

# Hazardous and Contaminated Materials



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# 18 Hazardous and Contaminated Materials

This chapter assesses the potential for the presence of hazardous materials along the Proposed Action corridor and the other directly affected areas. It examines the potential for exposure to any such hazardous materials associated with the Proposed Action and outlines specific measures that would be employed to protect public health, worker safety, and the environment. "Hazardous materials" are generally defined as any substances that pose a threat to human health or the environment.

### **18.1** REGULATORY CONTEXT

Transportation projects that include acquiring buildings and properties, rights-of-way, construction easements, and/or excavating and disturbing soils could encounter hazardous and/or contaminated (non-hazardous) materials as a result of the following:

- Planned construction activities
- Relocation or installation of utilities
- Stormwater management
- Installation of green infrastructure
- Structure demolition or modification

The presence of contaminated or hazardous materials on construction sites could expose workers and members of the public, and could cause a release to the environment. In addition, the unexpected encounter of either known or suspect hazardous and/or contaminated materials during construction could lead to project delays and add substantial cost to a project.

Established environmental regulations must be followed during the removal and disposal of identified hazardous waste, non-hazardous solid waste, and construction and demolition debris. Hazardous wastes are listed wastes that are ignitable, corrosive, reactive, or toxic. Non-hazardous solid waste includes materials such as general trash, both friable and non-friable asbestoscontaining materials, most petroleum contaminated soil, and empty drums and tanks. Construction and demolition debris includes uncontaminated concrete, asphalt pavement, brick, glass, soil, and rock.

<sup>1</sup> Friable asbestos-containing materials can be crumbled, pulverized, or reduced to powder by the pressure of an ordinary human hand.



At the federal level, the U.S. Environmental Protection Agency (USEPA) regulates the storage, transportation, and disposal of contaminated and hazardous materials. At the state level, most environmental regulations are promulgated and enforced by either of the following agencies:

- New York State Department of Environmental Conservation (NYSDEC)manages most statemandated environmental cleanups (brownfield, petroleum spills, state superfund, and voluntary cleanup), provides guidance on environmental cleanup levels, issues permits to waste transporters, and approves licenses for various disposal and treatment facilities.
- New York State Department of Health assists the NYSDEC with developing cleanup standards, assists the public with communicating right-to-know and public health issues, and grants certain environmental training certificates (e.g., asbestos and mold).
- New York State Department of Labor (NYSDOL) manages State of New York's Asbestos Control Bureau, project notifications, licensing of contractors, and the coordination of pre-demolition asbestos surveys.

Subsurface contamination is subject to various regulatory programs:

- Federal Comprehensive Environmental Response, Compensation and Liability Act (commonly referred to as "Superfund")
- Resource Conservation and Recovery Act (RCRA)
- State Inactive Hazardous Waste Disposal Site Remedial Program
- Brownfield Cleanup Program
- New York State Environmental Conservation Law
- Article 12 of the New York State Navigation Law (relating to petroleum spills)

The NYSDEC's Technical Guidance for Site Investigation and Remediation (DER-10) establishes methods for site investigation and clean up, and the Solid Waste Management Regulations control disposal of solid waste (6 NYCRR Parts 360-369).

Agencies require that a Phase I Environmental Site Assessment (Phase I ESA) be performed to identify the potential for encountering hazardous and non-hazardous contaminated materials on a property. The Phase I ESA (provided as Appendix G, "Phase I ESA Report") screens each of the properties under review for the following:

- Possible contamination, focusing on current and historical activities or uses
- A review of available environmental records, databases, and files for that property
- · Assessment of various historical maps and photos
- Review of city directories
- Assessment of the current and historical surrounding land uses



### 18.2 METHODOLOGY

Generally, most New York transportation agencies follow the methodology described in New York State Department of Transportation's *The Environmental Manual* as a guide for the Phase I ESA process to identify sites of potential environmental concern based on existing and past property uses. The procedures described in *The Environmental Manual* typically follow those steps outlined in the American Society for Testing and Materials' (ASTM) E1527-13: Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, and are consistent with ASTM's E1528-06, Standard Practice for Limited Environmental Due Diligence; Transaction Screen Process, and E1903-97, Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process, but are adapted to more closely meet the needs for transportation projects.

