

**MODIFIED ENVIRONMENTAL SITE ASSESSMENT
FOR THE
VALLEY HIGHWAY EIS
DENVER, COLORADO**

Prepared for:

Federal Highway Administration
Colorado Department of Transportation

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TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION AND BACKGROUND	1-1
1.1 <i>Purpose</i>	1-1
1.2 <i>Limitations</i>	1-3
1.3 <i>Methodology</i>	1-3
1.4 <i>Project Description</i>	1-10
1.5 <i>Environmental Setting</i>	1-11
2.0 SITE RECONNAISSANCE.....	2-1
2.1 <i>I-25 Mainline</i>	2-2
2.2 <i>6th Avenue</i>	2-6
2.3 <i>Santa Fe Drive and Kalamath Street</i>	2-9
3.0 HISTORICAL USE INFORMATION	3-1
3.1 <i>Project Area History</i>	3-2
4.0 DATABASE SCREENING AND SITE RANKING	4-1
5.0 AGENCY RECORDS AND INTERVIEWS	5-1
5.1 <i>I-25 Mainline</i>	5-2
5.2 <i>6th Avenue</i>	5-10
5.3 <i>Santa Fe Drive and Kalamath Street</i>	5-12
6.0 FINDINGS & RECOMMENDATIONS	6-1
6.1 <i>Findings</i>	6-1
6.2 <i>Recommendations</i>	6-2
7.0 REFERENCES	7-1
8.0 SIGNATURES AND QUALIFICATIONS	8-1
 APPENDIX A PHOTO LOG	
 APPENDIX B EDR DATABASE	

LIST OF FIGURES

	<u>Page</u>
Figure 1 Project Footprint	1-2
Figure 2 Historic Landfills and Fill Areas	3-5
Figure 3 Hazardous Sites Screening	4-2
Figure 4A Sites with Environmental Conditions – Northern Project Area	5-3
Figure 4B Sites with Environmental Conditions – Central Project Area.....	5-4
Figure 4C Sites with Environmental Conditions – Southern Project Area.....	5-5

LIST OF TABLES

	<u>Page</u>
Table 1 Summary of Limited Site Reconnaissance Activities	1-5
Table 2 Summary of Historical Records Reviewed	1-6
Table 3 Database Description and Approximate Minimum Search Distances	1-6
Table 4 Detailed Review Site Evaluation Matrix.....	1-9
Table 5 Sites with Potential Environmental Conditions Identified During the Site Reconnaissance.....	2-1
Table 6 Sites with Potential Environmental Conditions Identified During the Historical Review	3-1
Table 7 Summary of Historic Fill and Landfill Areas.....	3-4
Table 8 Selection of Sites for Detailed Review	4-3
Table 9 Summary of ERNS Sites	5-2
Table 10 Summary of Sites with Potential and Recognized Environmental Conditions.....	6-4

LIST OF ABBREVIATED TERMS

A	amsl	above mean sea level
	AST	aboveground storage tank
	ASTM	American Society for Testing and Materials
	AT&SF	Atchison, Topeka & Santa Fe Railroad
B	BNSF	Burlington Northern and Santa Fe Railroad
	BTEX	benzene, toluene, ethylbenzene, and xylenes
C	C&S	Colorado & Southern Railroad
	CCD	City and County of Denver
	CDOT	Colorado Department of Transportation
	CDPHE	Colorado Department of Public Health and Environment
	CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
	CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
	CORRACTS	RCRA corrective action
D	D&NO	Denver and New Orleans Railroad
	DEH	Department of Environmental Health, City and County of Denver
	DRS	Denver Radium Site
	D&RG	Denver & Rio Grande Railroad
	DSP&P	Denver South Park and Pacific Railway
	DDT	dichlorodiphenyltrichloroethane
E	EDR	Environmental Data Resources
	EIS	Environmental Impact Statement
	EPA	U.S. Environmental Protection Agency
	ERNS	Emergency Response Notification System
F	FHWA	Federal Highway Administration
	FHU	Felsburg Holt & Ullevig
	FINDS	Facility Index System
	ft	feet
I	I-25	Interstate 25
	ISA	initial site assessment
L	LUST	leaking underground storage tank
	LF	landfill

LIST OF ABBREVIATED TERMS

M	MESA	Modified Environmental Site Assessment
	µg/l	micrograms per liter
	mg/L	milligrams per liter
N	NEPA	National Environmental Policy Act
	NFRAP	no further remedial action planned
	NPL	National Priority List
O	OPS	Colorado Department of Labor and Employment Division of Oil and Public Safety
	OU	operable unit
P	PCB	polychlorinated biphenyl
	pCi/L	picocuries per liter
	ppb	parts per billion
	ppm	parts per million
R	RCRA	Resource Conservation and Recovery Act
	RCRIS	Resource Conservation and Recovery Information System
	RI/FS	remedial investigation/feasibility study
	RTD	Regional Transportation District
S	SWF	solid waste disposal site
T	TCE	trichloroethene (also called trichloroethylene)
	TEPH	total extractable petroleum hydrocarbons
	TPH	total petroleum hydrocarbons
	T-REX	Transportation Expansion Project
	TSD	treatment, storage, or disposal facility
U	UPRR	Union Pacific Railroad
	US 6	US Highway 6 / 6 th Avenue
	USGS	United States Department of Interior Geological Survey
	USPS	United States Postal Service
	UST	underground storage tank
V	VCUP	CDPHE Voluntary Clean-up Program
	VOCs	volatile organic compounds
Y	yds ³	cubic yards

1.0 INTRODUCTION AND BACKGROUND

Felsburg Holt & Ullevig (FHU), acting on behalf of the Colorado Department of Transportation (CDOT), conducted a Modified Environmental Site Assessment (MESA) for the Valley Highway Project. The Federal Highway Administration (FHWA), in cooperation with CDOT, is preparing an Environmental Impact Statement (EIS) for the Valley Highway Project. This MESA was performed in support of the EIS.

A methodology was prepared for this MESA based on the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments E1527-00 (ASTM, 2000), CDOT Modified Environmental Site Assessment Guidance (CDOT, February 2000), and through consultation with CDOT and the Colorado Department of Public Health and Environment (CDPHE) (CDOT, 2003a).

The Valley Highway Project includes potential improvements to portions of Interstate 25 (I-25, the Valley Highway), US 6 (6th Avenue), and to Santa Fe Drive and Kalamath Street in the vicinity of Alameda Avenue in south-central Denver. **Figure 1** depicts the project footprint.

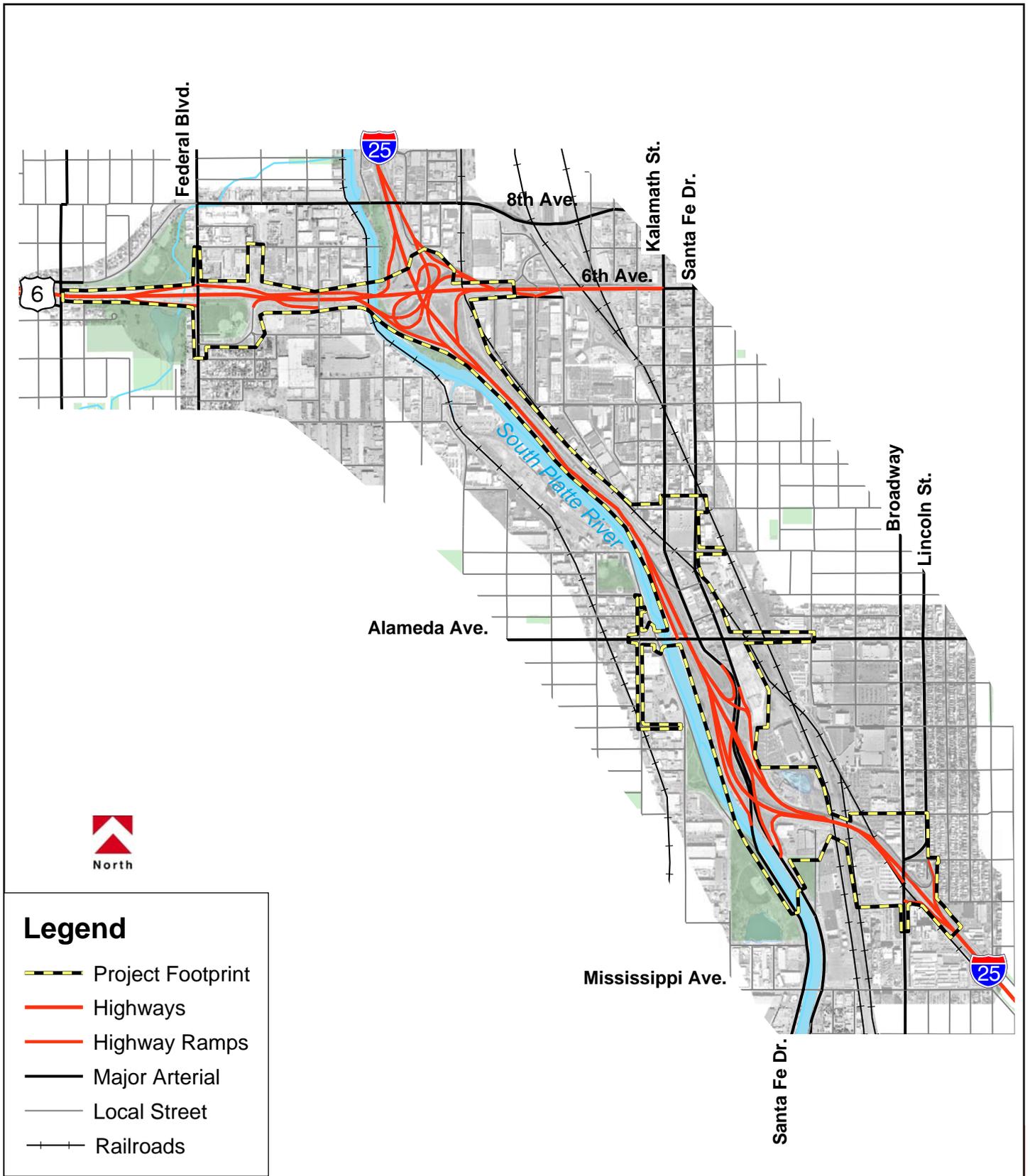
1.1 Purpose

This MESA identifies **potential** and **recognized environmental conditions** associated with the project footprint. The terms **potential** and **recognized environmental conditions** are defined in **Section 1.3.1**.

This MESA has been prepared with a level of detail appropriate for development and screening of design alternatives for the Valley Highway Project EIS. It is anticipated that additional assessment and/or field investigations will be required in support of:

- Project alternative feasibility
- Project design
- Right-of-way acquisition
- Development of specific materials management or institutional controls required during construction

The goal of this MESA is to provide information needed for planning efforts related to hazardous materials and contaminated sites. These planning efforts include right-of-way acquisition costs and property appraisals, the option for owner funded site remediation prior to CDOT acquisition, property avoidance evaluation, and planning for engineering options to minimize the necessary remediation and treatment of residual hazardous materials. Recommendations regarding additional assessment and investigation are provided in **Chapter 6.0**.



Valley Highway, 02-069, 01/12/2004

Project Footprint

Figure 1

1.2 Limitations

This MESA report was prepared for CDOT for their sole use and reliance. Reliance on this report by any other person(s) or entity(ies) is strictly at their own risk, and FHU makes no warranties to person(s) or entity(ies) other than CDOT who use the information provided in this report.

This work has been performed for the sole purpose of assisting in the evaluation of **potential** and **recognized environmental conditions** associated with the Valley Highway Project footprint. The findings presented herein are based upon observation of current project footprint conditions and a review of reasonably ascertainable standard record resources. This MESA includes a review of previously performed work to identify **potential** and **recognized environmental conditions** associated with the project footprint. The conclusions presented herein are not necessarily indicative of future conditions or operating practices in the project footprint area.

The findings and recommendations of this MESA must be viewed in recognition of certain limiting conditions. The scope of work commissioned for this project does not represent an exhaustive study, but rather a reasonable inquiry, consistent with good commercial practice, in general accordance with ASTM Practice E1527-00 and CDOT guidance. Modifications to the ASTM methodology are presented in **Section 1.3**.

In the course of this assessment, FHU has relied on information provided by outside parties, such as regulatory agencies and interview sources. FHU has made no independent investigations as to the validity, completeness, or accuracy of such information provided by third party sources. For the purposes of this MESA, such third party information is assumed to be accurate unless contradictory evidence is noted. FHU does not express or imply any warranty regarding information provided by third party sources. This MESA report makes no representation that no environmental contamination exists within the project footprint beyond that described in this report.

1.3 Methodology

The methodology for this MESA included the following steps:

- Step 1:** Performance of a limited site reconnaissance, “windshield survey,” of sites within the project area readily identifiable site activities
- Step 2:** Review of readily available documents identifying historical uses of the sites associated within the project area
- Step 3:** Review of readily available local, state, and federal environmental agency databases within a maximum distance of one mile of the centerline of the Valley Highway Project footprint of the combined alternatives as dictated by the CDOT guidance and ASTM Standard E1527-00
- Step 4:** Screening of sites identified in the local, state, and federal environmental agency databases by distance and estimated groundwater flow

- Step 5:** Ranking of sites identified in the local, state, and federal environmental agency databases based on known environmental site conditions
- Step 6:** Review of previous CDOT investigations and other available records from local, state, and federal agency records for sites within the project area
- Step 7:** Interviews of relevant agency and regulatory staff regarding the potential for historical releases of hazardous substances or petroleum products on sites associated within the project area
- Step 8:** Identification of sites requiring additional evaluation or investigation to assist in right-of-way acquisition, project alternative feasibility assessment, project design, and specific-materials management or institutional controls required during construction

Each of these steps is described briefly below.

1.3.1 Site Reconnaissance

The objective of the site reconnaissance was to assess environmental conditions in connection with sites located within and adjacent to [within 100 feet (ft) of] the Valley Highway Project footprint. Due to the size of the project footprint and site access issues, individual sites located within the project footprint were not physically inspected during the site reconnaissance. To differentiate between sites with known and potential soil or groundwater contamination, two terms have been used to identify sites associated with the Valley Highway Project footprint: sites with **potential** and **recognized environmental conditions**.

ASTM defines **recognized environmental conditions** as “the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property” (ASTM, 2000). Due to the limitations and nature of this MESA, the term **potential environmental condition** has been used to identify properties where recognized conditions may be present but could not be confirmed without additional inspection or investigation, which was beyond the scope of this MESA.

Recognized environmental conditions do not include de minimis conditions. ASTM defines these as “conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.”

To obtain information indicating environmental conditions on the sites, a limited site reconnaissance was conducted. The limited site reconnaissance consisted of a “windshield survey” of sites within and adjacent to the Valley Highway Project footprint. The limited site reconnaissance focused on visual areas of chemical and petroleum usage, storage, and discharges. Limited site reconnaissance activities are summarized in **Table 1**.

Table 1 *Summary of Limited Site Reconnaissance Activities*

Project Footprint Segment	Date Site Reconnaissance Conducted	Conducted By
Santa Fe/Kalamath	October 23, 2003	K. Maddoux, T. Gjelsteen
Santa Fe/Kalamath	November 4, 2003	K. Maddoux, T. Gjelsteen
I-25 Mainline and 6th Avenue	November 18, 2003	K. Maddoux
I-25 Mainline and Santa Fe/Kalamath	November 30, 2003	K. Maddoux
6th Avenue, I-25 Mainline, and Santa Fe/Kalamath	December 3, 2003	K. Maddoux

Due to the nature of the project footprint, several modifications to the ASTM methodology for a site reconnaissance were necessary as a result of access limitations. Observation of sites within and adjacent to the project footprint was limited due to fenced areas, buildings, and access restrictions. A visual inspection of sites within and adjacent to the project footprint was conducted from public right-of-way, such as I-25, Broadway, Lincoln Street, Cherokee Street, Santa Fe Drive, Kalamath Street, Lipan Street, Bryant Street, Virginia Avenue, Bayaud Avenue, 5th Avenue, 6th Avenue, and 7th Avenue. The interior of buildings, fenced areas, and rear lots (alley side portion of each site) were not inspected during the site reconnaissance.

1.3.2 Historical Document Review

FHU researched a variety of historical data resources. Historical resources can include fire insurance maps, aerial photographs, city directories, United States Geological Survey (USGS) historical topographic maps, historical society records, site transfer files (city or county clerk filings), museum holdings, or information held in private collections. FHU utilized Sanborn Fire Insurance Company maps, historical USGS topographical maps, and aerial photographs to identify historical land use in the project footprint area. **Table 2** summarizes the historical records reviewed.

Historical fire insurance maps produced by private companies are often valuable tools in investigating previous site uses. Such maps have been produced for over 100 years and indicate site use and locations of various facilities at specified dates.

USGS topographic maps have been prepared since the 1800s as part of the USGS' mission to map the United States and survey its resources. The topographic maps show prominent and cultural features. These resources are useful in identifying topographic and cultural features and site development over a period of time.

Aerial photographs have been collected for the continental United States since the mid-1930s, with variable coverage and frequency (generally based upon an area's importance to national defense). Aerial photographs offer an opportunity for direct observation of site conditions through a period of time. These observations may include the locations of tanks, drums, pits, ponds, lagoons, stained/stressed vegetation, or other site development features that can indicate environmental conditions.

Table 2 Summary of Historical Records Reviewed

Historical Record	Years Reviewed
Sanborn Fire Insurance Company Maps	1890, 1893, 1903, 1929, 1950, 1951, 1967, 1974
USGS Topographic Maps	1965, 1971, 1980, 1994
Aerial Photographs ¹	1927, 1937, 1948, 1956, 1962, 1963, 1975, 1977, 1984, 1993

Note:

- (1) Aerial photographs were reviewed at the Denver Public Library Western History Collection and obtained from a private contractor.

1.3.3 Agency Database Review

FHU contracted Environmental Data Resources, Inc. (EDR) to conduct a review of local, state, and federal database records for information relating to the project footprint. The approximate minimum search distance for each database is identified in **Table 3**. The approximate minimum search distance was performed according to ASTM Standard E1527-00 unless expanded according to CDOT guidance. The CDOT approximate minimum search distance is equivalent to or more stringent than the ASTM approximate minimum search distance.

Table 3 Database Description and Approximate Minimum Search Distances

Database	ASTM Approximate Minimum Search Distance (mile)	CDOT Approximate Minimum Search Distance (mile)	Radius Searched (mile)
Federal National Priorities List (NPL) EPA's database of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund Program.	1.0	1.0	1.0
Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Compilation by the EPA of sites at which the potential exists for contamination originating from on-site hazardous substance storage or disposal. Sites designated as "NFRAP" indicate that No Further Remedial Action is Planned.	0.5	1.0	1.0
Federal Resource Conservation and Recovery Act (RCRA) treatment, storage, or disposal (TSD) facilities RCRA permitted TSD facilities	1.0	1.0	1.0
Federal Resource Conservation and Recovery Information System (RCRIS) Facilities that are regulated based on current hazardous waste generation management activities.	Site and Adjoining Properties	0.25	0.25

Table 3 Database Description and Approximate Minimum Search Distances (Continued)

Database	ASTM Approximate Minimum Search Distance (mile)	CDOT Approximate Minimum Search Distance (mile)	Radius Searched (mile)
Federal RCRA Corrective Action (CORRACTS) facilities Sites identified as needing Corrective Action after a release of a hazardous waste or constituent into the environment from a RCRA facility.	1.0	--	1.0
Federal/State Emergency Response Notification System (ERNS) List Database of public complaints and reports of unverified releases or incidents.	Site	0.25	0.25
State Voluntary Cleanup Programs (VCUP) sites Sites being addressed under the Colorado Department of Public Health and Environment (CDPHE) Voluntary Cleanup Program (VCUP).	1.0	1.0	1.0
State Solid Waste Disposal (SWF) and/or Landfill (LF) sites Inventory of solid waste and landfill facilities.	0.5	1.0	1.0
State Historical Landfills sites Inactive landfill sites (including sites known to generate methane) and illegal dump sites.	0.5	1.0	1.0
State Above Ground Storage Tank (AST)/Underground Storage Tank (UST) List of sites that registered the presence of ASTs/USTs with the Colorado Department of Labor and Employment Division of Oil and Public Safety (OPS)	Site and Adjoining Properties	0.25	0.25
State Leaking Underground Storage Tanks (LUST) List of closed or unremediated reported LUSTs.	0.5	1.0	1.0

Source: ASTM, 2000 and CDOT, February 2000

Note: Colorado Division of Natural Resources Office of Water Resources Registered Well database not searched (CDOT, 2003a).

1.3.4 Database Screening Methodology and Site Ranking Criteria

Sites identified within the radii searched for the local, state, and federal environmental databases were screened to determine if they were likely to have had an adverse impact on the Valley Highway Project footprint. The initial screening process consisted of two criteria, distance from the project footprint (within 1,000 ft of the project footprint) and expected direction of groundwater flow.

Groundwater flow direction for the segments of the project footprint located east of the South Platte River is expected to be toward the north/northwest. Groundwater flow direction for the segments of the project footprint located west of the South Platte River is expected to be toward the north/northeast. However, bedrock topography, recharge and discharge areas, soil and bedrock heterogeneity, paleochannels, and proximity to water pumping wells can locally influence groundwater flow direction. While confirmation of the direction of groundwater flow within the project footprint is beyond the scope of this MESA, the general direction of groundwater flow is useful in the screening process.

Sites that were located downgradient, separated by a hydraulic barrier from the project footprint (i.e. South Platte River) or greater than 1,000 ft from the project footprint were judged relatively unlikely to have impacted the study corridor. Sites that were located within 1,000 ft from the project footprint and potentially upgradient or cross-gradient to the project footprint were ranked based on the possibility of an environmental condition. Sites potentially upgradient or cross-gradient and located greater than 1,000 ft from the project footprint were reviewed to identify **potential environmental conditions**. Sites with a high possibility to have impacted the project footprint were included in the ranking process described below.

Following the initial screening process, the sites identified during the site reconnaissance, historical documents, and the review of agency databases were ranked and screened to assess the need for further evaluation. The environmental condition ranking consisted of the following:

- Low:** Sites with minimal indications of an existing release, past release, or material threat of a release of any hazardous substances or petroleum products into the ground (soil), groundwater, or surface water. Examples include residential sites or commercial sites with activities that do not require the use of hazardous substances or petroleum products (>55 gallons/year), Resource Conservation and Recovery Information System (RCRIS) database hazardous waste generators with no reported violations, facilities with above ground/underground storage tanks (ASTs/USTs) with no reported leaks or spills, and sites reported on the Facility Index System (FINDS).
- Medium:** Sites with moderate indications of an existing release, past release, or material threat of a release of any hazardous substances or petroleum products into the ground (soil), groundwater, or surface water. Examples include, RCRIS database hazardous waste generators with reported violations, sites reported on the Emergency Response Notification System (ERNS) list, and facilities with leaking underground storage tanks (LUSTs).

In addition to agency records, previous environmental contaminant investigations conducted for CDOT in the project footprint area were reviewed. These investigations include:

- An initial screening investigation of the project corridor, including limited groundwater sampling from geotechnical borings
- Detailed investigations and contaminated material management planning for the I-25/Broadway Viaduct Replacement Project
- Investigations performed for the Transportation Expansion Project (T-REX) (formerly Southeast Corridor) Project, which begins immediately south of the Valley Highway Project

For this report, the results of these investigations were reviewed and relevant information summarized as appropriate. References cited for this report are listed in **Chapter 7.0**. FHU also conducted interviews with CDOT, CDPHE, City and County of Denver, DEH, and Regional Transportation District (RTD) staff when possible. Interviews can include pertinent information that is not otherwise provided in publicly available databases.

1.4 Project Description

The project footprint includes an approximately 2.4 mile segment of the I-25 mainline, an approximately 1.2 mile segment of 6th Avenue, and improvements to sections of Santa Fe Drive, Kalamath Street, Alameda Avenue, Lipan Street, and Virginia Avenue. The project footprint has been divided into smaller project segments consisting of improvements to the I-25 Mainline, 6th Avenue, Santa Fe Drive, and Kalamath Street. The Santa Fe Drive and Kalamath Street project footprint includes improvements to Alameda Avenue, Lipan Street, and Virginia Avenue.

1.4.1 I-25 Mainline

Improvements to the I-25 Mainline extend from Logan Street in the south to 6th Avenue in the north. The I-25 Mainline project footprint includes improvements to the Broadway/Lincoln Street, Santa Fe Drive, and Alameda Avenue interchanges along I-25.

