14. Asbestos-Containing Materials, Lead-Based Paint, Hazardous Wastes, and Contaminated Materials

14.1 INTRODUCTION

This chapter discusses the potential for construction activities associated with the CBD Tolling Alternative to encounter contaminants—such as suspect asbestos-containing materials (ACM), lead-based paint, subsurface (i.e., soil and groundwater) contamination, and other hazardous waste and contaminated materials—and describes the measures that would be implemented to address these materials during construction and avoid exposure to humans.

14.2 AFFECTED ENVIRONMENT

The potential to expose ACM, lead-based paint, hazardous wastes, and contaminated materials would occur during construction at locations where the Project Sponsors would install tolling infrastructure and tolling system equipment. This tolling infrastructure and tolling system equipment would be installed at approximately 120 locations in Manhattan, generally in the area south of 61st Street. A variety of infrastructure and equipment types would be used, depending on the location. Figures 32a through 32g in Chapter 3, "Environmental Analysis Framework," illustrate the proposed locations for the tolling infrastructure and tolling system equipment. In general, tolling infrastructure would involve replacing existing streetlight poles with new poles in the same location, adding new poles within the transportation right-of-way where none are present today, or modifying existing transportation infrastructure (including sign poles, overhead sign structures, and bridge superstructures) to accommodate new tolling system equipment. The locations of the tolling infrastructure and tolling system equipment comprise the local study area for this assessment of ACM, lead-based paint, hazardous wastes, and contaminated materials.

TBTA would require that the contractor test and dispose of all soils according to applicable Federal, state, and local waste management regulations, including Title 6 of the New York Codes, Rules, and Regulations (NYCRR). To date, the contractor has tested 35 anticipated tolling infrastructure and tolling system equipment locations. This section describes the results of the testing to date.

Soil waste classification testing was conducted between May 2020 and August 2021 by GTA Engineering Services, Inc. at locations where soil is to be disturbed/excavated as part of the Project's construction. The analyses conducted were consistent with those required by the New York State Department of Environmental Conservation (NYSDEC) to evaluate soil quality for the management of environmental conditions during construction, including laboratory analysis for volatile organic compounds, semi-volatile organic compounds, pesticides, herbicides, polychlorinated biphenyls (PCBs), and metals. Soil encountered during the testing comprised fill materials—which are the byproduct of the reworking of soil during construction or the filling of shoreline to increase Manhattan's land mass—was often imported to the area to raise the grade. Such materials can include wastes and byproducts (such as coal ash), which can contain

contaminants (such as lead and arsenic) at higher concentrations than found naturally, and organic compounds (such as polycyclic aromatic hydrocarbons [PAHs]), which are byproducts of combustion.

Results of the analysis generally showed levels of organic compounds and metals well below NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives or laboratory minimum detection limits. Samples from approximately 30 percent of the locations detected marginally more elevated levels of organic compounds and metals; however, the specific compounds (PAHs and metals) were detected at levels consistent with the presence of urban fill and within applicable NYSDEC Part 375 Restricted Residential Use Soil Cleanup Objectives. Concentrations of mercury detected at two locations were more elevated but were nonetheless at levels typically found in urban fill throughout New York City. Analysis of the samples via the Resource Conservation and Recovery Act Toxicity Characteristic Leaching Procedure did not detect hazardous levels of contaminants, including at locations with identified elevated mercury concentrations. Based on the history of the area, the known history of filling, and the levels and distribution of contaminants detected by the waste classification testing, identified conditions demonstrate the presence of the urban fill and not a release or spill.

It is also possible for soil and groundwater to become contaminated by migration of contaminants from nearby activities, such as a current or previous gasoline service station. Such contamination, which is generally highly localized and typically found at or below the water table (which is generally deeper than 10 feet below surface grade in Manhattan), would not likely be encountered during the shallow disturbance associated with construction of the CBD Tolling Alternative. Nor was such contamination identified by any of the waste classification testing conducted by GTA Engineering, Inc.

14.3 ENVIRONMENTAL CONSEQUENCES

14.3.1 No Action Alternative

The No Action Alternative would not implement a vehicular tolling program. The No Action Alternative would not involve any ground disturbance, removal, or alteration of existing structures, or change in the production or transport of hazardous wastes or contaminated materials. Therefore, the No Action Alternative would not result in any effects from exposure to or removal of hazardous wastes or the production or removal of contaminated materials.

14.3.2 CBD Tolling Alternative

Construction of the CBD Tolling Alternative would result in soil disturbance and the potential alteration, removal, or disturbance of existing roadway infrastructure and utilities that could contain ACM, lead-based paint, or PCBs. Therefore, its construction could encounter and disturb ACM, lead-based paint, PCBs, hazardous wastes, or contaminated materials. Construction will also require the management of the urban fill identified by the waste classification testing.

Tolling system equipment would be mounted on existing infrastructure, which could require minor alterations to support the new equipment, or tolling system equipment would be on new or replacement infrastructure, such as new streetlight poles. The installation of tolling infrastructure and tolling system equipment would require subsurface utility connections. Depending on the pole type and configuration, excavation areas would range from approximately 11 to approximately 80 square feet, and the depth of excavation would range from approximately 2 to approximately 12 feet below grade. Although not anticipated, if excavation below the water table is necessary, it would be done in accordance with New York City Department of Environmental Protection and NYSDEC requirements. The volume of excavated material at any location would be up to approximately 15 cubic yards. Additional trenching (approximately 2 feet below grade) could be required for utility connections.