As part of the screening to identify sites of potential environmental concern based on existing and past property uses, sites within and adjacent to the study area were reviewed using federal and state database records obtained from Environmental Data Resources Inc. in 2019 (EDR 2019). The study area is defined as 150 feet on either side of the Proposed Action corridor and includes portions of Main Street, Kenmore Avenue, Niagara Falls Boulevard, Maple Road, Sweet Home Road, Rensch Road, Putnam Way, Lee Road, and John James Audubon Parkway, within Buffalo, Tonawanda, and Amherst.

The search radius varied by the database but included the databases shown in Table 18-1. Other records and sources of information were also used for the review, including historical topographic and land use maps, Sanborn Fire Insurance maps, city directories, historical aerial photographs, and public records held by the City of Buffalo, Town of Tonawanda, Town of Amherst, and Erie County. In addition, NYSDEC's website was reviewed to identify additional environmental (i.e., spills, remediation, and bulk storage) database records (New York State Department of Environmental Conservation n.d.).

Work also included a sidewalk reconnaissance inspection and the collection of photographs to identify sites of potential environmental concern based on existing and past property uses and their potential to have contaminated materials and/or hazardous substances.

Local municipalities were contacted during the research of the study area. However, no individual property owners were interviewed during the walkover of the corridor.



Table 18-1. Datasets Used for the Hazardous Materials Inventory Assessment

Dataset	Dataset
Aerometric Information Retrieval System (AIRS)	NYSDEC Registry of Inactive Hazardous Waste Disposal Sites
Comprehensive Environmental Response, Compensation, and Liability Information	NYSDEC Spills
Corrective Action Sites (RCRA COR)	PCB Activity Database System (PADS)
Emergency Response Notification System (ERNS)	Potentially Responsible Party (PRP)
Facility Index System (FINDS)	Radiation Information Database (RADINFO)
Federal Brownfield	Resource Conservation and Recovery Act (RCRA) Administrative Action Tracking System (RAATS)
Federal Institutional and Engineering Controls (Fed IC/EC)	Resource Conservation and Recovery Act (RCRA) Large and Small Quantity Generators
FIFRA/ Toxic Substances Control Act Tracking Systems (FTTS)	Resource Conservation and Recovery Act (RCRA) Treatment, Storage, and Disposal
Hazardous Materials Information Reporting System (HMIRS)	Risk Management Plan
Hazardous Substance Waste Disposal (HSWDS)	State/Tribal Brownfield
Hazardous Waste Manifest (Manifest)	State/Tribal Institutional & Engineering Controls (IC/EC)
Integrated Compliance Information System	State/Tribal Leaking Underground Storage Tanks
Manufactured Gas Plants (MGP)	State/Tribal Solid Waste Landfills
Material Licensing Tracking System (MLTS)	State/Tribal Storage Tanks
National Pollutant Discharge Elimination System (NPDES)	State/Tribal Voluntary Cleanup Program
National Priorities List	Toxic Chemical Inventory Release System (TRIS)
National Priorities List Delisted	Toxic Substances Control Act
No Further Remedial Action Planned Sites (CERC-NFRAP)	Tribal Lands
Non Generator (NON GEN)	

### **18.3** EXISTING CONDITIONS

The Phase I ESA completed for the study area identified 39 sites of potential concern as show on Figure 18-1 at a corridor-level and Figure 18-2 at a detailed-level. Table 18-2 lists each site of potential concern along with current property name, address, identified general reason(s) for concern (former gas station, laundromat, history of tanks and petroleum storage, etc.), property rating, and the recommendation. Properties were assigned a rating score from 1 to 3, where 1 represents a recommendation for a Phase II Field Investigation if purchase and/or disturbance is likely to occur at that site and 3 represents a site where no additional investigation work is suggested at this time. Appendix G, "Phase I ESA Report" provides additional detail on each site of potential concern.