1.4.2 6th Avenue

Improvements to 6th Avenue extend from Quivas Street in the east to Knox Court in the west. The 6th Avenue project footprint includes improvements to the I-25, Bryant Street, and Federal Boulevard interchanges.

1.4.3 Santa Fe Drive and Kalamath Street

Improvements to Santa Fe Drive and Kalamath Street extend from I-25 in the south to Ellsworth Avenue in the north. The Santa Fe Drive and Kalamath Street project footprint includes improvements along Alameda Avenue extending from Cherokee Street in the east to Lipan Street in the west, along Lipan Street from Cedar Avenue in the north to Virginia Avenue in the south, and along Virginia Avenue from Lipan Street to South Platte River Drive in the east.

1.5 *Environmental Setting*

The project is located in the City and County of Denver along the Front Range of the Rocky Mountains in central Colorado. The local climate is semi-arid with low relative humidity, low precipitation, and high evaporation. The topography of the project footprint area is a broadly rolling river valley with local scarps present where resistant bedrock outcrops from the alluvium. The project footprint is located in the South Platte River drainage and is paralleled by the South Platte River along the I-25 Mainline, which flows to the north. The South Platte River is located approximately 10 ft to 50 ft below the surrounding topography. Elevations within the project area range from approximately 5,300 ft above mean sea level (amsl) to approximately 5,200 ft amsl.

1.5.1 **Geology**

Surficial geology along the South Platte River floodplain consists of alluvial deposits comprised of sand, gravel, silt, and clay. Surficial deposits, outside of the floodplain, generally contain Quaternary-aged (Pleistocene) loess, which is composed of non-striated, clayey sandy silt. These deposits are frequently less than 15 ft thick. Alluvial material in the project footprint area consists of channel, floodplain, and terrace deposits ranging in grain size from clay, silt, and sand to coarse (up to six-inch diameter) clasts. A layer of coarse pebbles and gravel, commonly several feet thick, often occurs at the base of the alluvial sequence at the bedrock surface. However, much of I-25 (particularly at the interchanges) is constructed on artificial fill ranging in thickness from five to 40 ft. This artificial fill is composed of varying amounts of clay, silt, sand, gravel, and debris, including concrete, brick, wood, vegetation, and trash (USGS, 1978; USGS, 1980). Historical fill and landfill areas are further discussed in **Chapter 3.0**.

The project footprint is underlain by the Denver Basin. The Denver Basin is a major north-south trending structural basin containing sediments ranging in age from late Pennsylvanian through Quaternary. The sediments are comprised of geologic units that include the Piney Creek, Post-Piney Creek, and Broadway Alluvium and the Denver formations.

The Piney Creek Alluvium consists of light gray to dark grayish-brown, humic, slightly calcareous sandy silt and clay overlying non-calcareous clean to silty pebbly sand interbedded with sandy silt and is approximately 18 ft to 25 ft thick along the South Platte River. The Post-Piney Creek Alluvium consists of light gray to light brown, non-calcareous, clean to slightly silty pebbly sand interbedded with sand silt and with a thickness of approximately three to 20 ft. The Broadway Alluvium is composed of light brown, non-calcareous, clean to slightly silty pebbly sand interbedded with sandy silt to silty sand along the South Platte River in central Denver, where it forms terraces approximately 18 ft to 30 ft thick.

The Denver Formation, of late Cretaceous and early Paleocene age, is present beneath alluvial materials and/or fill materials at depths of 10 ft to 60 ft. The bedrock consists of yellowish brown to grayish olive tuffaceous claystones, mudstones, and sandstones interbedded with scattered lenticular conglomerates (Ballofet-Entranco, 2001a).

1.5.2 Groundwater

Groundwater in the South Platte River valley generally flows in a northerly direction, parallel to the general direction of the surface flow of the South Platte River. However, studies have also shown a possible relationship between the water table elevation and the bedrock surface elevation. Local groundwater conditions may be significantly influenced by the position of underlying valleys and paleochannels within the bedrock surface.

Shallow groundwater in the eastern portion of the project footprint (east of the South Platte River) is approximately 20 ft below ground surface (bgs) and decreases in depth toward the South Platte River (USGS, 1996). Shallow groundwater in the vicinity of Federal Boulevard in the western portion of the project footprint is approximately 40 ft bgs and decreases in depth toward the South Platte River (USGS, 1996). The saturated thickness of the shallow groundwater aquifer is less than 20 ft throughout the project footprint except in the vicinity of Broadway (USGS, 1996). East of Broadway the saturated thickness is 20 to 40 ft (USGS, 1996).

The uppermost bedrock aquifer underlying the project footprint is the Denver aquifer, which is formed by the saturated part of the Denver formation. The primary water-bearing zone of the Denver Formation consists of moderately consolidated sandstone and siltstone layers ranging in thickness from a few inches to 50 ft. Although the Denver Formation is an aquifer in some parts of the Denver area, the upper portion of the Denver Formation in the project footprint area generally forms a confining layer below the overlying alluvial materials and yields little water due to its low permeability, as compared to the overlying coarse-grained alluvial materials.

2.0 SITE RECONNAISSANCE

A “windshield survey” site reconnaissance of sites within and adjacent to (within 100 ft of the project footprint) was conducted in order to obtain information indicating sites with **potential and recognized environmental conditions**. The site reconnaissance was conducted for each segment of the Valley Highway Project footprint: I-25 Mainline, 6th Avenue, and Santa Fe Drive and Kalamath Street.

The limited site reconnaissance focused on visual areas of chemical and petroleum usage and storage to identify sites with **potential environmental conditions**. Information related to known releases at sites within or adjacent to the project footprint and **recognized environmental conditions** is discussed in **Chapter 5.0**. Sites with **potential environmental conditions** that were identified during the site reconnaissance are identified in **Table 5**. Photographs taken during the site inspection are included in **Appendix A**.

Table 5 Sites with Potential Environmental Conditions Identified During the Site Reconnaissance

EDR Site I.D.	Site Name and Address	Description
<i>I-25 Mainline Project Footprint</i>		
199	US Welding 600 S. Santa Fe Drive	USTs and ASTs. No leaks or spills reported. Unknown material handling and disposal practices.
NA	Consolidated Main Line Railroad tracks parallels I-25 from Ellsworth to 6th Avenue	No leaks or spills reported. Impacts to soil and groundwater along the railroad corridor due to undocumented events and an accumulation of drips, leaks, spills and hydrocarbon exhaust residue over time.
NA	El Rey Distributing 50 Rio Grande Boulevard	Fenced yard with a variety of vehicles, heavy equipment, and materials stored. No leaks or spills reported. Unknown site conditions.
115	Calaham Construction 95 Rio Grande Boulevard	FINDS. RCRA Small Quantity Generator - no violations reported. Fenced yard with a variety of vehicles, heavy equipment, and materials stored. No leaks or spills reported. Unknown site conditions.
115	Egli Jim & Co. 115 Rio Grande Boulevard	UST permanently closed at property. No leaks or spills reported. Unknown site conditions.
101	Water Systems 285 Rio Grande Boulevard	FINDS. RCRA Small Quantity Generator - no violations reported. USTs permanently closed at property. No leaks or spills reported. Unknown site conditions.
<i>6th Avenue Project Footprint</i>		
NA	Proctor Production 501 Raritan Way	USTs permanently closed at property. No leaks or spills reported. Unknown site conditions.
81	Phillips 66 510 Bryant Street	USTs currently in use at property. No leaks or spills reported. Unknown site conditions (located adjacent to a LUST site).
86	Phillips 66 438 Federal Boulevard	USTs currently in use at property. No leaks or spills reported. Unknown site conditions (located adjacent to a LUST site).
NA	Denver Public Schools Hilltop Bus Terminal 2800/2929 W. 7th Ave.	USTs. No leaks or spills reported. Unknown material handling and disposal practices.

Table 5 Sites with Potential Environmental Conditions Identified During the Site Reconnaissance (continued)

EDR Site I.D.	Site Name and Address	Description
Santa Fe/Kalamath Project Footprint		
NA	Del Rio 215 S. Santa Fe Dr.	Fenced yard with a variety of vehicles, heavy equipment, and materials stored. No leaks or spills reported. Unknown site conditions.
146	Raul's Auto Trim/Caravea Auto Body 268 S. Santa Fe Drive	FINDS. No leaks or spills reported. Unknown material handling and disposal practices.
146	Heavenly Daze 208 S. Kalamath Street	FINDS. RCRA Small Quantity Generator - no violations reported. USTs permanently closed at property. No leaks or spills reported. Unknown site conditions.
NA	Dyer Auto Electric Inc. 331 S. Lipan Street	Fenced yard with a variety of vehicles, heavy equipment, and materials stored. No leaks or spills reported. Unknown site conditions.
168	Duffy Crane and Hauling 389 S. Lipan Street	FINDS. RCRA Small Quantity Generator - no violations reported. UST. Fenced yard with a variety of vehicles, heavy equipment, electrical transformers, and materials stored. No leaks or spills reported. Unknown site conditions.

NA Not Applicable

The following sections discuss the findings of the site reconnaissance. The site reconnaissance findings are summarized by footprint segment and by area within each segment. For each area in each footprint segment, the sites within and adjacent to the project footprint are presented and followed by a discussion on relevant sites and conditions related to those sites. Sites with identified environmental conditions were listed in the database search unless specifically noted as otherwise.

2.1 I-25 Mainline

The I-25 Mainline segment of the project footprint consists of I-25 from Logan Street in the south to 6th Avenue in the north. Sites located within and adjacent to the I-25 Mainline project footprint were included in the site reconnaissance. The I-25 Mainline project footprint extends to 6th Avenue from the West Washington Park and Platt Park residential neighborhoods near Logan Street through a commercial/industrial area that extends from Broadway to 6th Avenue along I-25. The South Platte River parallels the I-25 Mainline from Santa Fe Drive to 6th Avenue. The site reconnaissance was conducted from south to north. Sites along the I-25 Mainline footprint from the 500 block of Santa Fe Drive to Ellsworth Avenue and along Alameda Avenue, Lipan Street, and Virginia Avenue are discussed in **Section 2.3**.

At the time of the site reconnaissance, the southern portion of the project footprint from Logan Street to Broadway was under construction as part of T-REX and improvements to the Broadway Viaduct. As part of T-REX, a double track light-rail flyover was installed from the RTD park-n-Ride station on Broadway along the south side of I-25, and I-25 was widened. The Broadway Viaduct improvements included reconstruction of the I-25 viaduct over Broadway and the Consolidated Main Line Railroad. The design and construction of the Broadway Viaduct was not part of T-REX or the Valley Highway EIS. Construction activities limited access to sites adjacent to I-25 in this interchange area.

A T-REX construction yard is located at 1001 S. Logan Street. An Enterprise Car Rental facility, which appears to have been a historical gasoline service station, was previously located at this site (Brown and Caldwell, 1998). The site is a closed LUST site, and two 3,000-gallon USTs for gasoline, one 4,000-gallon UST for gasoline, one 6,000-gallon UST for gasoline, and several 55-gallon drums of hazardous material were removed from the site in 2003 by T-REX. Centennial Wood Products, an active lumberyard, is located at 985 S. Logan St, which is north of the T-REX construction yard. No evidence of hazardous substances or petroleum products, such as stored 55-gallon drums of material, ASTs, or USTs were observed on the portions of these sites adjacent to public right-of-way.

A United States Postal Service (USPS) vehicle maintenance facility is located at 915 S. Logan Street and consists of a complex of brick buildings. One 2,000-gallon UST for waste oil and one 15,000 gallon UST for gasoline are registered with OPS at the site. This site is also a LUST site, which is further discussed in **Section 5.1**. FHU personnel were unable to access the site for further observation. Hazardous materials management, as related to vehicle maintenance, at the site is unknown. No evidence of hazardous substances or petroleum products, such as stored 55-gallon drums of material, ASTs, or USTs were observed on the portions of the site adjacent to public right-of-way. Visible observation was limited by a large fence.

The area surrounding the Broadway and I-25 interchange consists of predominantly industrial or commercial land use. Six residences are located along the 800 block of Lincoln Street between Ohio Avenue and I-25. The sites north of I-25 along Broadway consist of:

- Hurricane Drain, a sewer contractor, at 800 S. Broadway
- Reklaw Partners at 788 and 796 S. Broadway
- Iyengar Yoga Center at 770 S. Broadway
- Renal Care Group, a dialysis clinic, at 765 S. Broadway
- Performance Radiator, an automotive maintenance and supply company, at 755 S. Broadway
- A vacant commercial building (former Antique Restoration Studio) at 754 S. Broadway
- Griff's Burger Bar at 742 S. Broadway
- El Paso Import Company, a furniture retail store, at 723 S. Broadway
- Toyota and Lexus Service, an automotive maintenance facility, at 700 S. Broadway

According to OPS records, one 560-gallon UST for gasoline is permanently closed at 755 S. Broadway. At the time of the site reconnaissance, the site contained a large one-story brick with metal siding building. A garage bay door was visible on the south side of the building. This site is also a closed LUST site for a separate tank removal, which is further discussed in **Section 5.1**. Vehicle maintenance activities may have been conducted at the site; however, hazardous materials management at the site is unknown. No evidence of hazardous substances or petroleum products, such as stored 55-gallon drums of material, ASTs, or USTs were observed on the portions of the site adjacent to public right-of-way.

The sites south of I-25 and Broadway are owned by Cherokee Denver LLC and the Gates Rubber Company (Gates Corporation). The Gates Rubber Company site extends south from I-25 to Arizona Avenue and east from Broadway to I-25. Portions of the block between Arizona Avenue and Mississippi Avenue are also owned by Gates Rubber Company. The Gates Rubber Company site consists of several administrative buildings, a medical facility, warehouse, manufacturing facilities, and parking lots. The Gates Rubber Company site was rezoned to a transit-oriented mixed use site during the time of the site reconnaissance. The Gates Rubber Company moved to 1551 Wewatta Street in Lower Downtown Denver in October and November 2003. At the time of the site reconnaissance, the Gates Rubber Company site was being vacated. No evidence of hazardous substances or petroleum products, such as stored 55-gallon drums of material, ASTs, or USTs were observed on the portion of this site adjacent to public right-of-way during the site reconnaissance. Historical maintenance and manufacturing processes, including petroleum and hazardous material management, are unknown at this site. This site is further discussed in **Section 5.1**.

The Cherokee Denver LLC site extends south from I-25, excluding the RTD park-n-Ride facility, to Arizona Avenue and from Broadway west to Santa Fe Drive. The Cherokee Denver site consists of a series of manufacturing facilities, warehouses, and parking lots. At the time of the site inspection, the Cherokee Denver site was undergoing decommissioning and was vacant. The Cherokee Denver site, which includes Swis Tire and Automotive Service at 887 S. Broadway, is currently part of or is submitting an application for the CDPHE VCUP (see **Section 5.1**). No evidence of hazardous substances or petroleum products, such as stored 55-gallon drums of material, ASTs, or USTs were observed on the portions of the site adjacent to public right-of-way.

US Welding is located north of I-25 at 600 S. Santa Fe Drive. The US Welding site and the Stor-All Storage site appear to have been part of a larger former Union Carbide Facility. The US Welding site was fenced, and several administrative and industrial buildings were visible on the site. Several ASTs and pallets of containers also were present on the site. One 2,000-gallon AST for diesel is registered with OPS for the US Welding site. FHU personnel were unable to determine the contents of the ASTs or the containers. Hazardous materials management at the site is unknown. Based on the unknown conditions at this site, this is a site with **potential environmental conditions**.

Stor-All Storage is located north of I-25 at 698 S. Santa Fe Drive. The Stor-All Storage site consists of a multi-storied building with multiple individual storage units. No evidence of hazardous substances or petroleum products, such as stored 55-gallon drums of material, ASTs, or USTs were observed on the Stor-All site adjacent to public right-of-way during the site reconnaissance. This site is identified as Union Carbide in the database search. A LUST site is identified at 666 S. Santa Fe Drive, which appears to be an address for this site. The LUST information is presented in **Section 5.1**.

From approximately Ellsworth Avenue to 6th Avenue, the Consolidated Main Line railroad tracks parallel existing I-25. No evidence of potential soil and groundwater impacts were identified associated with the Consolidated Main Line railroad tracks during the site reconnaissance. However, impacts to soil and groundwater along the railroad corridor may exist due to undocumented events and an accumulation of drips, leaks, spills, and hydrocarbon exhaust residue over time. Based on the unknown conditions along the railroad corridor, this is a site with **potential environmental conditions**.

East of the Consolidated Main Line railroad tracks is an industrial/commercial area. Sites located east of the Consolidated Main Line railroad tracks along the I-25 Mainline include:

- Bulb Depot, a fluorescent light bulb, ballast, and fixture recycler, at 1030 W. Ellsworth Avenue
- Ace High Glass at 2 Lipan Street
- Commercial Testing Laboratories at 22 Lipan Street
- El Rey Distributing Company, a stucco manufacture and distributor, at 50 Rio Grande Boulevard
- Summit Brick & Tile Co, a brick, cast-stone, and tile distributor, at 70 Rio Grande Boulevard
- Mid-Continent Office Distributors, a wholesale office furniture distributor, at 90 Rio Grande Boulevard
- Calaham Construction at 95 Rio Grande Boulevard
- Egli Jim & Co, drywall equipment and supply distributor, at 115 Rio Grande Boulevard
- HBF Marble & Granite LLC, stone countertops manufacturer, at 123 Rio Grande Boulevard
- Tuff Shed, a portable building manufacturer, at 201 Rio Grande Boulevard
- Water Systems, a plumbing supply distributor, at 285 Rio Grande Boulevard
- Crawford Printing, a printing supply distributor, at 1480 W. 3rd Avenue
- QED, an electrical supply distributor, at 1661 W. 3rd Avenue
- Westburne Supply Inc., a plumbing and heating supply distributor, at 417 Quivas Street
- Chess Inc., computer service and repair, at 410 Raritan Way

The sites in this area consist primarily of brick, cinder-block, and/or masonry industrial warehouses. El Rey Distributing and Calaham Construction at 50 Rio Grande and 95 Rio Grande Boulevard, respectively, have fenced yards with a variety of vehicles, heavy equipment, and materials stored. FHU personnel were unable to access the site for further observation. Petroleum and hazardous materials management at these sites is unknown. Based on the unknown conditions at these sites, they are sites with **potential environmental conditions**. The El Rey Distributing facility is not identified in the database search.

According to OPS, one 1,000-gallon UST for gasoline is permanently closed at the 115 Rio Grande Boulevard site. One 15,000-gallon, two 2,000-gallon, four 8,000-gallon, and one 12,000-gallon USTs for hazardous substances are permanently closed at 285 Rio Grande Boulevard site. No leaks or spills related to these tanks were reported. No evidence of hazardous substances or petroleum products, such as stored 55-gallon drums of material, ASTs, or USTs were observed on the portions of the remaining sites adjacent to public right-of-way. Based on the unknown conditions at this site, these sites are sites with **potential environmental conditions**.

Although the General Chemical facility is located west of the South Platte River at 1271 W. Bayaud Ave and is not upgradient of the project footprint, a site reconnaissance was conducted to identify environmental conditions due to the possible relocation of the South Platte River bike trail from the eastern embankment to the western side of the South Platte River. The site is a

closed chemical manufacturing facility. Several cinder block and metal buildings, concrete foundations, piping, ASTs, and railroad tanks car were located on the site. FHU personnel were unable to access the site for further observation. Petroleum and hazardous materials management at these sites is unknown. Based on the unknown conditions at these sites, they are sites with **potential environmental conditions**. An application for the CDPHE VCUP has been submitted for the site and is further discussed in **Section 5.1**.

2.2 6th Avenue

The 6th Avenue segment of the project footprint consists of 6th Avenue from Quivas Street in the east to Knox Court in the west. Sites located within and adjacent to the 6th Avenue project footprint were included in the site reconnaissance. The 6th Avenue project footprint is located in a primarily commercial/industrial area from Lipan Street to Federal Boulevard. 6th Avenue crosses the Consolidated Main Line railroad tracks between the westbound 6th Avenue on-ramp from I-25 and Raritan Way. Barnum Park is located in the northwestern, southwestern, and southeastern quadrants of the Federal Boulevard and 6th Avenue interchange.

Near Federal Boulevard, the northern edge of the Valverde residential neighborhood is located south of 6th Avenue and the Villa Park and Barnum residential neighborhoods are located north and south of 6th Avenue near Knox Court, respectively. The site reconnaissance was conducted from east to west along 6th Avenue.

South of 6th Avenue between existing I-25 and Quivas Street is a commercial/industrial area, which included the following sites:

- Kenny Electrical Service, an electrical supply distributor, at 595 Quivas Street
- Crescent Electrical Supply Co., an electrical supply distributor, at 1780 W. 6th Avenue
- Proctor Production, a promotional display manufacturer and distributor, at 501 Raritan Way

The sites in this area consist primarily of brick, cinder-block, and/or masonry industrial warehouses. One 2,000-gallon UST is reportedly permanently closed at the 501 Raritan Way site. No leaks or spills were reported at this site. No evidence of hazardous substances or petroleum products, such as stored 55-gallon drums of material, ASTs, or USTs were observed on the portions of the remaining sites adjacent to public right-of-way. Based on the unknown conditions at this site, this is a site with **potential environmental conditions**.

The Sears & Roebuck Co retail outlet and distribution center is located at 1701 W. 6th Avenue, which is north of 6th Avenue between the Consolidated Main Line railroad tracks and Seminole Road. Due to the size of the facility and limited access, FHU personnel were unable to determine the presence or absence of hazardous substances or petroleum products on the site. The facility appeared to be a distribution center with approximately 20 semi and delivery trucks parked on the site at the time of the site reconnaissance. No evidence of hazardous substances or petroleum products, such as stored 55-gallon drums of material, ASTs, or USTs were observed on the portions of this site adjacent to public right-of-way. This site is located in the area of the 6th & Osage diesel groundwater plume, which is discussed in **Section 5.2**.

West of the Sears & Roebuck Co. site, between the Consolidated Main Line railroad tracks and I-25 is a series of industrial/commercial sites, which include:

- Excel, a warehouse, at 2040 W. 7th Avenue
- Lawrence Tool Co. at 2050 W. 7th Avenue
- Productive Electric at 2120 W. 7th Avenue
- HPE Heating and Plumbing Engineers at 711 Vallejo

The sites in this area consist primarily of brick, cinder-block, and/or masonry industrial warehouses. No evidence of hazardous substances or petroleum products, such as stored 55-gallon drums of material, ASTs, or USTs were observed on the portions of these sites adjacent to public right-of-way.

The following sites are located north of 7th Avenue along Vallejo adjacent to the I-25 and 6th Avenue interchange.

- Denver Wireworks at 745 Vallejo
- Spa Palace at 755 Vallejo
- IAI at 757 Vallejo

The sites in this area consist primarily of brick, cinder-block, and/or masonry industrial warehouses. No evidence of hazardous substances or petroleum products, such as stored 55-gallon drums of material, ASTs, or USTs were observed on these sites adjacent to public right-of-way.

South of 6th Avenue between I-25 and Decatur Street is an industrial/commercial area. Sites located west of existing I-25 include:

- Consolidated Electrical Distributors at 2405 W. 5th Avenue
- Ryder Truck Rental at 550 Bryant Street
- Phillips 66, a gasoline service station, at 510 Bryant Street
- A vacant commercial building, currently under renovation, at 543 Bryant Street
- Colorado Electric Supply, an electrical supply distributor, at 525 Bryant Street
- Union Bearing and Transmission Company/Golden Industrial Supply, a power transmission supply distributor, at 505 Bryant Street
- S.P. Richards Company (SPARCO), an office supply distributor, at 2650 W. 6th Avenue
- Sid Harvey's, refrigeration, heating, ventilation, and air conditioning supply distributor, at 2700 W. 6th Avenue
- Valiant Products Corporation, motel and hotel equipment distributor, at 2727 W. 6th Avenue

The site at 510 Bryant Street is a gasoline service station with pump islands located west of a convenience store/maintenance building. According to the OPS, two 3,000-gallon USTs for gasoline and diesel and one 10,000-gallon UST for gasoline are currently in use at the 510 Bryant Street site. One 300-gallon UST for waste oil is permanently closed at the 510 Bryant Street site.

No evidence of hazardous substances or petroleum products was observed on the portions of the site adjacent to public right-of-way. Based on the unknown conditions at this site, this is a site with ***potential environmental conditions***.

The site at 550 is a Ryder Truck Rental facility. An office building and several fueling islands are located on the site. One 2,500-gallon UST for used oil, one 4,000-gallon UST for lube oil, and one 20,000-gallon UST for diesel are registered with OPS at the 550 Bryant Street site and are currently in use. This site is also a LUST site, which is further discussed in **Section 5.3**.

