

## 3.17 HAZARDOUS MATERIALS

This section provides an overview of sites in the project area with recognized or potential soil and groundwater contamination. The identification of contaminated sites is necessary so that they can be avoided when reasonably possible, or appropriate mitigation measures can be implemented. The presence of hazardous materials is a liability concern for any potential right-of-way acquisition and can affect the project in terms of worker health and safety, cost, schedule, and agency and public relations, particularly if these sites are not identified prior to construction. Therefore, an assessment of site contamination in the project area is an integral part of the CDOT project planning process.

### What's in Section 3.17?

#### 3.17 Hazardous Materials

- 3.17.1 Affected Environment
- 3.17.2 Environmental Consequences
- 3.17.3 Mitigation Measures

In support of this EIS, a corridor-wide *Hazardous Materials Modified Phase I Environmental Site Assessment (MESA)* (FHU, 2008c) was performed to identify properties (sites) in the project area with the presence of potential or known (recognized) soil and groundwater contamination (environmental conditions) from hazardous materials. The term “hazardous materials” is an all-inclusive term for materials that are regulated as a solid waste, hazardous waste, or other wastes contaminated with hazardous substances, radioactive materials, petroleum fuels, toxic substances, and pollutants. Areas of contaminated soil and groundwater must be identified to evaluate several aspects of the proposed improvements, including responsibility and management of contaminated soil and groundwater, engineering options to minimize and mitigate impacts, activities associated with right-of-way acquisition, and worker health and safety during construction.

The methodology used to identify sites with recognized and potential environmental conditions included a limited visual inspection of properties adjacent to the project corridors to locate activities that could potentially result in hazardous materials contamination, a review of historical information for the project corridors, and a review of current local, state, and federal environmental agency databases to identify known contaminated sites. The methodology is further discussed in the MESA (FHU, 2008c).

### 3.17.1 Affected Environment

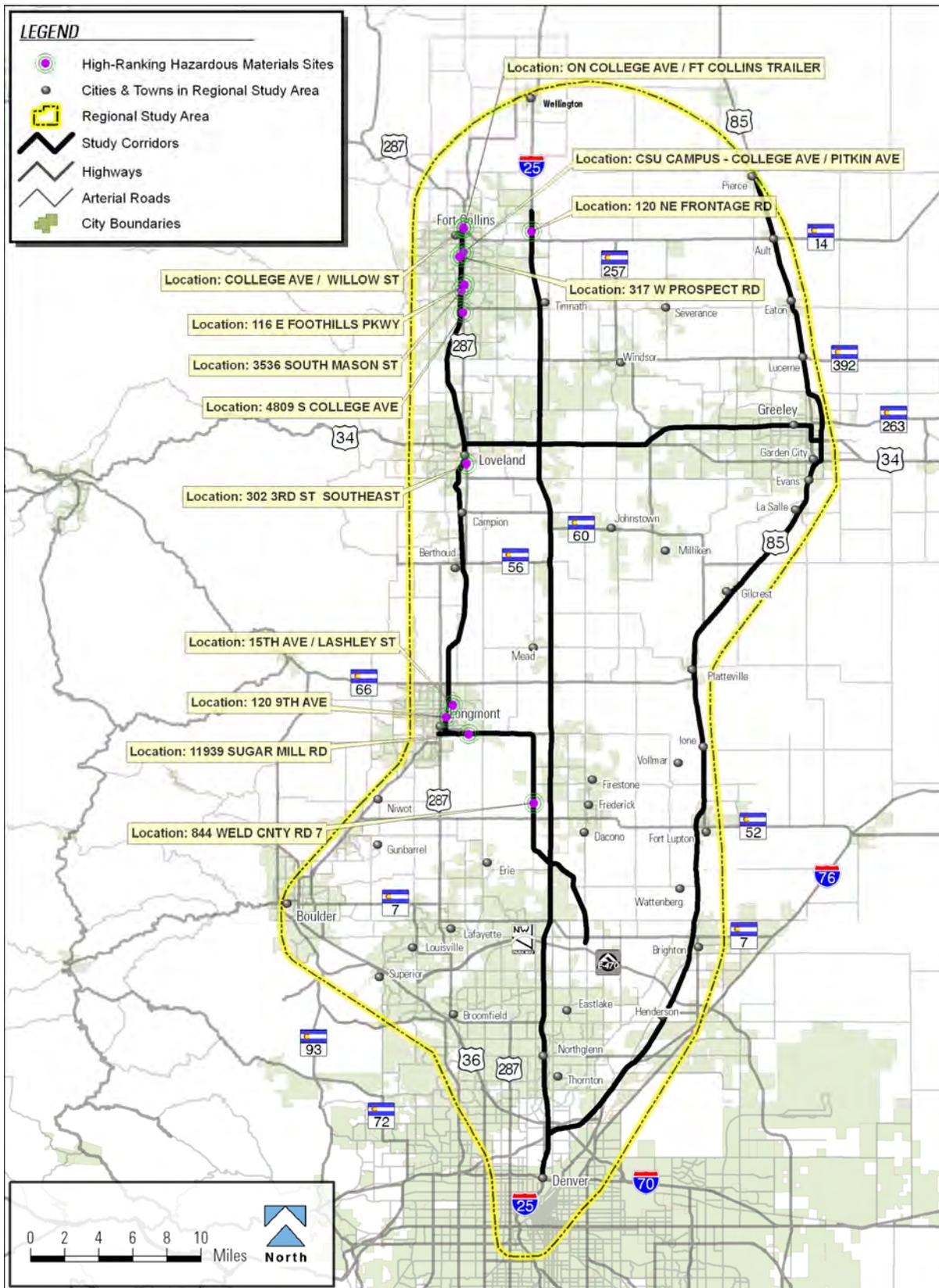
Sites with the potential for large-scale contaminant migration or a known existing or past release of a hazardous material are listed in **Table 3.17-1** and the locations of these sites are shown in **Figure 3.17-1**. These sites were identified in the MESA as having a high ranking with regard to potential site contamination, indicating that contamination (existing or residual) from hazardous materials may exist and could have an adverse impact on the project alternatives. These sites include National Priority List (NPL) or “Superfund” sites; sites on the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS); Resource Conservation and Recovery Act (RCRA) permitted treatment, storage, or disposal facilities; RCRA Corrective Action Sites (CORRACTS); sites in the Colorado Voluntary Clean Up program (VCUP); and state active and historical solid waste landfills (SWF). A detailed discussion of these sites is included in the MESA (FHU, 2008c).

1 Numerous sites with moderate indications of a potential or known existing release or past  
2 release of any hazardous materials (see **Section 3.17.2**) are also present along the project  
3 corridors and are discussed in further detail in the MESA and in the hazardous materials  
4 consequences section of this EIS.

5 **Table 3.17-1 Summary of High-Ranking Sites with Potential Contamination**

Corridor Component Location	Site Address	Type of Site	Concern
<b>I-25 Corridor (Packages A and B)</b>			
SH 1 to SH 14 (A-H1 & B-H1)	120 NE Frontage Rd., Fort Collins	CORRACTS	Site identified as needing corrective action after a release of a hazardous waste or constituent into the environment from a RCRA facility.
<b>Commuter Rail Corridor (Package A)</b>			
Fort Collins to Longmont (A-T1)	3536 S. Mason St, Fort Collins	CERCLIS	Known existing or past releases of hazardous materials and potential for large-scale contaminant migration exists. Site is designated as No Further Remedial Action Planned (NFRAP).
	Site at College Ave. Fort Collins Trailer, Fort Collins	CERCLIS	Known existing or past releases of hazardous materials and potential for large-scale contaminant migration exists. Site is designated as NFRAP.
	CSU campus – College Ave. /Pitkin Ave., Fort Collins	CORRACTS	Site identified as needing corrective action after a release of a hazardous waste or constituent into the environment from a RCRA facility.
	317 West Prospect Rd., Fort Collins	SWF	Potential presence of methane gas and other landfill gases.
	Site at College Ave./ Willow St., Fort Collins	VCUP	Site being addressed under CDPHE VCUP for a known existing or past releases of hazardous materials.
	116 E. Foothills Pkwy., Fort Collins	CORRACTS	Site identified as needing corrective action after a release of a hazardous waste or constituent into the environment from a RCRA facility.
	302 3rd St. SE, Loveland	CORRACTS	Site identified as needing corrective action after a release of a hazardous waste or constituent into the environment from a RCRA facility.
	4809 S. College Avenue, Fort Collins	VCUP	Site being addressed under CDPHE VCUP for a known existing or past releases of hazardous materials.
	120 9th Avenue, Longmont	VCUP	Site being addressed under CDPHE VCUP for a known existing or past releases of hazardous materials.
Longmont to North Metro (A-T2)	15th Ave./ Lashley St., Longmont	SWF	Potential presence of methane gas and other landfill gases.
	11939 Sugar Mill Rd., Longmont	VCUP	Site being addressed under CDPHE VCUP for a known existing or past releases of hazardous materials.
Commuter Rail Station: Longmont at Sugar Mill Site CR – A (A-T1/A-T2)	844 Weld County Rd 7, Erie	CERCLIS	Known existing or past releases of hazardous materials and potential for large-scale contaminant migration exists. Site is designated as NFRAP.
	11939 Sugar Mill Rd, Longmont	VCUP	Site being addressed under CDPHE VCUP for a known existing or past releases of hazardous materials.

