

Appendix G – Hazardous Materials Technical Report





Hazardous Materials and Waste Sites Summary Technical Memorandum

Kansas City Streetcar Main Street Extension

December 20, 2018

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Appendix A: EDR Database Report

1. Introduction

An environmental desktop review was conducted for the Streetcar route site (Build Alternative) under consideration as part of the Kansas City Streetcar Main Street Extension Project. An Environmental Data Resources (EDR) Database search was conducted of state, tribal, and federal environmental databases. A site visit and Phase I Environmental Site Assessment (ESA) was not conducted as part of the environmental desktop review. The purpose of the review was to identify historical and current sites with the potential to have impacted the soil and/or groundwater within and adjacent to the anticipated construction footprint of the streetcar project. Note that although certain aspects of the American Society for Testing and Materials (ASTM) 1527-13 Standard for Phase I Environmental Site Assessments were conducted as part of this review do not fully meet the requirements of the 1527-13 Standard or the All Appropriate Inquiry (AAI) regulation as codified at 40 CFR 312. Furthermore, this desktop review did not include any inquiry with respect to controlled substances, corporate environmental compliance, radon, methane, asbestos, lead paint, mold, wetlands, or vapor intrusion.

2. Methodology

Government databases were searched in accordance with ASTM 1572-13 through Environmental Data Resources (EDR), a commercial provider of that service. The search area provided to EDR for the database search included an area starting near Pershing Road and Main Street south to the point where Main Street and Emmanuel Cleaver II Boulevard (47th Street) intersect and Main Street transitions to Brookside Boulevard then south on Brookside Boulevard to 51st Street. EDR provided a Radius Report containing U.S. Environmental Protection Agency (EPA), State, and Tribal environmental database information in accordance with ASTM defined search distances. EDR's Radius Report lists the Federal, State and Tribal databases searched, a description of the databases, and the most recent release date of each database.

The review of the database focused on those uses that have a moderate to high potential to have resulted in soil and/or groundwater contamination within the study corridor. The study corridor for the evaluation was defined as 1 ½ blocks east and west of Main Street from Pershing Road south to the point where Main Street and Emmanuel Cleaver II Boulevard (47th Street) intersect and Main Street transitions to Brookside Boulevard then south on Brookside Boulevard to 51st Street.

For the streetcar project, it was assumed construction of the majority of the improvements would be completed within existing rights-of-way, with ground disturbance occurring at depths no greater than approximately 18 inches below the existing surface. Utility relocations and installation of catenary poles would involve excavations deeper than 18 inches, and thus have a higher probability of encountering potential contaminants.

A copy of the database report reviewed is included as Appendix A to this technical memorandum.

3. Project Study Area

The project study area for the hazardous materials and waste sites inventory and analysis was defined as 1 ½ blocks east and west of Main Street from Pershing Road south to the point where Main Street and Emmanuel Cleaver II Boulevard (47th Street) intersect and Main Street transitions to Brookside Boulevard then south on Brookside Boulevard to 51st Street.

Groundwater flows in three distinct directions across the project study area. In the northern half of the study area, the overall flow direction of groundwater is generally northward toward the alluvial valley occupied by Union Station. Generally, south of 39th Street to 43rd Street the overall flow direction of groundwater generally follows the rolling topography, while south of 43rd Street the overall flow direction of groundwater generally flows towards the Brush Creek valley.

The topography varies sharply near the north (e.g., Main Street near Union Station) and south (e.g., Main Street near 44th Street) ends of the project study area. Elevations range from approximately 800 feet above mean sea level (msl) near Union Station, approximately 950 feet msl along Main Street from 39th Street south to 44th Street and then drops to approximately 850 feet msl along Main Street through the Brush Creek alluvial valley.

In general, the project study area was first developed in the late 1800's to the early 1900's. Initial development included dwellings, flats, stores, and municipal buildings. Over time, the area has been continuously redeveloped with streets, businesses, and industries that have produced, stored, sold, and/or transported a number of substances including chemicals and fuels. Because of the dense nature of the development and types of uses common to the project study area, there is the potential that some of these historical activities may have affected the soils and groundwater through the release of hazardous materials or wastes. For most known contaminated properties, remediation has been completed or is currently underway.