Figure 18-1. Hazardous Waste and Contaminated Materials Potential Sites of Concern, Corridor-Level

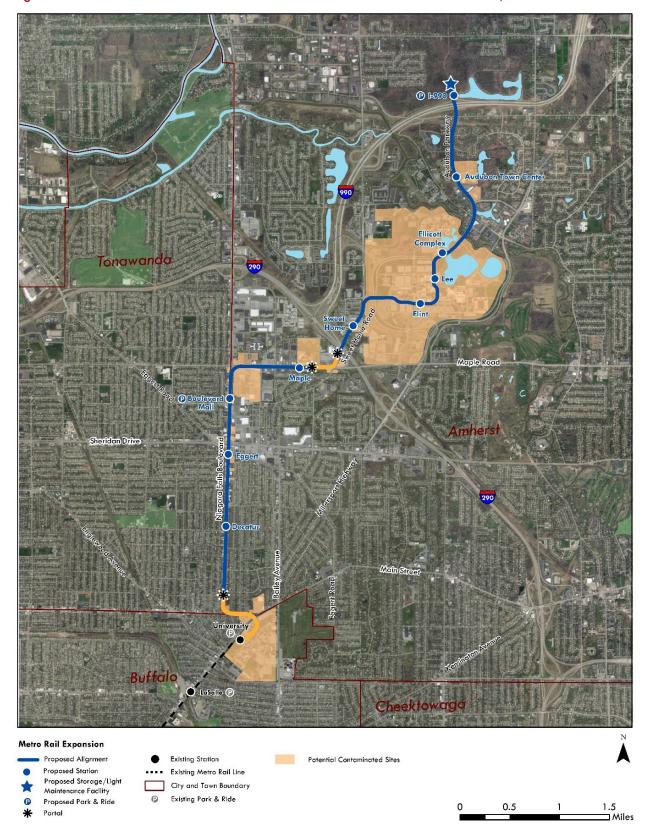
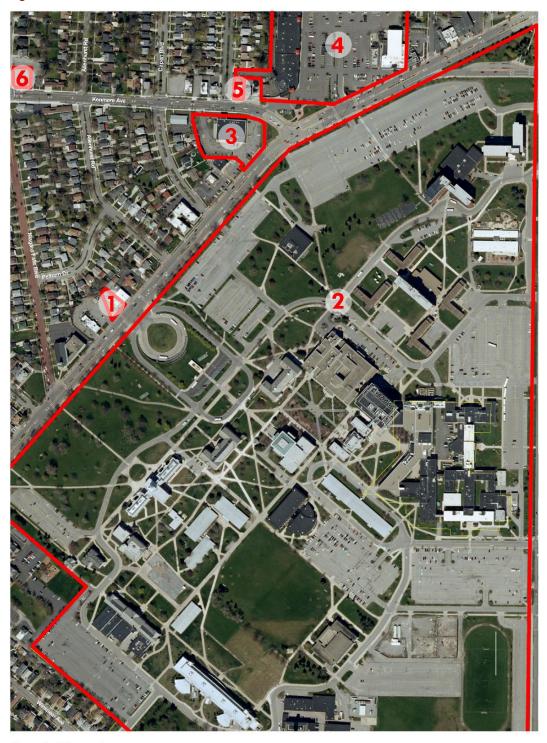




Figure 18-2. Hazardous Waste and Contaminated Materials Potential Sites of Concern



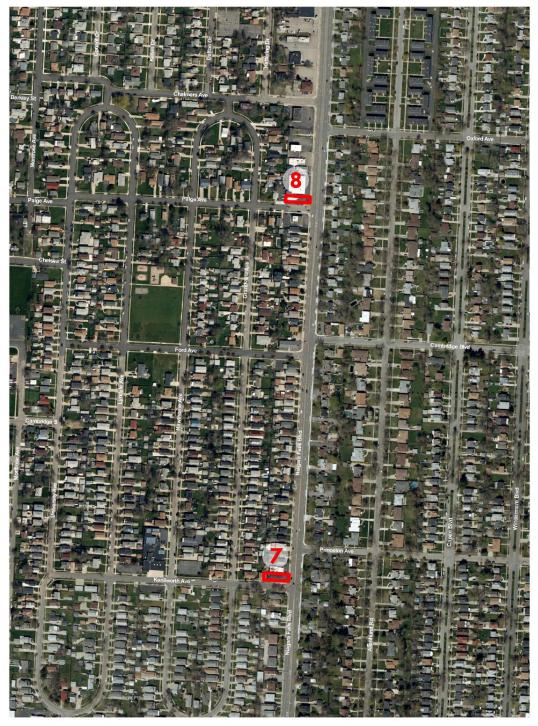
### **Metro Rail Expansion**

Sites of Concern

Subway Restaurants - 3384 Main St
 University at Buffalo - 3425 Main St
 Walgreens - 3490 Main St
 University Plaza - 3500 Main St
 May Jen Chineese Restaurant - 47 Kenmore Ave
 Vacant Lot - 159 Kenmore Ave



Figure 18-2. Hazardous Waste and Contaminated Materials Potential Sites of Concern (continued)





7. Storefronts - 240 Niagara Falls Blvd 8. Sweeney's Garage - 424 Niagara Falls Blvd

0 330 660 Feet



Hazardous Waste and Contaminated Materials Potential Sites of Concern (continued) Figure 18-2.