The remaining sites in this area consist primarily of brick, cinder-block, and/or masonry industrial warehouses. No evidence of hazardous substances or petroleum products, such as stored 55-gallon drums of material, ASTs, or USTs were observed on the portions of the remaining sites adjacent to public right-of-way.

Approximately 12 residences are located south of Barnum Park between Decatur Street and Federal Boulevard. Commercial sites are located along Federal Boulevard, south of 6th Avenue. The sites include:

- BBB Mart, a retail clothing store, at 499 Federal Boulevard
- Sound on Wheels, an automotive accessory store, at 450 Federal Boulevard
- Phillips 66, a gasoline station, at 438 Federal Boulevard
- Metro Camera Service Inc., a camera repair shop, at 425 Federal Boulevard
- Fino's Custom Wheel Inc., an automotive accessory store, at 405 Federal Boulevard
- Eye Vision Optica, an optometrist office, at 401 Federal Boulevard
- Ark Bookstore at 399 Federal Boulevard

These sites consist primarily of single-story, masonry buildings. The site at 438 Federal Boulevard is a gasoline service station with pump islands located west of a convenience store/maintenance building. One 6,000-gallon UST for diesel and an 8,000-gallon and a 10,000-gallon UST for gasoline are registered with OPS for the 438 Federal Boulevard site. No evidence of hazardous substances or petroleum products, such as stored 55-gallon drums of material, ASTs, or USTs were observed on the portions of the remaining sites adjacent to public right-of-way. Based on the unknown conditions at this site, this is a site with ***potential environmental conditions***. Sound on Wheels at 450 Federal Boulevard is also a LUST site, which is discussed in **Section 5.2**.

Commercial and industrial sites are also located north of 6th Avenue between Federal Boulevard and I-25. These sites include:

- Robinson Dairy at 646 Bryant Street (sites also located in the 600 block of Alcott)
- Downtown Radio at 2525 W. 6th Avenue
- RMD Signs, a sign manufacturer, at 601 Bryant Street
- Rexel Ryall, a light fixture and electrical supply manufacturer and distributor, at 2627 W. 6th Avenue

- A vacant parking lot at approximately 601 Canosa Street
- McCarten Installation Devices Inc. and El Faroan, a nightclub, at 2727 W. 6th Avenue
- A vacant parking lot at approximately 601 Decatur Street
- Denver Public Schools Service Building, supply warehouse, at 2800 W. 7th Avenue
- Denver Public Schools Hilltop Bus Terminal, bus maintenance and fueling facility at 2929 W. 7th Avenue
- Day's Inn, a motel, at 620 Federal Boulevard
- Austria Motors, an automotive repair shop, at 642 Federal Boulevard
- Marc's Auto Tech, an automotive repair shop, at 690 Federal Boulevard

The Denver Public Schools Service Building and Denver Public Schools Hilltop Bus Terminal are located adjacent to each other across 7th Avenue. Access to the site was limited by a chain-link fence surrounding the sites. On the Denver Public Schools Service Building site, several warehouses and maintenance facilities were visible. Parking for school buses and fueling islands were visible on the Denver Public Schools Hilltop Bus Terminal. According to OPS, seven 12,000-gallon USTs for diesel and three 6,000-gallon USTs for lube oil and antifreeze are located at the Denver Public Schools Hilltop Bus Terminal at 2929 W. 7th Avenue. Bus maintenance activities are also reportedly conducted at this facility. Hazardous materials management, as related to vehicle maintenance, at the site is unknown. Based on the unknown conditions at this site, this is a site with ***potential environmental conditions***.

No evidence of hazardous substances or petroleum products, such as stored 55-gallon drums of material, ASTs, or USTs were observed on the portions of the remaining sites adjacent to public right-of-way.

2.3 Santa Fe Drive and Kalamath Street

The Santa Fe Drive and Kalamath Street segment of the project footprint consists of improvements to Santa Fe Drive, Kalamath Street, Alameda Avenue, Lipan Street, and Virginia Avenue. The Santa Fe Drive and Kalamath Street improvements extend from the Santa Fe Drive and I-25 interchange north to Ellsworth Avenue. The Alameda Avenue improvements extend from Cherokee Street across I-25 to Lipan Street. The Lipan Street improvements extend south from Cedar Avenue across Alameda Avenue to Virginia Avenue, and the Virginia Avenue improvements extend east from Lipan Street to South Platte River Drive. Sites located within and adjacent to the I-25 Mainline project footprint were included in the site reconnaissance. The Santa Fe Drive and Kalamath Street project footprint consists of a commercial/industrial area with scattered residences located in the vicinity of the footprint. The site reconnaissance was conducted from south to north along Santa Fe Drive and Kalamath Street and from east to west along Alameda Avenue.

The following sites are located along Santa Fe Drive:

- The Home Depot, a construction supply retail store, at 500 S. Santa Fe Drive
- StarTech Mercedes, an automotive maintenance facility, at 480 S. Santa Fe Drive
- Vacant site (former RTD Bus Maintenance facility) at 350 S. Santa Fe Drive
- Thermo Tech, an industrial piping manufacturer and supplier, at 285 S. Santa Fe Drive
- Dahl Plumbing, a plumbing supply and construction company, at 280 S. Santa Fe Drive
- Raul's Auto Trim and Caravea Auto Body, automotive repair shops, at 268 S. Santa Fe Drive
- Thermal Grid Windows, window and door contractor, at 264 S. Santa Fe Drive
- Jarcon Contractors, contractor storage, at 262 S. Santa Fe Drive
- Santa Fe Windows and Glass at 230 S. Santa Fe Drive
- Del Rio, a restaurant under development, at 215 S. Santa Fe Drive
- Platte River Letterpress, a printer, at 185 S. Santa Fe Drive
- US Mix, an aggregate processing facility, at 170 S. Santa Fe Drive
- Xpedx, paper distributor, at 106 S. Santa Fe Drive
- US Mix Research Center at 100 S. Santa Fe Drive
- Denver Department of Social Services Food Assistance Program at 80 S. Santa Fe Drive
- Volvo Specialist/Bimmers of Denver, automotive repair shops, at 4 S. Santa Fe Drive
- Wazee Electric Crane Division at 2 S. Santa Fe Drive

A StarTech Mercedes facility is located at 480 S. Santa Fe Drive. The site consists of a masonry building with several garage bay doors. Vehicle maintenance activities are conducted at the facility. Petroleum and hazardous material management activities at this site are unknown. This site was part of the Denver Radium – CERCLA site and is discussed in **Section 5.3**.

A vacant site is located at 350 S. Santa Fe Drive, which was the former site of the RTD Bus and Denver Tramway Maintenance Facilities. The concrete foundations of the former structures are visible on the site. Piping is visible on various portions of the property. The site is also a closed LUST site and is further discussed in **Section 5.3**.

Raul's Auto Trim and Caravea Auto Body located at 268 S. Santa Fe Drive are automotive repair shops. The site contains several cinder-block buildings located on the northern portion of the site. The Caravea Auto Body facility is located east of the Raul's Auto Trim facility. Hazardous materials management, as related to vehicle maintenance, at the site is unknown. This site is identified as Raul's Auto Paint and Supplies in the database search. Based on the unknown conditions at these sites, they are sites with ***potential environmental conditions***.

The Del Rio building at 215 S. Santa Fe Drive was under renovation at the time of the site reconnaissance. A fenced yard with a variety of materials stored was visible from Santa Fe Drive. FHU personnel were unable to access the site for further observation. Petroleum and hazardous

materials management at these sites is unknown. Based on the unknown conditions at these sites, this is a site with **potential environmental conditions**. The Del Rio building is not identified in the database search.

The US Mix facility at 112 S. Santa Fe Drive includes a warehouse/production building located along the eastern site boundary and a storage yard area. Several ASTs were observed on the site. One 4,000-gallon UST for gasoline and one 10,000-gallon UST for diesel are registered with OPS for the 170 S. Santa Fe Drive site. No leaks or spills were reported at this site. No evidence of hazardous substances or petroleum products was observed on the portions of the remaining site adjacent to public right-of-way.

The following sites are located along Kalamath Street:

- Diamond Shamrock, a gasoline station, 330 S. Kalamath Street
- A warehouse with signage for Brady Real Estate at 920 W. Byers
- Survey and Construction Supply at 930 W. Byers
- Heavenly Daze, a microbrewery, at 208 S. Kalamath Street
- Wine Storage of Denver at 202 S. Kalamath Street
- MC² Electrical Contractor at 180 S. Kalamath Street
- Customized Tabs at 178 S. Kalamath Street
- Profile Systems at 135 S. Kalamath Street
- Mountain Trade Supply at 131 S. Kalamath Street
- Michaelson Wholesale Carpet at 125 S. Kalamath Street
- City Church Youth Center at 125 S. Kalamath Street
- Register Graphics and Home and Energy Services at 123 S. Kalamath Street
- Denver Fastening Systems at 1001 W. Bayaud
- TG X-ray at 55 S. Kalamath Street
- Garts Sports Warehouse at 50 S. Kalamath Street
- Tobin Heating and Air Conditioning at 25 S. Kalamath Street
- Alpine, air conditioning services, at 23 S. Kalamath Street
- American Standard, heating and air conditioning services, at 21 Kalamath Street
- Colorado Pen Co., at 2 S. Kalamath Street

A Diamond Shamrock gasoline station is located at 330 S. Kalamath Street. The site contains several pump islands on the southern portion of the site and a convenience store on the northern portion of the site. One 12,000-gallon UST for gasoline, two 10,000 gallon USTs for gasoline and one 8,000-gallon UST for diesel are currently in use at the 330 S. Kalamath Street site, according to the OPS. This site is also an active LUST site, which is further discussed in **Section 5.3**.

The Heavenly Daze microbrewery is located at 208 S. Kalamath Street, which contains a former warehouse/commercial facility converted to the restaurant and brewery. One permanently close 10,000-gallon UST for diesel is reported by OPS at the 208 S. Kalamath Street site. No leaks or spills were reported at this site. No evidence of hazardous substances or petroleum products was observed on the portions of the remaining site adjacent to public right-of-way. Based on the unknown conditions at this site, this is a site with **potential environmental conditions**.

The remaining sites in this area consisted primarily of brick, cinder-block, and/or masonry industrial warehouses. No evidence of hazardous substances or petroleum products was observed on the portions of the remaining sites adjacent to public right-of-way.

The following sites are located along Alameda Avenue:

- K.O.K. Automotive Service at 187 S. Cherokee Street
- Lighting Services, studio complex, at 241 S. Cherokee Street
- USL Pharma Inc., a pharmaceutical manufacturing facility, at 301 S. Cherokee Street
- Denny's restaurant at 900 W. Alameda Avenue
- Jerry's Amoco, a gasoline service station, at 919 W. Alameda Avenue
- Burger King restaurant at 950 W. Alameda Avenue
- Valverde Yacht Club and Motel 5 at 1101 W. Alameda Avenue
- Alameda Market at 1197 W. Alameda Avenue
- Best Car Buys, a used car sale center, at 1200 W. Alameda Avenue
- Rathburn Inc. at 1215 W. Alameda Avenue
- Soundtown, an automotive sound system retail store, 1233 W. Alameda Avenue
- Conoco, gasoline service station, at 1245 W. Alameda Avenue

K.O.K Automotive Service at 187 S. Cherokee Street is an automotive repair shop located in a former gasoline station. No active USTs are registered at the site; however, this site is also a LUST site, which is further discussed in **Section 5.3**.

Lighting Services is a studio complex located at 241 S. Cherokee Street. A large, rectangular masonry building is centrally located on the site. Two 10,000-gallon USTs for hazardous substances are reported by OPS as permanently closed at the 241 S. Cherokee Street site. No leaks or spills were reported at this site. This site is also a CERCLIS – No Further Remedial Action Planned (NFRAP) site, which is further discussed in **Section 5.3**.

The USL Pharma facility is a pharmaceutical manufacturing facility at 301 S. Cherokee. Three large masonry buildings are located on the site. One permanently closed 1,000-gallon UST for gasoline is reported by OPS at the 301 S. Cherokee Street site. No leaks or spills were reported at this site. Several 55-gallon drums of material were observed stored on a loading dock on the southern side of the building. This site is also a RCRA – Large Quantity Generator and is discussed in **Section 5.3**.

Jerry's Amoco is an active gasoline service station. Three 12,000-gallon USTs for gasoline and one 560-gallon UST for used oil are registered with OPS at the 919 W. Alameda site and are currently in use. This site is also a LUST site, which is further discussed in **Section 5.3**.

Conoco at 1245 W. Alameda Avenue is an active gasoline station. One 15,000-gallon UST for gasoline, one 8,000-gallon UST for gasoline, and one 8,000-gallon UST for diesel are registered with OPS at the site and are currently in use. This site is also a LUST site, which is further discussed in **Section 5.3**.

The remaining sites in this area consisted primarily of brick, cinder-block, and/or masonry commercial buildings. The following sites are located along Lipan Street and Virginia Avenue:

- Eon Office Products at 320 S. Lipan Street
- Dyer Auto Electric Inc. at 331 S. Lipan Street
- Duffy Crane & Hauling at 389 S. Lipan Street
- Commercial building for lease at 400 S. Lipan Street
- Denver Automotive and Diesel College at 460 S. Lipan Street
- OmniPro, a janitorial services company, at 455 S. Lipan Street
- Unmarked building at 1190 W. Virginia Avenue
- Automotive Equipment Service at 1160 W. Virginia Avenue
- Moli International at 1150 W. Virginia Avenue
- Rocky Mountain Blueprint and Supply at 1130 W. Virginia Avenue
- QCD Quality Converting Co. at 1128 W. Virginia Avenue
- Carpet Tile Hardwood at 1110 W. Virginia Avenue
- Rocky Mountain Church of God at 455 S. Platte River Drive

Although visibility was limited by fences and access, vehicle and equipment storage yards are located on the Dyer Auto Electric Inc. site at 331 S. Lipan Street and the Duffy Crane and Hauling site at 389 S. Lipan Street. The Dyer Auto Electric Inc. site consists of a single cinder-block building located adjacent to Lipan Street with a storage yard south of the building. This site is not included in the database. Based on the unknown conditions at these sites, they are sites with ***potential environmental conditions***.

Two large brick buildings separated by a large storage yard are located on the Duffy Crane and Hauling Site. Electrical transformers and refrigeration/air conditioning units were visible on the Duffy Crane and Hauling site. No leaks or spills have been reported at this site. Based on the unknown conditions at these sites, they are sites with ***potential environmental conditions***.

The remaining sites in this area consist primarily of brick, cinder-block, and/or masonry commercial buildings. No evidence of hazardous substances or petroleum products was observed on the portions of the remaining sites adjacent to public right-of-way.



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3.0 HISTORICAL USE INFORMATION

FHU researched Sanborn Fire Insurance Company maps, historical USGS topographical maps, and aerial photographs to identify historical land use in the project footprint area. The objective of the historical review was to establish historical general land use in the area and to identify specific land uses, such as gasoline filling stations, dry cleaners, and manufacturing facilities, when available. **Table 2** summarizes the historical records reviewed. Sites with **potential environmental conditions** that were identified during the historical information review are identified in **Table 6**. The following section discusses the findings of the historical review.

Table 6 Sites with Potential Environmental Conditions Identified During the Historical Review

EDR Site I.D.	Site Name and Address	Description
<i>I-25 Mainline Project Footprint</i>		
NA	Existing Northbound I-25 Broadway Viaduct 811 S. Broadway	Historical gasoline filling station. Potentially same location as 795 S. Broadway.
NA	Vacant lot (formerly Jimmy Java's) 888 S. Broadway	Historical gasoline filling station. Located in area with known chlorinated solvent and petroleum impacted groundwater.
NA	Existing Northbound I-25 at the northeast corner of the Kalamath Street and Alameda Avenue intersection 293 S. Kalamath Street	Historical gasoline filling station. Area excavated during construction of existing I-25 in the 1950s.
NA	El Paso Import Co. 723 S. Broadway	Historical automotive-related use in the 1950s. Unknown hazardous material management.
NA	Vacant lot 57 S. Kalamath	Formerly Tetrault Iron Works Co. (manufactured crushers, stamp mills, and concentrators). Located adjacent to the Consolidated Main Line railroad tracks. Unknown site conditions.
<i>6th Avenue Project Footprint</i>		
No sites identified.		
<i>Santa Fe/Kalamath Project Footprint</i>		
168	Best Car Buys, Ltd. 1200 W. Alameda Ave.	Historical gasoline filling station.
NA	Colorado Pen Co. 2 S. Kalamath Street	Historical paint dealership, National Lead Company, in the 1950s/1960s. Unknown hazardous material management.
NA	Denver Department of Social Services 80 S. Santa Fe Drive	Former location of Monument Works. Unknown site conditions.
NA	Dahl's Plumbing 280 S. Santa Fe Drive.	Former location of Six Star Lubricants Co. (a lubricant manufacturer). Unknown site conditions.
144, 146	Vacant lot 101 S. Santa Fe Drive	Historical gasoline filling station.
144, 146	US Mix Research Center 100 S. Santa Fe Drive. 701 W. Bayaud	Former location of S.A.D. Holford (manufactured grease traps and ash pits) and Clean Heat Fuel Co. (a coal yard).

Table 6 Sites with Potential Environmental Conditions Identified During the Historical Review (continued)

EDR Site I.D.	Site Name and Address	Description
140	Wazee Crane 2 S. Santa Fe Drive	Former Consolidated Cut Stone & Granite Co.
162	Lighting Services 241 S. Cherokee St.	Former Oswald Machine Co. (general machinists), Eversman Manufacturing (land level manufacturers), Davis and Son Manufacturing (oil fountain manufacturers), Continental Can Company (can producer), and Colorado Paint Co.
176	USL Pharma Inc. 301 S. Cherokee St.	Former William Russel Coal Yard and Chevrolet Motor.
188, 199	StarTech Mercedes 480 S. Santa Fe Drive	Former United States Gasoline Corporation (oil reclaiming plant) and Robinson Brick Company/Denver Radium.
146	Amoco 919 W. Alameda Avenue	Historical gasoline filling station.
146	Shamrock Ind. Lndry & Dry Clng 920 West Byers Place #A	Historical laundry and dry cleaning operations.

NA Not Applicable

3.1 Project Area History

The City and County of Denver was founded in 1858, when the towns of Auraria and Denver were platted near the confluence of Cherry Creek and the South Platte River. In 1860, Auraria combined with Denver. Denver remained a small frontier city until railroads established links with other U.S. population centers. Camp Weld, a military post, was established north of the existing I-25 and 6th Avenue interchange in 1861 but was abandoned in 1864. The project footprint area, located south/southwest of the Denver settlement, consisted of primarily undeveloped land with scattered residences and farmland. Broadway was built east of the project footprint in the 1860s.

In 1870, the Denver Pacific Railway connected Denver with the Union Pacific railroad mainline at Cheyenne, Wyoming, and the Kansas Pacific railroad connected Denver with Kansas City and St. Louis, Missouri. The Denver & Rio Grande (D&RG) railroad was incorporated in 1870 and constructed south through the project footprint area. A D&RG rail yard was located north of 4th Avenue and south of 10th Avenue approximately between Mariposa Street and the Consolidated Main Line railroad tracks. This railroad was intended to reach El Paso, Texas, on the Rio Grande River and included the construction of lines to mining communities in the Colorado mountains, such as the Black Hawk-Central City area and Georgetown. In 1872, the Denver, South Park & Pacific Railway (DSP&P) provided rail links to Breckenridge, Dillon, Keystone, Fairplay, Leadville, and Buena Vista. The D&RG extended lines to Leadville as well as Durango and Silverton in the San Juan Mountains during the last three decades of the nineteenth century. The Denver and New Orleans (D&NO) railroad connected Denver to the Gulf of Mexico in 1881. The D&NO railroad extended south from Denver through the project footprint area and along existing I-25 southeast of Broadway. In 1887/88 the Atchison, Topeka and Santa Fe Railway (AT&SF) constructed a new rail line north from Pueblo to Denver through the project footprint area.

The population of Denver grew rapidly from 4,449 individuals in 1860 to 106,713 individuals in 1890 following construction of the railroads (Leonard and Noel, 1990). The residential neighborhoods of Baker and West Washington Park, located east/northeast of the project footprint, were primarily constructed prior to 1900. In 1889, the University of Denver moved from Fourteenth and Arapahoe Streets to the present campus in south Denver near University Boulevard and Evans Avenue, located southwest of the project footprint. Prior to 1900, the project footprint area consisted primarily of residences and agricultural land with industrial and commercial land uses scattered throughout the area.

Denver's urban growth in the late nineteenth century was aided by the development of a street railway system, beginning with the Denver Horse Railroad Company (later renamed the Denver City Railway Company/Denver Trainway Company), installed in 1871 and providing access from downtown Denver to the Curtis Park subdivision. Other railway lines followed in 1873 and 1874. By 1884 the Denver City Railway owned more than 15 miles of track (Leonard and Noel, 1990). The Denver Tramway Company established a maintenance/storage yard at 350 S. Santa Fe Drive in the project footprint in 1903.

A series of streetcar suburbs and communities sprang up on the fringes of Denver, including several in the vicinity of the Valley Highway Project. The construction of bridges and viaducts over the South Platte River fostered the development of lands lying west of the city. One such suburb, Valverde, was platted to the southwest of Denver in 1882. In 1902 Valverde was annexed, along with a number of other suburbs, to the City of Denver. A short distance northwest of Valverde was Barnum, platted in the 1880s. Barnum was annexed to the City of Denver in 1896. The largest streetcar suburb established in Denver was South Denver. South Denver was platted in 1886 and encompassed nine square miles, bounded by Alameda Street on the north, Yale Avenue on the south, Colorado Boulevard on the east and Pecos Street on the west. South Denver was later annexed to Denver in 1893 (Leonard and Noel, 1990; Noel, 1996).

With railroads extending to mining communities, Denver became a major ore-refining center. The first of these refining operations was the Argo Smelter, which was erected approximately four miles north of downtown at the junction of the Colorado Central and Denver Pacific rail lines. The Colorado Zinc Company mill also was established at 550 S. Santa Fe Drive in the project footprint area along the South Platte River. Historical land use south of 6th Avenue and east of the South Platte River in the area of the project footprint consisted primarily of scattered residences and industrial/commercial buildings located along railroad sidings. Historical land use west of the South Platte River consisted primarily of scattered houses and agricultural land.

Lake Archer was constructed in 1878 to provide water to Denver. Water was diverted from the South Platte River through a ditch that extended from approximately southeast of the existing I-25 and Alameda Avenue interchange to Lake Archer. Lake Archer was bounded to the north by 7th Avenue, to the south by Bayaud Avenue, to the east by 7th Street (later Osage Street), and to the west by the D&RG and AT&SF railroad tracks (later the Consolidated Main Line railroad). The Lake Archer ditch was paralleled by the D&RG railroad tracks, which were located between the South Platte River and the ditch until approximately 4th Avenue where the South Platte River bended to the west. Lake Archer was later abandoned as a part of the water supply system.

Between 1900 and 1920, Denver became an important livestock processing and transportation center. Manufacturing also grew during this period, with grain milling, meat packing, brewing, and brick-making among its principal industries. Industrial facilities were established in the area of the project footprint and included a variety of industries, such as food production, mining equipment manufacturing, chemical manufacturing, mineral processing, and rubber products manufacturing. Lumber and coal yards were also established along the railroad tracks between Santa Fe Drive and Cherokee Street. The Gates Rubber Company plant at 999 S. Broadway was established in 1914.

During the 1920s, numerous automotive maintenance garages and gasoline filling stations sprang up throughout Denver, and the Gates Rubber Company plant on South Broadway met the growing demand for automotive tires, belts and hoses. Historical gasoline filling stations were identified on the 1929 Sanborn fire insurance maps and are included in **Table 6**.

