

Appendix F Hazardous Materials Supporting Documentation

This appendix contains the following documents:

Appendix F.1: Hazardous Materials Assessment Memorandum (Preliminary Initial Site Assessment) (April 2023)

Appendix F.2: Hazardous Materials Assessment Memorandum Addendum (July 2023)

Appendix F.3: Asbestos and Lead-Based Paint Survey Memorandum (May 2023)

Appendix F.4: Asbestos and Lead-Based Paint Survey Memorandum Addendum (July 2023)

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**Appendix F.1
Hazardous Materials Assessment Memorandum (Preliminary Initial Site
Assessment) (April 2023)**

Appendices for this report are on file at ADOT Environmental Planning and available upon request at 602.712.7767.

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AECOM
7720 North 16th Street
Phoenix, AZ 85020
aecom.com

Project name:
Grand Avenue, 35th Avenue and Indian School
Road Interchange

Project ref:
60628402

From:
Elizabeth Parker, Environmental Scientist

Date:
April 28, 2023

To:
Mr. Ed Green
Arizona Department of Transportation

CC:
Ms. Jessica Rietz, AECOM

DRAFT

Memo

Subject: Hazardous Materials Assessment

Approved
Ed Green
01 May 23

Concur with recommendation for additional assessment on full and partial take parcels. ASTM standard Phase I.

1. Introduction

AECOM Technical Services, Inc. (AECOM) conducted a Hazardous Materials Assessment of existing rights-of-way (ROW) and proposed acquisition and easement areas located at the intersection of Grand Avenue (US 60), 35th Avenue, and Indian School Road in Phoenix, Maricopa County, Arizona (“subject property” or “project corridor”). This Hazardous Materials Assessment was conducted in support of an Arizona Department of Transportation (ADOT) road improvement project (TRACS No. 060 MA 159 F0272 01L).

US 60 runs at a diagonal to the grid network that comprises the regional arterial street system in the Phoenix metropolitan area. This results in an intricate intersection configuration where the three roadways come together. This is made more complex by the BNSF Railway corridor paralleling US 60 to the south. The purpose of this project is to improve traffic operations, congestion, and safety at the intersection of US 60, 35th Avenue, and Indian School Road while maintaining regional mobility and access.

This report has been prepared for the exclusive use of ADOT. Results are based solely on the methodology stated in this report and the report should be relied upon in its entirety. Any reliance a third party makes of this report is the responsibility of such third party.

2. Purpose

The objective of this assessment was to identify potential environmental concerns associated with the subject property. Potential environmental concerns are defined by ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) as “the possible presence of any hazardous substances or petroleum products on a property under conditions that indicate the possibility of an existing release, a past release, or a threat of a future release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.”

The tasks comprising this assessment were conducted in accordance with the scope and limitations of ASTM E 1528-14 (ASTM, 2014). This assessment was also performed in accordance with the ADOT Preliminary Initial Site Assessment (PISA) procedures (ADOT, 2022). The Hazardous Materials Assessment is a limited initial screening, and therefore does not include exhaustive record searches or the level of inquiry that a Phase I Environmental Site Assessment (ESA) would encompass. As stated in ASTM E 1528-14, the user is advised that

this practice does not satisfy the practices that encompass all appropriate inquiry into the previous ownership and uses of the property, but rather is a limited environmental due diligence practice.

Hazardous waste is defined by the Resource Conservation and Recovery Act (RCRA) and includes lists of specific wastes, as well as waste that exhibits a specific characteristic (e.g., it is ignitable, corrosive, reactive, or toxic in accordance with RCRA-specific definitions). For the purpose of this Hazardous Materials Assessment, however, hazardous wastes and substances are defined herein as wastes or substances from production or operation activities that pose a substantial present or potential hazard to human health and the environment if improperly treated, stored, or disposed. The U.S. Environmental Protection Agency (USEPA) uses the term “hazardous substance” for chemicals that, if released into the environment above a certain amount, must be reported. Depending on the threat to the environment, federal involvement in handling the incident can be authorized under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The Arizona Department of Environmental Quality (ADEQ) implements both RCRA and CERCLA, as it has been granted primacy by the USEPA for both programs. Relevant laws and regulations that apply to this Hazardous Materials Assessment include the following.

- National Environmental Policy Act of 1969, as amended,
- Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, and
- Resource Conservation and Recovery Act of 1986.

3. Physical Setting

Physical characteristics including topography, geology, and hydrogeology were evaluated based on site observations, published literature, and maps.

3.1 Site Location

The project corridor is centered on the intersection of Indian School Road, US 60/Grand Avenue, and 35th Avenue in Phoenix, Arizona. The project corridor extends from the center of the intersection approximately 2,500 feet east and west along Indian School Road, 2,200 feet northwest and 2,600 southeast along US 60/Grand Avenue, and 2,000 feet north and south along 35th Avenue. In addition to existing unassessed road rights-of-way, the subject property includes adjacent parcels that would potentially be acquired for new right-of-way or easements within commercial, industrial, and residential properties along the project corridor, as summarized in Table 1. Potential acquisition areas were defined based on a conservative estimate of areas that could be impacted by the project, and right-of-way needs for the project are undergoing further evaluation at the time of this report’s preparation. Therefore, some parcels identified as potential acquisitions for this assessment may not be included in the final Build Alternative.

Table 1. Site Location

APN	Address	Owner	PLSS T/R/S	Full or Partial Acquisition*
107-10-010A	4336 North 35 th Avenue	AZ Canyon 35 LLC	2 North / 2 East / 22	Partial
107-10-084	4326 North 35 th Avenue	Fountainhead Phoenix LLC	2 North / 2 East / 22	Partial
107-11-001A	4209 North 35 th Drive	Douglas C. and Terrence B. Jones	2 North / 2 East / 22	Full
107-11-004	4147 North 35 th Drive	James L. Whitaker Trust	2 North / 2 East / 22	Full
107-11-005A	4143 North 35 th Drive	Hazel L. Chevalier (deceased)	2 North / 2 East / 22	Full
107-11-009	4210 North 35 th Drive	Weaver Automotive Specialist LLC	2 North / 2 East / 22	Full
107-11-014	4238 North 35 th Avenue	Makers Real Estate LLC	2 North / 2 East / 22	Partial

APN	Address	Owner	PLSS T/R/S	Full or Partial Acquisition*
107-11-020C	3522 Grand Avenue	AAA to Z Transport LLC	2 North / 2 East / 22	Full
107-11-021A	3600 West Indian School Road	City of Phoenix	2 North / 2 East / 22	Partial
107-11-025B	3648 Grand Avenue	3660 W Grand Ave LLC	2 North / 2 East / 22	Full
107-11-026D	No address	3660 W Grand Ave LLC	2 North / 2 East / 22	Partial
107-11-026E	No address	3660 W Grand Ave LLC	2 North / 2 East / 22	Partial
107-11-026F	3660 Grand Avenue	3660 W Grand Ave LLC	2 North / 2 East / 22	Partial
107-11-026G	No address	3660 W Grand Ave LLC	2 North / 2 East / 22	Partial
107-11-029C	3636 Grand Avenue	Grand Avenue Storage Ltd.	2 North / 2 East / 22	Partial
107-11-030B	3670 West Indian School Road	OS Advertising Company of Phoenix, Inc.	2 North / 2 East / 22	Full
107-11-030C	No address	City of Phoenix	2 North / 2 East / 22	Partial
107-11-031	4220 North 35 th Avenue	Makers Real Estate LLC	2 North / 2 East / 22	Partial
107-11-036B	4170 North 35 th Avenue	Semo Venture Group LLC	2 North / 2 East / 22	Full
107-11-036C	4150 North 35 th Avenue	Ridhi Sidhi Enterprise LLC	2 North / 2 East / 22	Full
107-11-038	4213 North 35 th Drive	James L. Whitaker Trust	2 North / 2 East / 22	Full
107-11-039D	4246 North 35 th Avenue	Makers Real Estate LLC	2 North / 2 East / 22	Partial
107-11-040	4308 North 35 th Avenue	Makers Real Estate LLC	2 North / 2 East / 22	Partial
107-11-042	3636 Grand Avenue	Grand Avenue Storage Ltd.	2 North / 2 East / 22	Full
107-11-043	3564 Grand Avenue	Atchison Topeka & Santa Fe	2 North / 2 East / 22	Partial
107-11-044B	3611 Grand Avenue	Atchison Topeka & Santa Fe	2 North / 2 East / 22	Full
107-11-044C	3521 Grand Avenue	Pablo and Renova Romana Enriquez-Vargas	2 North / 2 East / 22	Full
107-11-045	3564 Grand Avenue	Atchison Topeka & Santa Fe	2 North / 2 East / 22	Partial
107-12-006E	3824 West Indian School Road	Watznxt Inc.	2 North / 2 East / 22	Partial
107-12-007C	3750 West Indian School Road	Phoenix Turney Partners LLC	2 North / 2 East / 22	Partial
107-12-042B	3826 West Indian School Road	Jorge S. and Arminda M. Murillo Trust	2 North / 2 East / 22	Partial
107-33-004A	3811 West Indian School Road	Zimmerman III LLC	2 North / 2 East / 27	Partial
107-33-004B	3815 West Indian School Road	Zimmerman III LLC	2 North / 2 East / 27	Partial
107-33-022A	3705 West Indian School Road	Construction Guide Properties LLC	2 North / 2 East / 27	Partial
107-33-022B	3721 West Indian School Road	Majed Abuhamdieh, Basil Nona, and Chanikya Reddy Kundavaram	2 North / 2 East / 27	Partial
107-33-025A	4098 North 35 th Avenue	Harry Dennis Wood	2 North / 2 East / 27	Full
107-33-025B	3828 North 35 th Avenue	Bode Holdings LLC	2 North / 2 East / 27	Full
107-33-026E	3602 North 35 th Avenue	3602 N 35th Ave LLC	2 North / 2 East / 27	Partial

