



# MEMO

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To: Jerri Horst

From: Colleen Murray, Hazardous Materials Specialist, HDR Engineering

Date: September 16, 2010

**Re: CENTRAL MESA LRT EXTENSION – ADDENDUM TO THE ENVIRONMENTAL SITE ASSESSMENT**

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## 1.0 INTRODUCTION

The purpose of this technical memo is to update the information presented in the *Phase 1 Environmental Site Assessment*, HDR Engineering, February 2010. Since that report was prepared, several design refinements occurred which could have an effect on the report's findings. The changes include:

- The station platform at Alma School/Main Street was moved from west of the intersection to east of the intersection.
- The station platform at Centennial Way/Main Street was moved to the east side of the Center Street/Main Street intersection in front of the Mesa Arts Center.
- The station platform at Mesa Drive/Main Street was shifted slightly west but it remains east of this intersection.
- The station platform at Country Club Drive/Main Street was shifted slightly west but it remains east of the intersection.
- The park-and-ride study area was revised as follows: 1) the area north of Main Street was expanded to include approximately 6.6 acres fronting Main Street between Mesa Drive and Lesueur; 2) the area south of Main Street in this area was eliminated from further consideration. The specific design plan for the revised area of interest will be determined during final design. However, the facility would be built to accommodate about 500 cars and would not likely require the entire 6.6-acre site. The park-and-ride site may have potential market value for transit-oriented development sometime in the future.
- The location of traction power substation (TPSS) B-3 was shifted slightly to the north within the same parcel but adjacent to Main Street.
- Two additional TPSS options have been added to the ten locations previously considered. One option (B-4) is located within Morris Street (east of Country Club Drive) on the north side of Main Street. This would require closure of Morris Street at this location. The other option (C-3) is located on the north side of Main Street near Edgemont (east of Mesa Drive). The TPSS formerly proposed south of Main Street on Robson Street (B-4A) is no longer being considered. Note that only three of the options being considered would actually be needed for the proposed project. The three specific TPSS locations would be determined during preliminary engineering.

The drawings showing these refinements may be found in Appendix M of the Draft Environmental Assessment. Note that the changes listed above are the same regardless of

whether the 2-lane or 4-lane option of the Build Alternative from Country Club Drive to Hobson is implemented; therefore the findings presented in this memo are also the same. This memo reports on the findings of the evaluation of the project revisions and states whether the changes have any effect on the findings of the February 2010 report.

The revised evaluation for the entire proposed project may be found in Section 2.0 of this memo based on the current design which includes the modifications listed above. Section 3.0 focuses only on the changes in potential impacts based on the design refinements so that the reader can easily identify the changes from that presented in the February 2010 report. The major findings, conclusions, and recommendations are presented in Section 4.0.

## 2.0 PROJECT EVALUATION

Table 1 has been updated to present the potential sites of concern along the entire route, including the recent project refinements. The findings are the same regardless of whether the 2-lane or 4-lane option of the segment from Country Club Drive to Hobson is implemented. The potential sites of concern are presented in Figures 1 through 3. Additional information about each of the sites may be found in Section 4.0 of the original February 2010 report, and figures depicting each site may be found in Appendices A and B of that report.

As stated in the original report, those sites within a 200-foot radius of the station platforms, TPSSs, and park-and-ride are the ones considered to be of potential concern to the proposed project. The original report revealed 23 sites of potential concern located in the project area (11 sites identified in the Environmental Data Research [EDR] data base search, 11 sites identified in the historical research of city directories and aerial photographs, and one site identified during site reconnaissance). Table 1 identifies each of the 23 sites of potential concern, with ten of the sites identified by the American Society of Testing Materials (ASTM) as Recognized Environmental Condition (REC)<sup>1</sup> sites. The REC sites are shown in bold print on the table. Based on the results of the ESA, the remaining sites are also recommended as sites of potential concern. Note that the project revisions stated in Section 1.0 above have eliminated the sites depicted as Map Codes Q and R (a REC site) as sites of potential concern to the Centennial Way station due to the station's relocation to Center Street. A risk rating was assigned for each based on the criteria shown below:

**Low** = Sites with low potential to release hazardous materials. On some occasions, sites that have had a hazardous materials issue in the past but have been remediated with approval of the local state environmental agency (or EPA) may also qualify. Examples include undeveloped or agricultural property, residential property, or benign commercial properties such as office buildings, warehouses, distribution facilities, or municipal facilities with no listed violation.