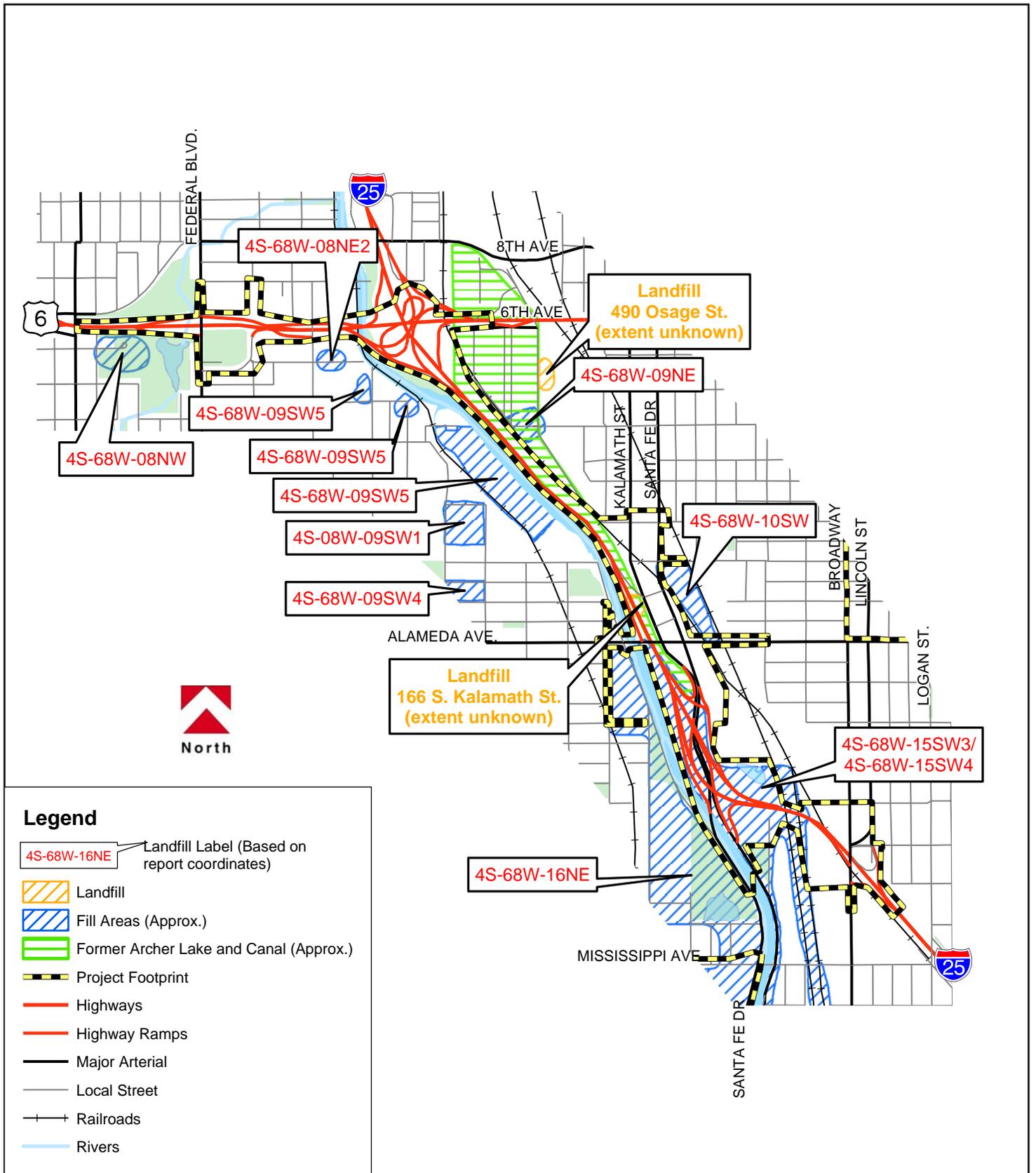
In the area south of 4th Avenue along Kalamath Street and Santa Fe Drive, the area continued to shift from scattered residences to primarily industrial/commercial land uses. Industries located in the project footprint included food production, aggregate processing, building supplies, coal yards, lubricant manufacturing, acetylene gas manufacturing, trunk assembly, car assembly, and oil reclamation.

The area west of the South Platte River and existing 6th Avenue continued to consist primarily of agricultural sites mixed with residential areas, such as the Valverde neighborhood. Scattered industrial facilities, such as General Chemical at 1271 W. Bayaud Avenue, were located west of the South Platte River. Sand and gravel mining quarries were located adjacent to the South Platte River. Many of these quarries were later used for municipal landfills. Historical landfills and fill areas are depicted on **Figure 2** and are summarized in **Table 7**.

Table 7 Summary of Historic Fill and Landfill Areas

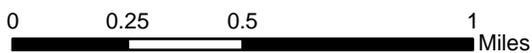
Map I.D.	Location	Use/Contents	Environmental Concerns
4S-68W-15SW3/ 4S-68W-15SW4	Area of the Santa Fe Drive and I-25 Interchange	Artificial fill; composed of earth, rock fragments, and refuse	Unknown groundwater contamination or potential methane
4S-68W-10SW	Area between Bayaud and Alameda, east of Consolidated Main Line railroad	Artificial fill; composed of earth, rock fragments, and refuse	Unknown groundwater contamination or potential methane
4S-68W-09NE	Area between Quivas and Osage Streets along 4th Avenue	Unknown use and contents	Unknown groundwater contamination or potential methane
4S-68W-16NE	Area between Alameda and Virginia Avenues, east of Lipan Street.	Municipal landfill; unknown contents	Unknown groundwater contamination. High levels of methane gas present.
4S-68W-08NE2	Area around 500 Alcott Street	Unknown use and contents	Unknown groundwater contamination or potential methane
4S-68W-08NW	Area around 500 Julian Street, along 6th Avenue exit ramp	Unknown use and contents	Unknown groundwater contamination or potential methane

Source: Pinyon Engineering, 1997



Source: Pinyon Engineering , 1997

Valley Highway, 02-069, 06/10/2004



Historical Fill/Landfill Areas

In the 1920s/1930s, Lake Archer and the Lake Archer ditch were in-filled, and Rio Grande Boulevard, Raritan Way, and Quivas Street were platted. The fill material for Lake Archer and the Lake Archer ditch is unknown. The fill material may have included municipal and industrial debris. Several known landfills are located in the area of former Lake Archer and the associated canal.

Existing 6th Avenue from Federal Boulevard to Mariposa Street had not been constructed prior to the 1940's. Eighth Avenue and Colfax Avenue were the primary east-west routes from downtown Denver to the west. The businesses constructed along Rio Grande Boulevard on the in-filled Lake Archer in the late 1940s consisted primarily of wholesale distributors, such as appliances, rugs and carpets, and floor coverings.

During the early 1940s, 6th Avenue was constructed west of Knox Court to provide access to the Denver Ordinance Plant from downtown Denver. Westbound traffic from downtown Denver used 8th Avenue to Federal Boulevard where 8th Avenue curved south to connect with 6th Avenue. The area between Knox Court and the South Platte River primarily consisted of agricultural land with scattered residences and industrial/commercial facilities.

Legislative support for controlled access highways was provided in 1941 after the state legislature passed the Freeway Act. The route of the Valley Highway followed the route of the old D&NO railroad and extended for a distance of 11.2 miles, between West 52nd Street on the north end and Evans Avenue on the south end. Construction of the Valley Highway commenced in September 1948 at the project's northern terminus and proceeded southward.

During construction of the Valley Highway, the channel of the South Platte River was shifted to the west from approximately northeast of the existing I-25 and Santa Fe Drive interchange, near the mouth of the former Lake Archer ditch to 4th Avenue. Existing I-25 from Alameda to approximately 4th Avenue is located in the area of the previous bed of the South Platte River. A gravel quarry and portions of the General Chemical Corporation site were consumed by the new South Platte River channel. The original cloverleaf interchange at 6th Avenue and I-25 was constructed in 1958. When completed in 1958, the new freeway included thirteen major interchanges, four minor interchanges, and no fewer than 62 bridges and grade separations.

During the 1960s, the industrial/commercial area located east/northeast of the Valverde neighborhood between Alameda Avenue and 6th Avenue was constructed and the area along Kalamath Street and Santa Fe Drive became primarily industrial/commercial. These areas have remained primarily industrial/commercial with several scattered residences since the 1960s.

4.0 DATABASE SCREENING AND SITE RANKING

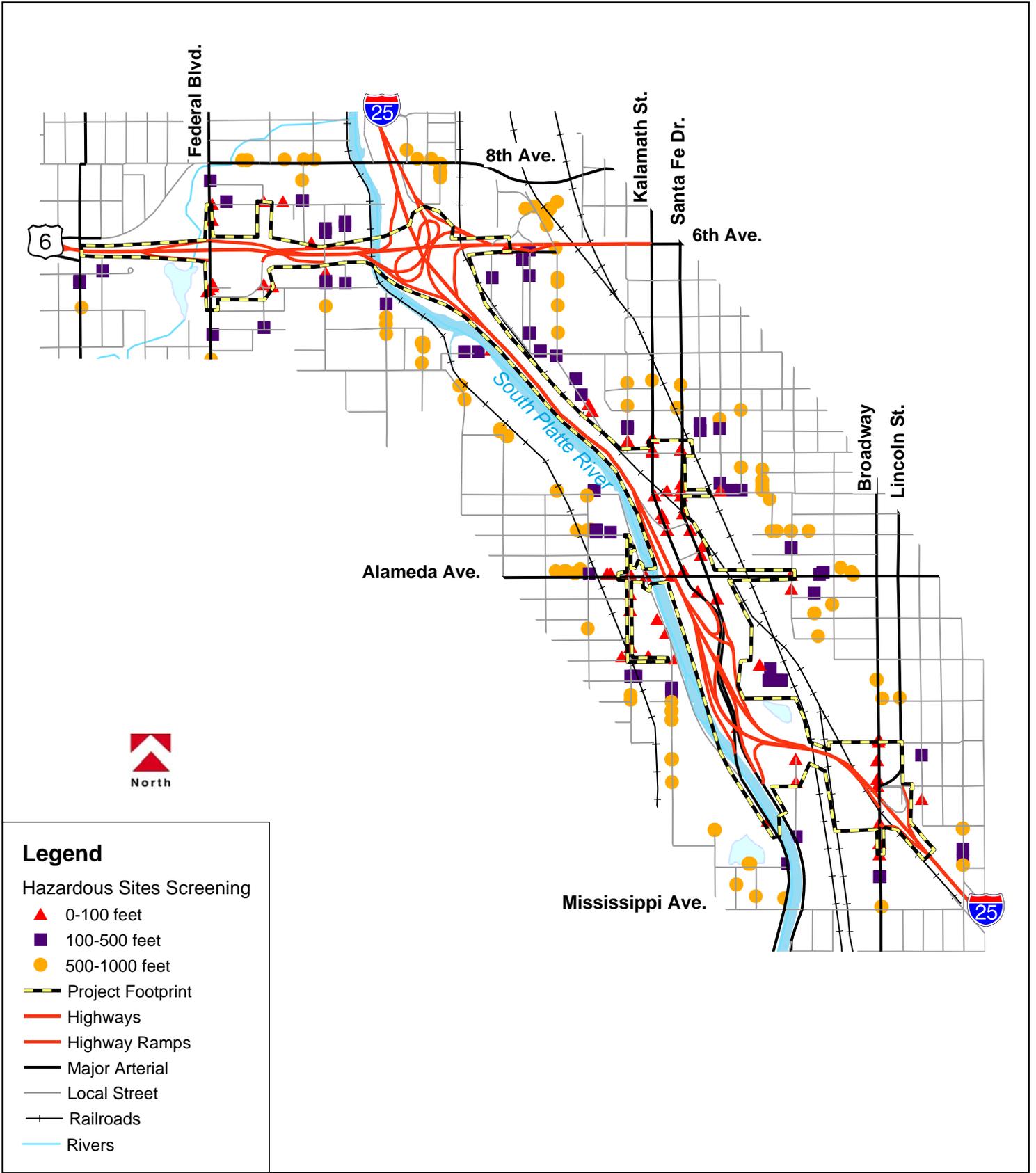
FHU contracted EDR to conduct a review of local, state, and federal database records for information relating to the project footprint. Approximately 1,500 sites were identified in the database review. Sites identified in the EDR database review of federal, state, and local environmental records were ranked and screened using the methodology presented in **Section 1.3**. The EDR database report is included in **Appendix B. Figure 3** depicts the screening distance, and the sites requiring additional review are summarized in **Table 8**. The detailed review consisted of researching agency records, reviewing previous CDOT investigations, and conducting interviews with relevant local and state environmental regulatory staff, as appropriate. The results of the detailed review are presented in **Chapter 5.0**.

FHU conducted an initial site screening, based on distance and estimated groundwater gradient, to determine sites that were likely to have had an adverse impact on the Valley Highway Project footprint. The site distance used was within 1,000 ft, and the estimated groundwater flow was north/northwest for the portions of the project footprint east of the South Platte River and north/northeast for those portions west of the South Platte River. Sites that were located downgradient, separated by a hydraulic barrier from the project footprint (i.e. South Platte River) or greater than 1,000 ft from the project footprint were judged relatively unlikely to have impacted the study corridor. Sites potentially upgradient or cross-gradient to the project footprint and located greater than 1,000 ft from the project footprint were reviewed to identify environmental conditions. During the screening process, 154 sites were identified in local, state, and federal database records with the possibility of having impacted the project footprint based on distance and estimated groundwater flow.

Following the initial screening process, the sites identified during the review of agency databases were ranked and screened to assess the need for further evaluation. Sites that were located within 1,000 ft from the project footprint and potentially upgradient or cross-gradient to the project footprint were ranked based on known environmental conditions. Sites were ranked based on the criteria presented in **Section 1.3.4**. Of the 154 sites, 15 sites were ranked as high, 56 sites as medium, and 83 sites as low based on known environmental conditions

Following the ranking, the sites were again screened based on distance. The project footprint was buffered to identify sites within 100 ft of the project footprint, from 100 ft to 500 ft of the project footprint, and from 500 ft to 1,000 ft of the project footprint. Seventy sites were located within 100 ft of the project footprint. Forty-two sites were located 100 ft to 500 ft from the project footprint, and 42 sites were located from 500 ft to 1,000 ft from the project footprint.

The sites were compared to the Detailed Review Site Evaluation Matrix (see **Table 4**). Sites located within 100 ft of the project footprint with an environmental condition ranking of either high or medium and sites from 100 ft to 500 ft with a high environmental ranking were recommended for a detailed reviewed. Forty-five sites identified in the agency databases were recommended for a detailed review. Thirty sites with a medium environmental condition ranking were located within 100 ft of the project footprint. Nine sites with a high environmental condition ranking were located within 100 ft, and four sites with a high environmental condition ranking were located from 100 ft to 500 ft of the project footprint. Two sites with a high environmental condition ranking that were located from 500 ft to 1,000 ft from the project footprint were recommended for a detailed review based on the potential for large-scale contaminant migration.



Valley Highway, 02-069, 01/12/2004

0 2,500 5,000 Feet

Hazardous Sites Screening



Table 8 Selection of Sites for Detailed Review

EDR ID	Site Name/Address	Distance Screening	Identified Concerns	Potential Environmental Concern Ranking	Selected for Detailed Review
75	Sears Roebuck and Company 1701 W. 6th Ave.	Less than 100 ft	LUST. UST. ERNS.	Medium	Yes
75	Conrads Inc 595 Quivas St.	Less than 100 ft	UST. LUST.	Medium	Yes
75	PPG Industries Inc 590 Quivas St.	100 to 500 ft	FINDS. RCRA Small Quantity Generator - no violations reported. UST.	Low	No
75	DuPont De Nemours & Co. 555 Quivas St.	100 to 500 ft	FINDS. RCRA Small Quantity Generator - no violations reported.	Low	No
75	No Site Name 500 Quivas St.	100 to 500 ft	ERNS.	Medium	No
76	6th & Osage UPRR Burnham Yard	Less than 100 ft	ERNS.	High ¹	Yes
80	No Site Name 500 Julian St.	100 to 500 ft	Landfill.	High	Yes
81	Ryder Truck Rental Inc. 550 Bryant St.	Less than 100 ft	FINDS. RCRA Conditionally Exempt Small Quantity Generator - no violations reported. UST. LUST.	Medium	Yes
81	Bryant St. Phillips 510 Bryant St.	100 to 500 ft	UST.	Low	No
81	No Site Name 500 Alcott St.	100 to 500 ft	Landfill.	High	Yes
81	5th & Bryant	100 to 500 ft	ERNS.	Medium	No
81	May D&F Distribution Center 445 Bryant St.	500 to 1,000 ft	FINDS. RCRA Small Quantity Generator - no violations reported.	Low	No



Table 8 Selection of Sites for Detailed Review (Continued)

Map ID	Site Name/Address	Distance Screening	Identified Concerns	Potential Environmental Concern Ranking	Selected for Detailed Review
82	CCOD Fire Station #20 510 Knox Ct.	100 to 500 ft	UST. LUST.	Medium	No
82	John J. Hegarty/HWS Technologies 504 Knox Ct.	100 to 500 ft	UST. LUST.	Medium	No
83	No Site Name 490 Osage St.	500 to 1,000 ft	Landfill.	High	Yes ¹
83	Rio Grande Co. Residential Products Division 500 Osage St.	500 to 1,000 ft	FINDS. UST. LUST.	High	Yes ¹
84	Skyline Business Forms Inc. 550 Raritan Way	100 to 500 ft	FINDS.	Low	No
86	Pester Marketing Company 438 Federal Blvd.	Less than 100 ft	FINDS.	Low	No
86	Charles Yamaguchi Property/KOK Auto Repair & Body Shop 450 Federal Boulevard	Less than 100 ft	UST. LUST.	Medium	Yes
86	1st Stop #1207 438 Federal Boulevard	Less than 100 ft	UST.	Low	No
86	Blair Labeling Systems Inc. 425 Federal Blvd.	Less than 100 ft	FINDS. RCRA Small Quantity Generator - no violations reported.	Low	No
86	In alley behind 445 Federal Blvd.	Less than 100 ft	ERNS.	Medium	Yes



Table 8 Selection of Sites for Detailed Review (Continued)

Map ID	Site Name/Address	Distance Screening	Identified Concerns	Potential Environmental Concern Ranking	Selected for Detailed Review
87	PCB Capacitor Cleanup 5th & Decatur	Less than 100 ft	CERCLIS. RCRA Small Quantity Generator- no violations reported. FINDS. ERNS.	High	Yes
91	Heppting Leather Cleaners 3469 West 4th Ave.	500 to 1,000 ft	FINDS. RCRA Conditionally Exempt Small Quantity Generator-no violations reported.	Low	No
97	Decatur 400 Decatur St.	100 to 500 ft	FINDS. FTTS.	Low	No
100	Boyd Distributing 350 Osage	500 to 1,000 ft	FINDS. RCRA Small Quantity Generator-no violations reported. UST. LUST.	Medium	No
101	Hawk Automotive 330 Quivas St.	100 to 500 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
101	BP Investment 330 Quivas St.	100 to 500 ft	LUST.	Medium	No
101	Murray Distributing Co./Metron 1505 W. 3rd Ave.	100 to 500 ft	RCRA Conditionally Exempt Small Quantity Generator-no violations reported. UST. LUST.	Medium	No
101	Frankel Mfg Co. 285 Rio Grande Blvd.	100 to 500 ft	FINDS. RCRA Small Quantity Generator-no violations reported. UST.	Low	No
102	Barnum Publishing Company Inc. 314 Federal Boulevard	100 to 500 ft	FINDS.	Low	No
110	Custom Molding 200 Lipan St.	500 to 1,000 ft	FINDS.	Low	No



Table 8 Selection of Sites for Detailed Review (Continued)

Map ID	Site Name/Address	Distance Screening	Identified Concerns	Potential Environmental Concern Ranking	Selected for Detailed Review
110	JVR Inc or Jim Paris Tire 100 Lipan St.	500 to 1,000 ft	FINDS.	Low	No
110	55 Lipan St.	100 to 500 ft	ERNS.	Medium	No
110	Public Service Co of Colorado 50 Lipan St.	100 to 500 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
110	Commercial Testing Laboratories 22 Lipan St.	Less than 100 ft	FINDS. RCRA Conditionally Exempt Small Quantity Generator-no violations reported. UST. LUST.	Medium	Yes
113	Thanhs Auto Body 253 Federal Blvd.	500 to 1,000 ft	FINDS.	Low	No
113	Gordo's Custom Wheels & Tires Incorporated 221 Federal Blvd.	500 to 1,000 ft	FINDS.	Low	No
115	Industrial Repair Ser Incorporated/Westinghouse Electric Corporation 200 Rio Grande Blvd.	100 to 500 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
115	Cover Up Custom Upholstery Inc. 150 Rio Grande Blvd.	100 to 500 ft	FINDS. RCRA Conditionally Exempt Small Quantity Generator-no violations reported.	Low	No
115	Water Systems Inc. 115 Rio Grande Blvd.	Less than 100 ft	UST.	Low	No
115	Calaham Construction Inc. 95 Rio Grande Blvd.	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No



Table 8 Selection of Sites for Detailed Review (Continued)

Map ID	Site Name/Address	Distance Screening	Identified Concerns	Potential Environmental Concern Ranking	Selected for Detailed Review
115	Edgewater Office Products Inc. 90 Rio Grande Blvd.	Less than 100 ft	FINDS. RCRA Conditionally Exempt Small Quantity Generator-no violations reported.	Low	No
117	McAtee Bolt 209 Kalamath	500 to 1,000 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
119	Rio Grande Co. 123 Santa Fe Dr.	500 to 1,000 ft	UST.	Low	No
119	Stark Lumber Company 924 W. 1st Ave.	500 to 1,000 ft	FINDS.	Low	No
119	MacDonald Hardwoods 929 W. 1st Ave.	500 to 1,000 ft	UST.	Low	No
121	PSCO - Barter Supply and Machinery Lot D 60 S. Inca St.	100 to 500 ft	FINDS. RCRA Conditionally Exempt Small Quantity Generator-no violations reported.	Low	No
121	Gates & Son 90 Fox St.	500 to 1,000 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
121	Unknown 70 Galapago St.	500 to 1,000 ft	UST. LUST.	Medium	No
121	Creek Holdings Property 50 Galapago St.	100 to 500 ft	UST. LUST.	Medium	No
121	PSCO - Barter Supply and Machinery Lot E 45 Inca St.	100 to 500 ft	FINDS. RCRA Conditionally Exempt Small Quantity Generator-no violations reported.	Low	No
136	Penske Truck Leasing Co. LP 70 Kalamath	Less than 100 ft	FINDS. RCRA Conditionally Exempt Small Quantity Generator-no violations reported. AST. UST.	Low	No



Table 8 Selection of Sites for Detailed Review (Continued)

Map ID	Site Name/Address	Distance Screening	Identified Concerns	Potential Environmental Concern Ranking	Selected for Detailed Review
136	May D&F Dept. Store Co. 50 S. Kalamath	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
136	Accuracy First Printing 1 S. Kalamath St.	Less than 100 ft	FINDS.	Low	No
136	TG X-Ray Ltd 5 S. Kalamath	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
140	Wazee Crane Co. Div. Wazee Elect. 2 Santa Fe Drive	Less than 100 ft	FINDS. RCRA Small Quantity Generator-violations reported. ERNS.	Medium	Yes
140	No Site Name Ellsworth/Santa Fe	Less than 100 ft	ERNS.	Medium	Yes
144	No Site Name 500 W. Bayaud	500 to 1,000 ft	ERNS.	Medium	No
144	Karl Schmidt & Associates 44 S. Fox St.	500 to 1,000 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
144	Gates & Sons Incorporated 45 S. Fox St.	500 to 1,000 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
144	No Site Name 52 S. Eliati	500 to 1,000 ft	ERNS.	Medium	No
144	Ochs, Herbert M. Chemist 81 S. Eliati	500 to 1,000 ft	FINDS.	Low	No
144	Gates & Sons Inc. 80 S. Galapago St.	100 to 500 ft	UST.	Low	No
144	Adrian Brown Consultants Inc. 90 S. Eliati St.	500 to 1,000 ft	FINDS.	Low	No



Table 8 Selection of Sites for Detailed Review (Continued)

Map ID	Site Name/Address	Distance Screening	Identified Concerns	Potential Environmental Concern Ranking	Selected for Detailed Review
144	No Site Name Bayaud/Elati	500 to 1,000 ft	ERNS.	Medium	No
144	Public Service Co of CO (Barter Supply and Machinery) 701 W. Bayaud	100 to 500 ft	CERCLIS-NFRAP. RCRA CORRACTS. UST.	High	Yes
144	Gates & Sons Inc. 655 W. Bayaud Ave.	100 to 500 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
144	Plasticrafts 600 W. Bayaud Ave.	100 to 500 ft	FINDS.	Low	No
144	Gates & Sons Inc. 125 S. Elati St.	500 to 1,000 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
146	Public Service Co of CO (Barter Supply and Machinery) 100 S. Santa Fe Dr.	Less than 100 ft	UST. LUST.	Medium	Yes
146	Public Service Co of CO 166 S. Kalamath St.	Less than 100 ft	Landfill.	High	Yes
146	Callisto Corporation DBA Office Scapes 80 South Santa Fe Dr.	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported. UST.	Low	No
146	PSCO-Barthers Lot B 101 S. Santa Fe Dr.	Less than 100 ft	FINDS. RCRA Conditionally Exempt Small Quantity Generator-no violations reported.	Low	No
146	Register Graphics Incorporated 123 S. Kalamath St.	Less than 100 ft	FINDS.	Low	No



