers, electrical feeder cables, hydraulic equipment, and fluorescent light ballasts that were manufactured prior to 1978. Disposal of such items must be in accordance with applicable federal and State regulations, so as to minimize human and environmental contact with PCBs. PCBs do not readily break down in the environment, and thus could remain in place for long periods of time. With regard to construction, PCBs can present risks to workers and public health and safety, through direct contact or ingestion of soil containing PCBs.

It is possible that PCB-containing equipment is present in the parking structure on the site.

D. THE FUTURE WITHOUT THE PROPOSED ACTION

In the future without the proposed action, the site would continue to be utilized as a municipal parking lot. The hazardous materials concerns described above under "Existing Conditions," would continue and there would be no greater potential for significant adverse impacts related to hazardous materials than exists under existing conditions.

E. PROBABLE IMPACTS OF THE PROPOSED ACTION

UNDERGROUND STORAGE TANKS AND SOIL HANDLING

Although there was no evidence of buried tanks beneath the site, it is still possible that they could be encountered. A geophysical survey, to locate potential buried tanks, would be conducted after the municipal lot is closed and prior to any soil disturbance activities for the proposed Flushing Commons project. For the Flushing Commons project, the New York City Economic Development Corporation will enter into a Memorandum of Understanding (MOU) that stipulates a Restrictive Declaration be placed on the property upon conveyance from NYCEDC to the applicant. The MOU, and subsequent Restrictive Declaration, would require that the geophysical survey be undertaken prior to any soil disturbance.

If tanks are located, they would be removed in accordance with all applicable federal, state and city requirements prior to beginning general excavation activities. Any petroleum contaminated soil associated with these tanks would be separately removed and properly disposed of in accordance with all requirements. To address the remediation of known or potential environmental conditions that may be encountered during proposed construction and development activities, all construction work involving subsurface disturbance would be performed under a site-specific NYCDEP-approved Remedial Action Plan (RAP)/environmental construction health and safety plan (CHASP). The RAP and CHASP are based on the results of the May 2006 Phase II investigation and would specify procedures for managing potential unforeseen underground storage tanks and any encountered contamination (including procedures for stockpiling and off-site transportation and disposal) and appropriate health and safety procedures including the need for dust and organic vapor monitoring. Both the RAP and CHASP for the Flushing Commons project have been submitted to the NYCDEP.

For the Macedonia Plaza project, provisions related to hazardous materials would be incorporated into the Land Disposition Agreement (LDA) with parties as determined by HPD. These provisions would include the preparation of a NYCDEP-approved CHASP and RAP.

If underground storage tanks or other types of contamination are discovered, and the above procedures are implemented properly, no associated significant impacts would be expected to occur due to the proposed action.

DEWATERING

It is possible that contaminated groundwater could be encountered during excavation activities. NYCDEP's Bureau of Wastewater Pollution Control has established regulations limiting the concentrations of certain constituents in effluent discharged to the municipal sewer system. NYCDEP's regulations are based, for the most part, on the effect of the contaminants on the receiving waters or treatment plant. A permit from NYCDEP is required which would require testing of the water (followed by pre-treatment, if necessary) prior to discharge to the sewer system.

If contaminated groundwater is encountered and mitigation is implemented properly, there would be no significant impacts from dewatering due to the proposed action.

ASBESTOS

Prior to any demolition activities, a comprehensive asbestos survey would be conducted and any identified asbestos-containing materials (ACMs) would be removed by a licensed asbestos abatement contractor in accordance with all applicable federal, state and local requirements.

If asbestos is found and the removal is implemented properly, there would be no significant impacts from asbestos due to the proposed action.

LEAD PAINT

Any activities that involve disturbance of surfaces with lead-based paint would be conducted in accordance with applicable Occupational Safety and Health Administration (OSHA) regulations for worker protection from exposure to lead.

If lead paint is found and the removal is implemented properly, there would be no significant impacts from lead paint due to the proposed action.

PCB-CONTAINING EQUIPMENT

Any activities that involve the disturbance or removal of ballasts (or any other suspect electrical equipment), would be disposed of in accordance with applicable regulatory requirements.

If PCB-containing equipment is found and the removal is implemented property, there would be no significant impacts from PCBs due to the proposed action. ✷