**Moderate** = Sites with some indications of possible hazardous materials issues. Sites may appear on a database as having a permit to handle hazardous materials, but no violations have been recorded. Also may include sites that are not listed in any environmental data bases, but

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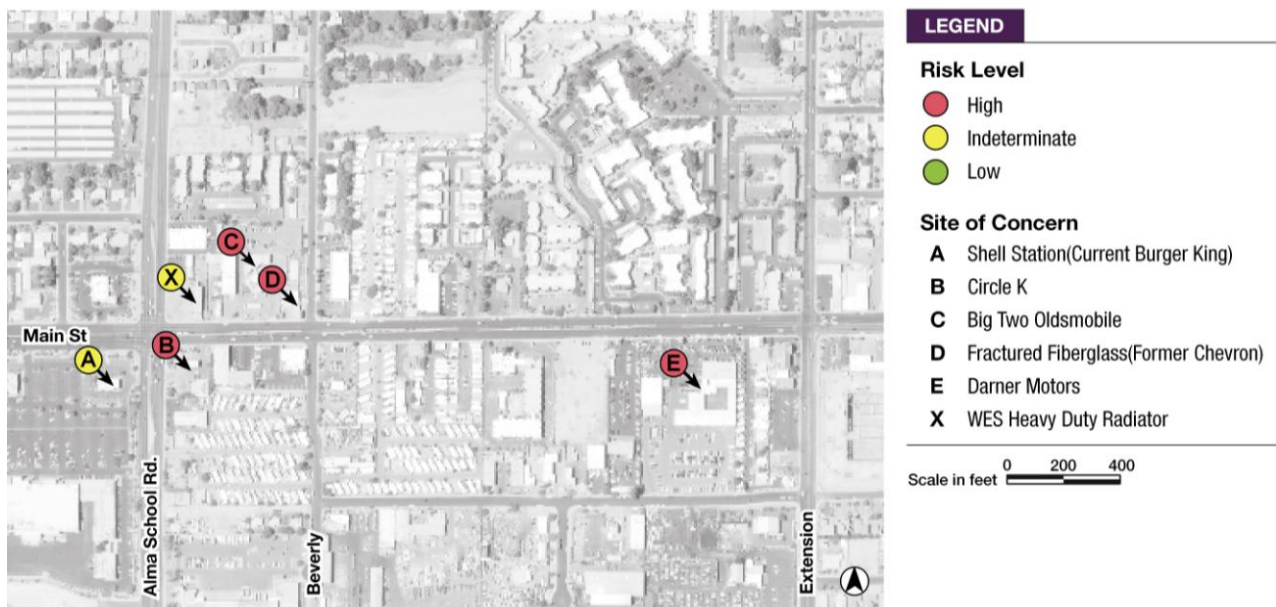
<sup>1</sup> A recognized environmental condition (REC) is defined by ASTM Practice E 1527-05 as: "The presence or likely presence of any hazardous substances or petroleum products on a project site under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the project site or into the ground, groundwater, or surface water of the project site. The term includes hazardous substances or petroleum products even under conditions of storage and use in compliance with local and state laws and regulations.

the site is an auto repair facility with visible surface staining. Examples include auto repair garages, welding shops, or manufacturing facilities with minor listings in the environmental database.

**High** = Sites with high potential for releasing hazardous materials to the soil or groundwater, or have a recorded release issue. Examples include current service stations, bulk fueling terminals, sites listed in environmental databases as having had a release, or a known release that has not been remediated.