APN	Address	Owner	PLSS T/R/S	Full or Partial Acquisition*
107-33-026F	3513 West Clarendon Avenue	CC Sands LLC, John S. and Amy Burchett, and Next Step Clarendon LLC	2 North / 2 East / 27	Partial
107-33-026G	3602 North 35 th Avenue	3602 N 35th Ave LLC	2 North / 2 East / 27	Partial
107-33-028	3575 West Clarendon Avenue	COFAM Holdings LLC	2 North / 2 East / 27	Partial
107-33-054	No address	AT&SFR/R	2 North / 2 East / 27	Partial
107-33-056	No address	COFAM Holdings LLC	2 North / 2 East / 27	Partial
107-33-058B	No address	Zimmerman III LLC	2 North / 2 East / 27	Partial
107-33-058Q	3839 West Indian School Road	Zimmerman I LLC	2 North / 2 East / 27	Partial
107-33-133A	3515 West Clarendon Avenue	CC Sands LLC, et al.	2 North / 2 East / 27	Partial
107-33-136A	3801 West Indian School Road	Silvia Spohnholz	2 North / 2 East / 27	Partial
108-01-166R	4029 North 33 rd Avenue	Plaza Del Sol 557 LLC	2 North / 2 East / 26	Partial
108-02-010E	3301 West Indian School Road	3301 W Indian School Rd VG LLC	2 North / 2 East / 26	Partial
108-02-026	3801 North 35 th Avenue	Gerald R. and Betty D. Knudson, et al.	2 North / 2 East / 26	Full
108-02-032A	3433 West Clarendon Avenue	Grand Avenue Industrial Properties, et al.	2 North / 2 East / 26	Partial
108-02-033	3637 North 35 th Avenue	Grand Avenue Industrial Properties, et al.	2 North / 2 East / 26	Full
108-02-046A	3621 North 35 th Avenue	Byran Industrial Properties Inc.	2 North / 2 East / 26	Full
108-02-047A	3805 North 34 th Avenue	Grand Avenue Industrial Properties, et al.	2 North / 2 East / 26	Full
108-02-048	3613 North 35 th Avenue	Grand Avenue Industrial Properties, et al.	2 North / 2 East / 26	Full
154-22-111	4311 North 35 th Avenue	Juan Vargas	2 North / 2 East / 23	Partial
154-22-112	4315 North 35 th Avenue	Ngoc Nhu Le	2 North / 2 East / 23	Partial
154-22-113	4321 North 35 th Avenue	Lino Rodriguez Sanchez and Carolina H. Caro	2 North / 2 East / 23	Partial
154-22-114	4325 North 35 th Avenue	Arturo Jimenez Alquisira	2 North / 2 East / 23	Partial
154-22-115	4331 North 35 th Avenue	Gregorio and Romelia Otero	2 North / 2 East / 23	Partial
154-22-116	4335 North 35 th Avenue	Tomas Coria Bravo and Judith M.C. Mendoza	2 North / 2 East / 23	Partial
154-22-117	4341 North 35 th Avenue	Otilia Felix	2 North / 2 East / 23	Partial
154-23-002A	3338 West Indian School Road	OS Advertising Company of Phoenix, Inc.	2 North / 2 East / 23	Full
154-23-002C	3325 West Monterosa Street	All Other Property Limited Liability Partnership	2 North / 2 East / 23	Full
154-23-003A	3336 West Indian School Road	Tom Carmody	2 North / 2 East / 23	Full

APN	Address	Owner	PLSS T/R/S	Full or Partial Acquisition*
154-23-004A	3332 West Indian School Road	Tom Carmody	2 North / 2 East / 23	Full
154-23-005	3331 West Monterosa Street	Robert L. Spangler	2 North / 2 East / 23	Full
154-23-006	3335 West Monterosa Street	Octavio Figueroa	2 North / 2 East / 23	Full
154-23-007	3341 West Monterosa Street	Darren E. Harrelson	2 North / 2 East / 23	Full
154-23-008	3345 West Monterosa Street	Juan Alonzo and Virginia B. Felix	2 North / 2 East / 23	Full
154-23-009	3346 West Monterosa Street	Presbitero and Gregoria Mendoza	2 North / 2 East / 23	Full
154-23-065A	4133 North 34 th Avenue	OS Advertising Company of Phoenix, Inc.	2 North / 2 East / 23	Full
154-23-065C	No address	City of Phoenix	2 North / 2 East / 23	Full
154-23-066B	No address	City of Phoenix	2 North / 2 East / 23	Partial
154-23-067	4141 North 35 th Avenue	Me Lam & Thu Kim Tang Trust	2 North / 2 East / 23	Full
154-23-068C	No address	City of Phoenix	2 North / 2 East / 23	Full
154-23-069B	No address	City of Phoenix	2 North / 2 East / 23	Partial
154-23-070B	4135 North 35 th Avenue	Me Lam & Thu Kim Tang Trust	2 North / 2 East / 23	Full
154-23-074B	3300 West Indian School Road	Minnie K. Mirotznik Trust and Pearl M. Grogan Trust	2 North / 2 East / 23	Full
154-23-075B	No address	City of Phoenix	2 North / 2 East / 23	Partial
154-23-076E	4133 North 35 th Avenue	Me Lam & Thu Kim Tang Trust	2 North / 2 East / 23	Full
154-23-078	4201 North 35 th Avenue	Tamarak Gardens Apartments LLC	2 North / 2 East / 23	Partial
154-24-052	3208 West Indian School Road	Gama International Operating, LLC	2 North / 2 East / 23	Partial
154-24-053	3208 West Indian School Road	Gama International Operating, LLC	2 North / 2 East / 23	Partial
154-24-071	3246 West Indian School Road	Advance Stores Company, Inc.	2 North / 2 East / 23	Partial
154-24-073C	3248 West Indian School Road	Bill Horton LLC	2 North / 2 East / 23	Partial
154-24-073D	3250 West Indian School Road	ARCP FD 2014 SLB Portfolio IV LLC	2 North / 2 East / 23	Partial
154-24-076	3222 West Indian School Road	Select Apartments Enterprises, LLC	2 North / 2 East / 23	Partial

APN = County Assessor's parcel number

PLSS T/R/S = Public Land Survey System Township, Range and Section

* Potential property acquisitions are undergoing further evaluation at the time of this report's preparation and are subject to change.

A project location map is presented as **Figure A.1** in **Appendix A**.

3.2 Topography and Surface Soils

According to the United States Geological Survey (USGS) Fowler, Arizona and Glendale, Arizona 2018 7.5-minute topographic quadrangle maps (USGS, 2018a and 2018b), the elevation of the project area ranges between approximately 1,110 feet to 1,130 feet above mean sea level. Although portions of the subject property consist of grassy vacant lots and gravel-covered areas, the area of the subject property is mostly developed with buildings and paved areas; therefore, surface water likely drains to municipal stormwater drains. In addition, stormwater retention basins are located within the project corridor. Topography of the surrounding area is relatively flat with slight topographic relief to the south.

According to the Environmental Data Resources, Inc. (EDR) database search report, surficial soils in the area of the project corridor are mapped as Gilman loam, Mariposa sandy loam, Brios sandy loam, Gilman fine sandy loam, and Avondale clay loam (EDR, 2023a). Soils are described as moderately well and well drained soils with moderately coarse textures and moderate infiltration rates.

3.3 Geology and Hydrogeology

According to the Arizona Department of Water Resources (ADWR) Arizona Water Atlas, the subject property is located within the West Salt River Valley subbasin of the Phoenix Active Management Area (AMA). The Phoenix AMA is also known as the Salt River Valley. The Salt River Valley is a broad alluvial basin within the Basin and Range physiographic province. The basin is almost surrounded by mountains composed primarily of volcanic, granitic, metamorphic, and sedimentary rocks. The valley floor is underlain by unconsolidated to semi-consolidated basin-fill sediments, which consist mainly of clay, silt, sand, and gravel. The primary source of groundwater in the Salt River Valley is the basin-fill sediments, which are divided into three distinct water bearing units: the upper alluvial unit, the middle fine-grained unit, and the lower conglomerate unit. In the West Salt River Valley subbasin, groundwater is generally obtained evenly between the upper, middle, and lower basin fill. The main water-bearing unit ranges in thickness from a few tens of feet near the mountains to more than 1,200 feet in the central part of the area. (Cooley, 1973 and ADWR, 2010)

According to the ADWR *Maps Showing Groundwater Conditions in the Phoenix Active Management Area, Maricopa, Pinal, and Yavapai Counties, Arizona - Nov. 2002 - Feb. 2003*, and well records provided in the EDR report, the depth to groundwater in the project area is between approximately 65 feet below ground surface (bgs) and 200 feet bgs (Rascona, 2005 and EDR, 2023a). The general direction of groundwater flow in the vicinity of the subject property appears to be west to west-northwest (Rascona, 2005).

4. Current Land Use

Mr. Matthew Anonsen and Mr. William Turner with AECOM's Phoenix, Arizona office performed a reconnaissance of the subject property on March 24, 2023 to identify properties potentially associated with the use or storage of hazardous materials. AECOM personnel were unaccompanied during the site reconnaissance. The site visit methodology consisted of driving and/or walking over accessible areas of the subject property and observations of the surrounding area from the subject property boundaries and/or adjacent ROW. Proposed full or partial acquisition areas were observed from publicly accessible portions of the parcels or adjacent public ROW. Private properties and building interiors were not entered during the site reconnaissance. The following sections summarize the results of the site visit. A site plan is presented as **Figure A.2** in **Appendix A**. Photographs of the subject property and adjoining properties are included in **Appendix B**.

4.1 Subject Property

The subject property includes areas of public ROW, publicly owned stormwater retention basins, and privately owned vacant, residential, commercial, and industrial properties. Areas of the subject property within parcels proposed for full or partial acquisition are described in Table 2. Unless otherwise noted in the table, the property is considered low risk, based on site observations.

Table 2. Site Description

Map Cross-Reference (Figure A.2)	APN/ Address	Description
1	107-10-010A/ 4336 North 35 th Avenue	Partial acquisition area consists of landscaped areas and concrete-paved walkways along the frontage of the Canyon 35 Apartments.
2	107-10-084/ 4326 North 35 th Avenue	Partial acquisition area consists of landscaped areas and asphalt-paved parking and drive areas along the frontage of The Resort on 35 th Avenue apartment complex.
3	107-11-001A and -038/ 4209 and 4213 North 35 th Drive	Full acquisition parcels are developed with a chain-link fenced storage and possible maintenance yard, including a canopy over a concrete pad, several possible storage containers, and surrounding concrete-paved and gravel-covered outside materials storage areas. A communications tower within a metal-rail fence is also located on this property, and a pole-mounted electrical transformer is in the northwestern portion of this property. Although separated by a chain-link fence, based on signage, this facility may be connected to the adjacent facility to the south (map ID 4). Several aboveground storage tanks (ASTs), 300-gallon totes, 5-gallon containers, and compressed gas cylinders of unknown contents, miscellaneous equipment, including air compressors, and two forklifts were observed within this property. In addition, several oil-stained areas and pooled liquids were visible on this property. Based on site observations, this property is considered to be high risk.
4	107-11-004 and -005A/ 4143 and 4147 North 35 th Drive	Full acquisition parcels are developed with a chain-link fenced equipment storage and possible maintenance yard, including a possible former railroad car used as a storage or maintenance building, an adjacent canopy over a concrete pad, and surrounding gravel-covered outside materials storage areas. Numerous ASTs of unknown contents, 300-gallon totes, and 55-gallon drums labeled as containing lubricants, compressed gas cylinders of unknown contents, miscellaneous equipment, including air compressors, a forklift, and a large man-lift were observed within this property. In addition, oil-stained areas and pooled liquids were visible on this property. A stormwater drain was observed within the Monterosa Street ROW adjacent to this property. No indication the staining on this property impacted the stormwater drain was observed. Based on site observations, this property is considered to be high risk.
5	107-11-009/ 4210 North 35 th Drive	Full acquisition parcel is developed with the Weaver Auto Repair building and gravel-covered and concrete-paved parking and drive areas and landscaped areas. The building includes two service bays with roll-up bay doors. It is unknown if either aboveground or underground vehicle lifts are located within the bays; however, a possible engine hoist was observed in the parking area east of the building. In addition, it is unknown if ASTs are located within the building; however, based on the use of the property for automotive service, chemical and hazardous materials storage is expected. A solid waste dumpster was observed in the landscaped area on the east side of this parcel. Based on site observations, this property is considered to be high risk.