4. Government Database Searches

There is no single comprehensive source of information available that identifies all known or potential sources of environmental contamination in the study area. Therefore, to identify and evaluate sites that may potentially contain hazardous materials, petroleum products, or other sources of contamination, a federal and state government database search was conducted by EDR, dated November 21, 2018. The database search included over 100 different environmental databases including sites identified or evaluated as Federal or state Superfund sites; facilities that generate, store, treat or dispose of hazardous wastes; solid waste landfills; facilities that have active, closed, or leaking aboveground storage tanks (ASTs) or underground storage tanks (USTs); sites actively undergoing cleanup; spills involving potentially hazardous materials; and a number of other activities that might be an indicator of a hazardous condition.

The results of the database searches were prioritized as to the likelihood of soil and/or groundwater contamination present on or in the project study area as described in Section 2.

In general sites identified within the study corridor fall into one of five categories, each of which is described below.

4.1. Historic/Current Dry Cleaners

Dry cleaners, rug cleaners and laundries are known to use and/or have used solvents such as perchloroethylene (PCE), trichloroethylene (TCE), naptha, ethylene glycol, propylene glycol, and gasoline for stain removal. The institutional laundries of the past generated steam using coal and oil fired boilers, which presents the potential for oil contaminated soil.

4.2. Historic /Current Auto and Petroleum Storage Tank Facilities

Filling stations, auto repair, auto service and auto cleaning facilities, including detailing and auto washing, produce oil waste, oil contaminated water and solvents, and usually include bulk storage of petroleum oil, which may leak or spill out onto the ground. Underground Storage Tanks (USTs) and ASTs were/are commonly used at these types of facilities.

4.3. Hazardous Waste Generators

These are facilities that are registered as generating, storing, transporting or disposing of small to large quantities of hazardous wastes. Facilities can vary in nature for example from a small photo finishing operation/drug store/apartment complex to large scale industrial size printing or manufacturing operations. These facilities may generate any number of wastes considered hazardous including spent volatile organic compounds, semivolatile organic compounds, petroleum related compounds, or metals. Only those hazardous waste facilities handling large quantities of hazardous waste, documented contamination, or numerous reported hazardous waste violations have been identified within the study corridor.

4.4. Reported Spills

These sites include reported spills of potentially hazardous materials made from a variety of sources regarding a number of different incidents and materials. They represent releases of hazardous substances reported to the Missouri Department of Natural Resources (MDNR) Emergency Response section.

4.5. Missouri Volunteer Cleanup Program (VCP) and Site Management and Reporting System (SMARS)

These are sites participating in the MDNR's VCP as well as a database that currently houses information for Superfund, Federal Facility, Brownfields VCP and Missouri's other state response programs.

5. Findings

Review of the EDR database report revealed 75 locations (many with several properties relatively close to each other or appearing in multiple databases) within 1 ½ blocks either side of Main Street/Brookside Boulevard (south of Emmanuel Cleaver II Boulevard/47th Street) as follows:

- Historic Cleaner Sites 101
- Dry Cleaner Sites 7
- Historic Auto Sites 131
- Aboveground Storage Tank (AST) Sites 6

- Underground Storage Tank (UST) Sites 35
- Leaking Underground Storage Tank (LUST) Sites 26
- Large Quantity Hazardous Waste Generators with Incidents of Contamination–1
- Spill Sites 32
- Missouri VCP/SMARS Sites 3

Table 1 and Figure 1 at the end of this technical memorandum identify the location and type of sites relative to the project study area.

Although it is unlikely that none of the identified potential hazardous environmental concerns that exist in the project study area would pose a major problem with regard to constructability of the project, traditional land use practices such as auto repair, gas stations, dry cleaners, printers and others have had the potential to affect soil and/or groundwater on or near the proposed streetcar alignment. Examples where contaminated soils and/or groundwater may be encountered include excavation and removal of contaminated groundwater during dewatering operations, or excavation during utility line construction activities. It is anticipated that construction activities associated with the implementation of the streetcar system expansion may include excavation up to 18 inches in depth. To minimize the potential for contamination during construction, requirements for safety procedures and protection of human health and the environment would be established in accordance with USEPA and MDNR regulations to ensure that there would be no further contamination and to provide a safe working environment during construction. All solid waste materials generated during construction of the project will be recycled or properly disposed of in accordance with federal, state and local regulations.