### **Metro Rail Expansion**



9. American Auto World - 733 Niagara Falls Blvd 10. Empire Auto Electric - 803 Niagara 11. NOCO Express - 820 Niagara Falls Blvd

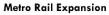
- 11. NOCO Express 820 Niagara Falls Blvd
  12. Sentry North Appliance Service 845 Niagara Falls Blvd
  13. Storefronts 853 Niagara Falls Blvd
  14. Corsi A First Klass Collision Center 874 Niagara Falls Blvd
  15. Lombardo Funeral Home 899 Niagara Falls Blvd
  16. U-Haul 925 Niagara Falls Blvd

- 17. Sun City Mattress 926 Niagara Falls Blvd 18. Partner's Bar & Pizzeria 934 Niagara Falls Blvd 19. Stanton Optical 2965 Sheridan Dr
- 20. El Palenque Restaurant 951 Niagara Falls Blvd
  - 225 450 Feet



Figure 18-2. Hazardous Waste and Contaminated Materials Potential Sites of Concern (continued)





19. Stanton Optical - 2965 Sheridan Dr
20. El Palenque Restaurant - 951 Niagara Falls Blvd
21. Monro Auto Service and Tire Centers - 2980 Sheridan Dr
22. Firestone Complete Auto Care - 995 Niagara Falls Blvd
23. Pep Boys Auto Parts & Service - 1025 Niagara Falls Blvd
24. AudioMotive Creations- 1167 Niagara Falls Blvd

450 Feet



Figure 18-2. Hazardous Waste and Contaminated Materials Potential Sites of Concern (continued)





24. AudioMotive Creations - 1167 Niagara Falls Blvd

24. AudioMotive Creations - 1167 Niagara Falls Blvd
25. Plaza - 1200 Niagara Falls Blvd
26. Boulevard Mall - 1265 Niagara Falls Blvd
27. Goodyear Auto Service - 1280 Niagara Falls Blvd
28. Valu Muffler & Brake Auto Center - 1346 Niagara Falls Blvd
29. Delta Sonic Car Wash - 1355 Niagara Falls Blvd
30. Firestone Complete Auto Care - 3893 Maple Rd
31. Premiere Group - 3900 Maple Rd

560 Feet



Figure 18-2. Hazardous Waste and Contaminated Materials Potential Sites of Concern (continued)

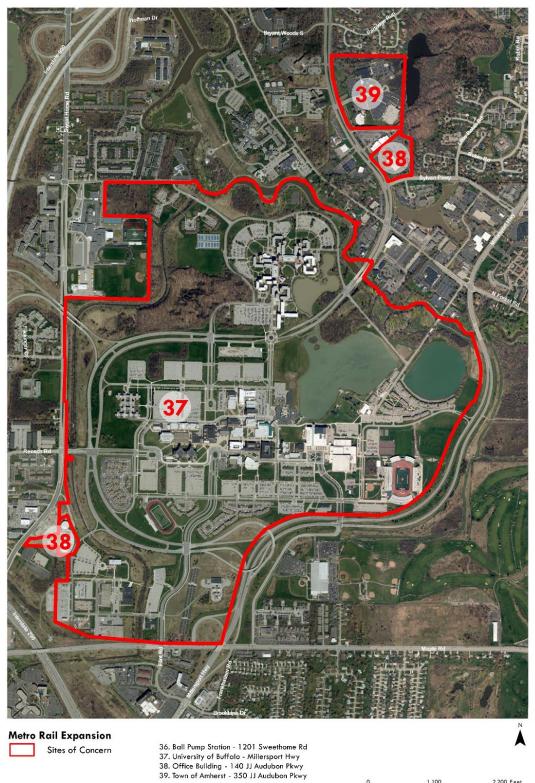




32. Sweethome Middle School - 4150 Maple Rd 33. NOCO Express - 4265 Maple Rd 34. Mobil - 4291 Maple Rd 35. Anchor Bar - 4300 Maple Rd