Table 8 Selection of Sites for Detailed Review (Continued)

Map ID	Site Name/Address	Distance Screening	Identified Concerns	Potential Environmental Concern Ranking	Selected for Detailed Review
146	US Mix Products Company 112 S. Santa Fe Drive	Less than 100 ft	FINDS. RCRA Small Quantity Generator-violations reported. UST.	Medium	Yes
146	No Site Name 135 South Kalamath	Less than 100 ft	ERNS.	Medium	Yes
146	Rio Grande Co. Garage 170 S. Santa Fe Dr.	Less than 100 ft	UST.	Low	No
146	American Chemical Works 178 S. Kalamath St.	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
146	Iliff Meadows Partnership 1001 West Bayaud	Less than 100 ft	FINDS. RCRA Small Quantity Generator-violations reported. Landfill.	High	Yes
146	Barter Machinery & Supply 215 South Santa Fe Drive	Less than 100 ft	FINDS.	Low	No
146	Lowrey's/Beatrice Specialty Foods 208 South Kalamath	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported. UST.	Low	No
146	Shamrock Ind. Lndry & Dry Cing 920 West Byers Place #A	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
146	Raul's Auto Paint and Supplies 268 S. Santa Fe Drive	Less than 100 ft	FINDS.	Low	No
146	Jerry's Amoco/Amoco Oil #8629 919 W. Alameda Ave.	Less than 100 ft	FINDS. RCRA Conditionally Exempt Small Quantity Generator-no violations reported. UST. LUST.	Medium	Yes
146	Chevron 950 W. Alameda	Less than 100 ft	LUST.	Medium	Yes
146	Total #2355/Total Petroleum #4089/Shamrock 4089 330 S. Kalamath	Less than 100 ft	FINDS. UST. LUST.	Medium	Yes



Table 8 Selection of Sites for Detailed Review (Continued)

Map ID	Site Name/Address	Distance Screening	Identified Concerns	Potential Environmental Concern Ranking	Selected for Detailed Review
146	RTD-Alameda Garage 350 South Santa Fe Drive	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported. UST. AST. LUST.	Medium	Yes
162	Public Service Co. of Colorado 329 W. Cedar Ave.	500 to 1,000 ft	Coal Gas.	High	No
162	Gates & Sons Fleet Maintenance 501 W. Cedar	500 to 1,000 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
162	Signs Inc./Cherokee Solvents 201 S. Cherokee	Less than 100 ft	FINDS. RCRA Small Quantity Generator. CERCLIS-NFRAP. ERNS.	High	Yes
162	Continental Can Company USA Plant 29/Colorado Paint Co. 241 S. Cherokee	100 to 500 ft	FINDS. RCRA Small Quantity Generator-no violations reported. CERCLIS-NFRAP. UST.	High	Yes
167	KOK Oil Co. Inc./KOK Phillips 187 W. Alameda Ave.	Less than 100 ft	FINDS. UST. LUST.	Medium	Yes
167	I-25/Alameda	Less than 100 ft	ERNS.	Medium	No
167	Southland 7-11 No. 23899 85 W. Alameda Ave.	500 to 1,000 ft	FINDS. UST.	Low	No
167	Serta Mattress Factory 198 W. Alameda Ave.	100 to 500 ft	UST. LUST.	Medium	No
167	Pester #280/Coastal Mart 80 W. Alameda Ave.	500 to 1,000 ft	UST. LUST.	Medium	No
167	Bennet Distributing Co. 190 W. Nevada Pl.	100 to 500 ft	LUST.	Medium	No
167	The Pep Boys, Manny, Moe & Jack #241/Tune Up Shop 301 S. Broadway	500 to 1,000 ft	FINDS. RCRA Small Quantity Generator-no violations reported. LUST.	Medium	No



Table 8 Selection of Sites for Detailed Review (Continued)

Map ID	Site Name/Address	Distance Screening	Identified Concerns	Potential Environmental Concern Ranking	Selected for Detailed Review
167	Tools for Bending Inc. 194 West Dakota Avenue	500 to 1,000 ft	FINDS. RCRA Small Quantity Generator-violations reported. UST. LUST.	Medium	No
167	Ness Manufacturing Inc. 177 W. Alaska Pl.	500 to 1,000 ft	LUST.	Medium	No
168	Floor Protectors 1309 W. Alameda	500 to 1,000 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
168	Duffy Crane and Hauling Inc./ Duffy Investment 389 S. Lipan St.	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported. UST.	Low	No
168	Malott Peterson Renner 1375 W. Alameda	500 to 1,000 ft	UST.	Low	No
168	Plaza Brothers Auto Body Inc. 1355 W. Alameda	500 to 1,000 ft	FINDS. RCRA Small Quantity Generator-violations reported.	Low	No
168	Tavios Auto Paint 1351 W. Alameda Ave.	500 to 1,000 ft	FINDS. RCRA Conditionally Exempt Small Quantity Generator-no violations reported.	Low	No
168	A B Petroleum 19 1253 W. Alameda Ave.	Less than 100 ft	ERNS. UST.	Medium	Yes
168	A B Petroleum 19/U-Gas-Um-#19 1245 W. Alameda Ave.	Less than 100 ft	FINDS. LUST.	Medium	Yes
168	Typewriter Exchange 1295 W. Alameda Ave.	100 to 500 ft	UST.	Low	No
168	LJ Dreiling International/ Denver Jeep Eagle Incorporated 1330 West Alameda Ave.	500 to 1,000 ft	FINDS. RCRA Small Quantity Generator-no violations reported. UST.	Low	No



Table 8 Selection of Sites for Detailed Review (Continued)

Map ID	Site Name/Address	Distance Screening	Identified Concerns	Potential Environmental Concern Ranking	Selected for Detailed Review
168	Best Car Buys 1200 W. Alameda	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
168	Hatch Grinding 1100 West Alameda	Less than 100 ft	UST.	Low	No
168	Annie Hatch 350 S. Lipan St.	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
176	USL Pharma Inc. 301 S. Cherokee St.	Less than 100 ft	FINDS. RCRA Large Quantity Generator-violations reported. UST. ERNS.	Medium	Yes
176	Accutank Testing Corporation 333 South Cherokee St.	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
179	CCOD Fire Dept. Warehouse 20 E. Center Ave.	500 to 1,000 ft	UST. LUST.	Medium	No
179	Atrium/Montgomery Wards/Broadway Marketplace 555 S. Broadway	500 to 1,000 ft	FINDS. RCRA Small Quantity Generator-no violations reported. UST. LUST.	Medium	No
179	No Site Name 601 South Lincoln	500 to 1,000 ft	FINDS.	Low	No
184	Denver Automotive & Diesel College 460 S. Lipan St.	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported. LUST.	Medium	Yes
184	Legget & Pratt Inc. 1225 W. Virginia	Less than 100 ft	UST. LUST.	Medium	Yes
184	Mountain West Printing 1150 West Custer Pl.	100 to 500 ft	FINDS. RCRA Small Quantity Generator-violations reported. UST. LUST.	Medium	No



Table 8 Selection of Sites for Detailed Review (Continued)

Map ID	Site Name/Address	Distance Screening	Identified Concerns	Potential Environmental Concern Ranking	Selected for Detailed Review
184	S & S Anodizing Inc. 1131 W. Custer Pl.	100 to 500 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
184	Accu Type Incorporated 1201 W. Custer Pl.	100 to 500 ft	FINDS.	Low	No
184	Intermountain Electric 602 South Lipan St.	500 to 1,000 ft	FINDS. RCRA Small Quantity Generator-no violations reported. UST.	Low	No
184	VisionPrint Limited 610 South Lipan St.	500 to 1,000 ft	FINDS. RCRA Conditionally Exempt Small Quantity Generator-no violations reported.	Low	No
186	Happy Church 455 S. Platte River Dr.	Less than 100 ft	CERCLIS-NFRAP.	High	Yes
190	Santa Fe/I-25	Less than 100 ft	ERNS.	Medium	Yes
191	Metwest Inc. DBA Quest Diagnostics Inc. 695 S. Broadway	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
191	Goldstar Radiator 696 S. Broadway	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported.	Low	No
191	Econo Lube N Tune #270/Estate of Sam Bloom 700 S. Broadway	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported. UST. LUST.	Medium	Yes
191	ABBA Business & Mail Ctr. 703 S. Broadway	Less than 100 ft	FINDS.	Low	No
191	United Engineers & Contractors/723 Co. 755 S. Broadway	Less than 100 ft	UST. LUST.	Medium	Yes



Table 8 Selection of Sites for Detailed Review (Continued)

Map ID	Site Name/Address	Distance Screening	Identified Concerns	Potential Environmental Concern Ranking	Selected for Detailed Review
191	Eastern Equities Corp/Interplaza Retail Ltd./Broadway Westrade Holdings 795 S. Broadway	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported. UST. LUST.	Medium	Yes
191	RTD - Burkhardt Storage Facility 869 S. Broadway Ave.	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported. LUST.	Medium	Yes
195	St. Francis de Sales School 735 S. Sherman St.	100 to 500 ft	FTTS.	Low	No
196	No Site Name 711 S. Cherokee	Less than 100 ft	ERNS.	Medium	Yes
196	No Site Name 800 S. Cherokee	Less than 100 ft	Landfill.	High	Yes
199	Union Carbide 666 S. Santa Fe Drive	500 to 1,000 ft	FTTS.	Low	No
199	US Welding 600 S. Santa Fe Dr.	100 to 500 ft	UST.	Low	No
199	Vacant Lot next to US Weld Facility 666 S. Santa Fe Dr.	Less than 100 ft	FINDS. RCRA Small Quantity Generator-no violations reported. UST. LUST.	Medium	Yes
199	Union Carbide 698 S. Santa Fe Drive	100 to 500 ft	TSCA.	Low	No
199	Abandoned 701 S. Platte River Dr.	Less than 100 ft	UST.	Low	No
200	838 Property 838 South Sherman St.	Less than 100 ft	FINDS.	Low	No

Table 8 Selection of Sites for Detailed Review (Continued)

Map ID	Site Name/Address	Distance Screening	Identified Concerns	Potential Environmental Concern Ranking	Selected for Detailed Review
203	Gates Rubber Company 999 S. Broadway	Less than 100 ft	FTTs. AST. VCUP.	High	Yes
203	Gates Rubber Co. 950 S. Broadway	Less than 100 ft	FTTS.	Low	No
203	Gates Rubber Co. 990 S. Broadway	Less than 100 ft	FINDS. RCRA Large Quantity Generator- violations reported. ERNS. UST. LUST.	Medium	Yes
205	Lloyd's Apartments 960 S. Logan St.	100 to 500 ft	FTTS.	Low	No
205	USPS Main Vehicle Maint. Facility 915 S. Logan St.	Less than 100 ft	FINDS. RCRA Small Quantity Generator- no violations reported. UST. LUST.	Medium	Yes
205	Metro Denver MRI 990 South Logan St.	100 to 500 ft	FINDS. RCRA Small Quantity Generator- no violations reported.	Low	No
205	Enterprise Leasing Co. 1001 S. Logan St.	500 to 1,000 ft	UST. LUST.	Medium	No
207	Lockheed Martin Astronautics 900 S. Santa Fe Drive	100 to 500 ft	FINDS. RCRA Small Quantity Generator- no violations reported.	Low	No
212	Gates Rubber Company 1050 S. Broadway	100 to 500 ft	FINDS. FTTS.	Low	No
217	Optima Batteries Inc. 5 E. Mississippi Ave.	500 to 1,000 ft	FINDS. RCRA Small Quantity Generator- violations reported.	Medium	No
188, 199	Robinson Brick & Tile Co./Home Depot 500 S. Santa Fe Dr.	Less than 100 ft	CERCLA. FINDS. RCRA Small Quantity Generator-no violations reported. UST. LUST.	High	Yes

Notes:

(1) Site ranked as high due to potential for large scale contaminant migration.

5.0 AGENCY RECORDS AND INTERVIEWS

Forty-five sites with **recognized environmental conditions** were recommended for detailed review based on the site screening and ranking criteria. The objective of the detailed review was to determine the extent of known impacted soil, groundwater or surface water. The detailed review consisted of researching agency records, reviewing previous CDOT investigations, and conducting interviews with relevant local and state environmental regulatory staff, as appropriate. The agency records review was conducted, as necessary, at the DEH, OPS, and the CDPHE. Individual records for sites, where a detailed review was recommended, were reviewed to identify on-site environmental conditions and the potential for soil and groundwater contamination due to an existing or past release of a hazardous substance or petroleum product. The results of the agency records review and interviews are summarized in the following sections. EDR Site Identification (I.D.) numbers for each site are included in the section header. Due to the number of sites, sites located in the same area were numbered the same by EDR.

Of the forty-five sites recommended for detailed review, six were identified as only ERNS sites. Specific spill information for each site was limited due to the nature of ERNS reporting. **Table 9** summarizes the ERNS sites. An additional ERNS site on the southbound ramp from 6th Avenue to I-25 was recommended by CDPHE personnel for inclusion as a site with recognized environmental conditions (CDOT, 2003a).

Six sites recommended for detailed review were identified as only landfills. These landfills were previously identified in **Table 8** and on **Figure 2**. The landfills identified in the EDR database search and their corresponding historical identification numbers are the following:

- 500 Julian Street (EDR Site I.D. 80) identified as 4S-68W-08NW on **Figure 2**.
- 500 Alcott Street (EDR Site I.D. 81) identified as 4S-68W-08NE2 on **Figure 2**.
- 490 Osage Street (EDR Site I.D. 83) located in the area of the former Lake Archer on **Figure 2**.
- 166 S. Kalamath Street (EDR Site I.D. 146) located in area of the former Lake Archer canal on **Figure 2**.
- 1001 W. Bayaud (EDR Site I.D. 146) located in area of the former Lake Archer canal on **Figure 2**.
- 800 S. Cherokee Street (EDR Site I.D. 196) identified as 4S-68W-15SW3/4S-68W-15SW4 on **Figure 2**.

Table 9 Summary of ERNS Sites

EDR Site I.D.	Site Name and Address	Description
76	6th and Osage UPRR– Burnham Yard	Site summary provided in Section 5.2 .
86	No Site Name 445 Federal Boulevard	Hazardous material found in dumpster in alley behind building. No additional information obtained.
140	No Site Name Ellsworth and Santa Fe	Diesel tank dropped off of the back of a truck in intersection. No additional information obtained.
146	No Site Name 135 S. Kalamath Street	30 gallons of sodium hydroxide spilled in street when container fell off of truck. No additional information obtained.
190	No Site Name Santa Fe and I-25	50 gallons of diesel spilled when truck went off of bridge. Residual soil contamination may be present on the river embankment.
196	No Site Name 711 S. Cherokee	75 gallons of diesel spilled when truck fuel line broke. Contaminated soil excavated and disposed of.
NA	Southbound ramp from 6th Avenue to I-25	Diesel tanker overturned and fell into South Platte River. Residual soil and groundwater contamination may be present. No additional information obtained.

Notes:

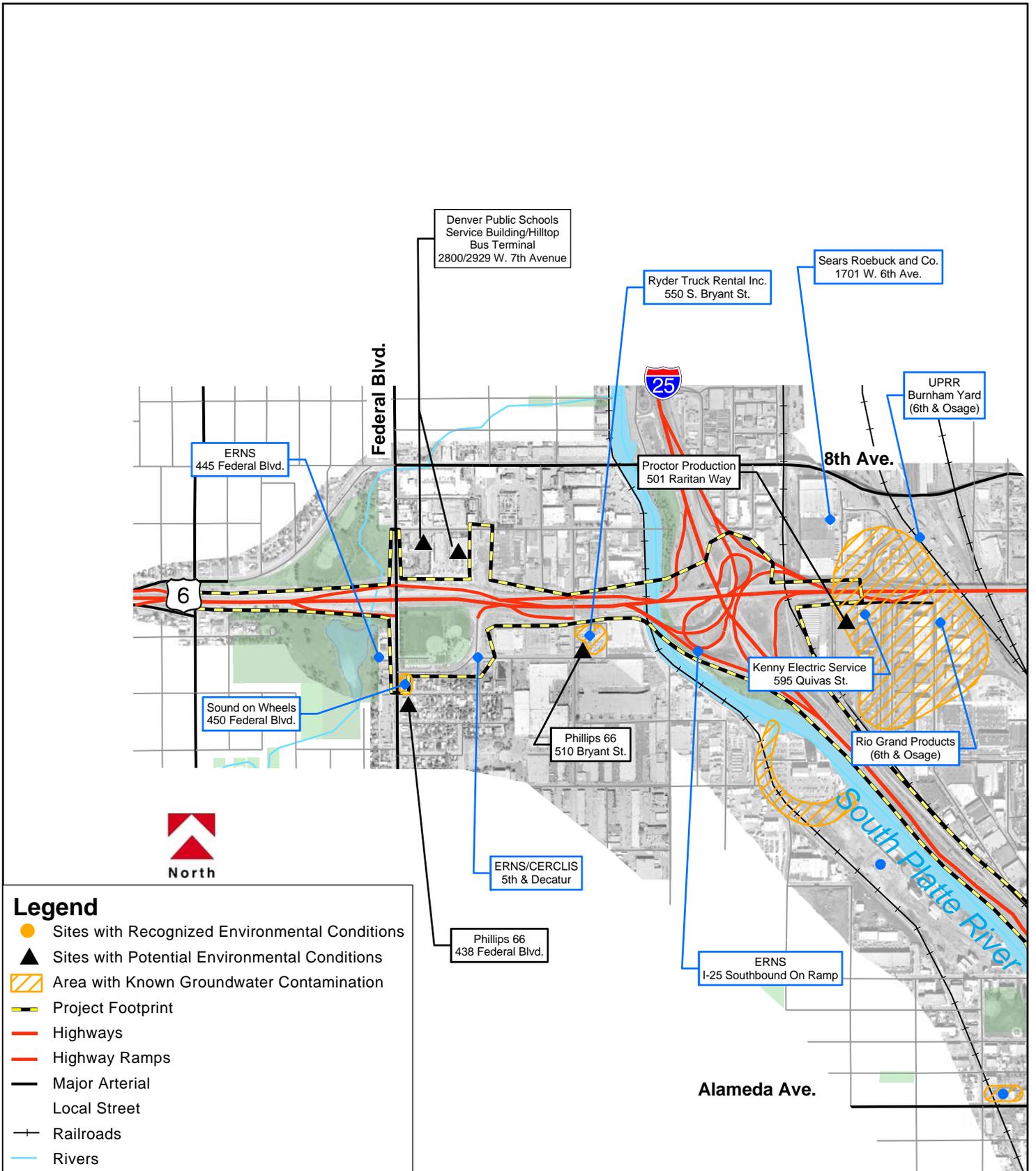
NA – Not Applicable. Site provided by CDPHE personnel (meeting, September 15, 2003).

5.1 I-25 Mainline

The sites with **recognized environmental conditions** located along the I-25 Mainline, for which a detailed review was conducted, are summarized in the following sections. **Figures 4A, 4B and 4C** identify the sites located inside and within 100 ft of the I-25 Mainline project footprint. The sites located along the I-25 Mainline in the vicinity of the Santa Fe and Kalamath project footprint are summarized in **Section 5.3**.

5.1.1 USPS Vehicle Maintenance (EDR Site I.D. 205)

The USPS Vehicle Maintenance facility is located at 915 S. Logan Street and is less than 100 ft north of the I-25 Mainline project footprint. Vehicle maintenance activities have been conducted at the site. The site is also a closed LUST site. One 15,000-gallon UST for diesel was permanently closed at the site on October 1, 1997. A no further action letter was issued by OPS on April 8, 1999. OPS defines a LUST site as closed/clean up complete when “the owner and/or operator has not necessarily removed all contamination, but instead actions taken have met the criteria that the State uses for determining adequate clean up.” Impacted soil and groundwater may be present on the site.