1 Figure 3.17-1 Location of High-Ranking Sites with Potential Contamination



1 Oil and gas facilities (existing and planned), including oil and gas wells, were identified  
2 within the project area using data from the Colorado Oil and Gas Conservation Commission  
3 Website. These facilities were identified within 100 feet, 100 to 500 feet, 500 to 1,000 feet,  
4 and 1,000 to 1,500 feet from the existing edge of pavement throughout the project area.  
5 Eleven facilities were identified within 100 feet of the project area, 63 wells within 100 to 500  
6 feet, 111 wells within 500 to 1000 feet, and 75 wells within 1000 to 1500 feet.

7 Oil and gas explorations, development, and production wastes (e.g., drilling fluids) are  
8 produced during primary field operations and the potential exists for subsurface releases  
9 that may not be observable at the surface or along the associated gathering and  
10 transmission pipeline. Chronic minor leaks that would not be detected by inventory control  
11 can also release over time into the subsurface. Thus, all oil and gas facilities/associated  
12 transmission lines that could be impacted or disturbed constitute a potential environmental  
13 condition.

### 14 **3.17.2 Environmental Consequences**

15 To determine the consequences of the No-Action Alternative and the two build packages  
16 (Package A and Package B), the properties from which right-of-way would potentially be  
17 acquired for each alternative were compared with the sites with potential environmental  
18 conditions and the sites with recognized environmental conditions that were identified in the  
19 MESA. These sites include medium and low-ranked sites that were evaluated in the MESA,  
20 as well as sites with potential environmental conditions that were identified during the site  
21 reconnaissance and the review of historical land use (e.g., evidence of storage, handling, or  
22 disposal of hazardous materials).

23 Medium-ranked sites include RCRA hazardous waste generators with reported violations,  
24 sites reported on the Emergency Response Notification System (ERNS) list, and facilities  
25 with leaking underground storage tanks (LUSTs). Low-ranked sites include residential sites  
26 or commercial sites with activities that do not require the use of hazardous substances or  
27 petroleum products (greater than 55 gallons/year), RCRA hazardous waste generators with  
28 no reported violations, facilities with above ground/underground storage tanks (ASTs/USTs)  
29 with no reported leaks or spills, and sites reported on the Facility Index System (FINDS).  
30 These sites have minimal indications of an existing release, past release, or material threat  
31 of a release of any hazardous substances or petroleum products into the ground (soil),  
32 groundwater, or surface water.

33 Sites to be acquired for right-of-way that have potential or recognized soil and groundwater  
34 contamination are considered direct hazardous materials impacts (See **Table 3.17-2**). Sites  
35 that will not be acquired for right-of-way but have potential or recognized soil and  
36 groundwater contamination and could affect materials management or worker health and  
37 safety are considered indirect impacts.

#### 38 **3.17.2.1 NO-ACTION ALTERNATIVE**

39 The No-Action Alternative is a conservative estimate of safety and maintenance  
40 improvements that will need to be constructed if the build alternatives are not built. Major  
41 and minor structure maintenance activities from US 36 to SH 1 and safety improvements at  
42 selected locations from WCR 34 to SH 1 are expected to occur.

1 The No-Action Alternative does not include the acquisition of any sites for right-of-way;  
2 therefore, there would be no direct impacts associated with hazardous materials associated  
3 with this alternative.

4 Indirect impacts are not associated with right-of-way acquisition but are associated with  
5 potentially contaminated sites that could affect materials management and worker health  
6 and safety. Indirect impacts identified with respect to the No-Action Alternative include the  
7 potential to encounter contaminated soil and/or groundwater during structure maintenance  
8 activities that require structural excavations or during safety improvements that require  
9 ramp terminal widening (e.g., I-25 and Prospect, I-25 and SH 392, I-25 and SH 402).

### 10 **3.17.2.2 PACKAGE A**

11 Package A was described in detail in **Chapter 2 Alternatives**. It consists of four highway  
12 components and four transit components. Package A generally includes construction of  
13 additional general purpose and auxiliary lanes on I-25 and implementation of commuter rail  
14 and commuter bus service. Construction of associated elements, such as commuter rail and  
15 bus stations, carpool lots, water quality ponds, retaining walls, bridges, interchanges, and  
16 queue jumps associated with Package A, also were considered in the component-level  
17 analysis. **Table 3.17-2** summarizes information on properties with potential or recognized  
18 environmental conditions with regard to hazardous materials that are associated with  
19 Package A proposed highway or transit improvements. This information is organized by  
20 build component. **Figure 3.17-2** graphically displays information regarding the total number  
21 of properties with potential or recognized environmental conditions associated with Package  
22 A highway and transit components by component.

23 A total of 38 parcels with potential environmental conditions and 16 parcels with recognized  
24 environmental conditions are associated with Package A highway components  
25 (**Figure 3.17-2**). A total of 58 parcels with potential environmental conditions and 2 parcels  
26 with recognized environmental conditions are associated with Package A transit  
27 components. Several of the sites identified in **Table 3.17-1** are impacted by the project. A  
28 detailed discussion of environmental conditions of these sites is included in the MESA  
29 (FHU, 2008c).

1 Table 3.17-2 Package A - Summary of Sites with Potential and Recognized Environmental Conditions

Parcel Identification Number	Environmental Condition	Description	Mitigation		
			ISA*	PSI**	MMP and H&S***
<b>Component A-H1: Safety Improvements</b>					
8834000007	Potential	Sod farm. Potential pesticide and herbicide use and storage. Unknown hazardous material storage, handling and disposal practices.	X		
8709121001	Recognized	Operating farm supply store and active LUST site. Active USTs/ASTs on site. Three 12,000-gallon USTs containing gasoline, one 560-gallon UST containing waste oil. Six ASTs: two 12,500-gallon and one 10,000-gallon containing gasoline, and three (17,000-gallon, 5,800-gallon, and 8,800-gallon) containing diesel fuel.  Four 2,000-gallon USTs permanently closed in June 1995. Three contained gasoline and one contained diesel. Four ASTs permanently closed prior to January 1977. One contained gasoline and three contained diesel.  Multiple releases from the USTs and product delivery piping have occurred, leading to contamination of both soils and groundwater. Known benzene-contaminated groundwater exists on site, and residual petroleum contamination exists within soils at the site.	X	X	X
<b>Component A-H2: General Purpose Lanes</b>					
8721000904	Potential	Large industrial biopower and bioenergy plant located west of I-25. Ethanol, hydrogen, and other hazardous material products are produced on site. Unknown hazardous material storage, handling, and disposal practices.	X		
8515000015	Recognized	Gasoline Station. FINDS. Potential for petroleum contamination from LUSTs. Orphan site. LUST (Closed). UST. CoTrust.	X		
8716100043	Recognized	Gasoline Station. Potential for petroleum contamination from LUSTs. LUST (Closed). UST.	X		
8722200022	Recognized	RCRIS-SQG (No Reported Violations), FINDS	X		
8722200023	Recognized	RCRIS-SQG (Reported Violations), FINDS. LUST (closed). UST. AST. RV maintenance and storage. Unknown chemical and material handling, storage, and disposal.	X		
8634307002 8722200025	Potential	Motor sports sales and service. Potential equipment maintenance. Unknown hazardous material storage, handling, and disposal practices.	X		
8716125007	Potential	Sign and awning manufacturer. Unknown hazardous material storage, handling, and disposal practices.	X		
8615000009	Potential	Automobile dealership and service center. Potential waste oil tanks. Unknown hazardous material storage, handling, and disposal practices.	X		
8610207001	Potential	Boats, boat parts, ATV, snowmobile, RV sales. Potential equipment maintenance. Unknown hazardous material storage, handling, and disposal practices.	X		
8627316001	Potential	Former RCRA large-quantity generator. Unknown site conditions.	X		