5.1. No Build Alternative

Under the No Build Alternative, no construction or excavation would occur within the right-ofway that would disturb any potentially impacted soils or groundwater. Any contaminants present would be left in place.

5.2. Build Alternative

The EDR search identified multiple potentially contaminated sites in the study area, adjacent and/or in the right-of-way within which construction is proposed. Construction of the streetcar trackway and stops would involve ground disturbance to a depth of approximately 18 inches. Construction of the power substation, installation of catenary poles, and utility relocations could involve excavations to depths greater than 18 inches. During utility upgrade or relocation work, excavations deeper than 18 inches could increase the risk of encountering contaminated materials.

Within the right-of-way where the streetcar improvements would be constructed, potential contamination is less likely to be encountered within the top 18 inches below the surface than at depths greater than 18 inches, because potential sources of contamination from these sites is likely set back substantially from the edge of the right-of-way and proposed streetcar tracks such that past releases would be unlikely to have migrated that distance horizontally.

If unanticipated sources of hazardous or regulated materials are encountered during construction activities, the construction manager or designee would immediately notify the City's

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Environmental Compliance Division. Specific mitigation activities, which address the type, level, and quantity of contamination encountered, would be immediately implemented. The handling, treatment, and disposal of any hazardous materials would occur in full compliance with all federal, state, and local requirements. The discharge of any wastewater suspected of containing hazardous/regulated materials is prohibited without first obtaining a National Pollution Discharge Elimination System (NPDES) Permit through the MDNR covering the one-time discharge of wastewater containing known and specific hazardous constituents. Such a permit may be obtained from the MDNR providing the discharge is well characterized, meets discharge standards, and does not pose a threat to the ultimate surface water body receiving the discharge. If fill material is required in construction of the proposed streetcar facilities, the construction contractor would be required to ensure that the sources of any fill material are free of contamination.

6. References

Environmental Data Resources, Inc. EDR Area/Corridor Report, KC Streetcar Main Street Extension. November 21, 2018.

Table

Map ID	Site Records Identified
AN 221	UST
AX 262	AST
CE 434	AST
DH 600	AST
FS 898	AST
GI 998	AST
CS 510	MO SPILLS
D 37	MO Drycleaners
61	Hist. Auto
69	Hist. Auto; Hist. Auto
74	Hist. Auto; Hist Cleaner; Hist. Auto; Hist. Auto; Hist. Auto; Hist. Auto
88	Hist. Auto; Hist. Auto; Hist. Auto
93	Spills
95	Hist. Auto; UST; LUST; Spills; RCRA LQG/RAATS
99	LUST; UST
101	Spills
102	Spills
103	MO VCP; MO SMARS
106	LUST; UST
108	Hist Auto; LUST; UST; LUST; Hist Auto; Hist Cleaner
109	Hist Auto; Hist Auto; Hist Auto; Hist Auto; Hist Auto
112	Hist. Auto
114	Hist. Auto
117	Spills
118	LUST; UST
119	Hist. Auto
122	Hist. Auto
123	MO Drycleaners; Hist. Cleaner; Hist. Cleaner; Hist. Cleaner; Hist. Auto
127	Hist. Cleaner
136	LUST; Spills; LUST; UST; Spills
138	Hist. Cleaner
142	Hist. Auto
148	Hist. Auto; Hist. Auto; Hist. Auto; Hist. Auto
150	Hist. Cleaner; Hist. Auto; Hist. Cleaner; Hist. Cleaner; Hist. Cleaner;
	Hist. Auto
156	Hist Auto; Hist Auto; Hist Cleaner; Hist Auto; Hist Cleaner; Hist Auto;
	Hist Auto; LUST/UST; UST; Hist Auto; Spills; Hist Cleaner; Hist
	Cleaner; Hist Cleaner; Hist Cleaner; Hist Auto; Hist Auto; UST/LUST;
	Hist Auto; Spills; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Auto
167	Spills
170	Hist. Cleaner; Hist. Cleaner
1/2	
174	Hist. Auto; Hist. Cleaner; Hist. Cleaner; Hist. Cleaner; Hist. Cleaner;
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TABLE 1 – List of Medium to High Risk Sites Within 1 ½ Blocks of Build Alternative