Map Cross-Reference (Figure A.2)

Map Cross-Reference (Figure A.2)	APN/ Address	Description
6	107-11-014, -031, -039D, -040/ 4220, 4238, 4246, 4308 North 35 th Avenue	<p>Partial acquisition areas consist of areas of gravel-covered and landscaped frontage areas, chain-link and masonry block fencing, and gravel-covered parking, drive, and outside storage areas within the Sierra Auction Phoenix storage lot. Numerous vehicles were observed staged throughout these areas. Oil-stained areas, typical of parking lots, was observed on the soil and gravel surfaces on this property. A stormwater ditch and Salt River Project (SRP) irrigation vault is located on the northeastern portion of APN 107-11-040. Based on a review of historical aerial photographs, outside vehicle and materials storage was visible on these parcels, including partial acquisition areas, as early as 1959. Several commercial and/or industrial buildings were visible on these areas by 1969. Based on the configuration, maintenance activities and/or chemical use and storage appear likely in these areas. Buildings and materials were removed from these properties beginning in 1998, and the properties appeared redeveloped for the current use by 2011. Based on observed oil-stained areas, the current use of these properties for vehicle staging, and the historical commercial and/or industrial use, this property is considered to be high risk.</p>
7	107-11-020C/ 3522 Grand Avenue	<p>Full acquisition parcel developed as a multi-tenant retail building, asphalt-paved parking and drive areas, and landscaped areas, partially surrounded by metal rail fencing. Tenants include Arizona Wholesale Flooring, Panda City Smoke Shop, and Encinas Meat. In addition, Mariana food truck and a canopy tent with seating were observed in the northern portion of the parking lot. Three pole-mounted electrical transformers (on one pole) were observed northwest of the building and a solid waste dumpster was observed west of the building.</p>
8	107-11-021A and -030C/ 3600 West Indian School Road	<p>Partial acquisition areas on these parcels consist of portions of a landscaped stormwater retention basin, a chain-link fence, gravel-covered and landscaped areas, and a portion of the Indian School Road access ramp (from Grand Avenue). Stormwater inlets are located in the southeast and southwest portions of the basin, within the partial acquisition areas.</p>
9	107-11-025B, -026D, -026E, -026F and -026G/ 3660 Grand Avenue	<p>Full acquisition parcel (107-11-025B) and partial acquisition areas (107-11-026D, -026E, -026F and -026G) consist of a chain-link fenced commercial property occupied by Mr. Lucky's Grubhouse, which appeared to be vacant, a separate storage building with a roll-up bay door, and surrounding concrete and asphalt-paved parking and unpaved areas used to store trailers and tractor trailers. A solid waste dumpster was observed adjacent to the east of the building, and a pole-mounted electrical transformer was observed south of the building. Trash and debris, including discarded furniture, pallets, and wood scrap, were observed east of the storage building. A concrete pad and several bollards were also visible south of the storage building; however, no indications of a former underground storage tank (UST) or ancillary equipment were visible in this area. Oil-stained areas and white staining were observed in various areas of the paved parking lots and the asphalt appeared to be in poor condition. Based on a review of historical aerial photographs, these parcels appeared to be residential and/or a hotel prior to commercial redevelopment in the late 1960s with the current Mr. Lucky's Grubhouse building and a commercial facility on parcel 107-11-025B in the southeastern portion of this area. Numerous vehicles and outside stored materials were visible around the building and</p>

Map Cross-Reference (Figure A.2)

Map Cross-Reference (Figure A.2)	APN/ Address	Description
		<p>outbuildings were visible north of the building on parcel 107-11-025B in various photographs. The facility appeared to be vacant by the early 2000s, and the building, outbuildings and stored materials on parcel 107-11-025B had been removed by 2008, except the building foundations appear to remain. Based on the unknown historical use of parcel 107-11-025B, and observed oil-stained areas on additional portions of this property, these areas are considered to be high risk.</p>
10	107-11-030B/ 3670 West Indian School Road	<p>Full acquisition parcel consists of a small, landscaped area and gravel-covered land adjacent to the southwest of the stormwater retention basin (map ID 8).</p>
11	107-11-036B/ 4170 North 35 th Avenue	<p>Full acquisition parcel developed as a multi-tenant retail building, concrete-paved walkways, asphalt-paved parking and drive areas, and landscaped areas. Tenants include Pollo Lukas Charbroiled Chicken restaurant, Yerberia Tarot Y Veladoras tarot readings, Paris Barber Shop, Mi Tienda Hispania market, La Plebada restaurant, Family Nutrition, and Metro by T Mobile stores. A solid waste dumpster was observed in the paved parking area southwest of the building. An additional solid waste dumpster and grease bin, potentially shared by the parcel tenants, were observed on the adjacent gasoline station property to the south (map ID 12). A pad-mounted electrical transformer was noted in the landscaped area southwest of the building.</p>
12	107-11-036C/ 4150 North 35 th Avenue	<p>Full acquisition parcel developed as the Kings Mini Mart and gasoline station, with a convenience store building, dispenser island canopy with six dispensers, asphalt, and concrete-paved parking, drive and walkway areas, and landscaped areas. An UST basin was observed in the southeastern portion of the parcel, and a propane AST was observed in the landscaped area southeast of the UST basin. Portions of the property were surrounded by a decorative masonry block and stucco wall. A solid waste dumpster and a cooking oil grease bin were observed within the paved area west of the building. Oily staining and pooled liquids, likely cooking oil grease, were observed around the grease bin. The dumpster and grease bin appeared to be shared with the adjacent multi-tenant retail property to the north (map ID 11). A stormwater drain was observed along the 35th Avenue ROW adjacent to this parcel. This gasoline station is further discussed in Section 6.2.1. Based on the developed use as a gasoline station, this property is considered to be high risk.</p>
13	107-11-029C and -042/ 3636 Grand Avenue	<p>Full acquisition parcel (107-11-042) and partial acquisition parcel (107-11-029C) consist of portions of the Grand Avenue Mini Storage self-storage facility, including parts of several storage buildings with numerous rental storage rooms and surrounding paved drive areas.</p>

Map Cross-Reference (Figure A.2)	APN/ Address	Description
14	107-11-043 and -045/ 3564 Grand Avenue	<p>Partial acquisition areas consist of two adjacent railroad tracks and surrounding gravel-covered areas. According to historical records, railroad tracks have been in this approximate location prior to 1912. Railroad ties have historically been treated with creosote and other preservatives, which can leech into the surrounding soils. No release was identified in this area. However, the potential exists for subsurface soils to be impacted by chemicals in the railroad ties and unreported releases due to the long term use of the railroad. The historical use of this property as a railroad is considered to be high risk.</p>
15	107-11-044B/ 3611 Grand Avenue	<p>Full acquisition parcel was developed as masonry block building (apparently vacant) and a gravel-covered vacant lot, surrounded by chain-link fencing. According to signage on the building, the building was formerly occupied by Alternative Portable Buildings. Possible former loading docks are located on the north and south sides of the building, and a separate concrete pad is located northwest of the building. Portions of the yard areas were overgrown with weeds. Two pole-mounted electrical transformers on one pole were observed south of the building, and one pole-mounted electrical transformer was observed within the Grand Avenue ROW adjacent to this property. Discolored soils and oil-stained areas were observed on and surrounding the separate concrete pad. This area appeared to be the location of a shed/outbuilding and staging area for portable buildings between 1991 and 2021, and part of various commercial or industrial properties, likely associated with the adjacent railroad, prior to 1930. Based on historical industrial use and observed oil-stained areas, this property is considered to be high risk.</p>
16	107-11-044C/ 3501 Grand Avenue	<p>Full acquisition parcel was developed as Angel's Paint & Body, and it included a mobile office trailer, a paint booth, a canopy, and asphalt-paved parking and drive areas and landscaped areas. The property is partially surrounded by metal rail fencing. The asphalt pavement appeared to be in poor condition in some areas. Based on a review of historical aerial photographs, various commercial and/or industrial facilities have operated on this parcel prior to 1930. In addition, a possible AST was visible on this property in 1982, and the facility appeared to be used for equipment and materials staging and possible vehicle maintenance since that time. Based on historical commercial and/or industrial use and automotive maintenance, this property is considered to be high risk.</p>
17	107-12-006E/ 3824 West Indian School Road	<p>Partial acquisition area consists of grass-covered landscaped area, business signage, and asphalt-paved parking and drive areas adjacent to the Sushinola Roll restaurant. Bollards preventing traffic access outside the access drives are located in the subject property area. A pole-mounted electrical transformer was observed adjacent to the partial acquisition area on this parcel.</p>

Map Cross-Reference (Figure A.2)

Map Cross-Reference (Figure A.2)	APN/ Address	Description
18	107-12-007C/ 3750 West Indian School Road	<p>Partial acquisition areas consist of gravel-covered landscaped areas and portions of asphalt-paved access driveways and concrete-paved walkways along the frontage of the Shasta Industries Corporate Headquarters property and along the north side of Indian School Road. Portions of the subject property are traversed by a chain-link fence. The southwestern corner of the building on this property is situated approximately 15 feet north of the partial acquisition area. Two stormwater drains are located within the adjacent Indian School Road. Based on a review of aerial photographs, ASTs are situated on the northern portion of this parcel, over 400 feet north of the partial acquisition area. This property was identified in several environmental databases (see Section 6.1). Based on a review of historical aerial photographs, the partial acquisition areas appeared to remain landscaped frontage and access roads. Chemical use and storage and industrial processes on this property appeared to be further to the north.</p>
19	107-12-042B/ 3826 West Indian School Road	<p>Partial acquisition area consists of concrete-paved frontage areas of the Alpha & Omega Auto Sales property. Vehicles appeared to be staged within and adjacent to the partial acquisition area, and oil-stained areas, typical of parking lots, was observed in this area. No indications of vehicle maintenance or chemical use or storage were observed on or adjacent to the partial acquisition area. A stormwater drain was observed within the adjacent Indian School ROW.</p>
20	107-33-004A/ 3811 West Indian School Road	<p>Partial acquisition areas consist of asphalt-paved frontage areas on a commercial building (apparently vacant).</p>
21	107-33-004B and -058B/ 3815 West Indian School Road	<p>Partial acquisition area consists of asphalt-paved frontage areas and portions of a parking canopy/pergola and business signage on the north side of the Grand Prix Collision Repair property. Automotive service and possible chemical storage areas appear to be located within the building over 30 feet south of the subject property. A pole-mounted electrical transformer was observed adjacent to the building. No indications of USTs, ASTs, or other chemical use or storage were observed on or adjacent to the partial acquisition areas. However, registered USTs were identified for this property (see Section 6.1). Although the USTs on this property were removed without a reported release, the location(s) of the USTs are unknown. Therefore, this property is considered to be moderate risk.</p>
22	107-33-022A/ 3707 West Indian School Road	<p>Partial acquisition area consists of asphalt-paved parking within the northwestern corner of the AZ Auto Xchange used car dealership. Numerous vehicles were observed in this area. Although the asphalt surface appeared to be in poor condition, no staining was observed in this area. This facility was not identified in the environmental database search report.</p>
23	107-33-022B/ 3717 and 3737 West Indian School Road	<p>Partial acquisition area consists of asphalt-paved parking and drive areas and business signage on the north side of the Eye's Tease Nude Cabaret and El Zafiro Banquet Hall properties. The businesses parking lots are separated by a narrow strip of landscaping and curbing. Oil-stained areas, typical of parking lots, was observed and the paved surfaces appeared to be in poor condition.</p>