1 Table 3.17-2 Package A - Summary of Sites with Potential and Recognized Environmental Conditions (Cont'd)

Parcel Identification Number	Environmental Condition	Description	Mitigation		
			ISA*	PSI**	MMP and H&S**
<b>Component A-H2: General Purpose Lanes (Cont'd)</b>					
8710000009	Potential	Heavy equipment rental company. Potential equipment maintenance. Unknown hazardous material storage, handling, and disposal practices.	X		
8603000011	Potential	Plant/tree nursery. Potential pesticide and herbicide use. Unknown hazardous material storage, handling, and disposal practices.	X		
8503008008	Potential	Motorcycle sales and service. Potential equipment maintenance. Unknown hazardous material storage, handling, and disposal practices.	X		
8627324006	Potential	Automobile dealership and service center. Potential waste oil tanks. Unknown hazardous material storage, handling, and disposal practices.	X		
8535209001	Potential	RV sales. Potential equipment maintenance. Unknown hazardous material storage, handling, and disposal practices.	X		
8627335001	Potential	Window manufacturing facility. Unknown hazardous material storage, handling, and disposal practices.	X		
106103426002	Potential	Gas station. Two active 15,000-gallon USTs on site. One for gasoline and one for diesel.	X		
8716100039	Recognized	Gas station and active LUST site. Three active 10,000-gallon gasoline USTs on site. Permanently closed USTs include one 6,000-gallon for diesel, two 6,000-gallon USTs for gasoline, and two 3,000-gallon USTs for diesel. Undergoing quarterly monitoring and implementing a corrective action plan. Known petroleum-impacted soil and groundwater on site.	X		
8535211001	Recognized	Operating truck stop and closed LUST site. Four active USTs on site include two containing a diesel/gasoline mixture (20,000-gallon and 15,000-gallon) and two containing diesel (20,000-gallon). Five active ASTs containing gasoline and diesel and one liquefied propane gas.  Multiple releases have occurred and contamination of both soils and groundwater is present. In October 2004, ten ASTs containing gasoline, diesel, and kerosene were permanently closed and removed. Groundwater monitoring is ongoing. Known petroleum impacted soil and groundwater on site.	X		

1 Table 3.17-2 Package A - Summary of Sites with Potential and Recognized Environmental Conditions (Cont'd)

Parcel Identification Number	Environmental Condition	Description	Mitigation		
			ISA*	PSI**	MMP and H&S***
<b>Component A-H2: General Purpose Lane (Cont'd)</b>					
871000022	Recognized	<p>Potential historic former cattle operations occurred at this site. Unknown insecticide storage, use, and handling.</p> <p>RCRA CORRACTS. Remediation complete. The facility performs roll forming and shearing of sheet metal processes, which utilize lead and chromium-based paints, xylenes, and mineral spirit solvents. An initial environmental investigation performed in January 1991 identified soil and groundwater contamination with volatile organic compounds (VOCs). Small concentrations of benzene, toluene, ethylbenzene, and chlorobenzene were detected in soils from the paint gallery area. Elevated concentrations of ethylbenzene, toluene, xylene, and chlorobenzene were detected in soils near the paint line roll-off area. Elevated concentrations of heavy metals (lead and chromium) were detected in soils at this site in the paint gallery and near the paint supply piping. Remediation activities were completed at this site and a No Further Action letter was issued by the then Colorado Department of Health (CDH) in June 1994 indicating that they do not require any further investigation or remedial action at the time the letter was issued.</p>	X		
853500009	Potential	RCRA small-quantity generator with no violations reported. Unknown hazardous material storage, handling, and disposal practices.	X		
8622300005	Potential	RCRA conditionally exempt small-quantity generator with no violations reported. Unknown hazardous material storage, handling, and disposal practices.	X		
851500021	Recognized	Gas station. Three active 8,000-gallon gasoline USTs on site. Permanently closed USTs include three 6,000 – gallon for gasoline and one 10,000-gallon for gasoline. Closed LUST site with two events reported. No Further Action letters issued on June 6, 1995 and June 17, 2005.			

1 Table 3.17-2 Package A - Summary of Sites with Potential and Recognized Environmental Conditions (Cont'd)

Parcel Identification Number	Environmental Condition	Description	Mitigation		
			ISA*	PSI**	MMP and H&S***
<b>Component A-H2: General Purpose Lane (Cont'd)</b>					
8603000010	Recognized	<p>Gas station and closed LUST site with multiple releases to soils and groundwater. Active USTs on site include two 12,000-gallon, one for unleaded gasoline and one for a diesel/gasoline mix. Six USTs permanently closed and removed. Groundwater contamination reportedly migrated off site in a southeastern direction toward a gravel pit that borders this site to the east and south.</p> <p>Several investigations conducted on site during the 1990s and 2000s. A corrective action plan was first implemented in 1994, which included installation of a groundwater recovery and treatment system and quarterly groundwater monitoring activities. Soils in the area of the former USTs (northwest corner) were over-excavated in 1995 until photoionization detector (PID) readings were 50 ppm or below. Quarterly groundwater monitoring from 1994 to present. Concentrations of benzene, toluene, ethylbenzene, and xylene (BTEX), total volatile petroleum hydrocarbons (TVPH), total extractable petroleum hydrocarbons (TEPH), and methyl tert-butyl ether (MTBE) in soils were non-detect during soil sampling activities conducted in 2002. In September, 2006 Colorado Department of Labor and Employment, Division of Oil and Public Safety (OPS), issued the most recent No Further Action letter for this facility, indicating that they do not require any further investigation or remedial action at the time the letter was issued.</p>	X	X	X
8603000004	Recognized	ERNS site. A buried dump truck was being used for used oil disposal. No remediation activities were reported.	X	X	X
8510000003	Recognized	RCRA small-quantity generator site with reported violations. Solid waste discovered in the southwest corner of site parking lot. General debris items included waste lumber, household appliances, tires, construction debris, waste oil containers, fluorescent light fixtures, brake fluid, paint cans, etc. Soil staining identified near former waste oil storage area and near two 250-gallon ASTs that contained diesel fuel and gasoline. Petroleum-contaminated soils identified near both the AST and former waste oil areas. Groundwater contamination not detected. Remediation activities: removal of solid waste that had accumulated upon the surface of the site, relocation of the ASTs, and excavation and off-site disposal of stained soils. Clean up completed and CDH issued a No Further Action letter in November 1997.	X		X
8734000924	Potential	ERNS site. No additional information reported.	X		X
8622143001	Potential	Gas station. Active USTs on site include four 12,000-gallon for gasoline and one 10,000-gallon for diesel.	X		

1 Table 3.17-2 Package A - Summary of Sites with Potential and Recognized Environmental Conditions (Cont'd)

Parcel Identification Number	Environmental Condition	Description	Mitigation		
			ISA*	PSI**	MMP and H&S***
<b>Component A-H2: General Purpose Lanes (Cont'd)</b>					
8615405006	Potential	Gas station. Active USTs on site include two 12,000-gallon for gasoline and one 12,000-gallon for diesel.	X		
8634000908	Recognized	Closed LUST site. One 2,500-gallon UST for diesel currently in use. Permanently closed USTs include two 10,000-gallon for diesel, one 10,000-gallon for gasoline, two 6,000-gallon for gasoline, and one 700-gallon UST for diesel. No Further Action letter issued on February 13, 1995.	X		X
8716107014	Potential	Propane gas distributor with one 30,000-gallon AST, one 18,000-gallon AST, and one 1,250-gallon AST for liquefied propane gas on the property.	X		
<b>Component A-H3: General Purpose Lanes</b>					
131302304001	Recognized	Gas Station. Potential for petroleum contamination from LUSTs.. Orphan Site (LUST, UST)	X		
131303400035	Potential	Gasoline Station. Potential for petroleum contamination from LUSTs. LUST (Closed). UST. FINDS.	X		
CDOT Right-of-Way Northeast corner of SH 119 and I-25	Potential	Baker tank present in CDOT right-of-way. Potential evidence of groundwater remediation.	X		
106122400018	Potential	Motorcycle and off-road vehicle race track. Unregistered ASTs visible on the property. Unknown hazardous material storage, handling, and disposal practices.	X		
131310100015	Potential	Truck sales and service. Potential equipment maintenance. Unknown hazardous material storage, handling, and disposal practices.	X		
131310100029	Potential	Tractor and agricultural equipment sales and service. Potential equipment maintenance. Unknown hazardous material storage, handling, and disposal practices.	X		
131310100020	Potential	Junkyard. Unknown hazardous material storage, handling, and disposal practices.	X		
131322409001	Potential	Vehicle storage facility. Unknown hazardous material storage, handling, and disposal practices.	X		
131322408001	Potential	Auto body shop. Unknown hazardous material storage, handling, and disposal practices.	X		
131322401001	Potential	Commercial/light industrial manufacturing facilities in strip mall. Unknown hazardous material storage, handling, and disposal practices.	X		
146702001001	Potential	Automobile dealership and service center. Potential waste oil tanks. Unknown hazardous material storage, handling, and disposal practices.	X		
146703111003	Potential	Construction equipment sales and service center. Potential waste oil tanks. Unknown hazardous material storage, handling, and disposal practices.	X		