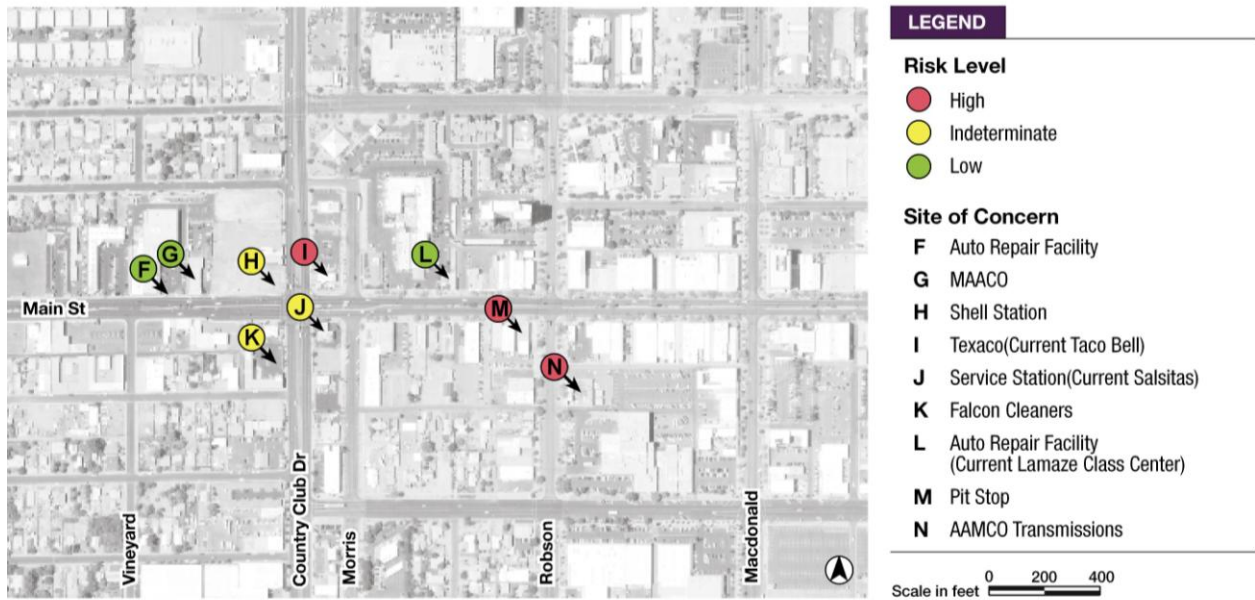
**Indeterminate** = Sites which do not include sufficient information to assign a rating. Often require additional file review to determine details of any related environmental issues at the site.