Map Cross-Reference (Figure A.2)	APN/ Address	Description
24	107-33-025A/ 4098 North 35 th Avenue	Full acquisition parcel is developed with several commercial businesses, including restaurants and automotive service facilities. Chemical use and storage on these properties is unknown; however, USTs were historically located on this property (see Section 6.1). In addition, based on a review of historical aerial photographs, this property was developed as a possible lumber yard or other industrial facility with multiple buildings and outside materials storage areas as early as the mid-to-late 1950s. Based on historical industrial use and current vehicle maintenance activities, this property is considered to be high risk.
25	107-33-025B/ 3828 North 35 th Avenue	Full acquisition parcel is developed as the Castle Steel Inc. facility with an industrial building and separate canopy with manufacturing areas and outside materials storage. Chemical use and storage on this property is unknown. Based on a review of historical aerial photographs, this property was developed as part of the adjacent lumber yard/industrial facility to the north as early as the mid-to-late 1950s and appeared developed in its current configuration by 1969. Based on historical industrial use and current vehicle maintenance activities, this property is considered to be high risk.
26	107-33-026E and -026G/ 3602 North 35 th Avenue	Partial acquisition areas consist of a narrow strip of asphalt-paved parking and drive areas along the frontage of the Copper State Bolt & Nut Co. property. Oil-stained areas, typical of parking lots, was observed on and adjacent to the partial acquisition area. Based on a review of historical aerial photographs, the property was developed in the early-to-mid-1970s. However, the partial acquisition area appeared to remain vacant land or paved parking and drive areas since that time.
27	107-33-026F and -133A/ 3513 and 3515 West Clarendon Avenue	Partial acquisition areas consist of gravel-covered and chain-link fenced vacant lot and a billboard in the northeastern portion of the property. According to the environmental database search report (see Section 6.1) and a review of historical aerial photographs, a gasoline station was located on the northern portion of this property as early as 1964, and the property appeared to be developed as an industrial facility and outside materials storage areas by 1982. Based on the historical gasoline station and industrial use, this property is considered to be high risk.
28	107-33-028/ 3575 West Clarendon Avenue	Partial acquisition area consists of a narrow strip of asphalt-paved outside materials storage areas in the northeastern portion of the fenced Arizona Department of Public Safety storage facility. The facility office trailer is located within and adjacent to the partial acquisition areas on this parcel, and numerous vehicles were observed parked within adjacent areas. Based on a review of historical aerial photographs, this property was agricultural land prior to redevelopment with an industrial facility in the 1950s, and the former industrial property was identified in the environmental database search report (see Section 6.1). Based on the historical industrial use, this property is considered to be high risk.

Map Cross-Reference (Figure A.2)	APN/ Address	Description
29	107-33-054/ No address	<p>Partial acquisition area consists of a railroad track and surrounding gravel-covered areas. An equipment shed is located within the partial acquisition area. In addition, the southern portion of the subject property on this parcel includes chain-link fenced asphalt and unpaved parking and commercial yard areas and business signage adjacent to a restaurant on a multi-tenant commercial property (map ID 24). A chain-link fenced storage area is located adjacent to the partial acquisition area on this parcel. According to historical records, railroad tracks have been in this approximate location prior to 1912. Railroad ties have historically been treated with creosote and other preservatives, which can leech into the surrounding soils. No release was identified in this area. However, the potential exists for subsurface soils to be impacted by chemicals in the railroad ties and unreported releases due to the long term use of the railroad. The historical use of this property as a railroad is considered to be high risk.</p>
30	107-33-056/ No address	<p>Partial acquisition area consists of a narrow strip of entrance driveway on the northeastern portion of this parcel. The property is surrounded by a masonry block wall and the entrance at the subject property portion is gated. The entrance drive provides access to the larger Allied Masonry facility. Based on a review of historical aerial photographs, this property was agricultural land prior to redevelopment with an industrial facility in the 1950s. The partial acquisition area appeared to be a portion of a railroad spur at that time. Based on the historical industrial use and former railroad spur, this property is considered to be high risk.</p>
31	107-33-058Q/ 3839 West Indian School Road	<p>Partial acquisition area consists of a narrow strip of asphalt-paved parking and drive areas on the northern portion of the Phoenix Sports Centre indoor soccer and SoccerLocker.net soccer store facility. Bollards preventing vehicle access in selected areas are located in this area. Business signage is located adjacent to the partial acquisition area. According to the environmental database search report (see Section 6.1) and a review of historical aerial photographs, a gasoline station operated adjacent to the west of the subject property as early as 1959. As discussed in Section 6.1, this former gasoline station is considered to be moderate risk.</p>
32	107-33-136A/ 3801 West Indian School Road	<p>Partial acquisition area consists of a narrow strip of asphalt-paved parking and drive areas on the northern portion of a commercial building (apparently vacant, formerly a restaurant) and chain-link fenced storage areas. Two pole-mounted electrical transformers on one pole were observed within the Indian School ROW immediately adjacent to the partial acquisition areas.</p>
33	108-01-166R/ 3241 West Indian School Road, 4029 North 33 rd Avenue	<p>Partial acquisition areas consist of narrow strips of gravel-covered landscaped frontage areas and asphalt-paved parking and drive areas along the northern frontage of four commercial buildings. In addition, decorative masonry block walls are located within these areas. Businesses include (from west to east) Chase Bank, McDonald's restaurant, Krispy Kreme donut shop, and a multi-tenant building occupied by Western Dental & Orthodontics and Wingstop restaurant. A bus shelter and stormwater drains are located within the adjacent Indian School Road ROW. The access driveways on the subject property on this parcel also provide access to additional retail businesses further to the south. Based on a review of historical aerial photographs, this area of the subject property appeared to be developed as numerous residential</p>

Map Cross-Reference (Figure A.2)

APN/ Address	Description
	properties or vacant land along the frontage of agricultural properties prior to redeveloped as frontage areas for retail or other commercial businesses in the 1960s.
34	108-02-010E/ 3301 West Indian School Road
	Partial acquisition area consists of a narrow portion of landscaped areas in the northeastern corner of a Laundry and Cleaners business. According to parcel records, historical aerial photographs and online records, this facility has operated as a self-service and commercial laundry and drycleaner since the 1980s. This facility was not listed on the environmental database search report as a generator of hazardous waste or with a release. Unknown commercial businesses operated on this parcel prior to redevelopment with the current laundry facility. Therefore, this property is considered to be moderate risk.
35	108-02-026/ 3801 to 3807 North 35 th Avenue
	Full acquisition parcel is developed with a multi-tenant light industrial building with three tenant spaces and surrounding paved parking and drive areas. Six loading bays with roll-up loading doors are located on the east side of the building, and two solid waste dumpsters are located in this area. Tenants include Copperstate Auto Electric, Smart Start Ignition Interlocks, and a vacant tenant space. A pole-mounted electrical transformer was observed east of the building. Based on a review of historical aerial photographs, this property was vacant or agricultural land prior to development with the current multi-tenant building. In addition, this property was not listed in the environmental database search report with chemical use and storage or a release.
36	108-02-032A and -033/ 3637 to 3645 North 35 th Avenue
	Partial (108-02-032A) and full (108-02-033) acquisition areas are developed with a multi-tenant light industrial building with five tenant spaces. Five loading bays with roll-up loading doors are located on the east side of the building. Tenants include Arizona Wholesale Lift Truck Parts and four vacant tenant spaces. A solid waste dumpster and a pole-mounted electrical transformer was observed on the east side of the building. Based on a review of historical aerial photographs, this property was vacant or agricultural land prior to development with the current multi-tenant building. Although a former tenant of this property was listed in the environmental database search report as a former generator of hazardous waste (see Section 6.1), no release was reported.
37	108-02-046A/ 3617 to 3621 North 35 th Avenue
	Full acquisition parcels are developed with a multi-tenant light industrial building with two tenant spaces and surrounding paved parking and drive areas. Two loading bays with roll-up loading doors are located on the east side of the building. Four solid waste and recycling dumpsters were observed on the east side of the building. Tenants include DMS Facility Services and Wholesale Accessories Smoke Shop. A pad-mounted electrical transformer was observed southeast of the building; however, the transformer appeared to be associated with the adjacent property to the east. Based on a review of historical aerial photographs, this property was vacant or agricultural land prior to development with the current multi-tenant building. In addition, this property was not listed in the environmental database search report with chemical use and storage or a release.