1 Table 3.17-2 Package A - Summary of Sites with Potential and Recognized Environmental Conditions (Cont'd)

Parcel Identification Number	Environmental Condition	Description	Mitigation		
			ISA*	PSI**	MMP and H&S***
<b>Component A-H3: General Purpose Lanes (cont'd)</b>					
120723000018	Potential	RV sales. Potential equipment maintenance. Unknown hazardous material storage, handling, and disposal practices. Active tanks on site include two 1,000-gallon ASTs for diesel and one 1,000-gallon AST for liquefied propane gas. Permanently closed USTs include one 4,000-gallon for gasoline and one 8,000-gallon for diesel.	X		
120723001024	Potential	Manufacturing facility. Unknown hazardous material storage, handling, and disposal practices.	X		
131310100033	Recognized	Four 12,000-gallon USTs for gasoline and four 10,000-gallon USTs for diesel are currently in use at this site. This facility is an active LUST site. Multiple events have occurred at this site. Known petroleum soil and groundwater contamination.	X	X	X
131310100019	Potential	RV sales. Potential equipment maintenance with discarded batteries visible. Unknown hazardous material storage, handling, and disposal practices.	X		
131311000072	Potential	RCRA small-quantity generator with no violations reported. Permanently closed USTs include two 6,000-gallon for an unknown substance, one 4,000-gallon for an unknown substance, one 2,000-gallon for an unknown substance, one 10,000-gallon for gasoline, one 4,000-gallon for gasoline, one 4,000-gallon for diesel, and one 3,000-gallon for used oil.	X		
131322412002	Potential	Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)/Toxic Substances Control Act (TSCA) Tracking System (FTTS) with no violations reported.	X		
<b>Component A-H4: Structure Upgrades</b>					
171903110001	Recognized	Gas Station. LUST, UST, CO Trust, FINDS	X	X	X
171934407017	Potential	Automotive dealership and service center. Unknown hazardous material storage, handling, and disposal practices. One 1,000-gallon UST for used oil permanently closed at this site. No spills or leaks reported.	X		
171903004006	Potential	RCRA conditionally exempt small-quantity generator with no violations reported.	X		
<b>Component A-T1: Commuter Rail Fort Collins to Longmont</b>					
9414451903	Potential	Former auto repair shop with UST (1927)	X		
9626000926	Potential	Multiple structures and ground disturbance.	X		
9711166902	Potential	Former location of petroleum distribution facilities - Standard Oil Company site (1906), Texaco (1917), and Continental Oil (1917). Unknown petroleum storage, handling, and disposal practices.	X		
9711124023	Potential	Former location of railroad switching yard that included a series of coal sheds.	X		

1 Table 3.17-2 Package A - Summary of Sites with Potential and Recognized Environmental Conditions (Cont'd)

Parcel Identification Number	Environmental Condition	Description	Mitigation		
			ISA*	PSI**	MMP and H&S***
<b>Component A-T1: Commuter Rail Fort Collins to Longmont (cont'd)</b>					
9711167901 9711168902	Potential	Former location of railroad switching yard.	X		
9513307801	Potential	Former location of petroleum distribution facilities – Sinclair Refining Company (1927). Unknown petroleum storage, handling, and disposal practices.	X		
9513348001	Potential	Former Loveland Farmers Milling and Elevator Company (1893). Former Big Thompson Milling and Elevator Company (1900, 1906, 1911). Unknown hazardous material storage, handling, and disposal practices.	X		
9411000033	Potential	Light industrial facility. Unknown hazardous material handling, storage, and disposal practices.	X		
9414451009 9411000012	Potential	Light industrial facility. Unknown hazardous material handling, storage, and disposal practices.	X		
9524211003	Potential	Junkyard. Unknown hazardous material handling, storage, and disposal practices.	X		
9735426004	Potential	Automotive service. Unknown hazardous material handling, storage, and disposal practices.	X		
9714411014	Potential	Old structure near rail line. Unknown site conditions. Site owned by CSU Research.	X		
9723400906	Potential	General ground disturbance on this large site.	X		
9414444036	Potential	Former Berthoud Electric Light Works (1906). Unknown hazardous material handling, storage, and disposal practices.	X		
9735467001	Potential	Automotive sales and service. Unknown hazardous material handling, storage, and disposal practices.	X		
9524243001	Potential	Automotive repair. Unknown hazardous material handling, storage, and disposal practices.	X		
9723109002	Potential	Self-storage facility. Although not reported, the potential for methamphetamine lab activity exists.	X		
9523405002	Potential	Self-storage facility. Although not reported, the potential for methamphetamine lab activity exists.	X		
9735119013	Potential	Dry cleaning operations with unknown solvent (e.g., perchloroethylene) storage, handling, and disposal practices.	X		
9423138001	Potential	Former Empson Packing Company (1927). Automotive repair shop; former Sinclair Gasoline Station. Unknown hazardous material handling, storage, and disposal practices.	X		

1 Table 3.17-2 Package A - Summary of Sites with Potential and Recognized Environmental Conditions (Cont'd)

Parcel Identification Number	Environmental Condition	Description	Mitigation		
			ISA*	PSI**	MMP and H&S***
<b>Component A-T1: Commuter Rail Fort Collins to Longmont (cont'd)</b>					
9513320801	Potential	Former Libby McNeill & Libby-Pickle Salting Station (1927). Miscellaneous debris. Unknown hazardous material handling, storage, and disposal practices.	X		
120523000003	Potential	Agricultural property with AST. Unknown hazardous material handling, storage, and disposal practices.	X		
120523000008	Potential	Agricultural property. Unknown hazardous material handling, storage, and disposal practices.	X		
120526001001	Potential	Power substation.	X		
120534415003	Potential	Multiple light industrial/commercial facilities. Unknown hazardous material handling, storage, and disposal practices.	X		
131503414001	Potential	Towing company and vehicle storage facility. Unknown hazardous material handling, storage, and disposal practices.	X		
9513348007	Potential	Former Loveland Light Heat & Power Company (1906). Former Crystal Ice & Storage Company artificial ice plant. Unknown hazardous material handling, storage, and disposal practices.	X		
9513306909	Potential	Former Colorado Highway Department yard with equipment repair (1937). Unknown hazardous material handling, storage, and disposal practices.	X		
9414480908	Potential	Former Gary-Fenton and VS Gallen sites with gasoline/oil storage (1927). Unknown hazardous material handling, storage, and disposal practices.	X		
9414415042	Potential	Former Continental Oil Company site (1927). Unknown hazardous material storage, handling, and disposal practices.	X		
9414428026					
9411000014	Potential	Agricultural property. Unknown hazardous material handling, storage, and disposal practices.	X		
9602400009	Potential	FTTS with no violations reported. Nursery/landscaping facility. Unknown hazardous material handling, storage, and disposal practices.	X		
9414117002	Potential	RCRA small-quantity generator with administrative violations reported. Light industrial/commercial facility. Unknown hazardous material handling, storage, and disposal practices.	X		
9723107003	Potential	RCRA small-quantity generator with no violations reported. Dry cleaners. Unknown solvent (e.g., perchloroethylene) storage, handling, and disposal practices.	X		
9414117003	Potential	RCRA small-quantity generator with administrative violations reported. Light industrial/commercial facility.	X		

1 Table 3.17-2 Package A - Summary of Sites with Potential and Recognized Environmental Conditions (Cont'd)

2

Parcel Identification Number	Environmental Condition	Description	Mitigation		
			ISA*	PSI**	MMP and H&S***
<b>Component A-T1: Commuter Rail Fort Collins to Longmont (cont'd)</b>					
9535400044	Potential	RCRA small-quantity generator with no violations reported. Light industrial facility business park. Unknown hazardous material handling, storage, and disposal practices.	X		
9414117001	Potential	Two 8,600 ASTs for an unknown substance currently in use. Light industrial facility. One 55-gallon drum observed. Unknown hazardous material handling, storage, and disposal practices.	X		
9523400006	Potential	Automotive repair. Unknown hazardous material handling, storage, and disposal practices.	X		
9524243002	Recognized	Closed LUST site. Former location of oil storage (1927). Automotive repair. Unknown hazardous material handling, storage, and disposal practices.  Permanently closed USTs include one 2,000-gallon for diesel, two 560-gallon for kerosene, and one unknown sized for an unknown substance. No Further Action letter issued on August 30, 1995.	X		X
9411000021	Potential	Home builder facility. Miscellaneous debris. Unknown hazardous material handling, storage, and disposal practices. One 500-gallon UST for gasoline permanently closed.	X		
120534427002	Potential	Automotive repair shop. Unknown hazardous material handling, storage, and disposal practices.	X		
<b>Component A-T2: Commuter Rail Longmont to North Metro</b>					
131503323009	Potential	Power Sub-Station.	X		
131503423003	Potential	Storage of train/truck trailer containers. Unknown contents.	X		
131503324005	Potential	Former Longmont Municipal Light & Power Plant (1930-1959). Unknown hazardous material handling, storage, and disposal practices.	X		
131503323005	Potential	Power substation.	X		
131309100078	Potential	Agricultural property. Unknown hazardous material handling, storage, and disposal practices. Debris along railroad right-of-way.	X		
146709100015	Potential		X		

1 **Table 3.17-2 Package A - Summary of Sites with Potential and Recognized Environmental Conditions (Cont'd)**