**FIGURE 1: POTENTIAL SITES OF CONCERN—SYCAMORE TO DATE**

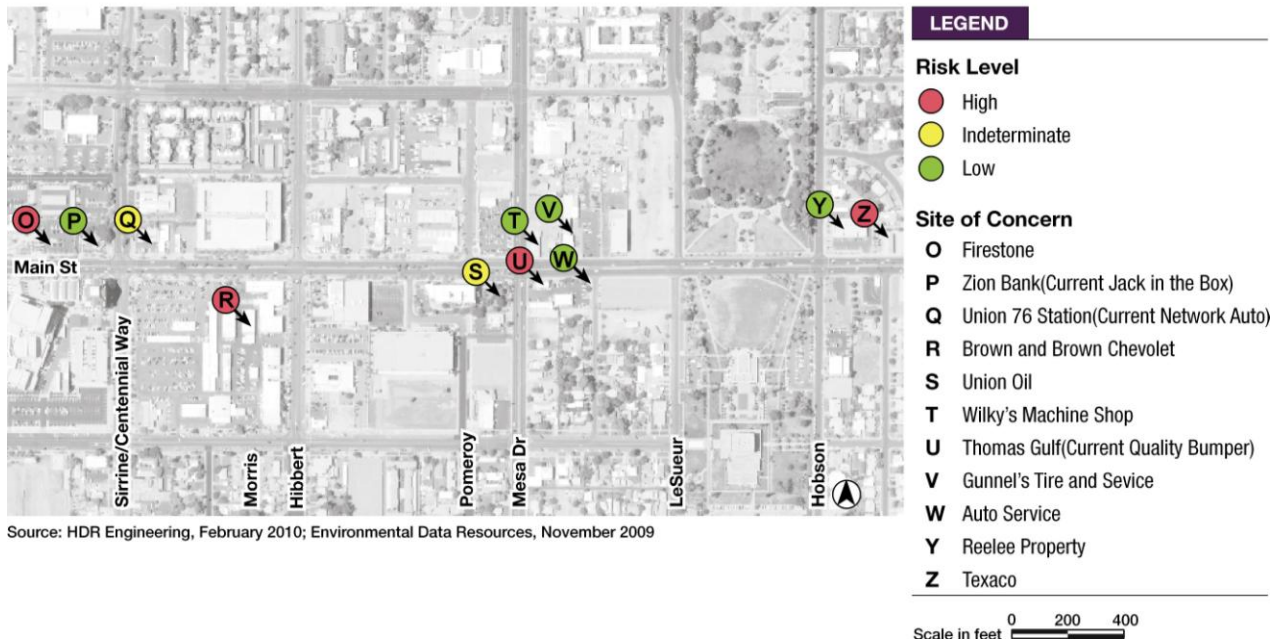


Source: HDR Engineering, February 2010; Environmental Data Resources, November 2009

**FIGURE 2: POTENTIAL SITES OF CONCERN—DATE TO CENTER STREET**



**FIGURE 3: POTENTIAL SITES OF CONCERN—CENTER STREET TO HORNE**



**TABLE 1: POTENTIAL SITES OF CONCERN—PROPOSED PROJECT  
(INCLUDING RECENT DESIGN REFINEMENTS)**

Map Code <sup>1</sup>	Site Name	Address <sup>2</sup>	Site Operations Relative to Hazmat Issues <sup>3</sup> , Regulatory Listing <sup>4</sup>	Data Source <sup>5</sup>	Impact Onsite L/M/H <sup>6</sup>	PSI <sup>7</sup> Recommended	Potentially Impacted Structure <sup>8</sup>
A	Shell Station (Current Burger King)	1165 W. Main Street	HSS, no regulatory listing	R, H	I		SP, Alma School
B	Circle K	1145 W. Main Street	CSS, 3 USTs onsite. Risk associated with property acquisition only.	R, D, H	H		SP, Alma School
C	<b>Big Two Oldsmobile</b>	<b>1120 W. Main Street</b>	<b>Auto Body Shop, 1 LUST case closed in 1993, 1 UST removed in 1991</b>	R, D, H	H	✓	<b>SP, Alma School; TPSS A-1</b>
D	<b>Fractured Fiberglass (Former Chevron)</b>	<b>1100 W. Main Street</b>	<b>FSS, LUST case closed in 1996, 5 USTs closed in 1967</b>	R, D, H	H	✓	<b>SP, Alma School; TPSS A-1</b>
E	<b>Darner Motors</b>	<b>837 W. Main Street</b>	<b>Auto dealership, LUST case closed in 1996, 1 UST removed in 1994</b>	R, D, H	H		<b>TPSS A-4</b>
F	Auto Repair Facility (Current strip mall)	450 W. Main Street	Historic auto repair facility, No regulatory listing	R, H	L		SP, Country Club
G	MAACO	434 W. Main Street	Auto body facility, No regulatory listing	R, H	L		SP, Country Club
H	Shell Station (Current vacant lot)	402 W. Main Street	HSS, no regulatory listing	R, H	I		SP, Country Club; TPSS B-4
I	<b>Chevron (Current Taco Bell)</b>	<b>310 W. Main Street</b>	<b>HSS, LUST cases closed in 2002 &amp; 2003, 8 USTs removed between 1992 and 2004</b>	R, D, H	H	✓	<b>SP, Country Club; TPSS B-4</b>
J	Service Station (Current Salsitas)	311 W. Main Street	FSS, no regulatory listing	R, H	I		SP, Country Club, TPSS B-1, B-4
K	<b>Falcon Cleaners</b>	<b>15 S. Country Club Drive</b>	<b>Former dry cleaner, 1 UST removed in 1992</b>	R, D, H	I	✓	<b>TPSS B-1</b>
L	Auto Repair Facility (Current Lamaze Class Center)	236 W. Main Street	Former auto repair facility	R, H	L		SP, Country Club
M	<b>Pit Stop</b>	<b>201 W. Main Street</b>	<b>Auto repair facility, LUST case closed in 2006, 3 USTs removed in 1993</b>	R, D, H	H	✓	<b>TPSS B-3</b>
N	<b>AAMCO Transmission</b>	<b>27 S. Robson Road</b>	<b>Former auto repair facility, SHWS, CERC-NFRAP, RCRA NON-GEN with Violations</b>	R, D, H	H		<b>None<sup>9</sup></b>
O	<b>Former Firestone (Current office building)</b>	<b>48 E. Main Street</b>	<b>Auto repair facility, LUST case closed in 1996, UST removed in 1996</b>	R, D, H	H		<b>SP, Center Street</b>
P	Zion Bank (Current Jack in the Box)	62 E. Main Street	HSS, UST removed in 1991	R, D, H	L		SP, Center Street