Map Cross-Reference (Figure A.2)	APN/ Address	Description
38	108-02-047A and -048/ 3611 to 3615 North 35 th Avenue	Full acquisition parcels are developed with a multi-tenant light industrial building with three tenant spaces and surrounding paved parking and drive areas. Three loading bays with roll-up loading doors are located on the east side of the building, and a solid waste dumpster was visible in this area. Tenants include AZ Glass Supply and vacant spaces. Based on a review of historical aerial photographs, this property was vacant or agricultural land prior to development with the current multi-tenant building. In addition, this property was not listed in the environmental database search report with chemical use and storage or a release.
39	154-22-111, -112, -113, -114, -115, -116 and -117/ 4311, 4315, 4321, 4325, 4331, 4335 and 4341 North 35 th Avenue	Partial acquisition areas consist of landscaped areas and paved walkways and driveways along the western portion of single-family residences. Several of the parcels were partially fenced. Typical residential trash bins were observed on several of the properties. These parcels are located on the eastern side of 35 th Avenue, between an alley north of Glenrosa Avenue and Turney Avenue.
40	154-23-002A, -002C, -003A and -004A/ 3332 to 3338 West Indian School Road, and 3325 West Monterosa Street	Full acquisition parcels consist of vacant, gravel-covered lots with some areas of grass and weeds. A billboard is located on APN 154-23-002A.
41	154-23-005, -006, -007, -008, and -009/ 3331 to 3346 West Monterosa Street	Full acquisition parcels are developed as five single-family residences, paved driveways and walkways, and fenced yard areas.
42	154-23-065A/ 4133 North 34 th Avenue	Full acquisition parcel located at the northeast corner of the intersection of Indian School Road and 35 th Avenue. This parcel is developed with a billboard and unpaved dirt areas. A stormwater drain was observed within the 35 th Avenue ROW adjacent to this property.
43	154-23-065C, -066B, -068C, -069B and -075B/ No address	Full acquisition (154-23-065C and -068C) and partial acquisition (154-23-066B, -069B and -075B) parcels are developed with a landscaped stormwater retention basin surrounded by masonry block and metal rail fences. Inlets to the retention basin are located on the northern, southeastern, and southwestern sides of the basin.
44	154-23-067, -070B and -076E/ 4133, 4135 and 4141 North 35 th Avenue	Full acquisition parcels located near the northeast corner of the intersection of Indian School Road and 35 th Avenue. These parcels are developed with the Tamarak Plaza multi-tenant retail building, a water and ice kiosk, paved parking and drive areas, and landscaped areas. Tenants included El Rey De Los Ostiones Seafood Market, Cerveza Pacifica, Myhanh's Hair Designs, Kim Hoan Oriental Jewelry, Cong Thanh Alterations Video & Gift Shop, KN Income Tax, Cristelas, Sun Valley Bakery Vietnamese Restaurant, Ca Phe Phuong Hoang Billiards, Pho Binh Minh Vietnamese Restaurant, and Los Amigos Liquor Store. Two solid waste dumpsters and a 55-gallon drum containing waste cooking oil were observed in the parking lot on the southern side of the parcels. Scattered trash was observed around the dumpsters and oil-stained asphalt was observed around the drum.
45	154-23-074B/ 3300 West Indian School Road	Full acquisition parcel consists of a vacant lot, partially overgrown with weeds, and surrounded by a chain-link fence. Billboards are located in the southwestern and southeastern portions of the parcel. A stormwater drain is located within the adjacent 33 rd Avenue ROW to the west.

Map Cross-Reference (Figure A.2)	APN/ Address	Description
46	154-23-078/ 4201 North 35 th Avenue	Partial acquisition area consists of landscaped areas on the western side of the Tamarak Gardens Apartments property. Signage and a bus shelter are located adjacent to the south and paved parking is adjacent to the east of the partial acquisition area.
47	154-24-052 and -053/ 3208 West Indian School Road	Partial acquisition area consists of a narrow strip of asphalt-paved parking and drive areas on the southern frontage of the Jay's Cocktail Lounge property. Business signage and parking bumpers are also located within the partial acquisition area. Based on a review of historical aerial photographs, these parcels appeared to be residential and agricultural land prior to redevelopment with various commercial businesses in the 1950s. Although the uses of these commercial businesses is unknown, the partial acquisition areas appeared to remain narrow strips of frontage in the past.
48	154-24-071/ 3246 West Indian School Road	Partial acquisition area consists of a narrow strip of gravel-covered landscaped areas and a concrete-paved walkway along the southern portion of the Advance Auto Parts property. Based on a review of historical aerial photographs, the property was residential, agricultural, or vacant land prior to redevelopment with the current business in 2016.
49	154-24-073C/ 3248 West Indian School Road	Partial acquisition areas consist of portions of a chain-link fenced vacant lot, a gravel-covered access drive, and a landscaped stormwater retention basin along the western portion of this parcel. In addition, a portion of the asphalt and concrete-paved entrance and exit driveway for the adjacent commercial property to the south (map ID 50) is located on the southern portion of this parcel. Based on a review of historical aerial photographs, the parcel appeared to be vacant or agricultural land in the past. The property appeared to have been graded and the retention basin constructed as part of construction of the adjacent commercial properties to the south in approximately 2013.
50	154-24-073D/ 3250 West Indian School Road	Partial acquisition areas consist of portions of asphalt-paved drive and parking areas, concrete walkways, and landscaped areas along the western and southern sides of a Family Dollar store. One pole-mounted electrical transformer is located within the partial acquisition area in the southwestern corner of this parcel. Based on a review of historical aerial photographs, the property was redeveloped from a residential and farm property in approximately 2013.
51	154-24-076/ 3222 to 3226 West Indian School Road	Partial acquisition area consists of a narrow strip of a gravel-covered landscaped area and paved entrance driveway along the southern portion of the Select Apartments property. Based on a review of historical aerial photographs, the property appeared to be residential, agricultural, and vacant land prior to redevelopment with the current apartments in the 1970s.

APN = County Assessor's parcel number

Overhead electrical transmission lines and utility vaults and electrical equipment for underground electrical transmission lines were observed throughout the project area. In addition, indications of additional underground utilities, including water valve covers, water backflow preventers, sanitary sewer manholes, natural gas pipeline markers, and communications equipment, were observed throughout the project area. Scattered trash and debris, typical of windblown trash in urban areas and minor amounts of dumped household trash, were also observed throughout the project area.

The project area is developed, and vegetation observed included landscaped areas with trees and shrubs, and native desert grasses and weeds. The vegetation in several areas appeared to be in poor condition due to climate stress.

4.2 Adjacent Properties

Adjacent properties along the project corridor include residential, commercial, and industrial properties, and vacant lots. Businesses adjacent to the subject property but within partial acquisition parcels are discussed in **Section 4.1**. Chemical use and storage or other indications of potential environmental concerns on adjacent parcels included the following:

- A multi-tenant commercial property, addressed at 3570 and 3572 Grand Avenue and occupied by Sierra Auction and G&G Used Cars, is located on the northeast side of Grand Avenue, between the intersections with 35th Avenue and 37th Avenue, adjacent to full and partial acquisition areas on APNs 107-11-009, -029C, and -042. According to historical records reviewed, commercial and/or farm buildings were located on this property prior to 1930, and an oil well and/or oil use or storage were identified in this area as early as 1942. The property was redeveloped with the current commercial or industrial building in 1971. Numerous vehicles, areas of discolored soils, and/or outside materials storage areas were noted on this property on historical aerial photographs, and an oil well and/or oil use or storage remained depicted in this area on topographic maps. These areas did not appear to extend on to the adjacent full or partial acquisition properties or into the adjacent road ROW. In addition, the facility was not listed on a database indicative of a release (see **Section 6.2**). Therefore, this facility is considered to be low risk.
- Goddess Scrap, addressed at 3701 Grand Avenue, is located between Grand Avenue and the railroad ROW, north of the intersection of Grand Avenue and Indian School Road, and approximately 100 feet northwest of the proposed acquisition areas on APN 107-11-044B. Numerous 300-gallon totes and 5-gallon containers of unknown contents and outside stored materials were observed on this property. No indications the subject property has been impacted by this off-site facility were observed. In addition, the facility was not listed on a database indicative of a release (see **Section 6.2**). Therefore, this facility is considered to be low risk.
- An industrial building with no signage, addressed at 3839 North 35th Avenue, located at the southeast corner of Grand Avenue/railroad tracks and 35th Avenue, was observed to contain a large Airgas AST, piping, and possible chiller equipment, indicating potential industrial manufacturing. These features were within a chain-link fenced yard area adjacent to the northeast of the subject property. No indications the subject property has been impacted by this off-site facility were observed. In addition, the facility was not listed on a database indicative of a release (see **Section 6.2**). Therefore, this facility is considered to be low risk.

No chemical storage, ASTs, USTs, or possible maintenance activities were observed on remaining adjacent properties. Adjacent properties identified on the environmental database search report are further discussed in **Section 6.2.1** through **6.2.3**.

Numerous registered wells were identified by EDR in the project area (EDR, 2023a). No wells were observed adjacent to the project corridor.

According to the U.S. Department of Transportation (USDOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) National Pipeline Mapping System (NPMS) public map viewer, no gas transmission pipelines, hazardous liquid pipelines, accidents or incidents, liquid natural gas plants, or breakout tanks were depicted on or adjacent to the subject property on the public map viewer (USDOT, 2023).

5. Historical Land Use

AECOM has reviewed readily available historical records sources in an attempt to identify historical uses of the subject property that may indicate potential environmental concerns. AECOM reviewed the following historical records for the subject property and adjacent properties.

- Historical aerial photographs dated 1930, 1937, 1949, 1951, 1953, 1959, 1964, 1969, 1976, 1979, 1982, 1986, 1991, 1993, 1996 to 1997, 1998 to 1999, 2000, 2000 to 2001, 2001 to 2002, 2002, 2003, 2003 to 2004, 2004, 2005, 2006, 2007 to 2008, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, and 2021, available on the Maricopa County Geographic Information System (GIS) website,
- Historical aerial photographs dated 1936, 1942, 1949, 1954, 1958, 1961, 1976, 1979, 1981, 1986, 1997, 2007, 2010, 2015, and 2019, as provided by EDR, and
- USGS historical topographic maps dated 1912, 1914, 1952, 1967, 1973, 2014, and 2018, available through the USGS website.

Results of the historical records review are summarized in the following subsections. Copies of the EDR historical records reports and selected historical maps and aerial photographs are included in **Appendix C**.

5.1 Subject Property and Surrounding Areas

Historical land use of the overall subject property is summarized in Table 3. An evaluation of historical land use for specific parcels within the project area are included in **Section 4.1**.

Table 3. Historical Summary of the Subject Property

Date(s)	Description	Source(s)
1912 – 1914	Roadways were depicted in the approximate alignments of Indian School Road, 35 th Avenue and Grand Avenue, and railroad tracks were depicted along the southwestern side of Grand Avenue. Irrigation or drainage ditches were depicted along the western side of 35 th Avenue and the southern side of the eastern portion of Indian School Road. Several small buildings were depicted along the roadways.	USGS topographic maps
1930 – 1942	The roadways and railroad tracks appeared similar to the configuration depicted in the topographic maps. The subject property and surrounding area appeared to consist primarily of agricultural land and rural residential and farm properties. Railroad, commercial, and/or industrial buildings were visible between Grand Avenue and the railroad tracks.	Historical aerial photographs
1949 – 1953	Residential and commercial development increased throughout the project area. A possible airport was visible adjacent to the southeastern portion of the subject property. The airport was identified as the Airhaven Airport on the 1952 topographic map. A possible runway for the airport extended to adjacent to the partial acquisition areas on the south side of Indian School Road and east of the 35 th Avenue intersection. Since at least the 1952 topographic map, commercial or industrial facilities with gas and oil use and storage were depicted to the southeast and northwest of the intersection of Indian School Road and Grand Avenue, which are outside the boundaries of the subject property.	Historical aerial photographs and historical topographic maps
1954 – 1976	Commercial and industrial development was visible in the area along 35 th Avenue south of the Indian School Road intersection, including on several acquisition parcels. Commercial and/or industrial buildings were visible along Indian School Road west of 35 th Avenue since at least 1958. Residential, commercial, and/or industrial development increased throughout the area, and agricultural land use appeared to have stopped by at least 1976.	Historical aerial photographs and historical topographic maps

Date(s)	Description	Source(s)
1979 – 2021	Improvements at the intersection were visible, including the bridge along Indian School Road over Grand Avenue and the railroad and the associated access ramps. The stormwater retention basins to the northeast and northwest of the intersection appeared to be present. Although individual properties were redeveloped, the surrounding area appeared similar to the current configuration.	Historical aerial photographs and historical topographic maps

According to the *Abandoned & Little-Known Airfields: Western Arizona* (Freeman, 2022), Airhaven Airport operated as a commercial or municipal airfield between approximately 1946 and 1961. The crosswind taxiway that extended adjacent to the subject property was abandoned between 1949 and 1952 and this area was redeveloped. Operations at the airport reportedly included a flight school, commercial sightseeing trips, plane rentals, and service for private planes. No indications the airfield was used for crop dusting were identified. In addition, service activities likely occurred in the area of the hangars and other airport buildings, over 0.2 mile south and east of the subject property areas. Based on reviewed information, this former airfield is considered low risk to the subject property.