<b>Component A-T2: Commuter Rail Longmont to North Metro (cont'd)</b>					
146724000078	Potential	Construction company with heavy equipment. Unknown hazardous material handling, storage, and disposal practices.	X		
146725200056	Potential	Feed lot. Unknown hazardous material handling, storage, and disposal practices.	X		
146736000017	Potential	Agricultural property. Potential land filling. Unknown contents. Potential uncontrolled dumping.	X		
131503414001	Potential	Towing company and vehicle storage facility. Former Standard Concrete Products Company (1930-1959). Unknown hazardous material handling, storage, and disposal practices.	X		
131503414002	Potential	Public storage facility. U-Haul vehicle storage. Former Libby McNeill & Libby Pickle Station (1930). Unknown hazardous material handling, storage, and disposal practices.	X		
131502300001	Potential	Junkyard. Miscellaneous debris. Unknown hazardous material handling, storage, and disposal practices.	X		
131502300002	Potential	Miscellaneous debris, including metal and 55-gallon drums, in railroad right-of-way. Potential soils staining. Unknown hazardous material handling, storage, and disposal practices.	X		
131503423001 131503424001	Potential	Storage of train/truck trailer containers. Unknown contents.	X		
131502300007	Potential	Recycling center. Unknown hazardous material handling, storage, and disposal practices.	X		
131502300006	Potential	Junkyard. Unknown hazardous material handling, storage, and disposal practices.	X		
131503436001	Recognized	Closed LUST site. No Further Action letter issued on February 13, 1996.	X		X
131502300004	Potential	RCRA small-quantity generator with no violations. Metal fabrication facility. Metal debris on site. Unknown hazardous material handling, storage, and disposal practices.	X		
<b>Component A-T3 &amp; A-T4: Commuter Bus Greeley to Denver/DIA</b>					
130931400030	Potential	Manufacturing facility. RCRA small-quantity generator with no violations. Unknown hazardous material handling, storage, and disposal practices.	X		

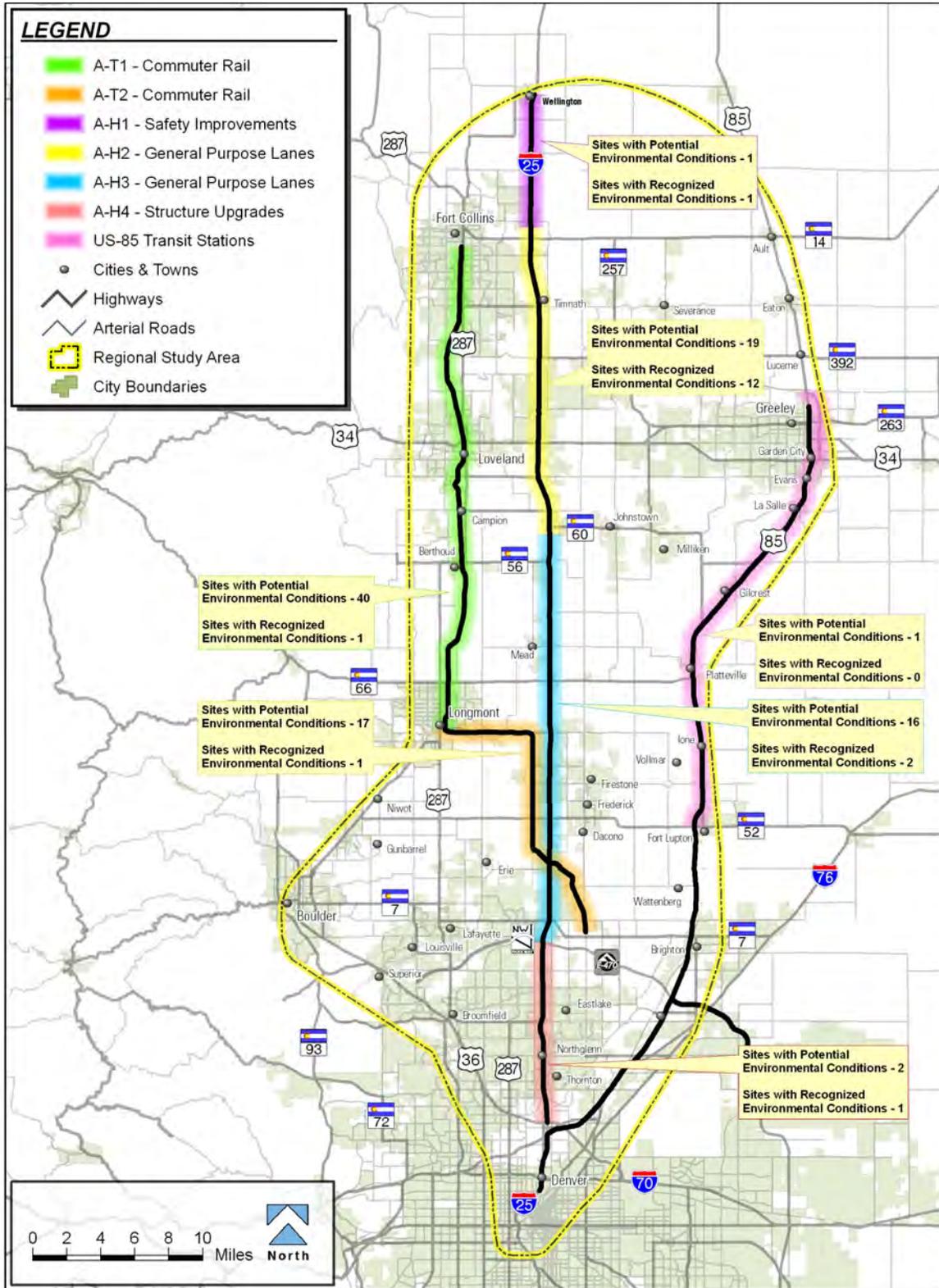
\*Initial Site Assessment (ISA)

\*\*Preliminary Site Investigation (PSI)

\*\*\*Materials Management Plan (MMP)/Health and Safety (H&S)

Note: See **Sections 3.17.3.1** and **3.17.3.2** for ISA, PSI, MMP and H & S descriptions.

1 **Figure 3.17-2 Package A - Summary of Sites with Potential and Recognized Environmental Conditions**  
2



1 **3.17.2.3 PACKAGE B**

2 Package B was described in detail in **Chapter 2** Alternatives. It consists of four highway  
3 components and two transit components. Package B generally includes construction of tolled  
4 express lanes on I-25 and implementation of bus rapid transit service. Construction of associated  
5 elements, such as bus stations, carpool lots, water quality ponds, retaining walls, bridges,  
6 interchanges, and queue jumps associated with Package B, also were considered in the  
7 component-level analysis. **Table 3.17-3** summarizes information on properties with potential or  
8 recognized environmental conditions with regard to hazardous materials that are associated with  
9 Package B proposed highway or transit improvements. This information is organized by build  
10 component. **Figure 3.17-3** graphically displays information regarding the total number of properties  
11 with potential or recognized environmental conditions associated with Package B highway  
12 improvements. No properties are associated with bus rapid transit service.

13 A total of 41 parcels with potential environmental conditions and 16 parcels with recognized  
14 environmental conditions are associated with Package B highway components. A detailed  
15 discussion of these sites is included in the MESA (FHU, 2008c).

1 Table 3.17-3 Package B - Summary of Sites with Potential and Recognized Environmental Conditions

Parcel Identification Number	Environmental Condition	Description	Mitigation		
			ISA*	PSI**	MMP & H&S***
<b>Component B-H1: Safety Improvements</b>					
8834000007	Potential	Sod farm. Potential pesticide and herbicide use and storage. Unknown hazardous material storage, handling, and disposal practices.	X		
8709121001	Recognized	Operating farm supply store and active LUST site. Active USTs/ASTs on site: Three 12,000-gallon USTs containing gasoline and one 560-gallon UST containing waste oil. Six ASTs including two 12,500 gallon, one 10,000-gallon containing gasoline, and three (17,000-gallon, 5,800-gallon, and 8,800-gallon) containing diesel fuel.  Four 2,000-gallon USTs permanently closed in June 1995. Three contained gasoline and one contained diesel. Four ASTs permanently closed prior to January 1977. One contained gasoline and three contained diesel.  Multiple releases from the USTs and product delivery piping have occurred, leading to contamination of both soils and groundwater. Known benzene-contaminated groundwater exists on site, and residual petroleum contamination exists within soils at the site.	X	X	
<b>Component B-H2: Tolled Express Lanes</b>					
8515000015	Recognized	Gasoline Station. FINDS. Potential for petroleum contamination from LUSTs. Orphan site. LUST (Closed). UST. CoTrust.	X		
8716100043	Recognized	Gasoline Station. Potential for petroleum contamination from LUSTs. LUST (Closed). UST.	X		
8722200022	Recognized	RCRIS-SQG (No Reported Violations), FINDS	X		
8722200023	Recognized	RCRIS-SQG (Reported Violations), FINDS. LUST (closed). UST. AST. RV maintenance and storage. Unknown chemical and material handling, storage, and disposal.	X		
8721000904	Potential	Large industrial biopower and bioenergy plant located west of I-25. Ethanol, hydrogen, and other hazardous material products are produced on site. Unknown hazardous material storage, handling, and disposal practices.	X		
8716125007	Potential	Sign and awning manufacturer. Unknown hazardous material storage, handling, and disposal practices.	X		
8615000009	Potential	Automobile dealership and service center. Potential waste oil tanks. Unknown hazardous material storage, handling, and disposal practices.	X		
8610207001	Potential	Boats, boat parts, ATV, snowmobile, RV sales. Potential equipment maintenance. Unknown hazardous material storage, handling, and disposal practices.	X		