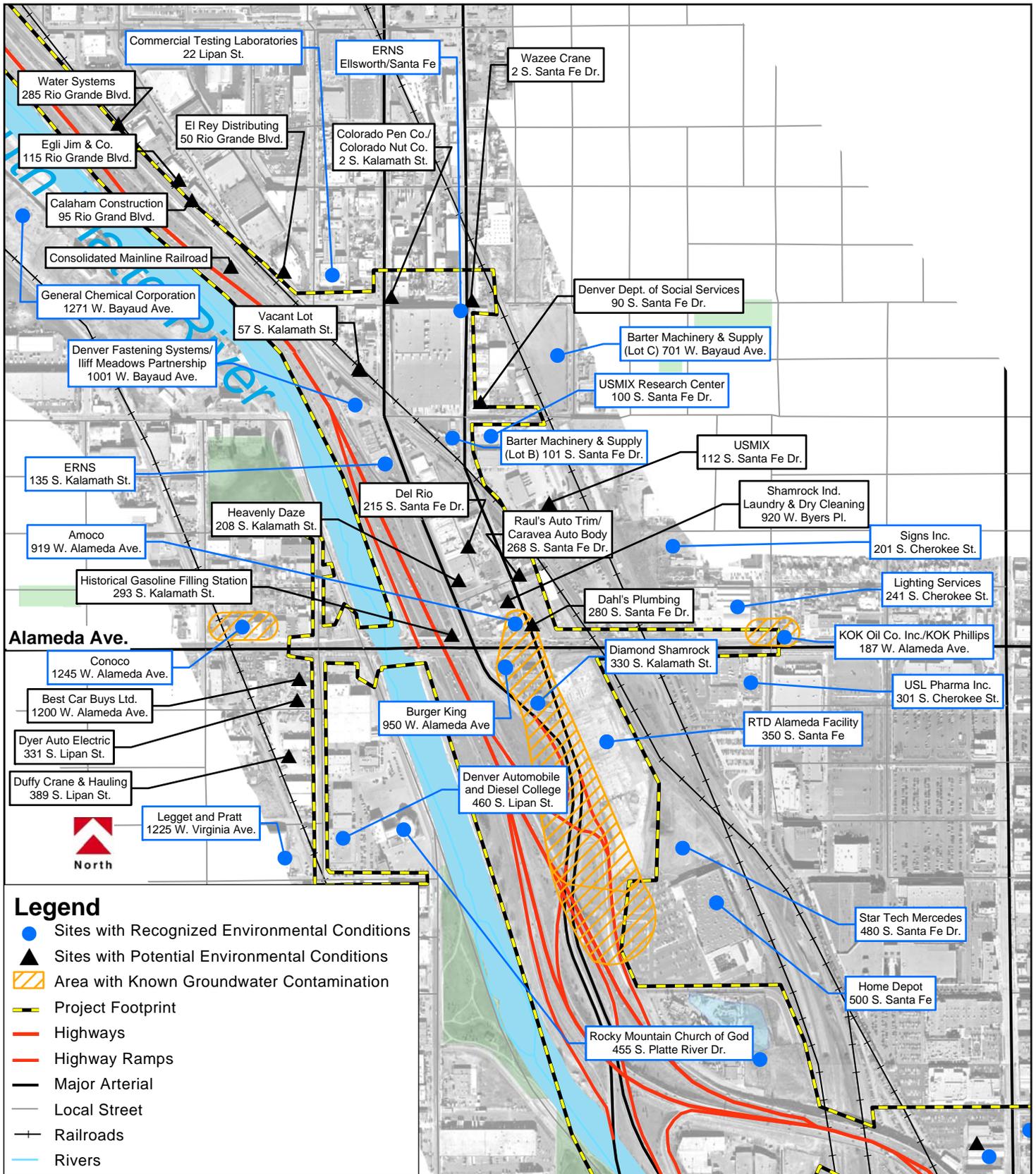


Source: FHU, 2004

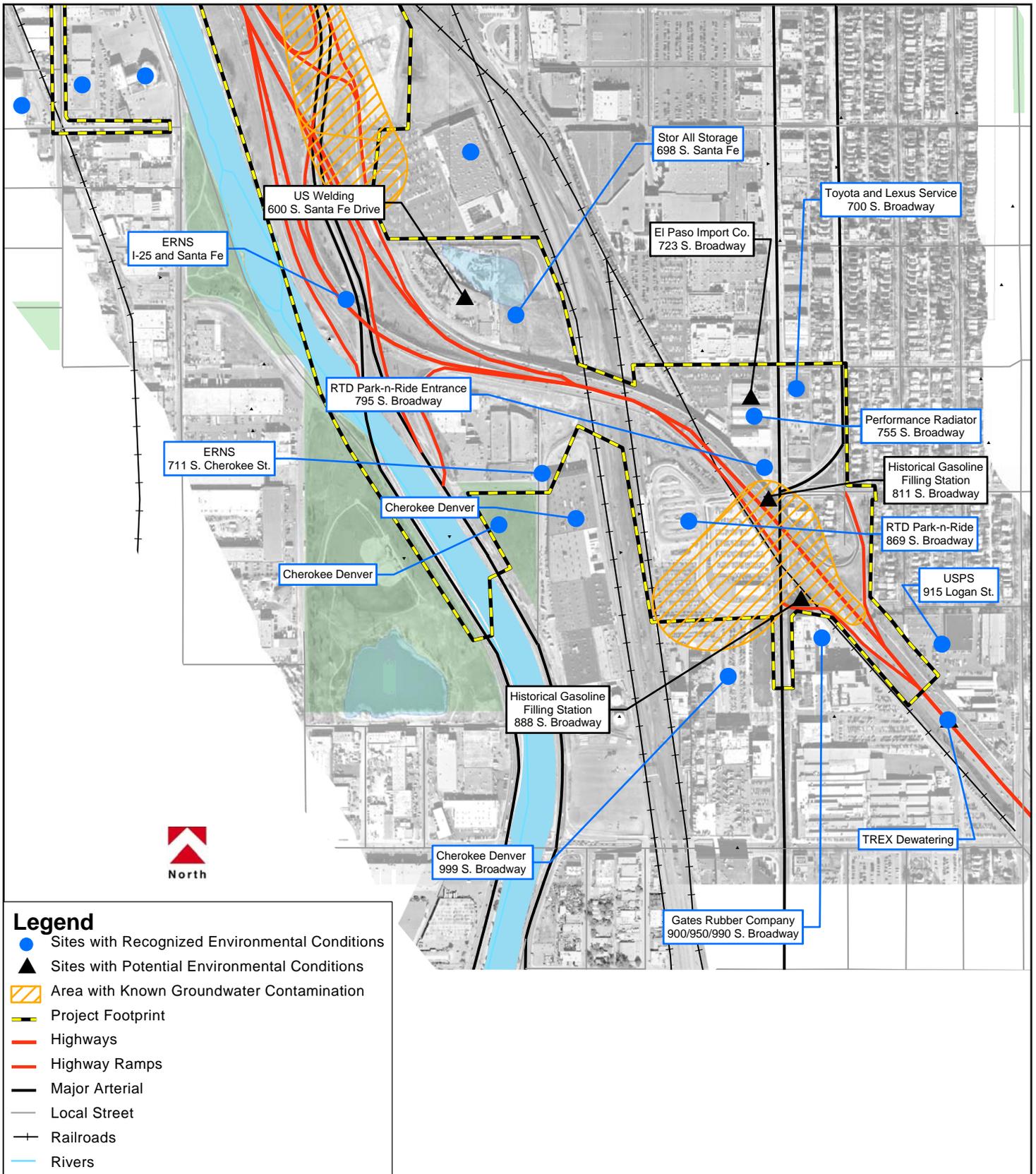
Valley Highway, 02-069, 01/12/2004

**Sites with Environmental Conditions
Northern Project Area**

0 500 1,000 2,000 Feet



**Sites with Environmental Conditions
Central Project Area**



Source: FHU, 2004

Valley Highway, 02-069, 01/12/2004

Sites with Environmental Conditions Southern Project Area

0 500 1,000 2,000 Feet

5.1.2 Gates Rubber Company (EDR Site I.D. 203)

The Gates Rubber Company site is located at 900/950/990 S. Broadway, and the 900 S. Broadway site is less than 100 ft south of the I-25 Mainline project footprint. Site uses have included administrative offices, manufacturing facilities, medical facilities, and warehouses. The site is a closed LUST, RCRA Large Quantity Generator, and ERNS site.

Six USTs were removed from the site in April 1988. Elevated concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) and lead were identified in the soil and groundwater (RTD, 1992). Quarterly groundwater monitoring was conducted from 1994 to 1998. A no further action letter was issued by OPS on June 26, 2000. OPS defines a LUST site as closed/clean up complete when “the owner and/or operator has not necessarily removed all contamination, but instead actions taken have met the criteria that the State uses for determining adequate clean up.” Impacted soil and groundwater may be present on the site.

In 2004, Gates Rubber Company installed five soil boring/monitoring wells on their property west of Broadway and will be installing an additional five monitoring wells in 2005 (CCD, 2004b). A potential source of trichloroethylene (TCE) contamination was identified on the southwestern portion of the property where a 12,000 gallon UST for TCE had previously been located. TCE concentrations in groundwater were identified at 52,000 micrograms per liter ($\mu\text{g/l}$) on the western edge of the property in the vicinity of I-25. The Colorado Basic Standard for Groundwater for TCE is 5.0 ppb (CDPHE, 1999).

The facility was also a RCRA large quantity generator— generating greater than 1,000 kilograms of hazardous waste per month. Three RCRA violations were reported at the facility following a compliance evaluation inspections. The violations were administrative in nature.

Several spills have been reported on the site. The spills have ranged from 100 gallons to 1,000 gallons and have included PCBs, oil, fuel oil, and diesel. Spill clean up activities are unknown.

5.1.3 Cherokee Denver (former Gates Rubber Company) (EDR Site I.D. 203)

The Cherokee Denver site is located at 999 S. Broadway and extends west from Broadway Avenue to the South Platte River and south from I-25 and the RTD park-n-Ride facility to Mississippi Avenue. The site is less than 100 ft south of the I-25 Mainline project footprint.

The site was formerly the Gates Rubber Company. In 1914, the site was purchased by the Gates Rubber Company. Site uses have included the Gates Rubber Company administrative offices, research and engineering laboratories, and manufacturing facilities. Gates Rubber Company operated at the site for approximately 80 years. The site was purchased in 1996 by Cherokee Denver LLC. Cherokee Denver proposes to redevelop the site as a transit-oriented mixed use site, which would include commercial, retail, residential, and office use. As of this MESA, the site was undergoing site characterization, and the site had been divided into operable units for the VCUP process.

Two operable units have been accepted into the CDPHE VCUP, and VCUP applications are reportedly being prepared for the remaining portions of the site. The operable units accepted into the VCUP include East Vanderbilt Park, which is located east of the South Platte River, and

Parcel 5, which is located at the southwest corner of Mississippi Avenue and Broadway (Cherokee Denver, 2004).

Concentrations of benzene and TCE exceeding Colorado groundwater standards have been identified on the site and downgradient of the site toward existing I-25. Benzene concentrations in groundwater in alluvial wells on the site ranged from 0.6 to 4,400 µg/l (Cherokee Denver, 2003a). Benzene concentrations in groundwater in bedrock wells on the site ranged from 1.0 µg/l to 17,000 µg/l (Cherokee, 2003b). Off-site benzene concentrations in groundwater in alluvial wells in the vicinity of existing I-25 ranged from 0.46 to 440 µg/l (Cherokee Denver, 2003 a). Off-site benzene concentrations in groundwater in bedrock wells in the vicinity of existing I-25 ranged from 0.2 to 1182 µg/l (Cherokee, 2003b). The Colorado Basic Standard for Groundwater for benzene is 5.0 µg/l (CDPHE, 1999).

TCE concentrations in groundwater in alluvial wells on the site ranged from 1.02 to 160,000 µg/l (Cherokee Denver, 2003c). TCE concentrations in groundwater in bedrock wells on the site ranged from 0.5 to 770,000 µg/l (Cherokee Denver, 2003d). Off-site TCE concentrations in groundwater in alluvial wells in the vicinity of existing I-25 ranged from two to 21,000 µg/l (Cherokee Denver, 2003c). Off-site TCE concentrations in groundwater in bedrock wells in the vicinity of existing I-25 ranged from seven to 260,000 µg/l (Cherokee Denver, 2003d). The Colorado Basic Standard for Groundwater for TCE is 5.0 µg/l (CDPHE, 1999). The surface water discharge standard for TCE to the South Platte River is 2.6 µg/l.

During construction of a caisson as a part of the T-REX project for the RTD double track light-rail flyover in northern portion of the Cherokee Denver site, benzene and TCE were identified in the soil excavation for the caisson. The benzene concentration was 3.9 parts per million (ppm), and the TCE concentration was 300 ppm (T-REX, 2002). For reference, the Colorado Soil Remediation standard for residential land use is 0.60 ppm for benzene and is 2.99 µg/l for TCE (CDPHE, 1997).

In January and February 2004, CDPHE requested Cherokee Denver LLC conduct an additional investigation north/northeast of I-25 in the vicinity of Broadway, Lincoln Street, and Ohio Avenue. A series of shallow alluvial, deep alluvial, and bedrock ground water monitoring wells was installed as a part of the investigation. In addition, indoor air in the basements of the residences along Lincoln Street was sampled (IRG, 2004). Three shallow alluvial, one deep alluvial, and three bedrock monitoring wells were installed directly northeast of the existing northbound Broadway Viaduct behind the residences along S. Lincoln Street and Hurricane Drain at 800 S. Broadway. Groundwater was encountered at approximately 25 ft bgs.

TCE groundwater concentrations in the shallow alluvial wells ranged from 3,400 to 4,900 µg/l. The TCE groundwater concentration in the deep alluvial well was 15,000 µg/l. TCE groundwater concentrations in deep alluvial wells ranged from 41 to 880 µg/l.

Indoor air sample results from TCE ranged from 0.02 micrograms per cubic meter (µg/m³) to 0.2 µg/m³. These detected concentrations were below the CDPHE guidance concentrations of 13.6 µg/m³.

Chlorinated solvent and petroleum impacted soil and groundwater are located on the site and in the vicinity of existing I-25. TCE contaminated groundwater extends from the Cherokee Denver site across Broadway and I-25 to the northeast in the vicinity of Ohio Avenue/Lincoln Street.

5.1.4 RTD park-n-Ride (former Burkhardt Storage Facility) (EDR Site I.D. 191)

The RTD park-n-Ride facility is located at 869 S. Broadway and is less than 100 ft from the I-25 Mainline project footprint. The site was formerly occupied by the RTD Burkhardt Storage Facility. The site was acquired in 1976 by RTD, which used the site for bus maintenance, storage and computer operations until 1990. The site was a former steel fabrication plant, Burkhardt Steel, which operated from the 1920s until the 1970s. The steel fabrication plant and office building were demolished prior to construction of the RTD park-n-Ride facility in 1993.

Four USTs were removed from the site in 1991, and contaminated soil associated with the USTs was also removed. Residual hydrocarbon and solvent contamination are present on the site (RTD, 1992).

Surficial soil sampling conducted in 1992 identified lead contaminated soil on the site. The lead contaminated soil was capped by the RTD park-n-Ride parking lot (Raabe, 2003) and remains in-place.

Petroleum hydrocarbons and TCE, chloroethane, and 1,1-dichloroethane were detected in groundwater on the site and TCE exceeded Colorado groundwater standards (RTD, 1995).

5.1.5 RTD park-n-Ride Entrance (former Eastern Equities Corp./Interplaza Retail/Broadway Westrade Holdings) (EDR Site I.D. 191)

The Eastern Equities Corp./Interplaza Retail/Broadway Westrade Holdings site is a closed LUST site located at 795 S. Broadway. A no further action letter was issued by OPS on March 30, 2000. OPS defines a LUST site as closed/clean up complete when "the owner and/or operator has not necessarily removed all contamination, but instead actions taken have met the criteria that the State uses for determining adequate clean up."

The site is currently occupied by the Ohio Avenue bus entrance to the RTD park-n-Ride facility at I-25 and Broadway. The site is located within 100 ft of the I-25 Mainline project footprint. The site was previously a used car dealership and a gas station. Potential impacts to groundwater and soil were investigated in June 1993. Volatile organic compounds (VOCs) and total extractable petroleum hydrocarbons (TEPH) were not detected above the laboratory reporting limit in groundwater (RTD, 1993b). Petroleum impacted soil was detected on the site. Three 4,000-gallon USTs for gasoline were removed from the site in March 1994. Residual impacted soil may be located on the site.

5.1.6 Performance Radiator (former United Engineers & Contractors/723 Co.) (EDR Site I.D. 191)

The United Engineers & Contractors/723 Co. site is a closed LUST site located at 755 S. Broadway. A no further action letter was issued by OPS on May 19, 1994. OPS defines a LUST site as closed/clean up complete when "the owner and/or operator has not necessarily removed all contamination, but instead actions taken have met the criteria that the State uses for determining adequate clean up."

The site is currently occupied by Performance Radiator and is located within 100 ft of the I-25 Mainline project footprint. One 1,000-gallon UST for gasoline was removed from the site in June 1991. Laboratory analytical results indicated that BTEX were not detected above the laboratory reporting limit, and total recoverable petroleum hydrocarbons (TRPH) was 26.6 ppm in soil (Easton Construction Company, 1991). Groundwater was not encountered during the tank removal.

5.1.7 Toyota and Lexus Service (former Econo Lube N Tube) (EDR Site I.D. 191)

The Econo Lube N Tube site is a closed LUST site located at 700 S. Broadway. A no further action letter was issued by OPS on December 3, 1996. OPS defines a LUST site as closed/clean up complete when “the owner and/or operator has not necessarily removed all contamination, but instead actions taken have met the criteria that the State uses for determining adequate clean up.”

The site is currently occupied by Toyota and Lexus Service and is located within 100 ft of the I-25 Mainline project footprint. One 2,000 gallon UST and one buried 55-gallon drum retrofitted to function as a UST were removed from the site in October 1996. The former contents of the USTs were unknown. Approximately 55 cubic yards (yds³) of impacted soil were removed from the site. Groundwater was not encountered during the tank removal. Residual impacted soil may be located on the site.

5.1.8 Stor-All Storage (former Linde Gases of the West) (EDR Site I.D. 199)

The Stor-All Storage facility was constructed on a vacant lot next to the U.S. Welding facility in approximately 2000/2001. Although the site is identified at 666 S. Santa Fe Drive in the EDR database report (see **Appendix B**), the site includes the parcel at 698 S. Santa Fe Drive. The 698 S. Santa Fe Drive site is a closed LUST site. A no further action letter was issued by OPS on June 24, 1996. OPS defines a LUST site as closed/clean up complete when “the owner and/or operator has not necessarily removed all contamination, but instead actions taken have met the criteria that the State uses for determining adequate clean up.”

The site is located less than 100 ft north of the I-25 Mainline project footprint. The site was formerly occupied by Linde Gases of the West, a subsidiary of Union Carbide, and was a gas plant with acetylene and carbide use. Three USTs were removed from the site in June 1993. One 2,000-gallon UST for gasoline, one 3,000-gallon UST for diesel, and one 900-gallon UST for waste oil were removed from the site. A 1,000-gallon UST for acetone was closed in-place on the site. Approximately 320 yds³ of contaminated material related to the USTs and a lime pond were removed from the site. Groundwater was not encountered during the excavation. Residual impacted soil and groundwater may be located on the site.

5.1.9 Commercial Testing Laboratories (EDR Site I.D. 110)

The Commercial Testing Laboratories site is a closed LUST site located at 22 Lipan Street. A no further action letter was issued by OPS on November 11, 2000. OPS defines a LUST site as closed/clean up complete when “the owner and/or operator has not necessarily removed all contamination, but instead actions taken have met the criteria that the State uses for determining adequate clean up.”

The site is located less than 100 ft east of the I-25 Mainline project footprint. One 2,000-gallon UST for gasoline was removed from the site in August 1990. Petroleum impacted soil was removed from the tank excavation, and soil laboratory analytical results from the tank excavation were not detected above the laboratory reporting limit for BTEX. Groundwater was not encountered during the tank removal. Residual petroleum impacted soil may be located on the site.

5.1.10 General Chemical (EDR Site I.D. 151)

The General Chemical facility is located at 1271 W. Bayaud Ave. Although this site is located west of the South Platte River, is not upgradient of the project footprint, and was not included in the database screening and site ranking (see **Chapter 4.0**); a detailed review was conducted to identify environmental conditions due to the possible relocation of the South Platte River bike trail from the eastern embankment to the western side of the South Platte River.

The General Chemical facility has been at the site since the early 1900s and chemical and mineral processing have been conducted at the site. The facility is a RCRA – Small Quantity Generator, UST, closed LUST, and ERNS site. Three permanently closed USTs are reported at the site. As of this MESA, an application for the CDPHE VCUP had been submitted.

Concentrations of aluminum, arsenic, cadmium, chromium, lead, selenium, and zinc in groundwater on the property and downgradient of the site toward the City and County of Denver Wastewater Management building and the South Platte River exceed Colorado groundwater standards. White precipitate has been identified in the South Platte River, north of the City and County of Denver Wastewater Management building, where the heavy metal contaminated groundwater discharges to the South Platte River.

5.2 6th Avenue

The sites with **recognized environmental conditions** located along the 6th Avenue project footprint for which a detailed review was conducted are summarized in the following sections. **Figure 4B** identifies the site located within or within 100 ft of the 6th Avenue project footprint.

A CERCLIS, RCRA small quantity generator, FINDS, and ERNS site was identified in the database at 5th and Decatur (EDR Site I.D. 87), which is south of 6th Avenue between Federal Boulevard and Bryant Street. According to the description, the site was a PCB capacitor clean-up; however, a file was not available for review at CDPHE.

5.2.1 Sound on Wheels (former Charles Yamaguchi Site /KOK Auto Repair & Body Shop) (EDR Site I.D. 86)

The Sound on Wheels site is an open LUST site located at 450 S. Federal Boulevard. The site was formerly occupied by Charles Yamaguchi Site/KOK Auto Repair & Body Shop site. The site is located less than 100 ft south of the eastbound on-ramp to 6th Avenue from Federal Boulevard. The USTs have been reportedly removed and soil vapor monitoring has been conducted on the site. Benzene in groundwater on the site exceeds Colorado state standards. Petroleum impacted soil may also be present.

5.2.2 Ryder Truck Rental Inc. (EDR Site I.D. 81)

The Ryder Truck Rental Inc. site is a closed LUST site located at 550 Bryant Street. A no further action letter was issued by OPS on February 4, 2003. The site is a rental truck office and fueling facility and is located less than 100 ft south of 6th Avenue between Bryant Street and Alcott Street. OPS defines a LUST site as closed/clean up complete when “the owner and/or operator has not necessarily removed all contamination, but instead actions taken have met the criteria that the State uses for determining adequate clean up.”

The site is located less than 100 ft south of the 6th Avenue project footprint. One 10,000-gallon UST for gasoline and one 12,000-gallon UST for diesel were removed from the site in October 1999. Approximately 650 yds³ of petroleum impacted soil were removed from the site. Eight additional USTs ranging in size from 560-gallons to 12,000-gallons have been permanently closed on the site. Benzene impacted groundwater is present on-site. Residual petroleum impacted soil may also be present.

5.2.3 Kenny Electrical Service (former Conrads Inc.) (EDR Site I.D. 75)

The Kenny Electrical Service site is a closed LUST site located at 595 Quivas Street. A no further action letter was issued by OPS on August 18, 1997. OPS defines a LUST site as closed/clean up complete when “the owner and/or operator has not necessarily removed all contamination, but instead actions taken have met the criteria that the State uses for determining adequate clean up.”

The site is located less than 100 ft south of 6th Avenue between Quivas Street and Raritan Way and was formerly occupied by Conrads Inc. Two USTs were removed from the site in October 1996. Petroleum impacted soil and groundwater were identified in the tank excavation, but laboratory analytical results for total petroleum hydrocarbons (TPH) were below the OPS clean-up standard of 500 ppm. A groundwater sample was not collected. Residual petroleum impacted soil and groundwater may be present.

5.2.4 Sears Roebuck & Company (EDR Site I.D. 75)

The Sears Roebuck & Company site is a closed LUST site located at 1701 W. 6th Avenue. The site consists of a retail outlet facility that is located less than 100 ft north of 6th Avenue between Seminole Road and I-25. A 4,000-gallon and 6,000-gallon UST for diesel were removed from the site in October 1988 (CCD, 2004). Petroleum impacted soil and groundwater were identified on-site. A pump and treat system was reportedly installed on the property and several thousand gallons of petroleum product were removed in 1988. The site is located downgradient of 6th & Osage diesel plume (see **Section 5.2.5**).

5.2.5 6th & Osage (UPRR – Burnham Yard and Rio Grande Products) (EDR Site I.D. 76 and 83)

The 6th & Osage site is bounded to the north by 8th Avenue, to the south by 3rd Avenue, to the east by the Union Pacific Burnham railroad yard, and to the west by Quivas Street and the Consolidated Main Line railroad tracks. This site is also identified in **Table 9** as an ERNS site. Groundwater in the area has been identified as containing elevated levels of petroleum TEPH in

exceedances of 3,100 mg/l (DEH, December 2002). Petroleum stained soils have also been observed in the area.

Three potential sources of the plume have been identified: the UPRR Burnham Yard and the Rio Grande Products site at 500 Osage St., and an abandoned UPRR diesel pipeline located east of the Rio Grande Products site. The UPRR Burnham Yard site is the source of the contamination north of 6th Avenue, and the Rio Grande Products site is the source of the contamination south of 6th Avenue. Approximately 670 linear ft of the storm drain located southwest of the UPRR Burnham Yard has been sealed, and a Corrective Action Plan approved for the UPRR Burnham Yard site (CDPHE, 2004). The lining and sealing of the storm drain is intended to prevent further diesel seepages into the stormwater drain from groundwater. However, diesel impacted groundwater is seeping into the stormwater drain from the south (CDPHE, 2004). The Rio Grande Products Site overlies the likely source of the diesel plume located south of 6th Avenue. However, work had not been completed to identify the source or owner as of this MESA.

Petroleum contaminated soil and groundwater are located on the site and in the vicinity of existing I-25 and 6th Avenue.

5.3 Santa Fe Drive and Kalamath Street

The sites with **recognized environmental conditions** located along the Santa Fe Drive and Kalamath Street project footprint for which a detailed review was conducted are summarized in the following sections. **Figure 4C** identifies the site located within or within 100 ft of the Santa Fe Drive and Kalamath Street project footprint.

5.3.1 StarTech Mercedes and The Home Depot (former Robinson Brick Company/Denver Radium) (EDR Site I.D. 188 and 199)

The StarTech Mercedes and Home Depot sites are a CERCLA Superfund site located at 480/500 S. Santa Fe Dr. The site is Operable Unit (OU) 9 of the Denver Radium Superfund site, which consists of eleven OUs throughout Denver. Industrial activity began at the site in 1886 with the construction of the Bailey Smelter, which operated sporadically until the late 1880s. The Gold and Silver Extraction Company occupied the site in the 1890s and operated a cyanide leaching operation. In the early 1900s, a mill was constructed on the site by the Colorado Zinc Company. Zinc milling operations continued until about 1910. The National Radium Institute extracted radium from ore at this location from 1914 to 1920. Large quantities of waste material from on-site metal recovery operations were probably disposed of in the nearby South Platte River channel and adjacent sites. In the 1940s, the Robinson Brick Company purchased 17 acres of the property for the production of brick and tile. Robinson Brick Company operated at this location until the 1980s.

In the early 1990s, approximately 97,000 tons of radioactive soil and materials were excavated from the site as part of a CERCLA remediation. The Home Depot store was constructed in 1996. The parking lot of the Home Depot store caps heavy metal impacted soils that remain in-place on the site.

In addition, the area north of The Home Depot parking lot and west of the StarTech Mercedes facility contains an area of consolidated thorium-impacted soils that is demarcated by a geotextile barrier.

Heavy metal and radionuclide impacted groundwater is present on the site and west of the site toward existing I-25 and the South Platte River. The CDPHE conducts annual groundwater and surface water monitoring. The July 2003 sampling event indicated elevated concentrations of cadmium, manganese, uranium, zinc, radium 226, radium 228, and gross alpha radionuclides (CDPHE, November 2003).

5.3.2 Vacant lot (former RTD Alameda Facility) (EDR Site I.D. 146)

The vacant lot at 350 S. Santa Fe Drive is a closed LUST site. A no further action letter was issued by OPS on July 21, 2000. OPS defines a LUST site as closed/clean up complete when “the owner and/or operator has not necessarily removed all contamination, but instead actions taken have met the criteria that the State uses for determining adequate clean up.”