Map Code <sup>1</sup>	Site Name	Address <sup>2</sup>	Site Operations Relative to Hazmat Issues <sup>3</sup> Regulatory Listing <sup>4</sup>	Data Source <sup>5</sup>	Impact Onsite L/M/H <sup>6</sup>	PSI <sup>7</sup> Recommended	Potentially Impacted Structure <sup>8</sup>
Q	Union 76 Station (Current Network Automotive)	104 E. Main Street	FSS, no regulatory listing	R, H	I		None
R	<b>Brown &amp; Brown Chevrolet</b>	<b>145 E. Main Street</b>	<b>Auto dealership, LUST case closed in 2000, USTs removed in 1992 &amp; 1998</b>	R, D, H	H		<b>None</b>
S	Union Oil (Currently Gateway Park)	361 E. Main Street	HSS, no regulatory listing	R, H	I		SP, PNR Mesa Drive
T	Wilky's Machine Shop	402 E. Main Street	Auto repair facility, no regulatory listing	R, H	L		SP, PNR Mesa Drive
U	<b>Thomas Gulf (Current Quality Bumper)</b>	<b>405 E. Main Street</b>	<b>FSS, LUST closed in 1999</b>	R, H	H	✓	<b>SP, PNR Mesa Drive</b>
V	Gunnels Tire and Service	420 E. Main Street	Auto repair facility, no regulatory listing	R	L		SP, PNR Mesa Drive
W	Auto Service	425 E. Main Street	Auto repair facility	R, H	L		SP, PNR Mesa Drive; TPSS C-1
X	<b>WES Heavy Duty Radiator</b>	<b>1140 W. Main Street</b>	<b>Auto repair facility, RCRA Non-Generator with violations</b>	R, D	I		<b>SP, Alma School Road</b>
Y	Reelee Property	606 E Main Street	Retail shopping facility, UST removed in 2003	R, D	L		TPSS C-3
Z	<b>Texaco</b>	<b>630 E. Main Street</b>	<b>FSS, LUST cases closed in 1997. Four USTs removed in 1991</b>	R, D	H	✓	<b>TPSS C-3</b>

Sites listed in bold print are considered by ASTM to be Recognized Environmental Condition (RECs)

<sup>1</sup>Corresponds to location of site as indicated in Figures 1 through 3.

<sup>2</sup>Address corresponds to that listed in EDR database search or historical source that identified site in the February 2010 report. Given address may differ slightly from currently listed address.