1 Table 3-17-3 Package B - Summary of Sites with Potential and Recognized Environmental Conditions (cont'd)

Parcel Identification Number	Environmental Condition	Description	Mitigation		
			ISA*	PSI**	MMP & H&S***
<b>Component B-H2: Tolled Express Lanes (cont'd)</b>					
8627316001	Potential	Former RCRA large-quantity generator. Unknown site conditions.	X		
8710000009	Potential	Heavy equipment rental company. Potential equipment maintenance. Unknown hazardous material storage, handling, and disposal practices.	X		
8603000011	Potential	Plant/tree nursery. Potential pesticide and herbicide use. Unknown hazardous material storage, handling, and disposal practices.	X		
8503008008	Potential	Motorcycle sales and service. Potential equipment maintenance. Unknown hazardous material storage, handling, and disposal practices.	X		
8627324006	Potential	Automobile dealership and service center. Potential waste oil tanks. Unknown hazardous material storage, handling, and disposal practices.	X		
8535209001	Potential	RV sales. Potential equipment maintenance. Unknown hazardous material storage, handling, and disposal practices.	X		
8627335001	Potential	Window manufacturing facility. Unknown hazardous material storage, handling, and disposal practices.	X		
106103426002	Potential	Gas station. Active USTs on site include one 15,000-gallon for gasoline and one 15,000-gallon for diesel.	X		
8716100039	Recognized	Gas station. Active LUST site. Three active 10,000-gallon USTs for gasoline on site. Permanently closed USTs include one 6,000-gallon for diesel, two 6,000-gallon for gasoline, and two 3,000-gallon for diesel. Undergoing quarterly monitoring and implementing a corrective action plan. Known petroleum impacted soil and groundwater on site.	X	X	X
8535211001	Recognized	Operating truck stop and closed LUST site. Four active USTs on site include two containing a diesel/gasoline mixture (20,000-gallon and 15,000-gallon) and two containing diesel (20,000-gallon). Five active ASTs containing gasoline and diesel and one liquefied propane gas.  Multiple releases have occurred and contamination of both soils and groundwater is present. In October 2004, 10 ASTs containing gasoline, diesel, and kerosene were permanently closed and removed. Groundwater monitoring is ongoing. Known petroleum impacted soil and groundwater on site.	X	X	X

1 Table 3-17-3 Package B - Summary of Sites with Potential and Recognized Environmental Conditions (cont'd)

Parcel Identification Number	Environmental Condition	Description	Mitigation		
			ISA*	PSI**	MMP & H&S***
<b>Component B-H2: Tolled Express Lanes (cont'd)</b>					
871000022	Recognized	<p>Potential historic former cattle operations occurred at this site. Unknown insecticide storage, use, and handling.</p> <p>RCRA CORRACTS. Remediation complete. The facility performs roll forming and shearing of sheet metal processes, which utilize lead and chromium-based paints, xylenes, and mineral spirit solvents. An initial environmental investigation performed in January 1991 identified soil and groundwater contamination with VOCs. Small concentrations of benzene, toluene, ethylbenzene, and chlorobenzene were detected in soils from the paint gallery area. Elevated concentrations of ethylbenzene, toluene, xylene, and chlorobenzene were detected in soils near the paint line roll-off area. Elevated concentrations of heavy metals (lead and chromium) were detected in soils at this site in the paint gallery and near the paint supply piping. Remediation activities have been completed at this site and a No Further Action letter was issued by the CDH in June 1994, indicating that they do not require any further investigation or remedial action at the time the letter was issued.</p>	X	X	X
860300010	Recognized	<p>Gas station and closed LUST site with multiple releases to soils and groundwater. Active USTs on site include two 12,000-gallon, one for unleaded gasoline and one for a diesel/gasoline mix. Six USTs permanently closed and removed. Groundwater contamination reportedly migrated off site in a southeastern direction toward a gravel pit that borders this site to the east and south.</p> <p>Several investigations conducted on site during the 1990s and 2000s. A corrective action plan was first implemented in 1994, which included the installation of a groundwater recovery and treatment system and quarterly groundwater monitoring activities. Soils in the area of the former USTs (northwest corner) were over-excavated in 1995 until PID readings were 50 ppm or below. Quarterly groundwater monitoring from 1994 to present. Concentrations of BTEX, TVPH, TEPH, and MTBE in soils were non-detected during soil sampling activities conducted in 2002.</p> <p>In September, 2006 OPS issued the most recent No Further Action letter for this facility, indicating that they do not require any further investigation or remedial action at the time the letter was issued.</p>	X	X	X
860300004	Recognized	ERNS site. A buried dump truck was being used for used oil disposal. No remediation activities were reported.	X	X	X

1 Table 3-17-3 Package B - Summary of Sites with Potential and Recognized Environmental Conditions (cont'd)

Parcel Identification Number	Environmental Condition	Description	Mitigation		
			ISA*	PSI**	MMP and H&S***
<b>Component B-H2: Tolled Express Lanes (cont'd)</b>					
851000003	Recognized	RCRA small-quantity generator site with reported violations. Solid waste discovered in the southwest corner of site parking lot. General debris items included waste lumber, household appliances, tires, construction debris, waste oil containers, fluorescent light fixtures, brake fluid, paint cans, etc. Soil staining identified near former waste oil storage area and near two 250-gallon ASTs that contained diesel fuel and gasoline. Petroleum-contaminated soils identified near both the AST and former waste oil areas. Groundwater contamination not detected.  Remediation activities: removal of solid waste that had accumulated upon the surface of the site, relocation of the ASTs, and excavation and off-site disposal of stained soils. Clean up completed and the CDH issued a No Further Action letter in November 1997.	X		X
853500009	Potential	RCRA small-quantity generator with no violations reported. Unknown hazardous material storage, handling, and disposal practices.	X		
862230005	Potential	RCRA conditionally exempt small-quantity generator with no violations reported. Unknown hazardous material storage, handling, and disposal practices.	X		
851500021	Recognized	Gas station. Three active 8,000-gallon gasoline USTs on site. Permanently closed USTs include three 6,000-gallon for gasoline and one 10,000-gallon for gasoline.  Closed LUST site with two events reported. No Further Action letters issued on June 6, 1995 and June 17, 2005.	X	X	X
8734000924	Potential	This is an ERNS site with no additional information reported.	X		
8622143001	Potential	Gas station. Active USTs on site include four 12,000-gallon for gasoline and one 10,000-gallon for diesel.	X		
8615405006	Potential	Gas station. Active USTs on site include two 12,000-gallon for gasoline and one 12,000-gallon for diesel.	X		
8634000908	Recognized	Closed LUST site. One 2,500-gallon UST for diesel currently in use at this site. Permanently closed USTs include two 10,000-gallon for diesel, one 10,000-gallon for gasoline, two 6,000-gallon for gasoline, and one 700-gallon for diesel. No Further Action letters issued on February 13, 1995.	X		X
8716107014	Potential	Propane gas distributor with one 30,000-gallon AST, one 18,000-gallon AST, and one 1,250-gallon AST for liquefied propane gas on the property.	X		

1 Table 3-17-3 Package B - Summary of Sites with Potential and Recognized Environmental Conditions (cont'd)

Parcel Identification Number	Environmental Condition	Description	Mitigation		
			ISA*	PSI**	MMP and H&S***
<b>Component B-H2: Tolled Express Lanes (cont'd)</b>					
157303002002	Potential	Automotive service center. Unknown hazardous material storage, handling, and disposal practices.	X		
171934100005	Potential	Automotive Service Center, Potential Waste Oil Tank Unknown hazardous material storage, handling, and disposal practices.	X		
131302304001	Recognized	Gas Station. Potential for petroleum contamination from LUSTs.. Orphan Site (LUST, UST)	X		
131303400035	Potential	Gasoline Station. Potential for petroleum contamination from LUSTs. LUST (Closed). UST. FINDS.	X		
146703111003	Potential	Construction equipment sales and service center. Potential waste oil tanks. Unknown hazardous material storage, handling, and disposal practices.	X		
CDOT Right-of-Way Northeast corner of SH 119 and I-25	Potential	Baker tank present in CDOT right-of-way. Potential evidence of groundwater remediation.	X		
106122400018	Potential	Motorcycle and off-road vehicle race track. Unregistered ASTs visible on the property. Unknown hazardous material storage, handling, and disposal practices.	X		
131310100015	Potential	Truck sales and service. Potential equipment maintenance. Unknown hazardous material storage, handling, and disposal practices.	X		
131310100029	Potential	Tractor and agricultural equipment sales and service. Potential equipment maintenance. Unknown hazardous material storage, handling, and disposal practices.	X		
131310100020	Potential	Junkyard. Unknown hazardous material storage, handling, and disposal practices.	X		
131311000057	Potential	Boat, RV storage, RV sales and service. Unknown hazardous materials storage, handling, and disposal practices.	X		
131322409001	Potential	Vehicle storage facility. Unknown hazardous material storage, handling, and disposal practices.	X		
131322408001	Potential	Auto body shop. Unknown hazardous material storage, handling, and disposal practices.	X		
131322401001	Potential	Commercial/light industrial manufacturing facilities in strip mall. Unknown hazardous material storage, handling, and disposal practices.	X		
120723000018	Potential	RV sales. Potential equipment maintenance. Unknown hazardous material storage, handling, and disposal practices. Active ASTs/USTs on site include two 1,000-gallon ASTs for diesel, one 1,000-gallon AST for liquefied propane gas, one 4,000-gallon UST for gasoline, and one 8,000-gallon UST for diesel.	X		