Figure 18-2. Hazardous Waste and Contaminated Materials Potential Sites of Concern (continued)



2,200 Feet



Table 18-2. Hazardous Waste and Contaminated Materials Potential Sites of Concern

		Current or Former Uses					
Map Key	Property Name and Address	Auto Related	Dry Cleaner	Tanks	Other	Property Rating	Recommendation
1	University at Buffalo – 3425 Main St			Χ		3	No Action Required – Monitor Only
2	Subway Restaurant – 3384 Main St	Χ		Χ		2	Contamination could be encountered if excavation is required – Monitor Only
3	Walgreens – 3490 Main St	Х		Х		1	Phase II Detailed Site Investigation if right-of-way acquisition or excavation is required.
4	University Plaza – 3500 Main St	Χ		Χ		3	No Action Required – Monitor Only
5	May Jen Chinese Restaurant – 47 Kenmore Ave		Х			3	No Action Required – Monitor Only
6	Vacant Lot – 159 Kenmore Ave	Χ		Х		1	Phase II Detailed Site Investigation if right-of-way acquisition or excavation is required.
7	Storefronts – 240 Niagra Falls Blvd	Х		Х		1	Phase II Detailed Site Investigation if right-of-way acquisition or excavation is required.
8	Sweeney's Garage – 424 Niagara Falls Blvd	Х		Х		1	Phase II Detailed Site Investigation if right-of-way acquisition or excavation is required.
9	American Auto World – 733 Niagara Falls Blvd	Х		Х		1	Phase II Detailed Site Investigation if right-of-way acquisition or excavation is required.
10	Empire Auto Electric – 803 Niagara Falls Blvd	Х				2	Contamination could be encountered if excavation is required – Monitor Only
11	NOCO Express – 820 Niagara Falls Blvd	Х		Х		1	Phase II Detailed Site Investigation if right-of-way acquisition or excavation is required.
12	Sentry North Appliance Service – 845 Niagara Falls Blvd		Х			3	No Action Required – Monitor Only
13	Fancy Florist – 853Niagara Falls Blvd	Χ				2	Contamination could be encountered if excavation is required – Monitor Only
14	Corsi A First Klass Collision Center – 874 Niagara Falls Blvd	Х				3	No Action Required – Monitor Only
15	Lombardo Funeral Home – 899 Niagara Falls Blvd	Χ				2	Contamination could be encountered if excavation is required – Monitor Only
16	U-Haul – 925 Niagara Falls Blvd	Х		Х		1	Phase II Detailed Site Investigation if right-of-way acquisition or excavation is required.
17	Sun City Matttress – 926 Niagara Falls Blvd	Х				3	No Action Required – Monitor Only
18	Partner's Bar & Pizzeria – 934 Niagara Falls Blvd	Χ		Х		2	Contamination could be encountered if excavation is required – Monitor Only
19	Stanton Optical – 2965 Sheridan Dr	Χ		Χ		1	Phase II Detailed Site Investigation if right-of-way acquisition or excavation is required.
20	El Palenque Restaurant – 951 Niagara Falls Blvd	Χ				1	Phase II Detailed Site Investigation if right-of-way acquisition or excavation is required.
21	Monro Auto Service And Tire Centers – 2980 Sheridan Dr	Χ		Χ		2	Contamination could be encountered if excavation is required – Monitor Only



Table 18-2. Hazardous Waste and Contaminated Materials Potential Sites of Concern (continued)