The project area appeared to be developed for agricultural use prior to 1936 until the 1970s. Although pesticides and herbicides may have been used on the agricultural farm fields on and adjacent to the subject property in the past, no indications of excessive chemical use (i.e., impoundments, storage areas, crop dusting air strips) were observed on or adjacent to the subject property. In addition, redevelopment of the subject property and surrounding area with the current facilities and structures would likely have disturbed residual chemicals in soils, if any. Therefore, the former agricultural use of the surrounding area is considered to be low risk.

Historical use of individual properties considered to be moderate or high risk are further discussed in Section 4.1. Historical use of the remaining properties on and in the area of the surrounding property are considered to be low risk.

6. Environmental Database Review

AECOM reviewed information gathered from the USEPA and the State of Arizona through EDR to evaluate if activities on or near the subject property would potentially threaten its environmental integrity. EDR reviews databases compiled by Federal and state governmental agencies. The complete list of databases reviewed by EDR is provided in EDR's report, which is included in **Appendix D**. It should be noted that this information is reported as AECOM received it from EDR, which in turn reports information as it is provided in various governmental databases. It is not possible for either AECOM or EDR to verify the accuracy or completeness of information contained in these databases. However, the use of and reliance on this information is a generally accepted practice in the conduct of environmental due diligence. USEPA and ADEQ documents and lists were reviewed in accordance with the minimum search distances specified in the ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (Standard Designation E1527-13), as follows.

Table 4. Standard Regulatory Databases

Regulatory Database	Search Distance
Federal National Priorities List (NPL) site list	1.0 mile
Federal Delisted NPL site list	½ mile
Federal Superfund Enterprise Management System (SEMS) and SEMS Archive site list *	½ mile
Federal RCRA Corrective Action Report (CORRACTS) facilities list	1.0 mile
Federal RCRA non-CORRACTS Treatment, Storage and Disposal (TSD) facilities list	½ mile
Federal RCRA generators list	Target and adjoining properties
Federal institutional/engineering control registries	Target property only

Regulatory Database	Search Distance
Federal Emergency Response Notification System (ERNS) list	Target property only
Water Quality Assurance Revolving Fund (WQARF), state-equivalent NPL	1.0 mile
State list of hazardous waste sites (SHWS), state-equivalent CERCLIS	½ mile
State landfill and/or solid waste disposal site (SWLF) lists	½ mile
State and tribal leaking underground storage tank (LUST) lists	½ mile
State and tribal registered underground storage tank (UST) lists	Target and adjoining properties
State institutional/engineering control registries	Target property only
State voluntary cleanup sites (VCP)	½ mile
State Brownfield sites	½ mile

* SEMS has replaced the Comprehensive Environmental Response, Compensation and Liability Index System (CERCLIS), and SEMS Archive site list has replaced the CERCLIS – No Further Remedial Action Planned (CERC-NFRAP) list

AECOM reviewed the Orphan List Sites, which are sites that have not been geocoded based upon lack of sufficient data regarding their exact location within the general area. Unless otherwise discussed in the following subsections, the Orphan List Sites were not located within the applicable ASTM search radii of the subject property and are not considered to be potential environmental concerns.

In addition, AECOM reviewed the ADEQ online map for the project corridor (ADEQ, 2023). All sites identified on the databases reviewed are depicted on the figures included in the EDR report (**Appendix D**). Sites identified by AECOM in the risk ranking system are shown on **Figure A.3** and summarized in the following subsections by type of risk.

6.1 Subject Property

Full or partial acquisition properties identified in the environmental databases reviewed by EDR or in a review of the ADEQ online map are summarized in Table 5.

Table 5. Environmental Database Sites Identified on the Subject Property

Map Cross-Reference (Figure A.2)	Listing/ Address	Description
5	Weaver Enterprises/ 4210 North 35 th Drive	According to EDR, this facility was listed on the RCRA-NonGen/NLR, FINDS, and ECHO databases. This facility was listed as a NonGen/NLR in 1994. No hazardous waste evaluations or violations were identified and the facility was not listed on a database indicative of a release. Although no release was reported, based on site observations, this property is considered to be high risk (see Section 4.1).
7	PB Burnell/ 3500 S Grand	According to EDR, this facility was listed on the EDR Hist Auto database as an automobile repair facility in 1950. Based on addressing and a review of historical aerial photographs, this facility was likely located beneath the current Indian School Road, 35 th Avenue and Grand Avenue intersection adjacent to this area. Based on redevelopment with the current roadways, this listing is considered to be low risk.

Map Cross-Reference (Figure A.2)

Map Cross-Reference (Figure A.2)	Listing/ Address	Description
8	Clay Brake C Wheel Alignment Co. (aka Motorama Auto, Johns Motorama)/ 3600 West Indian School Road	This facility was listed on the EDR Hist Auto database as automobile repair facilities under various names between 1964 and 1968. Based on a review of historical aerial photographs, this facility was likely located within the existing ROW beneath the current Indian School Road roadway and access ramp northeast of the intersection with Grand Avenue. Based on redevelopment with the current roadway and bridge, this listing is considered to be low risk.
12	Kings Mini-Mart (aka Quality Gasoline)/ 4150 North 35 th Avenue	This facility was listed on the UST, EMap, Financial Assurance, Enforcement, and EDR Hist Auto databases. According to EDR, one 20,000-gallon dual compartment gasoline UST was installed on this property in 2000. Several notices of violations or enforcement actions related to the UST Program were issued between 2005 and 2021. Each violation or enforcement action was listed as closed. This facility was not listed on a database indicative of a release. This full acquisition parcel is developed as an active gasoline station (see Section 4.1). Based on the developed use as a gasoline station, this property is considered to be high risk.
18	AT&T (aka Lucent Technologies Inc.)/ 3750 West Indian School Road	This property was identified on the SHWS, SEMS-Archive, AZURITE, AUL, UST, LUST, EMap, RCRA-NonGen/NLR, FINDS, and ECHO databases. According to EDR, PA/SI were performed between 1986 and 1989 on the facility was part of the West Central Phoenix WQARF investigation. The facility was assigned NFRAP status and the file was archived by the USEPA in 1989. One 10,000-gallon UST was installed in 1973 and removed from the ground in 1988. One fuel release was reported in 1987 and the LUST was closed with a recorded Declaration of Environmental Use Restriction (DEUR) in 2002. Based on a review of historical aerial photographs, the partial acquisition areas on this property appeared to remain landscaped frontage and access roads. Although the precise location of this UST is unknown, the UST, other chemical use/storage and industrial processes were likely located within the building or on the north side of this parcel, over 400 feet from the subject property. Therefore, these listings are considered to be low risk. The West Central Phoenix WQARF is further discussed in Section 6.2.1 .
21	New Grand Prix Auto Body (aka Phoenix Big Wheel)/ 3815 West Indian School Road	This facility was listed on the UST, RCRA-NonGen/NLR, EDR Hist Auto, FINDS, ECHO, EMap, and Manifest databases. One 1,200-gallon used oil UST was reportedly removed in 2008, and the facility has operated as an automobile repair facility since at least 1968. This facility was not listed on a database indicative of a release. Partial acquisition area consists of asphalt-paved frontage areas and portions of a parking canopy/pergola and business signage on the north side of this facility, and no indications of USTs, ASTs, or other chemical use or storage were observed on or adjacent to the partial acquisition areas (see Section 4.1). Therefore, this property is considered to be moderate risk.
24	Wood Brothers Lumber Co. of Phoenix/ 4098 North 35 th Avenue	According to EDR, a 500-gallon UST with unidentified contents was installed in 1956 and a 7,000-gallon UST with an unidentified hazardous substance was installed in 1970. Both USTs were removed in 1988. This facility was not listed on a database indicative of a release. The location of the USTs on this full acquisition parcel is unknown. As discussed in Section 4.1, based on historical industrial use and current vehicle maintenance activities, this property is considered to be high risk.

Map Cross-Reference (Figure A.2)

Map Cross-Reference (Figure A.2)	Listing/ Address	Description
27	Serv A Station/ 3515 West Clarendon Avenue	This facility was identified on the EDR Hist Auto database as a gasoline station in 1977. Based on a review of historical aerial photographs, the gasoline station was situated on and immediately adjacent to the partial acquisition area on the northern portion of this parcel as early as 1964. Therefore, this property is considered to be high risk.
28	Former Rainbow Slump Block/ 3575 West Clarendon Avenue	This property was identified on the SHWS and EMap databases. According to EDR, this property was assessed as part of the West Central Phoenix WQARF investigation. A PA/SI was performed between 1991 and 1993. The facility was assigned NFRAP status and the file was archived by the USEPA in 1993. Based on these listings and the historical industrial use, this property is considered to be high risk.
30	Diel Equipment (aka Star Silver of Arizona)/ 3775 North 36 th Avenue	This facility was listed on the UST, RCRA-NonGen/NLR, FINDS and ECHO databases. According to EDR, two USTs were installed in 1950 and removed from the property in 1994. This facility was not listed on a database indicative of a release. Although the locations of the USTs and hazardous materials storage areas are unknown, the partial acquisition area consists of a narrow strip of entrance driveway on the northeastern portion of this parcel, and this area was historically part of a railroad spur. As discussed in Section 4.1, based on the historical industrial use and former railroad spur, this property is considered to be high risk.
31	Suzanne Slatkin/ 3841 West Indian School Road	This facility was listed on the UST, LUST, and EMap databases. According to EDR, two 10,000-gallon gasoline USTs were removed from this property in 1991. One LUST was reported in 1995. The LUST was closed in 1996 meeting RBCA Tier 1 levels. Based on a review of historical aerial photographs, the gasoline station building and dispensers were located approximately 50 feet to the south and west, respectively, of the partial acquisition areas on this parcel. The location of the UST basin was not apparent; however, the area adjacent to the subject property appeared to be signage and landscaping; therefore, the USTs are likely located further southwest. Therefore, this property is considered to be moderate risk.
33	Gibraltar Transmission/ 3165 West Indian School Road Nu-Born Sunshine Center/ 3153 West Indian School Road Homepage 61 3 E Company/ 3223 West Indian School Road Western Dental – Indian School/ 3155 West Indian School Road	Gibraltar Transmission was listed on the EDR Hist Auto database as an automotive repair facility in 1982. Nu-Born Sunshine Center was identified on the Drycleaners database in 1968. Homepage 61 3 E Company was listed on the RCRA-NonGen/NLR, FINDS, and ECHO databases as a VSQG in 1990 and NonGen/NLR in 2003. Western Dental was listed on the RCRA-VSQG, FINDS, ECHO, and Manifest databases between 2001 and 2015. These facilities were not listed on a database indicative of a release. Based on addressing and a review of historical aerial photographs, these businesses may have operated in the area of the current multi-tenant retail buildings on the northeastern portion of this parcel (see Section 4.1). Partial acquisition areas consist of narrow strips of gravel-covered landscaped frontage and asphalt-paved parking and drive areas along the northern frontage of this parcel. No indications of chemical use and storage were visible on or adjacent to the subject property in this area. Therefore, this listing is considered to be low risk.