1 Table 3.17-3 Package B - Summary of Sites with Potential and Recognized Environmental Conditions (cont'd)

Parcel Identification Number	Environmental Condition	Description	Mitigation		
			ISA*	PSI**	MMP and H&S***
<b>Component B-H3: Tolled Express Lanes (cont'd)</b>					
120723001024	Potential	Manufacturing facility. Unknown hazardous material storage, handling, and disposal practices.	X		
131310100033	Recognized	Active USTs on site include four 12,000-gallon for gasoline and four 10,000-gallon for diesel. Active LUST site. Multiple events have occurred at this site. Known petroleum soil and groundwater contamination.	X	X	X
131310100019	Potential	RV sales. Potential equipment maintenance with discarded batteries visible. Unknown hazardous material storage, handling, and disposal practices.	X		
131311000072	Potential	RCRA small-quantity generator with no violations reported. Permanently closed USTs include two 6,000-gallon for an unknown substance, one 4,000-gallon for an unknown substance, one 2,000-gallon for an unknown substance, one 10,000-gallon for gasoline, one 4,000-gallon for gasoline, one 4,000-gallon for diesel, and one 3,000-gallon for used oil. No spills or leaks reported.	X		
131322412002	Potential	FTTS with no violations reported.	X		
<b>Component B-H4: Tolled Express Lanes</b>					
171903110001	Recognized	Gas Station. LUST, UST, CO Trust, FINDS.	X		
171934100005	Potential	Automotive service center. Unknown hazardous material storage, handling, and disposal practices.	X		
171934407017	Potential	Automotive dealership and service center. Unknown hazardous material storage, handling, and disposal practices. One 1,000-gallon UST for used oil permanently closed. No spills or leaks reported.	X		
171903004006	Potential	RCRA conditionally exempt small-quantity generator with no violations reported.	X		
<b>Component B-T1: Bus Rapid Transit Fort Collins/Greeley to Denver</b>					
No impacts identified.					
<b>Component B-T2: Bus Rapid Transit Fort Collins to DIA</b>					
No additional stations are associated with this service.					

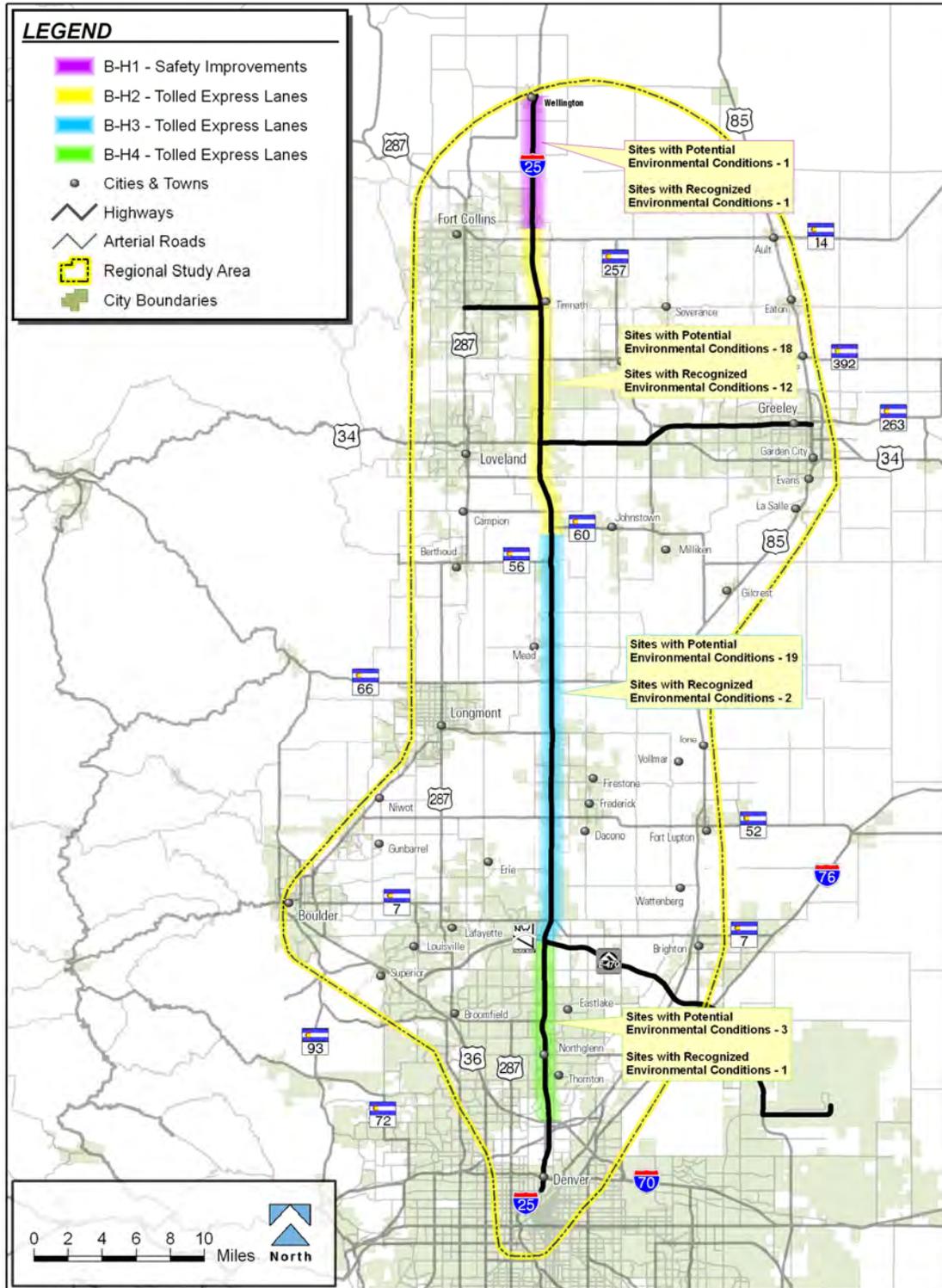
\*Initial Site Assessment (ISA)

\*\*Preliminary Site Investigation (PSI)

\*\*\*Materials Management Plan (MMP)/Health and Safety (H&S)

Note: See Sections 3.17.3.1 and 3.17.3.2 for ISA, PSI, MMP and H & S descriptions.

1 **Figure 3.17-3 Package B - Summary of Sites with Potential and Recognized**  
2 **Environmental Conditions**



### 3.17.3 Mitigation Measures

A total of 38 parcels with potential environmental conditions and 16 parcels with recognized environmental conditions are associated with Package A highway components. A total of 58 parcels with potential environmental conditions and 2 parcels with recognized environmental conditions are associated with Package A transit components.

A total of 41 parcels with potential environmental conditions and 16 parcels with recognized environmental conditions are associated with Package B highway and transit components.

#### 3.17.3.1 RIGHT-OF-WAY ACQUISITION

The process of identifying, evaluating, and mitigating hazardous waste during right-of-way acquisition is identified in Chapter 3 of the CDOT Right-of-Way Manual (CDOT, 2005b). Projects requiring right-of-way or easements follow 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, during, and after construction. Right-of-way to be acquired may be modified during final design. The MESA contains a complete listing of sites with potential and recognized environmental conditions that were identified for the project and should be referenced to verify recommended mitigation actions (FHU, 2008c).