		Current or Former Uses					
Map Key	Property Name and Address	Auto Related	Dry Cleaner	Tanks	Other	<b>Property Rating</b>	Recommendation
22	Firestone Complete Auto Care – 995 Niagara Falls Blvd	Χ		Χ		1	Phase II Detailed Site Investigation if right-of-way acquisition or excavation is required.
23	Pep Boys Auto Parts & Service – 1025 Niagara Falls	Χ		Х		2	Contamination could be encountered if excavation is required – Monitor Only
24	Boulevard Mall – 1261-1265 Niagara Falls Blvd			Х		3	No Action Required – Monitor Only
25	AudioMotive Creations – 1167 Niagara Falls Blvd	Χ				2	Contamination could be encountered if excavation is required – Monitor Only
26	Plaza – 1200 Niagara Falls Blvd	Χ	Χ			3	No Action Required – Monitor Only
27	Goodyear Auto Service – 1280 Niagara Falls Blvd	Χ		Х		1	Phase II Detailed Site Investigation if right-of-way acquisition or excavation is required.
28	Valu Muffler & Brake Auto Center – 1346 Niagara Falls	Χ				1	Phase II Detailed Site Investigation if right-of-way acquisition or excavation is required.
29	Delta Sonic Car Wash – 1355 Niagara Falls Blvd	Χ		Х		1	Phase II Detailed Site Investigation if right-of-way acquisition or excavation is required.
30	Firestone Complete Auto Care – 3893 Maple Rd	Χ		Х		2	Contamination could be encountered if excavation is required – Monitor Only
31	Premiere Group – 3900 Maple Rd	Χ		Χ		3	No Action Required – Monitor Only
32	Sweethome Middle School – 4150 Maple Rd			Х		1	Phase II Detailed Site Investigation if right-of-way acquisition or excavation is required.
33	NOCO Express – 4265 Maple Rd	Χ		Х		1	Phase II Detailed Site Investigation if right-of-way acquisition or excavation is required.
34	Mobil – 4291 Maple Rd	Χ		Х		1	Phase II Detailed Site Investigation if right-of-way acquisition or excavation is required.
35	Anchor Bar – 4300 Maple Rd	Χ				3	No Action Required – Monitor Only
36	Ball Pump Station – 1201 Sweethome Rd			Χ		3	No Action Required – Monitor Only
37	University of Buffalo – Millersport Hwy			Χ		3	No Action Required – Monitor Only
38	Office Building – 140 JJ Audubon Pkwy			Χ		3	No Action Required – Monitor Only
39	Town of Amherst – 350 JJ Audubon Pkwy			Χ		3	No Action Required – Monitor Only

Source: Watts AE. April 2019. Phase I Environmental Site Assessment for the Metro Rail Expansion Project City of Buffalo, Towns of Amherst & Tonawanda



### **18.4** FUTURE WITHOUT THE PROPOSED ACTION

Without the Proposed Action, there would be no subsurface disturbance of the existing roadway network and the Metro Rail system would continue in its existing configuration. Thus, there would be no potential for exposure to any subsurface contamination that might be present.

### 18.5 PROPOSED ACTION

The Phase I ESA identified 39 locations where there is potential for hazardous or contaminated materials to affect costs and construction schedule for the Proposed Action. These properties are listed in Table 18-2.

While these properties have been identified as having a possibility of subsurface soil or groundwater contamination or orphan tanks, not all of the sites will be physically impacted by the Proposed Action. In addition, environmental remediation has already occurred at some of the sites. Any remaining contamination may be at a concentration below the NYSDEC soil cleanup objectives or be located where it will not impacted by the extent of construction at that property. During the preliminary and final design of the Proposed Action, potentially contaminated sites requiring subsequent investigation will be identified for assessment in support of the development of plans and specifications for bid.

The potential for encountering future contamination associated with any sites affected by the Proposed Action would be reduced by the cleanup actions conducted during construction. Operationally, maintenance and cleanup of any future releases will be performed in accordance with applicable state and federal laws and standards.

### **18.6** MITIGATION

The presence of soil and/or groundwater contamination, or the existence of hazardous materials within existing or proposed rights-of-way, can adversely affect the cost and schedule to complete a transportation project. Early identification of potential contamination sites provides valuable information for the alternatives evaluation, design, right-of-way acquisition and construction plans.

Once the preliminary design has been developed, a review of the anticipated site-specific construction impacts will be performed against the information found within the Phase I ESA report to prepare a detailed environmental investigation (Phase II) and/or Soil Management Plan for the Proposed Action.

A Phase II Site Assessment will be performed as the design advances at those locations with the greatest likelihood of contamination where property acquisition and/or substantial soil disturbance is proposed. These investigations would be performed to determine the presence or absence of contamination or underground storage tanks, to assist with developing remediation cost estimates, and to select and develop procedures for protecting on-site workers and the adjacent public during remediation work.