186	Hist. Auto
187	UST
189	Hist Auto; Hist Auto; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Auto; Hist Auto; Hist Auto; Hist Auto; Hist Auto; Hist Auto; Hist Auto; Hist Auto; Hist Cleaner; Hist Cleaner; Hist Cleaner; UST
193	Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Auto; Hist Auto; Hist Auto
196	Spills; Spills
200	Hist. Auto
208	Hist. Auto
209	UST
212	Spills
213	Hist Auto; Hist Auto; Hist Auto; Hist Auto; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Spills; Spills; Hist Auto
216	Hist Cleaner; Hist Auto; Hist Cleaner; Hist Auto; Hist Auto; Hist Auto; Hist Auto; Hist Cleaner; Hist Auto; Hist Auto; Hist Auto; LUST/UST; Hist Auto; Hist Auto; Hist Auto; Hist Cleaner; HIst Cleaner
217	Hist. Auto
224	AST; Hist. Auto; Spills; LUST; UST; Spills
225	Hist Auto; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Auto;
228	Hist Cleaner; Dry Cleaners; UST; Hist Auto; Hist Auto; Spills; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Auto; Hist Auto; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Auto; Spills; Hist Auto; LUST; Spills; LUST; UST; Hist Cleaner; Hist Cleaner; Hist Auto
237	Hist. Auto
238	UST
239	Hist Cleaner; Hist Cleaner; Hist Cleaner; Spills; UST; Hist Auto
242	Hist Cleaner; Dry Cleaners; Hist Cleaner
243	Hist Auto
248	Hist Auto
249	Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Auto; Hist Auto; Hist Cleaner; Hist Cleaner; Hist Auto; Hist Auto; Dry Cleaners; Hist Cleaner; Hist Cleaner; Hist Cleaner; Hist Cleaner
266	Hist Auto; Spills; UST; LUST; UST
273	Dry Cleaners; Hist Auto
279	Hist Cleaner; Hist Auto; Hist Auto; LUST; Hist Auto; LUST; UST; Hist Cleaner; Hist Auto; Hist Auto
283	Hist. Cleaner
287	Hist. Cleaner
289	Hist. Auto; Hist. Auto
292	Spills; Hist. Auto
295	Hist. Auto; Spills; Hist. Auto; UST; LUST

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300	Hist Auto; Hist Auto; Hist Auto
302	LUST; UST
303	Hist Cleaner; UST; LUST; Hist Cleaners; UST; LUST; Spills; Hist Auto;
	Hist Cleaner; UST; LUST
305	UST
310	Spills
317	Hist Auto; Hist Auto; Hist Auto; Hist Cleaner; Hist Cleaner
319	Hist. Auto
330	Spills
333	Hist Auto; Hist Auto; Hist Auto; UST
358	UST; LUST; Spills
359	UST; Hist. Auto
362	Spills; Hist Auto; Hist Auto; UST/LUST/MO VCP/MO SMARS; Hist
	Auto; Spills
366	MO VCP/MO SMARS
368	Hist Auto; Hist Auto; Hist Auto; Hist Cleaner; Hist Cleaner; Hist Cleaner;
	Hist Auto; LUST; UST; Spills; Hist Cleaners; Dry Cleaners

UST = Underground Storage Tank(s) LUST = Leaking Underground Storage Tank(s) RCRA LGQ = Large Quanity Hazardous Waste Generator RAATS = Enforcement Actions Issued Under Hazardous Waste Regulations MO VCP = Missouri Volunteer Cleanup Program MO SMARS = A Database That Currently Houses Information for Superfund, Federal Facility, Brownfields Voluntary Cleanup Program Program and Missouri's Other State Response Programs

Figures