<sup>3</sup>CSS = Current Service Station, FSS= Former Service Station, HSS = Historic Service Station (no longer present)

<sup>4</sup>LUST=Leaking Underground Storage Tank, UST= Underground Storage Tank. Complete list of acronyms identified in EDR report in Appendix C of the February 2010 report.

<sup>5</sup>Indicates primary information sources for listing: R=Reconnaissance, D=Database, H=Historical Source (city Directories, historical aerial photographs)

<sup>6</sup>Risk of potential impacts onsite, Low / Medium / High / Indeterminate

<sup>7</sup>PSI= Preliminary Site Investigation

<sup>8</sup>SP= Station Platform, PNR= Park-and-Ride, TPSS= Traction Powered Substation. Twelve options for TPSS sites were evaluated. Only three would be selected for actual installation of a TPSS.

<sup>9</sup>Since TPSS Option B-4A is no longer being considered, no structures would be potentially impacted.

Source: *Environmental Site Assessment for the Central Mesa LRT Extension*, HDR, February 2010 and HDR update, August 2010.

### 3.0 EVALUATION OF PROJECT CHANGES

Table 2 focuses on the evaluation of project changes since completion of the February 2010 report. The potential sites of concern are presented in Figures 1 through 3. Additional information about each of the sites may be found in Section 4.0 of the original report, and figures depicting each site may be found in Appendices A and B of that report.

**TABLE 2: POTENTIAL SITES OF CONCERN—PROJECT REFINEMENTS ONLY**

Map Code <sup>1</sup>	Site Name	Address <sup>2</sup>	Site Operations Relative to Hazmat Issues <sup>3</sup> , Regulatory Listing <sup>4</sup>	Data Source <sup>5</sup>	Impact Onsite L/M/H <sup>6</sup>	PSI <sup>7</sup> Recommended	Potentially Impacted Structure <sup>8</sup>
<b>Alma School/Main Street Station Platform Relocation</b>							
A	Shell Station (Current Burger King)	1165 W. Main Street	HSS, no regulatory listing	R, H	I		SP, Alma School
B	Circle K	1145 W. Main Street	CSS, 3 USTs onsite. Risk associated with property acquisition only.	R, D, H	H		SP, Alma School
C	Big Two Oldsmobile	1120 W. Main Street	Auto Body Shop, 1 LUST case closed in 1993, 1 UST removed in 1991	R, D, H	H	✓	SP, Alma School
D	Fractured Fiberglass (Former Chevron)	1100 W. Main Street	FSS, LUST case closed in 1996, 5 USTs closed in 1967	R, D, H	H	✓	SP, Alma School
X	WES Heavy Duty Radiator	1140 W. Main Street	Auto repair facility, RCRA Non-Generator with violations	R, D	I	✓	SP, Alma School Road
<b>TPSS Option B-4 (Morris Street)</b>							
H	Shell Station (Current vacant lot)	402 W. Main Street	HSS, no regulatory listing	R, H	I		TPSS B-4
I	Chevron (Current Taco Bell)	310 W. Main Street	HSS, LUST cases closed in 2002 & 2003, 8 USTs removed between 1992 and 2004	R, D, H	H	✓	TPSS B-4
J	Service Station (Current Salsitas)	311 W. Main Street	FSS, no regulatory listing	R, H	I		TPSS B-4
<b>TPSS Option B-3</b>							
M	Pit Stop	201 W. Main Street	Auto repair facility, LUST case closed in 2006, 3 USTs removed in 1993	R, D, H	H	✓	TPSS B-3
<b>Center Street/Main Street Station Platform Relocation</b>							
O	Former Firestone (Current office building)	48 E. Main Street	Auto repair facility, LUST case closed in 1996, UST removed in 1996	R, D, H	H		SP, Center Street
P	Zion Bank (Current Jack in the Box)	62 E. Main Street	HSS, UST removed in 1991	R, D, H	L		SP, Center Street