The site was formerly occupied by the RTD Alameda Facility, a bus maintenance facility. RTD operated at the site from the mid-1970s to 1990 (RTD, 2003). The site was previously occupied by the Denver Tramway Company, which occupied the site in 1904. Streetcars were previously maintained at the facility. The site consisted of an open yard with a paint shop in the northeastern corner until 1950. A maintenance building was constructed in 1950 on the site.

Two 10,000-gallon, two 2,000-gallon, and one 1,000-gallon USTs for diesel; one 1,000-gallon UST for used oil; and one 7,500-gallon UST with unknown prior contents were removed from the site in December 1991. Petroleum impacted groundwater and soil were identified on the site. TCE was identified along the western edge of the site in the northern portion of the site exceeding 10 µg/l (Engineering-Science, 1991). No additional sampling of TCE was conducted on the site.

A bioventing/air sparge was installed along the western edge of the site. In March 2000, benzene was detected at 6.5 µg/l in groundwater on the site, but BTEX was not detected above the laboratory reporting limit downgradient of the site (L.T. Environmental, 2000). Petroleum impacted groundwater and residual petroleum impacted soil are most likely present on the site.

5.3.3 Diamond Shamrock (former Total Petroleum) (EDR Site I.D. 146)

The Diamond Shamrock site is an active LUST site located at 330 S. Kalamath Street. The site consists of an operating gasoline station, which is located in the project footprint between Kalamath Street and Santa Fe Drive south of Alameda Avenue. Four 10,000-gallon USTs for diesel and gasoline were removed from the site in October 1991. Petroleum impacted soil and groundwater were identified across the site and have been reported downgradient of the site. Elevated concentrations of benzene ranging from 120 µg/l to 390 µg/l have been reported in the groundwater on-site (Higgins & Associates, 2001). A Corrective Action Plan (CAP) is currently being implemented for the site with quarterly groundwater monitoring.

5.3.4 Burger King (Former Chevron) (EDR Site I.D. 146)

The Burger King (former Chevron) site is an open LUST site at 950 W. Alameda Avenue. The site consists of an operating fast-food restaurant and is located within the project footprint. Petroleum impacted soil with a total petroleum hydrocarbon concentration of 1,800 ppm. A threshold value of 500 ppm has been established by OPS (OPS, 1999). The site is currently undergoing additional site characterization, and a CAP had not been prepared at the time of this MESA.

5.3.5 Amoco (EDR Site I.D. 146)

The Amoco site is an open LUST site at 919 W. Alameda Avenue. The site consists of an operating gasoline station and is located within the project footprint. One 8,000-gallon and two 6,000-gallon USTs for gasoline and 550-gallon UST for used oil were permanently closed 7 on the site. Petroleum impacted soil and groundwater were identified across the site. Elevated concentrations of benzene ranging from 17.7 µg/l to 56.7 µg/l were detected in groundwater on the site (Delta, 2003). BTEX concentrations in off-site groundwater sampling was not detected above the laboratory reporting limits. A CAP is currently being implemented for the site with quarterly monitoring.

5.3.6 U.S. Mix Research Center (former Barter Machinery & Supply) (EDR Site I.D. 144 and 146)

The U.S. Mix Research Center site is a closed LUST site located at 100 S. Santa Fe Drive. A no further action letter was issued by OPS on January 31, 1996. OPS defines a LUST site as closed/clean up complete when “the owner and/or operator has not necessarily removed all contamination, but instead actions taken have met the criteria that the State uses for determining adequate clean up.”

One 1,000-gallon and one 550-gallon UST were removed from the site in 1993, and 200 yds³ of petroleum impacted soil were also removed from the tank excavation. Groundwater monitoring was conducted in 1995, and VOCs were not detected above the laboratory reporting limit (ERM, 1995). Total halogens were detected in groundwater ranging from 15 µg/l to 23 µg/l (ERM, 1995).

The site is also a RCRA CORRACTS site. The site was previously owned by the Public Service Company of Colorado, which had purchased the site from Barter Machinery and Supply. Barter Machinery and Supply operated a scrap metal and machinery salvage facility on five lots near the Santa Fe/Kalamath project footprint:

- Lot A – 100 S. Santa Fe Drive
- Lot B – 101 S. Santa Fe Drive
- Lot C – 701 W. Bayaud Avenue
- Lot D – 60 Inca Street
- Lot E – 45 Inca Street

Contaminated soil was identified above the site-specific PCB action level of three ppm and the lead action level of 500 ppm on the sites (ERM, 1992). Approximately 12,684 tons of contaminated soil were removed from Lot A, and approximately 2,949 tons of contaminated soil were removed from Lot B. PCB and lead contaminated soil remains in-place on Lot A adjacent to the railroad tracks because these areas could not be excavated without impacting the railroad tracks (Spectrum, 2001). PCB and lead contaminated soil may be present along the Consolidated Main Line railroad tracks in the vicinity of Santa Fe Drive and Kalamath Street.

5.3.7 U.S. Mix Products (EDR Site I.D. 146)

The U.S. Mix Products Company is located at 112 S. Santa Fe Drive. According to OPS records, one 10,000-gallon UST for diesel and one 5,000-gallon UST for gasoline are permanently closed at the site. One 16,900-gallon AST for diesel is also registered at the site. In addition, three 16,900-gallon ASTs, three 12,000-gallon ASTs, one 5,000-gallon AST, and four 3,000-gallon ASTs for unknown substances are on the site.

The facility is also a RCRA Small Quantity generator with violations. The violations were due to an administrative oversight in generator status and appear not to be related to a known environmental condition.

5.3.8 Wazee Crane Co. (EDR Site I.D. 140)

The Wazee Crane Co. is a RCRA small quantity generator located at 2 S. Santa Fe Drive, less than 100 ft north of the Santa Fe/Kalamath project footprint. One RCRA violation was reported at the facility following a compliance evaluation inspection. The violation was administrative in-nature. Several spills (ERNS) have been reported at the facility. An unknown quantity of paint and solvent was spilled in September 1992 near the loading docks in the southeastern corner of the building. Spill clean up activities are unknown.

5.3.9 Lighting Services (former Continental Can Company/Colorado Paint Co.) (EDR Site I.D. 162)

The Lighting Services site is a CERCLIS-NFRAP site located at 241 S. Cherokee Street. The site was formerly occupied by the Continental Can Company. The site is less than 100 ft north of Alameda Avenue between Cherokee Street and Santa Fe Drive. The Continental Can Company closed operations in January 1984.

During operations, approximately eight to fifteen 55-gallon drums of spent lacquer (composed of methyl ethyl ketone, lacquer, and water) were generated on an annual basis and were stored on a concrete pad west of the building on-site. Small spills of spent lacquer were reported in the storage area. As part of the plant closure, the storage area was washed with water and sampling conducted on the edge of the concrete pad. Soil samples were collected from approximately one to two ft bgs and were analyzed for VOCs. VOCs were not detected above the laboratory reporting limits in the soil samples. Groundwater was not sampled.

Two 10,000-gallon USTs for methyl ethyl ketone and vinyl acetate are registered with OPS for Colorado Paint Co. at the site. The USTs were reportedly last used in 1983. No leaks or spills were reported.

5.3.10 Signs Inc. (former Cherokee Solvents) (EDR Site I.D. 162)

The Signs Inc. site is a CERCLIS-NFRAP site. The site is located at 201 S. Cherokee Street, which is approximately 1,000 ft east and upgradient of the project footprint. The site consists of a multi-use office building.

The EPA responded to a report of solvent dumping on March 6, 1990. Workers had reportedly dumped several 55-gallon drums of used paint solvents, acetone, mineral spirits, and methyl ethyl ketone. Approximately eight to 11 ft of contaminated soil was excavated from the spill area and "landfarmed" on-site. Groundwater was not encountered in the excavation, although potential impact to groundwater may have occurred. No additional investigation was conducted.

5.3.11 K.O.K. Automotive Service (former KOK Oil Co./KOK Phillips) (EDR Site I.D. 167)

The KOK Oil Company/KOK Phillips site is an active LUST site located at 167 W. Alameda. The site consists of an automotive repair shop and former gasoline station, which is less than 100 ft northeast of the Alameda Avenue and Cherokee Street intersection. Two USTs were removed from the site in July 1998. Petroleum impacted soil and groundwater were encountered during the tank removal. No additional sampling or laboratory analysis was available for the site. As of November 2003, a CAP was pending submittal for the site.

5.3.12 USL Pharma Inc. (EDR Site I.D. 176)

The USL Pharma Inc. site is a RCRA large quantity generator located at 301 S. Cherokee St. The site consists of a pharmaceutical manufacturing facility, which is less than 100 ft south of Alameda Avenue between Cherokee Street and Santa Fe Drive. Nine RCRA violations were reported at the facility following two compliance evaluation inspections. The violations were administrative in-nature, and no spills, leaks, or releases to the environment have been reported at the facility. Waste streams at the facility include lab waste, spent solvents, and used oil.

5.3.13 Conoco (former A-B Petroleum and U-Gas-Um) (EDR Site I.D. 168)

The Conoco site is an active LUST site located at 1245/1253 W. Alameda Avenue. The site consists of an active gasoline station. Six USTs for gasoline and ranging in size from 4,000-gallons to 20,000 gallons were removed from the site in October 1995. Several orphan tanks were discovered. In addition, approximately 936 yds³ and 4,120 gallons of free product were removed from the tank excavation. Petroleum impacted soil ranging from 87 to 1,930 ppm TPH and groundwater with a benzene concentration of 19 µg/l remain on the site.

5.3.14 Denver Automotive & Diesel College (EDR Site I.D. 184)

The Denver Automotive & Diesel College site is a closed LUST site located at 460 S. Lipan Street. A no further action letter was sent by OPS on December 15, 1995. OPS defines a LUST site as closed/clean up complete when "the owner and/or operator has not necessarily removed all contamination, but instead actions taken have met the criteria that the State uses for determining adequate clean up."

The site is located less than 100 ft east of the Santa Fe/Kalamath project footprint. One 550-gallon tank for used oil was removed from east of the building. Approximately five yds³ of petroleum contaminated soil were removed from around the fill pipe. Landfill material was observed outside of the tank fill. Oil and grease impacted soil with a concentration of 9,250 ppm was identified in the landfill material. The landfill material included brick and wood fragments. Groundwater was not encountered in the excavation. This site is located on a former landfill. Petroleum contaminated land fill debris, groundwater, and methane concerns may be located on the property.

5.3.15 Legget & Pratt Inc. (EDR Site I.D. 184)

The Legget & Pratt Inc. site is a closed LUST site located at 1225 W. Virginia Avenue. A no further action letter was sent by OPS on May 8, 1997. OPS defines a LUST site as closed/clean up complete when “the owner and/or operator has not necessarily removed all contamination, but instead actions taken have met the criteria that the State uses for determining adequate clean up.”

The site consists of a commercial building occupied by Legget & Pratt Inc. and is less than 100 ft west of the project footprint along Lipan Street south of Alameda Avenue. One 2,000-gallon UST for gasoline was removed in August 1989. Residual soil contamination was reportedly below standards. Groundwater was not encountered during UST removal.

5.3.16 Rocky Mountain Church of God (former Happy Church) (Site I.D. 186)

The Happy Church site is a CERCLIS-NFRAP site located at 455 S. South Platte River Drive. The site consists of a church, currently occupied by the Rocky Mountain Church of God, which is less than 100 ft west of the project footprint along Lipan Street south of Alameda Avenue. High levels of methane were identified at the site in 1978. The site is located on a former landfill, approximately seven acres in size. Landfill debris, groundwater contamination, and methane may be present at the site.

6.0 FINDINGS & RECOMMENDATIONS

FHU has performed a MESA on the Valley Highway Project in conformance with the scope and limitations of ASTM Practice E 1527-00 and CDOT Modified Environmental Site Assessment Guidance (CDOT, February 2000). This MESA has been prepared with a level of detail appropriate for the development and screening of design alternatives for the Valley Highway Project EIS and identifies “**potential**” and “**recognized environmental conditions**” associated with the project footprint.

Sites with **recognized environmental conditions** are sites with known existing or past releases of any hazardous substances or petroleum products into structures on the site or into the ground, groundwater, or surface water of the site. Sites with **potential environmental conditions** are sites where a **recognized environmental condition** may be present but could not be confirmed without additional inspection or investigation, which was beyond the scope of this MESA. The following sections discuss the MESA findings and recommendations.

6.1 Findings

The project footprint is located in an area with a long history of industrial and commercial land use. Railroads were constructed through the project footprint area in the 1870s and 1880s. Several railroad lines, including the Consolidated Main Line railroad and numerous railroad sidings are located in or in the vicinity of the project footprint. Although no evidence of potential soil and groundwater impacts were identified with railroad tracks during the site reconnaissance, impacts to soil and groundwater along the railroad corridor may exist due to undocumented events and an accumulation of drips, leaks, and spills over time.

Industrial and commercial land use has been located in the area since construction of the railroads. Although scattered residences are located throughout the project footprint area and in the vicinity of the project footprint, the project area has primarily been influenced by historical industrial and commercial processes. Industrial and commercial land use in the project footprint area has included but is not limited to, rubber manufacturing, vehicle maintenance, mineral processing, aggregate mining, petroleum processing, fueling facilities, petroleum storage, lubricant manufacturing, lumber milling, coal storage and warehouse distribution. Abandoned aggregate quarries along the South Platte were historically used for landfills. As shown on **Figure 2**, historical landfills and fill areas are prevalent throughout the project footprint. Due to the project footprint area’s long history of industrial and commercial land use, soil and groundwater contamination may be present throughout the project footprint.

Several areas of known contaminated groundwater are located in the project footprint area. Chlorinated solvent and petroleum impacted groundwater and soil are present in the vicinity of the Broadway and I-25 interchange. Petroleum impacted groundwater and soil is present underneath I-25 and 6th Avenue interchange. Several active LUST and CERCLA sites are located in the project footprint, and an area of petroleum, chlorinated solvent, radionuclide and heavy metal impacted soil and groundwater is located along Santa Fe Drive and Kalamath Street in the vicinity of Alameda Avenue. Several LUST sites are located south of 6th Avenue along Federal Boulevard and Bryant Street and along Alameda Avenue near Cherokee Street and Lipan Street. Areas of known groundwater contamination are identified on **Figures 4A, 4B, 4C**.

To identify sites with **potential** and **recognized environmental conditions**, a methodology was prepared based on the ASTM Standard Practice for Environmental Site Assessments E1527-00 (ASTM, 2000) CDOT Modified Environmental Site Assessment Guidance (CDOT, February 2000), and through consultation with CDOT and the Colorado Department of Public Health and Environment (CDPHE) (CDOT, 2003a). The methodology used for this MESA is presented in **Section 1.3**. Sites with **potential** and **recognized environmental conditions** were identified during the site reconnaissance, historical review, database screening, and detailed review.

A total of seventy-four sites with **potential** or **recognized environmental** conditions were identified within or adjacent to the project footprint. Fifteen sites were identified during the site reconnaissance (see **Table 5**). Seventeen sites were identified during the historical review (see **Table 6**); however, nine of those sites were also identified during the database screening. Two historical landfills were also identified. Forty-five sites were identified during the database screening (See **Table 8**), and an additional four sites were identified during the detailed review (see **Chapter 5.0**). **Table 10** summarizes sites with potential and recognized environmental concerns as they were identified either during the site reconnaissance, historical use review, or detailed review. **Figure 2** identifies historic landfills and fills areas in the project footprint. **Figures 4A, 4B, and 4C** summarize the identified sites with **potential** and **recognized environmental conditions**.

6.2 Recommendations

Given the variety of industrial and commercial uses and the long history of use, soil and groundwater throughout the project area have the potential to be contaminated. Areas of contaminated groundwater have been identified in **Section 6.1**. Project alternatives being considered as part of the EIS process that include permanent below grade structures in areas of groundwater contamination should be evaluated with regard to short-term hazardous materials management and long-term mitigation of contaminated groundwater. Long-term mitigation requirements would be included in preliminary/final project design.

Encountering soil and groundwater during construction without prior knowledge can potentially affect the project in terms of cost, schedule, and agency and public relations. A Materials Handling Plan, as required by section 250.03 of the CDOT Standard Specifications for Road and Bridge Construction (CDOT, 1999), and a Health and Safety Plan are recommended for use throughout the project footprint area. Construction specifications shall be written to include review of the Materials Handling and Health and Safety Plans by the CDOT Regional Environmental Manager. Sites where known soil and groundwater contamination exists and a Materials Handling Plan and Health and Safety Plan will be required are identified in **Table 10**.

It is important to protect CDOT from liability for existing or future contamination as a result of this project. A goal of this MESA was to provide the information needed to plan for hazardous materials and contaminated sites. Such planning efforts include: addressing issues such as acquisitions costs and property appraisals, the option for owner funded site remediation prior to CDOT acquisition, property avoidance evaluation, planning for engineering options to minimize the necessary remediation and treatment of residual hazardous materials. The process for identifying, evaluating, and mitigating hazardous waste during right-of-way acquisition is identified in Chapter 3 of the *Right of Way Manual* (CDOT, 2003b). All projects requiring right-of-way or easements should consider these guidelines in order to avoid to the greatest extent

possible acquisition of contaminated property and to ensure protection for employees, workers, and the community prior to and after construction. The right-of-way acquisition process for sites with **potential** and **recognized environmental conditions** is a three step process: *Initial Site Assessment (ISA)*, *Preliminary Site Investigation (PSI)*, and *Remedial Investigation/Feasibility Study (RI/FS)* (CDOT, 2003b).

The ISA is similar to a MESA or Phase I Environmental Site Assessment and involves a site reconnaissance, historical land use review, and database search. An ISA is performed on properties that are to be acquired by or dedicated to CDOT.

The PSI is an investigation performed on properties with **potential environmental conditions**. A PSI involves a drilling/sampling and analytical program to determine preliminary information regarding environmental conditions on the property. The objective of the PSI is assist in the decision-making process regarding the potential liability associated with acquiring a property and to provide information regarding health and safety issues for construction workers and the public.

The RI/FS is a detailed, comprehensive investigation that further delineates the magnitude of contamination on a property. The RI/FS details the mitigation and clean-up strategies and provides cost estimates for the clean-up and mitigation of a contaminated property.

Table 10 summarizes sites with **potential** and **recognized environmental conditions** and recommended actions. It is important to note that a PSI or RI/FS may be recommended based on the findings of an ISA. Sites where a PSI or RI/FS are expected to be required are identified. Agency coordination and general permitting issues are identified in the comments column of **Table 10**.



Table 10 Summary of Sites with Potential and Recognized Environmental Conditions

Type of Environmental Condition	Site Number	Property Name and Address	Environmental Conditions	Recommendations			Comments
				ISA	PSI	R/FS H&S	
I-25 Mainline Project Footprint							
Potential	199	US Welding 600 S. Santa Fe Dr.	USTs and ASTs. No leaks or spills reported. Unknown material handling and disposal practices.	X			Additional investigation may be necessary for right-of-way acquisition.
Potential	NA	El Rey Distributing 50 Rio Grande Blvd.	Fenced yard with a variety of vehicles, heavy equipment, and materials stored. No leaks or spills reported. Unknown site conditions.	X			Additional investigation may be necessary for right-of-way acquisition.
Potential	115	Calaham Construction 95 Rio Grande Blvd.	FINDS. RCRA Small Quantity Generator - no violations reported. Fenced yard with a variety of vehicles, heavy equipment, and materials stored. No leaks or spills reported. Unknown site conditions.	X			Additional investigation may be necessary for right-of-way acquisition.
Potential	115	Egji Jim & Co. 115 Rio Grande Blvd.	UST permanently closed at property. No leaks or spills reported. Unknown site conditions.	X			Additional investigation may be necessary for right-of-way acquisition.
Potential	101	Water Systems 285 Rio Grande Blvd.	FINDS. RCRA Small Quantity Generator - no violations reported. USTs permanently closed at property. No leaks or spills reported. Unknown site conditions.	X			Additional investigation may be necessary for right-of-way acquisition.
Potential	NA	Consolidated Main Line Railroad tracks parallels I-25 from Ellsworth to 6th Avenue	No leaks or spills reported. Impacts to soil and groundwater along the railroad corridor due to undocumented events and an accumulation of drips, leaks, spills, and accumulation of hydrocarbon exhaust residue over time.	X	X	X	Coordination with UPRR and BNSF will be required.
Potential	NA	Existing Northbound I-25 Broadway Viaduct 811 S. Broadway	Historical gasoline filling station. Potentially same location as 795 S. Broadway.			X	Site within existing right-of-way.



Table 10 Summary of Sites with Potential and Recognized Environmental Conditions (Continued)

Type of Environmental Condition	Site Number	Property Name and Address	Environmental Conditions	Recommendations				Comments
				ISA	PSI	R/FS	H & S	
I-25 Mainline Project Footprint (continued)								
Potential	NA	Vacant lot (formerly Jimmy Java's) 888 S. Broadway	Historical gasoline filling station. Located in area with known chlorinated solvent and petroleum impacted groundwater.				X	Site within existing right-of-way for the T-REX project.
Potential	NA	Existing Northbound I-25 at the northeast corner of the Kalamath Street intersection Alameda Avenue 293 S. Kalamath St.	Historical gasoline filling station. Area excavated during construction of existing I-25 in the 1950s.				X	Site within existing right-of-way.
Potential	NA	El Paso Import Co. 723 S. Broadway	Historical automotive-related use in the 1950s. Unknown hazardous material management.	X			X	Additional investigation may be necessary for right-of-way acquisition.
Recognized	NA	Landfill Area between Bayaud and Alameda, east of Consolidated Main Line railroad	Artificial fill. Unknown groundwater contamination or potential methane. Identified as 4S-68W-10SW on Figure 2 .		X		X	
Recognized	NA	Area between Quivas and Osage Streets along 4th Avenue	Unknown use or contents. Unknown site conditions (potential groundwater contamination and methane). Identified as 4S-68W-09NE on Figure 2 .		X		X	
Potential	NA	Vacant lot 57 S. Kalamath	Formerly Tetrauit Iron Works Co. (manufactured crushers, stamp mills, and concentrators). Located adjacent to the Consolidated Main Line railroad tracks. Unknown site conditions.	X			X	Additional investigation may be necessary for right-of-way acquisition.
Recognized	205	United States Postal Service 915 S. Logan	USTs. LUST. Unknown material handling and disposal practices.	X	X		X	



Table 10 Summary of Sites with Potential and Recognized Environmental Conditions (Continued)

Type of Environmental Condition	Site Number	Property Name and Address	Environmental Conditions	Recommendations				Comments
				ISA	PSI	R/FS	H&S	
I-25 Mainline Project Footprint (continued)								
Recognized	191	Performance Radiator 755 S. Broadway	Former United Engineers & Contractors and 723 Co. LUST. Residual petroleum impacted soil on site.	X	X		X	Additional investigation may be necessary for right-of-way acquisition.
Recognized	203	Gates Rubber Company 900/950/990 S. Broadway	Former Ford Motor Company assembly plant and Shwadyer Trunk (Samsonite) Manufacturing facility. FINDS. RCRA Large Quantity Generator-violations reported. ERNS. UST. LUST. Known chlorinated solvent contaminated soil and groundwater, VCUP recently initiated.	X	X	X	X	
Recognized	203	Cherokee Denver LLC (former Gates Rubber Company) 999 S. Broadway	Former Gates Rubber Company manufacturing facility. VCUP. Known chlorinated solvents and petroleum impacted soil and groundwater on the property and in the vicinity of I-25.	X	X	X	X	Long-term mitigation for groundwater contamination is expected. Coordination with CDPHE will be required.
Recognized	199	Stor All Storage 666 S. Santa Fe Drive	FINDS. RCRA Small Quantity Generator - no violations reported. UST. LUST. Former Prest-O-Lite company and Linde Gases of the West (manufacturers of acetylene gas). Unknown site conditions.	X	X		X	



Table 10 Summary of Sites with Potential and Recognized Environmental Conditions (Continued)