Construction would involve subsurface disturbance of soil and fill that could contain heavy metals (e.g., lead and arsenic) and/or organic contaminants (e.g., PAHs) at concentrations higher than natural background levels. It is possible that other types of contamination from historic releases could be present at some locations; however, no such conditions were identified by GTA Engineering, Inc.'s soil testing.

Construction activities associated with the CBD Tolling Alternative are common and routinely occur in the local study area. Established regulatory programs mandate specific control measures for disturbance of these types of materials. Through its contract documents, TBTA will require the contractor to implement the following plans and adhere to specific protocols developed to be consistent with Federal, State of New York, and City of New York regulations and requirements:[1]

- Prepare and implement a Waste Handling Plan describing procedures to comply with regulations and best management practices for identifying, collecting, handling, storing, and disposing of solid waste generated during construction.
- Prepare and implement a Construction Health and Safety Plan that would identify potential hazards that could be encountered during construction and specify measures to ensure that subsurface disturbance is performed in a manner that protects workers, the community, and the environment.
- Employ best management practices and comply with Federal and state requirements if petroleum storage tanks or contamination be encountered, including for release reporting to NYSDEC (17 NYCRR Parts 32.3 and 32.4).
- For disturbed areas and stockpiled materials (e.g., excavated soil, construction fill, building debris) that have not been restored and would not be disturbed for a period of 21 days, stabilize these areas within 14 days of initial disturbance by use of mulching, seeding, geotextile fabric, or other approved methods; securely cover stockpiles at the end of each workday.

[1] TBTA would require its contractor to comply with all applicable Federal, State of New York, and local laws, codes, rules, and regulations, including, but not limited to, the regulations of the U.S. Environmental Protection Agency, Occupational Safety and Health Administration, NYSDEC, New York State Department of Health, New York State Department of Labor, and the New York City Department of Environmental Protection.

- Dispose of waste and demolition and excavation material at an approved site in accordance with Federal, state, and local laws and regulations.
- Upon completion of construction, restore the ground surface to its preconstruction condition; if uncapped soils would remain exposed, conduct testing to ensure soils are clean and there is no risk of human exposure to hazardous wastes or contaminated materials.
- If necessary, the importation of certified clean fill would be conducted to replace surficial urban fill where a solid cap (i.e., asphalt, concrete, etc.) is not currently present or would not be restored.
- Employ the following measures to minimize fugitive dust emissions from construction activities: cover disturbed soil and stockpiled materials or treat these materials with dust suppressors; use dust-tight protective shields; use vacuuming, wet mopping, wet sweeping, or wet power brooming in lieu of dry power brooming or air blowing; use only wet cutting of stone, concrete, and/or asphalt; inspect vehicles for dirt prior to their leaving the work site and remove dirt, soils, or rubble likely to be dislodged during transit; comply with local requirements for covering trucks and other equipment used to transport soils and other construction materials.
- Prepare an Emergency Response Plan and Contingency Plan detailing procedures to follow in the event of an accident, emergency situation, or release or spill of hazardous wastes during construction.
- Sample any paint that would be removed for lead and other heavy metals or presume that the paint is lead-based paint; remove lead-based paint in accordance with the Occupational Safety and Health Administration Standard 1926.62 (Lead) and perform lead abatement and disposal in accordance with safety and health codes and Federal and state regulations.
- Perform an asbestos survey of any suspect ACM that may be disturbed by construction, and if such materials are present and would be disturbed, perform asbestos abatement and disposal in accordance with state and Federal regulations.

With these measures in place, construction of the CBD Tolling Alternative would not result in adverse effects associated with hazardous waste and contaminated materials. Once operational, there would be no human exposure pathways to any residual hazardous materials, so operation of the CBD Tolling Alternative would also not result in effects related to contaminated or hazardous materials.

14.4 CONCLUSION

The CBD Tolling Alternative would involve replacing existing or installing new infrastructure to support tolling system equipment, including the excavation of subsurface soil. GTA Engineering Services, Inc. conducted soil testing to identify the potential contamination in subsurface soil based on the known history of development of the Project area (including manufacturing and industrial facilities), which also involved extensive landfilling and regrading resulting in the formation of non-native urban fill with a wide range of potential contaminants. Soil testing found that contaminated soils could be disturbed by the Project's construction, although the soil characteristics were typical of urban fill in the Manhattan CBD.

The Project Sponsors have developed measures to anticipate and address potential contaminants that are typical in urban settings. TBTA will ensure that these measures are implemented during construction of the CBD Tolling Alternative, which would avoid or minimize any potential adverse effects resulting from potential exposure. **Table 14-1** summarizes the potential effects of the CBD Tolling Alternative and commitments to mitigate the effects.

Table 14-1. Summary of Effects of the CBD Tolling Alternative Related to Asbestos-Containing Materials, Lead-Based Paint, Hazardous Waste, and Contaminated Materials

SUMMARY OF EFFECTS	EFFECT FOR ALL TOLLING SCENARIOS	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
Potential for disturbance of existing contaminated or hazardous materials during construction	Soil disturbance during construction and the potential alteration, removal, or disturbance of existing roadway infrastructure and utilities that could contain ACM, lead-based paint, or other hazardous substances. Potential effects will be managed through construction commitments.	No	Refer to **Section 14.3.2** for a list of commitments that the Project Sponsors will undertake to address ACM, lead-based paint, hazardous waste, and contaminated materials.