Map Code <sup>1</sup>	Site Name	Address <sup>2</sup>	Site Operations Relative to Hazmat Issues <sup>3, 4</sup> Regulatory Listing	Data Source <sup>5</sup>	Impact Onsite L/M/H <sup>6</sup>	PSI <sup>7</sup> Recommended	Potentially Impacted Structure <sup>8</sup>
<b>Mesa Drive/Main Street Station Platform Relocation and Park-and-Ride Study Area</b>							
S	Union Oil (Currently Gateway Park)	361 E. Main Street	HSS, no regulatory listing	R, H	I		SP, PNR Mesa Drive
T	Wilky's Machine Shop	402 E. Main Street	Auto repair facility, no regulatory listing	R, H	L		SP, PNR Mesa Drive
<b>U</b>	<b>Thomas Gulf (Current Quality Bumper)</b>	<b>405 E. Main Street</b>	<b>FSS, LUST closed in 1999</b>	<b>R, H</b>	<b>H</b>	✓	<b>SP, PNR Mesa Drive</b>
V	Gunnels Tire and Service	420 E. Main Street	Auto repair facility, no regulatory listing	R	L		SP, PNR Mesa Drive
W	Auto Service	425 E. Main Street	Auto repair facility, no regulatory listing	R, H	L		SP, PNR Mesa Drive
<b>TPSS Option C-3 (Edgemont)</b>							
Y	Reelee Property	606 E Main Street	Retail shopping facility, UST removed in 2003	R, D	L		TPSS C-3
<b>Z</b>	<b>Texaco</b>	<b>630 E. Main Street</b>	<b>FSS, LUST cases closed in 1997. Four USTs removed in 1991.</b>	<b>R, D</b>	<b>H</b>	✓	<b>TPSS C-3</b>

Sites listed in bold print are considered by ASTM to be Recognized Environmental Conditions (RECs)

<sup>1</sup>Corresponds to location of site as indicated in Figures 1 through 3.

<sup>2</sup>Address corresponds to that listed in EDR database search or historical source that identified site. Given address may differ slightly from currently listed address.

<sup>3</sup>CSS = Current Service Station, FSS= Former Service Station, HSS = Historic Service Station (no longer present)

<sup>4</sup>LUST=Leaking Underground Storage Tank, UST= Underground Storage Tank. Complete list of acronyms identified in EDR report in Appendix C of the full Phase I ESA, HDR, February 2010.

<sup>5</sup>Indicates primary information sources for listing: R=Reconnaissance, D=Database, H=Historical Source (city Directories, historical aerial photographs)

<sup>6</sup>Risk of potential impacts onsite, Low / Medium / High / Indeterminate

<sup>7</sup>PSI= Preliminary Site Investigation

<sup>8</sup>SP= Station Platform, PNR= Park-and-Ride, TPSS= Traction Powered Substation. Twelve options for TPSS sites were evaluated. Only three would be selected for actual installation of a TPSS.

Source: HDR, August 2010.

## 4.0 FINDINGS, CONCLUSIONS, RECOMMENDATIONS

The major findings and conclusions are stated below:

- For the purposes of this addendum to the ESA report, conclusions regarding potential sites of concern were not affected by the 2-lane or 4-lane design options. However, the location of potential station platforms, TPSS, and park-and-ride were a determining factor in identifying sites of concern. This determination was based on the increased amount of subsurface disturbance required for the construction of the station platforms, park-and-ride, and TPSS.
- A total of 23 sites of potential concern were identified in the original report as follows:
  - The EDR report identified 11 sites of concern to the project. Many of the sites listed in the EDR report were eliminated as sites of concern based on the distance from a potential station platform, park-and-ride, or TPSS. Only sites located within a 200-foot radius of a station platform, park-and-ride, or TPSS were considered to be of concern to

the project. Based on the location and distance of a listed site, current status of the listing, and/or nature of the database, seven LUST sites and three additional UST sites were identified as sites of concern in the EDR report. One additional site with multiple database listings was identified in the report. Of the 11 sites identified in the EDR report, nine are considered to be RECs (seven LUST sites [Map Codes C, D, E, I, M, O and R] one facility with multiple regulatory listings [Map Code N] and one former dry cleaner [Map Code K]). The recent project refinements eliminated Site R (a REC) as a site of potential concern.