Map Cross-Reference (Figure A.2)	Listing/ Address	Description
34	Fox Real Estate Group Inc./ 3301 West Indian School Road	This facility was listed on the EDR Hist Cleaner database as a laundry and drycleaner agent in 2014. As discussed in Section 4.1 , partial acquisition area consists of a narrow portion of a landscaped area in the northeastern corner of a drycleaner. This facility was not listed as a generator of hazardous waste or with a release. Unknown commercial businesses operated on this parcel prior to redevelopment with the current laundry facility. Therefore, this property is considered to be moderate risk.
36	American Heritage Restorations/ 3637 North 35 th Avenue	According to EDR, this facility was listed on the RCRA-NonGen/NLR, FINDS, and ECHO databases. This facility was listed as a NonGen/NLR in 2002. No hazardous waste evaluations or violations were identified, and this facility was not listed on a database indicative of a release. Therefore, these listings are considered to be low risk.
50	Family Dollar #9254/ 3250 West Indian School Road	According to EDR, this facility was listed on the RCRA-VSQG, FINDS, and ECHO databases. The facility was listed as a VSQG in 2015. No hazardous waste violations were identified, and the facility was not listed on a database indicative of a release. Partial acquisition areas consist of portions of asphalt-paved drive and parking areas, concrete walkways, and landscaped areas along the western and southern sides of the store, and no hazardous waste storage or handling areas were observed (see Section 4.1). Based on reviewed information, these listings are considered to be low risk.

EMap = Arizona electronic mapping system

AZURITE = Arizona Unified Repository for Information Tracking of the Environment

AUL = Activity and Use Limitation

NFRAP = no further remedial action planned

PA/SI = preliminary assessment/site inspection

EDR Hist Auto = EDR listing of historical automotive service or fueling stations

RBCA = Risk-Based Corrective Action

NonGen/NLR = verified not a generator or no longer a generator of hazardous waste

VSQG = very small quantity generator of hazardous waste (formerly conditionally exempt small quantity generator [CESQG])

FINDS = Facility Index System/Facility Registry System

ECHO = Enforcement and Compliance History Online

6.2 Surrounding Sites

AECOM reviewed the EDR database report to identify off-site facilities that have suspected or documented potential environmental concerns that may negatively impact the subject property. AECOM's criteria for further evaluating the potential impact of a listed off-site facility are summarized below:

- A likely pathway exists for environmentally mobile contaminants to reach the subject property (i.e., groundwater or surface runoff); and,
- The offsite facility is listed on one or more of the reviewed databases, and is not listed in the database as “closed” or “no further action” (including NFRAP); or,
- The facility is a known or suspected concern based upon AECOM's experience or observations made during the site reconnaissance (i.e., dry-cleaning operations that may or may not be listed as hazardous waste generators or a non-adjacent UST site that appears to have a remediation system in place).

In addition, AECOM employed a risk ranking system (low / moderate / high / indeterminate) that includes several investigation elements. Each element of the investigation process uses a different set of criteria to assess the risk of hazardous materials being present in association with a specific site or location. These criteria are

primarily based on the project-specific planned area of disturbance. For a typical scope of work, AECOM uses the following investigation elements in arriving at the risk ranking for a given site.

- High-risk sites are those that have a high potential for releasing hazardous materials to the soil or groundwater, or have a recorded release issue.
- Moderate-risk sites are those that have a moderate potential for releasing hazardous materials to the soil or groundwater.
- Low-risk and no-risk sites are those that have little or no potential for releasing hazardous materials to the soil or groundwater.

6.2.1 High-Risk Sites

High-risk sites are those that have a high potential for releasing hazardous materials to the soil or groundwater, or have a recorded release issue. These primarily include:

- Facility located within the planned area of disturbance with reported USTs that have not been removed.
- Property adjacent to the planned area of disturbance that is identified as having a known release of hazardous materials (including LUSTs) that has not been remediated to the satisfaction of the regulatory agency.

The following high-risk site was identified in the review of the environmental database search report:

Table 6. High-Risk Site

Database(s)	Listing / Address	Description
WQARF, SPL	West Central Phoenix (WCP) North Canal Plume	According to EDR and information available on ADEQ’s website, the WCP North Canal Plume was added to the WQARF registry in 1987. The WQARF site is an area of groundwater contamination and chemicals of concern were identified as trichloroethene (TCE), tetrachloroethene (PCE), 1,1-dichloroethene (1,1-DCE), and chromium, due to industrial processes in the area. The current boundaries of the groundwater plume are mapped beneath the area of the subject property along 35 th Avenue, south of the intersection with Indian School Road (Central and East Plumes), and along Indian School Road, west of the intersection with 35 th Avenue (West Plume). In addition, several facilities within the area of the subject property have been assessed as potential sources for contamination, and the possibility exists that chemicals of concern may remain in soils in the surrounding area, including current and former industrial properties on the subject property. In addition, at least one facility assessed as part of the WQARF, Pyramid Industries, was also identified on a tracking database for per- and polyfluoroalkyl substances (PFAS). Groundwater monitoring wells associated with the WQARF investigation are mapped along 33 rd Drive, 36 th Avenue, 38 th Avenue, Clarendon Avenue, Whitton Avenue in the area of the full or partial acquisition parcels.

SPL = Superfund Priority List (state-equivalent CERCLIS)

Although additional WQARF and NPL sites were identified in the surrounding area, the boundaries of these additional sites are well defined and monitoring by ADEQ. These additional areas of groundwater contamination are not mapped within or adjacent to the subject property. Therefore, these additional sites are considered to be low-risk.

6.2.2 Moderate-Risk Sites

Moderate-risk sites are those that have a moderate potential for releasing hazardous materials to the soil or groundwater. These primarily include:

- Facility located adjacent to the alignment with registered USTs, with or without LUST incidents.
- Facility located adjacent to the alignment listed as generators of hazardous wastes (with recorded open violations).

- Facility located within the immediate area of the alignment with open hazardous materials incidents (including LUSTs) with reported impacts to groundwater.

The following moderate-risk sites were identified in the review of the environmental database search report:

Table 7. Moderate-Risk Sites

Database(s)	Listing / Address	Description
UST, LUST, AZURITE, EMap	U-Haul – Grand Avenue & Indian School Center/ 3601 West Indian School Road	According to EDR, USTs were removed from this facility in 1995. Four LUSTs were reported between 1994 and 1995. The LUSTs were listed as closed in 1997 and 2000 meeting RBCA Tier 1 standards. This facility was located at the southwest corner of Indian School Road and 36 th Avenue. No full or partial acquisition areas were identified for this property. Therefore, no further mitigation measures are recommended in relation to this site.
UST, LUST, AZURITE, EMap, EDR Hist Auto	Circle K Stores Inc./ 3122 West Indian School Road	According to EDR, USTs were removed from this facility in 1992 and one LUST was reported. The LUST was listed as closed in 2004 meeting RBCA Tier 1 standards. This facility was located at the northwest corner of Indian School Road and 31 st Drive. No full or partial acquisition areas were identified for this property. Therefore, no further mitigation measures are recommended in relation to this site.
Drycleaners	Ted’s Grand Av Dry Cleaning/ 3454 West Grand Avenue	According to EDR, this facility was listed as a drycleaner as early as 1953. This facility was located at the southeast corner of Indian School Road and Grand Avenue. No full or partial acquisition areas were identified for this property. Therefore, no further mitigation measures are recommended in relation to this site.
UST, LUST, EMap	A Total Roof Service/ 3883 North 36 th Avenue	According to EDR, two fuel USTs were removed from this property in 1989. One LUST was reported in 1987, and the incident was closed in 2016 meeting RBCA Tier 3 levels. This facility was located northeast of Clarendon Avenue and 36 th Avenue, adjacent to the west of the full acquisition parcel in this area (Figure 2, map ID 24). No full or partial acquisition areas were identified for this property. Therefore, no further mitigation measures are recommended in relation to this site.

RBCA = Risk-Based Corrective Action

6.2.3 Low-Risk or No-Risk Sites

Low-risk or no-risk sites are those that have little or no potential for releasing hazardous materials to the soil or groundwater. Numerous low-risk or no-risk sites were identified in the review of the environmental database search report. The low-risk and no-risk sites are described in the environmental database search report included in **Appendix D**. A copy of the ADOT Draft PISA Form is included in **Appendix E**.

7. Conclusions

AECOM has completed a Hazardous Materials Assessment of existing ROW and proposed acquisition and easement areas located at the intersection of Grand Avenue (US 60), 35th Avenue, and Indian School Road in Phoenix, Maricopa County, Arizona. AECOM’s Hazardous Materials Assessment was completed in accordance with the scope and limitations of ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (ASTM E 1528-14) and in accordance with ADOT PISA procedures (ADOT, 2022).

Based on AECOM’s assessment, the following properties within the full or partial acquisition areas are considered to be high risk:

- APNs 107-11-001A and -038, 4209 and 4213 North 35th Drive (map ID 3), and APNs 107-11-004 and -005A, 4143 and 4147 North 35th Drive (map ID 4). The full acquisition parcels are developed with chain-link fenced storage areas and possible maintenance yards, including ASTs and other chemical storage. Several oil-stained areas and pooled liquids were visible on these properties.