Type of Environmental Condition	Site Number	Property Name and Address	Environmental Conditions	Recommendations				Comments
				ISA	PSI	R/FS	H&S	
I-25 Mainline Project Footprint (continued)								
Recognized	191	RTD park-n-Ride 869 S. Broadway	Former Burkhart Storage Facility. FINDS. RCRA Small Quantity Generator-no violations reported. LUST. Petroleum and lead contaminated soil and chlorinated solvent impacted groundwater on the property.	X	X		X	
Recognized	191	RTD park-n-Ride Entrance 795 S. Broadway	FINDS. RCRA Small Quantity Generator-no violations reported. UST. LUST. Residual petroleum impacted soil and chlorinated solvent and petroleum impacted groundwater may be on site.	X	X		X	
Recognized	191	Toyota and Lexus Service 700 S. Broadway	Former Econo Lube-N-Tube. FINDS. RCRA Small Quantity Generator-no violations reported. UST. LUST. Residual impacted soil may be located on the property.	X	X		X	
Recognized	110	Commercial Testing Laboratories 22 Lipan Street	FINDS. RCRA Conditionally Exempt Small Quantity Generator-no violations reported. UST. LUST. Residual impacted soil may be located on the property.	X	X		X	
Recognized	151	General Chemical 1271 W. Bayaud Ave	UST. LUST. RCRA-Small Quantity Generator. ERNS. VCUP. Known heavy metal contaminated soil and groundwater on the site.	X	X	X	X	Coordination with CDPHE will be required.
Recognized	196	Landfill Area of the Santa Fe Drive and I-25 Interchange (800 S. Cherokee)	Artificial fill. Unknown groundwater contamination or potential methane. Identified as 64S-68W-15SW3 and 4S-68W-15SW4 on Figure 2 .		X		X	



Table 10 Summary of Sites with Potential and Recognized Environmental Conditions (Continued)

Type of Environmental Condition	Site Number	Property Name and Address	Environmental Conditions	Recommendations			Comments
				ISA	PSI	R/FS H&S	
I-25 Mainline Project Footprint (continued)							
Recognized	146	No Site Name 135 S. Kalamath Street	ERNS. Located in area of former Lake Archer canal.				
Recognized	190	No Site Name I-25/Santa Fe	ERNS.			X	
Recognized	196	No Site Name 711 S. Cherokee	ERNS.			X	
6th Avenue Project Footprint							
Potential	NA	Proctor Production 501 Raritan Way	USTs permanently closed at property. No leaks or spills reported. Unknown site conditions.	X			Additional investigation may be necessary for right-of-way acquisition.
Potential	81	Phillips 66 510 Bryant Street	USTs currently in use at property. No leaks or spills reported. Unknown site conditions (located adjacent to a LUST site).	X			Additional investigation may be necessary for right-of-way acquisition.
Potential	86	Phillips 66 438 Federal Boulevard	USTs currently in use at property. No leaks or spills reported. Unknown site conditions (located adjacent to a LUST site).	X			Additional investigation may be necessary for right-of-way acquisition.
Potential	NA	Denver Public Schools Hilltop Bus Terminal 2800/2929 W. 7th Ave.	USTs. No leaks or spills reported. Unknown material handling and disposal practices.	X	X		Additional investigation may be necessary for right-of-way acquisition.
Recognized	80	Landfill 500 Julian Street	Unknown use or contents. Unknown site conditions (potential groundwater contamination and methane). Identified as 4S-68W-08NW on Figure 2 .		X	X	



Table 10 Summary of Sites with Potential and Recognized Environmental Conditions (Continued)

Type of Environmental Condition	Site Number	Property Name and Address	Environmental Conditions	Recommendations				Comments
				ISA	PSI	R/FS	H&S	
6th Avenue Project Footprint (continued)								
Recognized	81	Landfill 500 Alcott Street	Unknown use or contents. Unknown site conditions (potential groundwater contamination and methane). Identified as 4S-68W-08NE2 on Figure 2 .	X			X	
Recognized	86	Sound on Wheels 450 Federal Boulevard	Former location of Charles Yamaguchi Property/KOK Auto Repair & Body Shop. UST. LUST. Known petroleum impacted soil and groundwater on the property.	X	X		X	This site is an active LUST. Coordination with OPS would be required.
Recognized	81	Ryder Truck Rental Inc. 550 Bryant Street	FINDS. RCRA Conditionally Exempt Small Quantity Generator - no violations reported. UST. LUST. Known petroleum impacted soil and groundwater on the property.	X			X	
Recognized	75	Kenny Electrical Service 595 Quivas Street	Former location of Conrads Inc. UST. LUST. Residual petroleum impacted soil may be located on the property.	X			X	
Recognized	75	Sears Roebuck and Company 1701 W. 6th Ave.	LUST. UST. ERNS. Known petroleum impacted soil and groundwater on site.	X	X		X	This site is impacted by the 6 th & Osage UPRR-Burnham Yard Site.
Recognized	76	6th & Osage UPRR - Burnham Yard	ERNS. Known petroleum impacted soil and groundwater in area and the vicinity of 6 th Avenue and I-25.	X	X		X	
Recognized	87	PCB-Capacitor Cleanup 5th & Decatur	CERCLIS. RCRA Small Quantity Generator-no violations reported. FINDS. ERNS. No additional information available. Unknown site conditions.	X	X		X	Additional investigation may be necessary for right-of-way acquisition.
Recognized	NA	Southbound Ramp 6th Avenue to I-25	ERNS.				X	



Table 10 Summary of Sites with Potential and Recognized Environmental Conditions (Continued)

Type of Environmental Condition	Site Number	Property Name and Address	Environmental Conditions	Recommendations				Comments
				ISA	PSI	R/FS	H&S	
6th Avenue Project Footprint (continued)								
Recognized	86	In alley behind 445 Federal Boulevard	ERNS.				X	
Recognized	83	Landfill 490 Osage St.	Landfill. Unknown use or contents. Unknown site conditions (potential groundwater contamination).		X			
Recognized	83	Rio Grande Co. Residential Products Division 500 Osage St.	FINDS. UST. LUST. Known petroleum impacted soil and groundwater in area and vicinity of US and I-25.	X	X		X	This site is related to the 6 th & Osage UPRR-Burnham Yard ERNS Site. This site is an active LUST. Coordination with OPS would be required.
Santa Fe/Kalamath Project Footprint								
Potential	146	Raul's Auto Trim/Caravea Auto Body 268 S. Santa Fe Drive	FINDS. No leaks or spills reported. Unknown material handling and disposal practices.	X				Additional investigation may be necessary for right-of-way acquisition.
Potential	146	Heavenly Daze 208 S. Kalamath Street	FINDS. RCRA Small Quantity Generator - no violations reported. USTs permanently closed at property. No leaks or spills reported. Unknown site conditions.	X				Additional investigation may be necessary for right-of-way acquisition.
Potential	NA	Dyer Auto Electric Inc. 331 S. Lipan Street	Fenced yard with a variety of vehicles, heavy equipment, and materials stored. No leaks or spills reported. Unknown site conditions.	X				Additional investigation may be necessary for right-of-way acquisition.



Table 10 Summary of Sites with Potential and Recognized Environmental Conditions (Continued)

Type of Environmental Condition	Site Number	Property Name and Address	Environmental Conditions	Recommendations				Comments
				ISA	PSI	R/FS	H&S	
Santa Fe/Kalamath Project Footprint (continued)								
Potential	168	Duffy Crane and Hauling 389 S. Lipan Street	FINDS. RCRA Small Quantity Generator - no violations reported. UST. Fenced yard with a variety of vehicles, heavy equipment, electrical transformers, and materials stored. No leaks or spills reported. Unknown site conditions.	X				Additional investigation may be necessary for right-of-way acquisition.
Potential	146	Shamrock Ind. Laundry & Dry Cleaning 920 West Byers Pl. #A	Historical laundry and dry cleaning operations. Unknown material handling and disposal practices.	X	X			Additional investigation may be necessary for right-of-way acquisition.
Recognized	146	Denver Fastening Systems/Iliff Meadows Partnership 1001 W. Bayaud	FINDS. RCRA Small Quantity Generator-violations reported. Landfill. Unknown use or contents. Unknown site conditions. Former location of the Crauel Manufacturing and Vinegar Co./Leo Vinegar & Sales Co. Unknown site conditions. Located adjacent to the Consolidated Main Line railroad.	X	X		X	Located in area of former Lake Archer canal.
Recognized	146	Landfill 166 S. Kalamath Street	Unknown use or contents. Unknown site conditions (potential groundwater contamination and methane).		X		X	
Potential	168	Best Car Buys, Ltd. 1200 W. Alameda Avenue	FINDS. RCRA Small Quantity Generator - no violations. Historical automotive-related use in the 1920s. Unknown hazardous material management. Historical gasoline filling station in the 1940s.	X				Additional investigation may be necessary for right-of-way acquisition.



Table 10 Summary of Sites with Potential and Recognized Environmental Conditions (Continued)

Type of Environmental Condition	Site Number	Property Name and Address	Environmental Conditions	Recommendations			Comments
				ISA	PSI	R/FS H&S	
Santa Fe/Kalamath Project Footprint (continued)							
Potential	NA	Colorado Pen Co. 2 S. Kalamath Street	Historical paint dealership, National Lead Company, in the 1950s/1960s. Unknown hazardous material management.	X			Additional investigation may be necessary for right-of-way acquisition.
Potential	NA	Denver Department of Social Services 80 S. Santa Fe Drive	Former location of Monument Works. Unknown site conditions.	X			Additional investigation may be necessary for right-of-way acquisition.
Potential	NA	Dahl's Plumbing 280 S. Santa Fe Drive.	Former location of Six Star Lubricants Co. (a lubricant manufacturer). Unknown site conditions.	X			Additional investigation may be necessary for right-of-way acquisition.
Recognized	144, 146	Vacant lot [former gasoline filling station and Barter Machinery & Supply (Lot B)] 101 S. Santa Fe Drive	Barter Machinery & Supply (Lot B) CERCLIS-NFRAP. RCRA CORRACTS. Potential PCB and lead contaminated soil along railroad. Historical gasoline filling station.	X	X	X	Coordination with CDPHE would be required.
Potential	146	US Mix 112 S. Santa Fe Drive	FINDS. RCRA Small Quantity Generator-violations reported. UST. No leaks or spills reported. Unknown site conditions.	X			Additional investigation may be necessary for right-of-way acquisition.
Recognized	144, 146	US Mix Research Center 100 S. Santa Fe Drive. 701 W. Bayaud	Former location of S.A.D. Holford (manufactured grease traps and ash pits) Clean Heat Fuel Co. (a coal yard), and Barter Machinery & Supply. CERCLIS-NFRAP. RCRA CORRACTS. Potential PCB and lead contaminated soil along railroad. UST. LUST. Residual petroleum soil contamination may be present.	X	X	X	Coordination with CDPHE would be required.



Table 10 Summary of Sites with Potential and Recognized Environmental Conditions (Continued)

Type of Environmental Condition	Site Number	Property Name and Address	Environmental Conditions	Recommendations			Comments
				ISA	PSI	R/FS H&S	
Santa Fe/Kalamath Project Footprint (continued)							
Recognized	140	Wazee Crane 2 S. Santa Fe Drive	Former Consolidated Cut Stone & Granite Co. FINDS. RCRA Small Quantity Generator-violations reported. ERNS. Unknown site conditions.	X			Additional investigation may be necessary for right-of-way acquisition.
Potential	NA	Del Rio 215 S. Santa Fe Drive	Fenced yard with a variety of vehicles, heavy equipment, and materials stored. No leaks or spills reported. Unknown site conditions.	X			Additional investigation may be necessary for right-of-way acquisition.
Recognized	162	Lighting Services 241 S. Cherokee St.	Former Oswald Machine Co. (general machinists), Eversman Manufacturing (land level manufacturers), Davis and Son Manufacturing (oil fountain manufacturers), Continental Can Company (can producer), and Colorado Paint Co. FINDS. RCRA Small Quantity Generator-no violations reported. CERCLIS-NFRAP. UST.	X	X		Additional investigation may be necessary for right-of-way acquisition.
Recognized	176	USL Pharma Inc. 301 S. Cherokee St.	Former William Russel Coal Yard and Chevrolet Motor. FINDS. RCRA Large Quantity Generator-violations reported. UST. ERNS. Unknown site conditions.	X			Additional investigation may be necessary for right-of-way acquisition.
Recognized	188, 199	StarTech Mercedes 480 S. Santa Fe Drive	Former United States Gasoline Corporation (oil reclaiming plant) and Robinson Brick Company/Denver Radium - CERCLA. FINDS. RCRA Small Quantity Generator-no violations reported. UST. LUST. Known heavy metal and radionuclide contaminated soil and groundwater in the vicinity.	X	X	X	Coordination with CDPHE would be required.



Table 10 Summary of Sites with Potential and Recognized Environmental Conditions (Continued)

Type of Environmental Condition	Site Number	Property Name and Address	Environmental Conditions	Recommendations				Comments
				ISA	PSI	R/FS	H&S	
Santa Fe/Kalamath Project Footprint (continued)								
Recognized	188, 199	The Home Depot 500 S. Santa Fe Drive	CERCLA. FINDS. RCRA Small Quantity Generator-no violations reported. UST. LUST. Known heavy metal and radionuclide contaminated soil and groundwater.	X	X		X	Coordination with CDPHE would be required.
Recognized	146	Vacant lot (former RTD Alameda facility) 350 S. Santa Fe Drive	FINDS. RCRA Small Quantity Generator-no violations reported. UST. AST. LUST. Residual petroleum soil and groundwater contamination may be present.	X	X		X	
Recognized	146	Diamond Shamrock (former Total Petroleum) 330 S. Kalamath Street	FINDS. UST. LUST. Known petroleum contaminated soil and groundwater on the property.	X	X		X	This site is an active LUST. Coordination with OPS would be required.
Recognized	146	Burger King (former Chevron) 950 W. Alameda Avenue	LUST. Known petroleum contaminated soil and groundwater on the property.	X	X		X	This site is an active LUST. Coordination with OPS would be required.
Recognized	146	Amoco 919 W. Alameda Avenue	Historic gasoline filling station. FINDS. RCRA Conditionally Exempt Small Quantity Generator-no violations reported. UST. LUST. Known petroleum contaminated soil and groundwater on the property.	X	X		X	This site is an active LUST. Coordination with OPS would be required.
Recognized	162	Signs Inc. (former Cherokee Solvents) 201 S. Cherokee Street	FINDS. RCRA Small Quantity Generator. CERCLIS-NFRAP. ERNS. Unknown site conditions.	X			X	Coordination with CDPHE would be required.



Table 10 Summary of Sites with Potential and Recognized Environmental Conditions (Continued)

Type of Environmental Condition	Site Number	Property Name and Address	Environmental Conditions	Recommendations				Comments
				ISA	PSI	R/FS	H&S	
Santa Fe/Kalamath Project Footprint (continued)								
Recognized	167	K.O.K. Automotive Service (former KOK Oil Co./KOK Phillips) 187 W. Alameda Avenue	FINDS. UST. LUST. Known petroleum contaminated soil and groundwater on the property.	X	X		X	This site is an active LUST. Coordination with OPS would be required.
Recognized	168	Conoco (former A-B Petroleum and U-Gas-UM) 1245/1253 W. Alameda Avenue	ERNS. UST. FINDS. LUST. Known petroleum contaminated soil and groundwater on the property.	X	X		X	This site is an active LUST. Coordination with OPS would be required.
Recognized	184	Denver Automotive & Diesel College 460 S. Lipan Street	FINDS. RCRA Small Quantity Generator-no violations reported. LUST. Potential Landfill. Unknown site condition.	X			X	
Recognized	184	Legget & Pratt Inc. 1225 W. Virginia	UST. LUST. Residual petroleum impacted soil and groundwater may be present.	X			X	
Recognized	140	No Site Name Ellsworth and Santa Fe	ERNS.	X			X	
Recognized	186	Rocky Mountain Church of God (former Happy Church) 455 S. Platte River Drive	CERCLIS-NFRAP. Former municipal landfill. Known high levels of methane present. Unknown groundwater conditions.	X	X		X	Coordination with CDPHE would be required.

(1) ISA = Initial Site Assessment recommended.
 (2) PSI = Preliminary Site Investigation recommended.
 (3) R/FS = Remedial Investigation/Feasibility Study recommended.
 (4) H & S = Materials Handling and Health and Safety Plans recommended.

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8.0 SIGNATURES AND QUALIFICATIONS

The preceding report has been prepared in accordance with standard industry practice for performance of Modified Environmental Site Assessments and includes the applicable portions of the investigation procedures codified in ASTM 1527-00, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The end user of this report may rely on the contents, findings, and conclusions to be accurate within the limitations stated herein and in the ASTM standard. The report also complies with specific requirements supplied by the Client.



Qualified Assessor/Report Preparer
Kevin Maddoux
Environmental Scientist

Qualifications of Primary Assessor

Mr. Maddoux is an environmental scientist with seven years of experience in site assessment/due diligence, subsurface investigation, environmental management, and impact assessment. He has a B.A. in Environmental Science and International Studies and a M.A. in Environmental Policy and Management from the University of Denver.

APPENDIX A PHOTO LOG

1. View from the west of the Gates Rubber Company properties at 900/950/900 S. Broadway.



2. View from the east of the Cherokee Denver property at 999 S. Broadway.



3. View from the north of the U.S. Welding property at 600 from the north. Santa Fe Drive.



4. View from the south of Broadway north of I-25.



5. View from the south of Rio Grande Boulevard, north of Ellsworth Avenue.



6. View from the southeast of Calaham Construction at 95 S. Rio Grande Boulevard.



7. View of Raritan Way from the south near Quivas Street.



8. View of Raritan Way from the south.



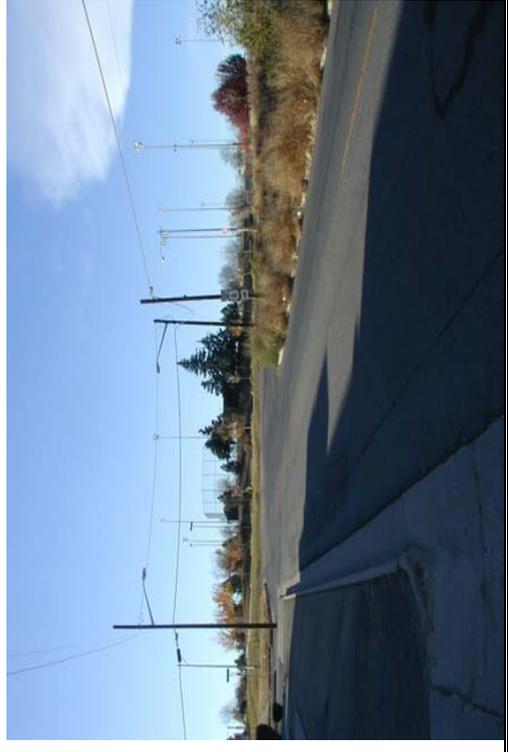
9. View from the east of area south of 6th Avenue and west of I-25.



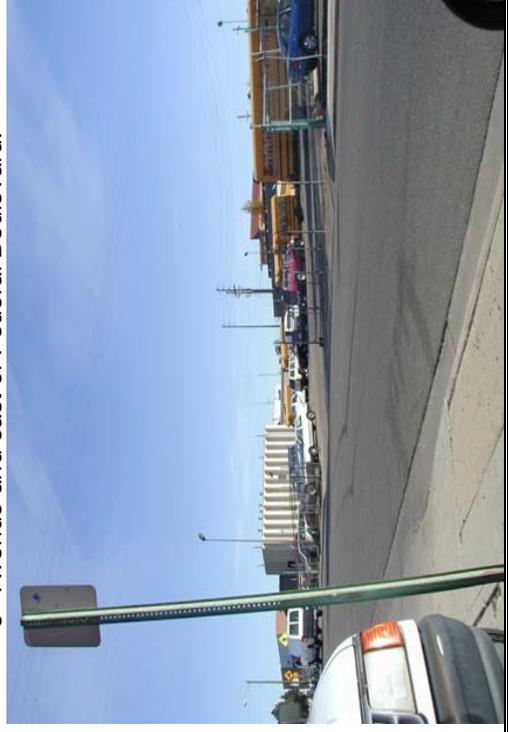
10. View from the south of Bryant Street between 5th and 6th Avenues.



11. View from the east of 5th Avenue and Decatur Street.



12. View of Denver Public Schools Hilltop Bus Terminal, north of 6th Avenue and east of Federal Boulevard.



13. View from the north of Federal Boulevard, south of 6th Avenue.



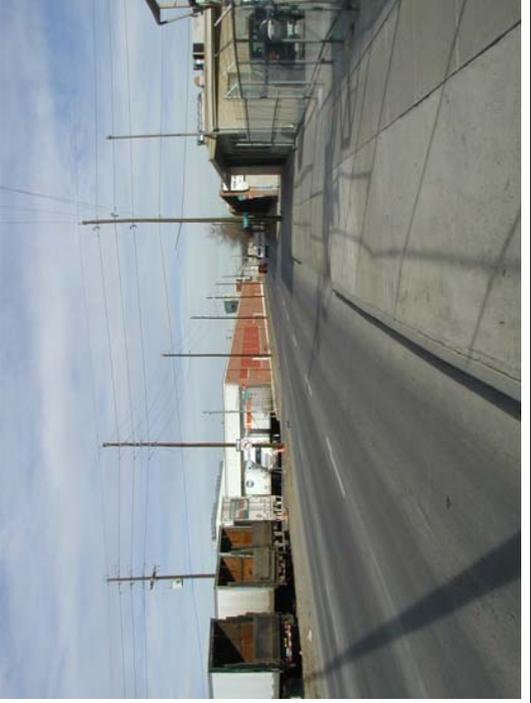
14. View from the south of The Home Depot at 500 S. Santa Fe Drive.



15. View from the south of the former RTD Alameda facility property at 350 S. Santa Fe Drive.



16. View from the south of Santa Fe Drive near the Consolidated Mainline railroad and Bayaud Avenue.



17. View from the north of Kalamath Street, near Ellsworth Avenue.



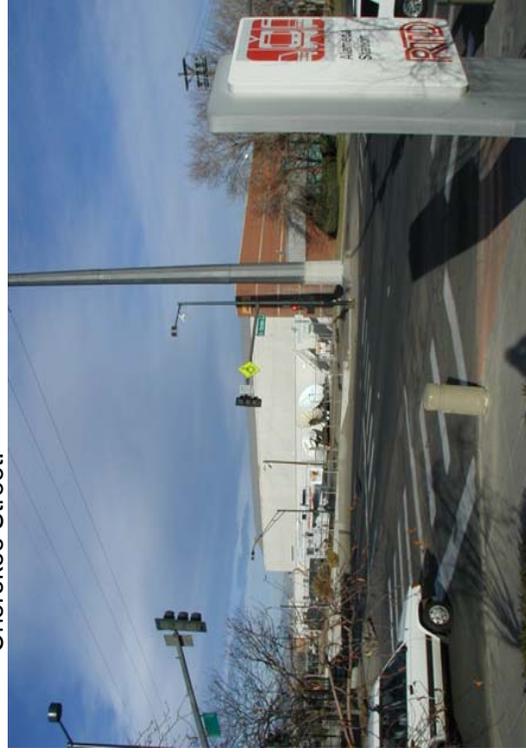
18. View of Alameda Avenue from the west near Navajo Street.



19. View from the south of K.O.K. Auto Service at 187 W. Alameda Avenue.



20. View from the southeast of Lighting Services at 201 S. Cherokee Street.



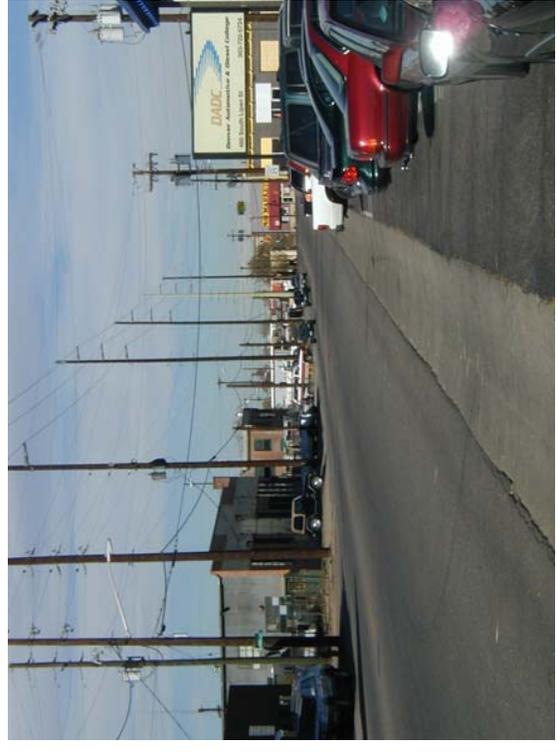
19. View from the east of Duffy Crane and Hauling at 389 S. Lipan Street.



20. View from the east of Dyer Auto Electric at 331 S. Lipan Street.



21. View of Lipan Street from the south.



22. View of Virginia Avenue from the east.





APPENDIX B
EDR DATABASE REPORT