- Historical research (city directories and historic aerial photographs) of the project area identified 11 additional sites of concern. The analysis of historical research information is not affected by the 2-lane or 4-lane option. However, distance from a potential station platform and/or TPSS park-and-ride was a factor in determining whether a city directory listing was considered to be of concern. Of the 11 sites identified through historical research, one site, a former service station and current auto repair facility (Map Code U), is considered a REC. Note that recent project refinements eliminated Sites N and Q as sites of potential concern.
- A site reconnaissance of the project area was performed for the project area. Development within the project area consisted of service stations, auto repair facilities, auto dealerships, mobile home parks, hotels and motels, shopping plazas, office buildings and other miscellaneous retail and commercial facilities. The project area consisted of newly constructed structures, as well as structures present since the at least the 1950s. The site reconnaissance findings were not affected by the 2-lane or 4-lane option. However, distance from a potential station platform and/or TPSS park-and-ride was a factor in determining whether a site identified in during the visit was considered to be of concern. One site of concern, a former service station not previously identified in the EDR report or historical research, was identified during the site reconnaissance (Map Code J).
- Based on the updated located of the Alma School station platform, and the location of TPSS C-3, three additional sites of concern were added to this addendum (Map Codes X, Y, and Z). Two of these sites, WES Radiator (Map Code X) and the former Texaco (Map Code Z), are considered to be RECs.

Recommendations have been developed through the investigative procedures described in the *Scope of Services, Significant Assumptions, and Limitations* section of the February 2010 report. These findings should be reviewed within the context of the limitations provided in that section. Based on the location and specific details of the identified risk sites, HDR has identified REC sites associated with the project area. This conclusion has led to the inclusion of the following statement as required by ASTM E 1527-05:

HDR has performed an ESA in general conformance with the scope and limitations of ASTM E 1527-05 of the project area located along Main Street, from Sycamore Drive to approximately Hobson Road in Mesa, Maricopa County, Arizona. Any exceptions to or deletions from these practices are described in later sections of the original report. **The original report revealed the evidence of ten RECs in connection with 23 sites of concern located in the project area. Based on the updated station platform and TPSS locations, three additional sites of concern were identified within the project area. Two of these sites are considered to be RECs. A total of 26 sites of concern and 12 RECs have been identified for the project area as of the date of this memo (Table 1).**

The two major recommendations are the same as that presented in the February 2010 report. In addition, a third recommendation is included in this memorandum, relating to the park-and-ride location. The following recommendations are carried forward from the February 2010 report:

- HDR recommends further investigation (in the form of a Preliminary Site Investigation) at seven of the ten REC sites as shown in Table 1. Additional investigation for these sites is based on the location of known or suspected contamination and/or other details associated with the site's regulatory listing. A drilling and sampling program should be implemented to verify or refute the existence of actionable concentrations of released hazardous materials. A specific and targeted analytical program should be implemented to determine the concentration of residual impacts, if present.
- HDR recommends that environmental construction monitoring (ECM) be conducted along the entire length of project area based on the potential for contamination within the soil resulting from the operations of the facilities surrounding the project area. Additionally, all construction contractors should be instructed to immediately stop all subsurface activities in the event that potentially hazardous materials are encountered, an odor is identified, or significantly stained soil is visible. Contractors should be instructed to follow all applicable regulations regarding discovery and response for hazardous materials encountered during the construction process.

HDR also makes the following recommendation regarding the park-and-ride location:

- In the event of property acquisition at the proposed park-and-ride location, HDR recommends a site-specific Phase I ESA for any property acquired for the final layout of the planned park-and-ride facility.