The scope of the environmental investigation would include drilling investigations conducted with a direct push "hydraulic" or rotary drilling rig to collect soil samples for retrieval and examination. Soil samples would be collected and analyzed for both Target Compound List and Target Analyte List parameters for volatile, semi-volatile, pesticides, herbicides, PCBs, and metals including mercury, cyanide, and hexavalent chromium. If any of the results indicate that the sample has the potential to be hazardous, the soil sample would be further analyzed under Toxicity Characteristic Leaching Procedure (TCLP) methodology (USEPA method 1311) for the parameter(s) in question. This additional TCLP analysis would determine whether the sample meets the definition of an RCRA hazardous waste. The results of these field studies would provide information to develop environmental remediation cost estimates and to determine budgetary allowances that should be set aside for construction.

To identify how contamination discovered in the field would be addressed, the contractor would be required to prepare a site-wide Soil Management Plan prior to the start of work, outlining procedures to be followed any time evidence of contamination, and/or potential contamination, is suspected or identified. Once evidence of contamination is identified by the contractor in the field, an environmental monitor hired by the contractor would be on call to assist with the screening and management of soils that show signs of contamination (i.e., strange or noxious odors, unnatural colors or sheen, odors characteristic of petroleum or solvent contamination, elevated volatile vapor readings as measured by field screening instruments). These measures would assist with the protection of on-site workers, the collection of any necessary samples, and segregation of contaminated from non-contaminated soil. Ambient air would be monitored by the contractor's environmental monitor for the protection of on-site workers, and soil screening would be performed through visual observations and use of a photoionization detector or similar instrument. The environmental monitor would follow the procedures described in a Field Organic Vapor Monitoring Plan prepared by the contractor.

During site remediation work, there would be potential for an increase in local worker exposures to the materials being removed (e.g., contaminated water and soil, the removal of identified petroleum bulk storage tanks and their associated products, etc.). A project Health and Safety Plan would be required to be developed by the contractor and would identify the various environmental remediation activities both known as well as procedures to be followed in the event of an unidentified discovery. The plan would be prepared to include the following:

- Prepare a job hazard analysis of each identified task.
- Assist with identifying procedures to protect on-site workers and the adjacent public.
- Describe the real-time monitoring of environmental field conditions and the collection of any necessary samples for laboratory analysis.
- Detail the procedures and regulations to be followed for the segregation, transport and disposal
  of contaminated materials.

Elevated readings would be expected only near the active work zone and would be mitigated by using respiratory and other personal protective equipment with equipment levels adjusted based on field measurements. In addition, perimeter work zone monitoring for volatile vapors and particulates would be conducted at downwind and upwind locations to verify that any exposures are limited to adequately trained and protected personnel in the exclusion work zone. If elevated readings are



recorded at the work zone limits, modifications—including the implementation of engineering controls, adjustment of the exclusion zone boundary, or temporary stoppage of work—would be employed.

However, not all contaminated sites exhibit signs of contamination, such as petroleum odors, unnatural colors or sheen, or elevated volatile vapor readings as measured by field screening instruments. During construction, the contractor will closely review and characterize soils excavated from industrial and commercial sites identified as having the potential for contamination in order to coordinate their proper management and disposal (per 6 NYCRR Part 375 and 6 NYCRR Part 360). The establishment and use of an excavated soil laydown yard(s) will be a necessary component of the Soil Management Plan to provide a means to stockpile and test suspect soils generated during the Proposed Action. Testing of materials associated with historical industrial property uses will be conducted before releasing native soils to the contractor as unclassified excavation.

Contaminated soils will be managed in areas identified for material stockpiles or direct loaded for transport to an approved landfill. Stockpiled soils will be placed on impervious pavement or on polyethylene sheeting and covered with sheeting or an equivalent material and then properly weighted to prevent contaminated runoff from precipitation and the release of odors. Any soils stored in roll-off containers awaiting transport will be completely covered and secured with waterproof tarpaulins. During transport, contaminated soils will be covered to control dust emissions. Covering the materials during stockpile and transport will mitigate potential public exposure to dust and contamination.

Mitigation will result in the removal and proper disposal of all contaminated materials that are excavated during construction and all contamination identified within the right-of-way.

### **18.7** REFERENCES

EDR. 2019. Metro Rail Expansion Corridor. Environmental Database Report, Shelton: EDR.

New York State Department of Environmental Conservation. n.d. *Environmental Remediation Databases*. Accessed January 8, 2019. https://www.dec.ny.gov/cfmx/extapps/derexternal/.

Watts Architecture & Engineering. 2019. "Phase I Environmental Site Assessment for the Metro Rail Expansion Project." Buffalo.