The right-of-way acquisition process for sites with potential and recognized environmental conditions includes three-steps (CDOT, 2005b):

- ▶ **Initial Site Assessment (ISA).** The ISA is similar to a MESA or Phase I Environmental Site Assessment and involves site reconnaissance, historical land use review, and database search activities. An ISA is performed on properties that are to be acquired by or dedicated to CDOT. For properties that will be partially acquired for right-of-way, an ISA, based on CDOT Form #881 *Initial Site Assessment Checklist* and in accordance with CDOT hazardous materials guidance (CDOT EPB, 2005), should be performed. For properties that will be fully acquired for right-of-way, an ISA or site-specific Phase I Environmental Site Assessment, in accordance with American Society for Testing and Materials (ASTM) E 1527-05, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM, 2005), U.S. Environmental Protection Agency (EPA) Standards and Practices for All Appropriate Inquiries [40 Code of Federal Regulations (CFR) Part 312], and CDOT hazardous materials guidance (CDOT EPB, 2005), should be performed.
- ▶ **Preliminary Site Investigation (PSI).** The PSI is an investigation performed on properties with potential environmental conditions. A PSI involves a drilling/sampling and analytical program to establish preliminary information regarding environmental conditions on the property. The objective of the PSI is to 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.
- ▶ **Remedial Investigation/Feasibility Study (RI/FS).** 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 an estimate of cost for the cleanup and mitigation of contaminated property. Based on known conditions, no RI/FS was recommended for any property that would be acquired as part of the project.

1 It is important to note that a PSI or RI/FS may be recommended based on the findings of an  
2 ISA. Sites where a PSI or RI/FS are expected to be required have been identified above  
3 (see **Table 3.17-2** and **Table 3.17-3**).

### 4 **3.17.3.2 CONTAMINATED SOIL AND GROUNDWATER MANAGEMENT**

5 Encountering soil and groundwater during construction without prior knowledge can  
6 potentially affect the project in terms of cost, schedule, and agency and public relations. A  
7 Materials Management Plan (MMP), as required by Section 250.03 of the CDOT Standard  
8 Specifications for Road and Bridge Construction (CDOT, 2005a), will be prepared for areas  
9 with known soil and groundwater contamination. Construction specifications will be written  
10 to include review of the MMP by the CDOT Regional Environmental Manager.

11 Structural excavation, such as caisson and retaining wall construction, may require the  
12 dewatering of contaminated groundwater. If dewatering is necessary, groundwater brought  
13 to the surface will be managed according to Section 107.25 of the CDOT Standard  
14 Specifications for Road and Bridge Construction (CDOT, 2005a) and permitted by the  
15 CDPHE Water Quality Control Division, in accordance with Section 402 of the Clean Water  
16 Act.

### 17 **3.17.3.3 REMOVAL OF STRUCTURES/OBSTRUCTIONS**

18 Pole-mounted electrical transformers were not identified as part of site reconnaissance  
19 activities. However, relocation of overhead electrical utility lines and pole-mounted  
20 transformers will be identified in project plans and specifications. Performance of the work  
21 set forth in the project plans and specifications will be conducted in accordance with any  
22 easement agreement between CDOT and/or private landowners.

23 All wells that are located within the proposed construction area, including any that were not  
24 previously identified, will be abandoned and plugged according to CDOT Section 202.02 in  
25 Standard Specifications for Road and Bridge Construction (CDOT, 2005a) and in  
26 conformance with the Colorado Department of Natural Resources Division of Water  
27 Resources State Engineer Water Well Construction Rules, specifically Rule 16, "Standards  
28 for Plugging, Sealing, and Abandoning Wells and Boreholes" (Colorado Department of  
29 Natural Resources, 2006).

30 The Colorado Oil and Gas Conservation Commission (COGCC) regulates the clean up of  
31 gas wells and associated facilities. The COGCC clean-up standard for petroleum  
32 contaminated soil is 1,000 parts per million (ppm) total petroleum hydrocarbons in sensitive  
33 areas with the potential to impact groundwater (COGCC, 2001). The COGCC clean-up  
34 standard for non-sensitive areas is 10,000 ppm total petroleum hydrocarbons (COGCC,  
35 2001). A typical clean-up standard used by CDOT for materials management is the OPS  
36 clean-up standard of 500 ppm total petroleum hydrocarbons. If petroleum- contaminated  
37 soil is identified with a concentration less than 1,000 ppm but higher than 500 ppm, CDOT  
38 would be responsible for clean-up of this soil. A MMP and a Health and Safety plan, as  
39 required by Section 250.03 of the CDOT Standard Specifications for Road and Bridge  
40 Construction (CDOT, 2005), also is recommended for use when oil and gas facilities are  
41 encountered.

### 1 3.17.3.4 REGULATED MATERIALS CLEARANCE

2 Environmentally regulated materials may be present in buildings and structures that could  
3 be demolished as part of the project. Prior to demolition of any structures, an asbestos,  
4 lead-based paint, and miscellaneous hazardous materials survey will be conducted at each  
5 parcel, where applicable. Regulated materials abatement will be conducted in accordance  
6 with Section 250, Environmental, Health, and Safety Management, of the CDOT Standard  
7 Specifications for Road and Bridge Construction (CDOT, 2005a) and relevant Occupational  
8 Health and Safety (OSHA) regulatory details. Basic regulatory requirements for the type of  
9 materials that may be encountered in the project area are summarized in this section.

#### 10 *AST and UST Management*

11 Sites with regulated ASTs and USTs will most likely be acquired for right-of-way for  
12 Package A and Package B. In conjunction with final design, a detailed review of the  
13 Colorado Department of Labor and Employment Division of Oil and Public Safety (OPS)  
14 files related to these properties would identify the results of any site investigations  
15 conducted, remedial systems or actions installed at the properties, and quarterly monitoring  
16 requirements. In the event that any of these sites are identified as having active leaking  
17 tanks, coordination with OPS would be required prior to parcel acquisition. If site  
18 characterization and/or remediation have not been completed, the OPS may require CDOT  
19 to complete these activities after acquisition. The OPS requirements may include:

- 20 ▶ Removal of any ASTs/USTs
- 21 ▶ Excavation and management of petroleum contaminated soil
- 22 ▶ Modifications to or redesign of remediation systems
- 23 ▶ Replacement of any monitoring wells destroyed during construction
- 24 ▶ Long-term groundwater monitoring

25 During the right-of-way acquisition process, additional properties may require similar actions  
26 depending on the results of the ISAs.

#### 27 *Asbestos and Materials Containing Lead-Based Paint*

28 By law, all friable asbestos-containing materials (ACM) must be removed from structures,  
29 including bridges, prior to demolition, and soils if encountered in excavated landfill or  
30 building debris, buried utilities, or other ACM. The contractor performing the asbestos  
31 abatement is required to be licensed to perform such work and obtain permits from the  
32 CDPHE. Improper abatement can lead to release of asbestos in soils and the need for soil  
33 remediation.

34 Third party certification is required to document that the abatement was completed in  
35 accordance with regulatory requirements. The certification is needed to obtain the  
36 demolition permits for the structures. All ACM must be bagged and labeled for transport and  
37 disposal at a facility permitted to accept ACM.

38 Lead-based paint may need to be removed prior to demolition if the lead is leachable at  
39 concentrations greater than regulatory levels. Where lead-based painted surfaces would be  
40 removed via torching, additional health and safety monitoring requirements are applicable.

1 *Other Regulated Materials*

2 Prior to demolition, regulated materials must be removed from any structures and  
3 appropriately recycled or disposed. Bills of lading or waste manifests are usually completed  
4 to document proper management of these materials. Typical materials include  
5 polychlorinated biphenyl (PCB)-containing ballasts, fluorescent bulbs, mercury-containing  
6 equipment (i.e., switches, meters), electronic equipment, containerized regulated liquids  
7 such as paints, solvents, oil, grease, hazardous materials, pesticides, and herbicides, and  
8 CFC-containing equipment (equipment must be emptied before equipment is removed).

9 **3.17.3.5 HEALTH AND SAFETY PLANS**

10 Prior to construction activities, a Health and Safety Plan, as required by Section 250.03 of  
11 the CDOT Standard Specifications for Road and Bridge Construction (CDOT, 2005a), will  
12 be developed. Construction specifications shall be written to include review of the Health  
13 and Safety Plan by the CDOT Regional Environmental Manager. In addition, some site-  
14 specific requirements may be applicable as discussed in this section.

15 **3.17.3.6 MINE GAS MANAGEMENT**

16 If abandoned landfills or coal mines are present below and/or within 1,000 feet of  
17 construction activities, the Health and Safety Plan will need to include provisions for  
18 assessing and monitoring air quality at all utility trenches, drainage structures, and similar  
19 underground construction (i.e., caissons) areas prior to and during intrusive activities to  
20 ensure worker safety. Under 29 CFR Part 1926.651(g) Specific Excavation Requirements,  
21 Hazardous Atmosphere, OSHA requires testing the atmosphere of excavations greater than  
22 four feet in depth before employees enter the excavation where oxygen deficient (less than  
23 19.5 percent oxygen) environments exist or could reasonably be expected to exist. OSHA  
24 also requires that precautions be taken to prevent employee exposure to atmospheres  
25 containing less than 19.5 percent oxygen and other hazardous atmospheres.

26 CDOT specification 250.02 states that monitoring equipment shall be capable of meeting  
27 the set standards of 1 percent of the lower explosive limit for flammable gas with an  
28 instrument measurement increment of 1 percent and 19 percent oxygen with an instrument  
29 measurement increment of 0.1 percent.