- APNs 107-11-009, 4210 North 35th Drive (map ID 5). The full acquisition parcel is developed as the Weaver Auto Repair facility. The facility was also listed as verified not a generator of hazardous waste in 1994.
- APNs 107-11-014, -031, -039D, -040, 4220, 4238, 4246, 4308 North 35th Avenue (map ID 6). These partial acquisition areas are developed as the Sierra Auction Phoenix storage lot. The properties were developed as outside vehicle and materials storage as early as 1959, and several commercial or industrial buildings were visible on these areas by 1969. Based on the configuration, maintenance activities and/or chemical use and storage appear likely in these areas.
- APNs 107-11-025B, -026D, -026E, -026F and -026G, 3648 and 3660 Grand Avenue (map ID 9). These full and partial acquisition parcels are developed as the vacant former Mr. Lucky's Grubhouse, outside trailer and tractor trailer staging, and the foundations of a former commercial building. Oil stained areas were observed throughout the paved parking lots and the asphalt appeared to be in poor condition. These parcels appeared to be residential and/or a hotel prior to commercial redevelopment in the late 1960s with the current Mr. Lucky's Grubhouse building and a commercial facility on parcel 107-11-025B in the southeastern portion of this area. Numerous vehicles and outside stored materials were visible around the building and outbuildings were visible north of the building on parcel 107-11-025B in various photographs. The facility appeared to be vacant by the early 2000s, and the building, outbuildings and stored materials on parcel 107-11-025B had been removed by 2008. Based on the unknown historical use of parcel 107-11-025B, and observed oil-stained areas on additional portions of this property, these areas are considered to be high risk.
- APN 107-11-036C, 4150 North 35th Avenue (map ID 12). The full acquisition parcel is developed as the Kings Mini Mart and gasoline station. The gasoline station includes a registered fuel UST that was installed in 2000, fuel dispensers, and a propane AST. This facility was not listed on a database indicative of a release; however, several UST Program notices of violation or enforcement actions were identified (all listed as closed).
- APN 107-11-044B, 3611 Grand Avenue (map ID 15). The full acquisition parcel is developed as the vacant former Alternative Portable Buildings facility. Discolored soils and oily staining were observed on and surrounding a concrete pad on this property. This area appeared to be developed as part of various commercial or industrial properties, likely associated with the adjacent railroad, prior to 1930.
- APN 107-11-044C, 3501 Grand Avenue (map ID 16). The full acquisition parcel was developed as Angel's Paint & Body, and various commercial or industrial facilities have operated on this parcel prior to 1930. In addition, a possible AST was visible on this property in 1982, and the facility appeared to be used for equipment and materials staging and possible vehicle maintenance since that time.
- APN 107-33-025A, 4098 North 35th Avenue (map ID 24). The full acquisition parcel is developed with several commercial businesses, including restaurants and automotive service facilities. Historical and current chemical use and storage on these properties is unknown; however, USTs were installed on the property between 1956 and 1970 and removed in 1988. No release was reported. This property was developed as a possible lumber yard or other industrial facility with multiple buildings and outside materials storage areas as early as the mid-to-late 1950s.
- APN 107-33-025B, 3828 North 35th Avenue (map ID 25). The full acquisition parcel is developed as the Castle Steel Inc. facility with an industrial building and separate canopy with manufacturing areas and outside materials storage. Historical and current chemical use and storage on this property is unknown. Based on a review of historical aerial photographs, this property was developed as part of the adjacent lumber yard/industrial facility to the north as early as the mid-to-late 1950s.
- APN 107-33-026F and -133A, 3513 and 3515 West Clarendon Avenue (map ID 27). The partial acquisition areas consist of gravel-covered and chain-link and masonry block fenced vacant lot and a billboard in the northeastern portion of the property. A gasoline station was located on the northern portion of this property, including within the partial acquisition area, as early as 1964, and the property appeared to be developed as an industrial facility and outside materials storage areas by 1982.

- APN 107-33-028, 3575 West Clarendon Avenue (map ID 28). The partial acquisition area consists of a narrow strip of asphalt-paved outside materials storage areas in the northeastern portion of the masonry block fenced Arizona Department of Public Safety storage facility. The property was part of the former Rainbow Slump Block industrial facility as early as the 1950s, and this facility was assessed as part of the WQARF investigation.
- APN 107-33-054, no address (map ID 29). The partial acquisition area consists of a railroad track and surrounding gravel-covered areas. An equipment shed is located within the partial acquisition area. In addition, the southern portion of the subject property on this parcel includes chain-link fenced asphalt and unpaved parking and commercial yard areas and business signage adjacent to a restaurant on a multi-tenant commercial property. Based on a review of historical records, railroad tracks have been in this approximate location prior to 1912. Railroad ties have historically been treated with creosote and other preservatives, which can leech into the surrounding soils. No release was identified in this area. However, the potential exists for subsurface soils to be impacted by chemicals in the railroad ties and unreported releases due to the long term use of the railroad.
- APN 107-33-056, 3775 North 36th Avenue (map ID 30). The partial acquisition area consists of a narrow strip of entrance driveway on the northeastern portion of this parcel. The larger property is part of the Allied Masonry facility. An industrial facility operated on the larger parcel since the 1950s, and several businesses were identified with registered USTs and hazardous waste generation. The partial acquisition area appeared to be a portion of a railroad spur at that time, and industrial operations appeared to be further to the south.
- The southern and western portions of the subject property are located within the WCP North Canal Plume WQARF area of groundwater contamination. In addition, several facilities within the area of the subject property have been assessed as potential sources for contamination, and the possibility exists that chemicals of concern may remain in soils in the surrounding area, including current and former industrial properties on the subject property. Groundwater monitoring wells associated with the WQARF investigation are mapped along 33rd Drive, 36th Avenue, 38th Avenue, Clarendon Avenue, and Whitton Avenue in the area of the full or partial acquisition parcels.

Based on AECOM's assessment, the following properties within the full or partial acquisition areas are considered to be moderate risk:

- APNs 107-33-004B and -058B, 3815 West Indian School Road (map ID 21). The partial acquisition area consists of asphalt-paved frontage areas and portions of a parking canopy/pergola and business signage on the north side of the Grand Prix Collision Repair property. A used oil UST was removed from this property in 2008, and the facility was identified as an automotive repair business since at least 1968. Automotive service and possible chemical storage areas appear to be located within the building over 30 feet south of the subject property. This facility was not listed on a database indicative of a release.
- APN 107-33-058Q, 3839 West Indian School Road (map ID 31). The partial acquisition area consists of a narrow strip of asphalt-paved parking and drive areas on the northern portion of the Phoenix Sports Centre indoor soccer and SoccerLocker.net soccer store facility. A gasoline station operated adjacent to the west of the subject property (at 3841 West Indian School Road) as early as 1959. The adjacent former gasoline station was identified with registered USTs removed in 1991, and one LUST incident was closed in 1996. The gasoline station building and dispensers were located approximately 50 feet to the south and west, respectively, of the partial acquisition areas on this parcel. The location of the UST basin was not apparent.
- APN 108-02-010E, 3301 West Indian School Road (map ID 34). The partial acquisition area consists of a narrow portion of landscaped areas in the northeastern corner of a Laundry and Cleaners business. A self-service and commercial laundry and drycleaner have operated on this property since the 1980s, and unknown commercial businesses operated on this parcel prior to redevelopment with the current laundry facility.

In addition, the following properties within the surrounding area are considered to be moderate risk to the subject property:

- U-Haul – Grand Avenue & Indian School Center is located at 3601 West Indian School Road. This facility is located at the southwest corner of Indian School Road and 36th Avenue, and no full or partial acquisition areas were identified on this property. USTs were removed from this facility in 1995. Four LUSTs were reported between 1994 and 1995. The LUSTs were listed as closed in 1997 and 2000 meeting RBCA Tier 1 standards.
- Circle K Stores Inc. is located at 3122 West Indian School Road. This facility is located at the northwest corner of Indian School Road and 31st Drive, and no full or partial acquisition areas were identified for this property. USTs were removed from this facility in 1992 and one LUST was reported. The LUST was listed as closed in 2004 meeting RBCA Tier 1 standards.
- Ted's Grand Av Dry Cleaning is located at 3454 West Grand Avenue. This facility is located at the southeast corner of Indian School Road and Grand Avenue, and no full or partial acquisition areas were identified for this property. This facility was listed as a drycleaner as early as 1953.
- A Total Roof Service is located at 3883 North 36th Avenue. This facility was located northeast of Clarendon Avenue and 36th Avenue, and no full or partial acquisition areas were identified for this property. Two fuel USTs were removed from this property in 1989. One LUST was reported in 1987, and the incident was closed in 2016 meeting RBCA Tier 3 levels.

8. Recommendations

Based on AECOM's assessment, Phase I ESAs conducted in accordance with ASTM Standard 1527-21 are recommended for proposed full and partial acquisition parcels, prior to property acquisition. Based on environmental concerns summarized in **Section 7**, the recommended Phase I ESAs are considered high priority. Additional assessment, including local and state agency file reviews and/or Phase II ESAs are recommended for properties identified as moderate or high risk, except that no further assessment of the WCP North Canal Plume WQARF groundwater contamination is recommended, unless groundwater will be encountered (such as for dewatering activities) during construction.

The following is recommended to minimize the potential for encountering hazardous materials during construction:

- Stormwater features, such as retention basins and stormwater drains, should be protected during construction activities in accordance with City of Phoenix and ADEQ requirements.
- Groundwater monitoring wells should be protected during construction activities or abandoned in accordance with ADWR requirements.
- Results and applicability of a lead-based paint and asbestos-containing materials survey will be reviewed by the ADOT Environmental Planning Group hazardous materials coordinator 30 (thirty) days prior to the start of construction activities.
- No pavement marking obliteration will occur until the Lead-Based Paint Removal and Abatement Plan, if required, is approved by the ADOT Environmental Planning hazardous materials coordinator.
- No demolition of load-bearing concrete will be allowed to occur until the Asbestos Removal and Disposal Plan, if required, is approved by the ADOT Environmental Planning hazardous materials coordinator.
- If suspected hazardous materials are encountered, an odor is identified, or significantly stained soil is visible during construction, work shall cease at that location and the ADOT Environmental Planning hazardous materials coordinator should be notified immediately. Subsequently arrangements for assessment, treatment and disposal of those materials should be made.

9. Limitations

This Hazardous Materials Assessment was prepared as a result of a contractual agreement that defined the approach, limits of inquiry, and scope of services to be employed during the course of the investigation. The opinions and conclusions expressed in this study have been based strictly on the results of these contracted services. The services provided by AECOM should not be construed to be a warranty or guarantee that no environmental impairments exist at this site or that all environmental impairments have been uncovered. No conclusions are stated or implied concerning the suitability of the subject property for its eventual use. Third-party reliance is strictly prohibited.

Changes in the condition of the subject property may occur with time due to either natural processes or human activities. The findings presented in this report are based on site conditions existing at the time of the investigation. In addition, AECOM has relied, in part, on representations made to AECOM regarding the conditions at the subject property or adjoining properties. AECOM cannot be responsible for any errors or omissions in this investigation resulting from incomplete or inaccurate disclosures by the client or contacts.

10. References

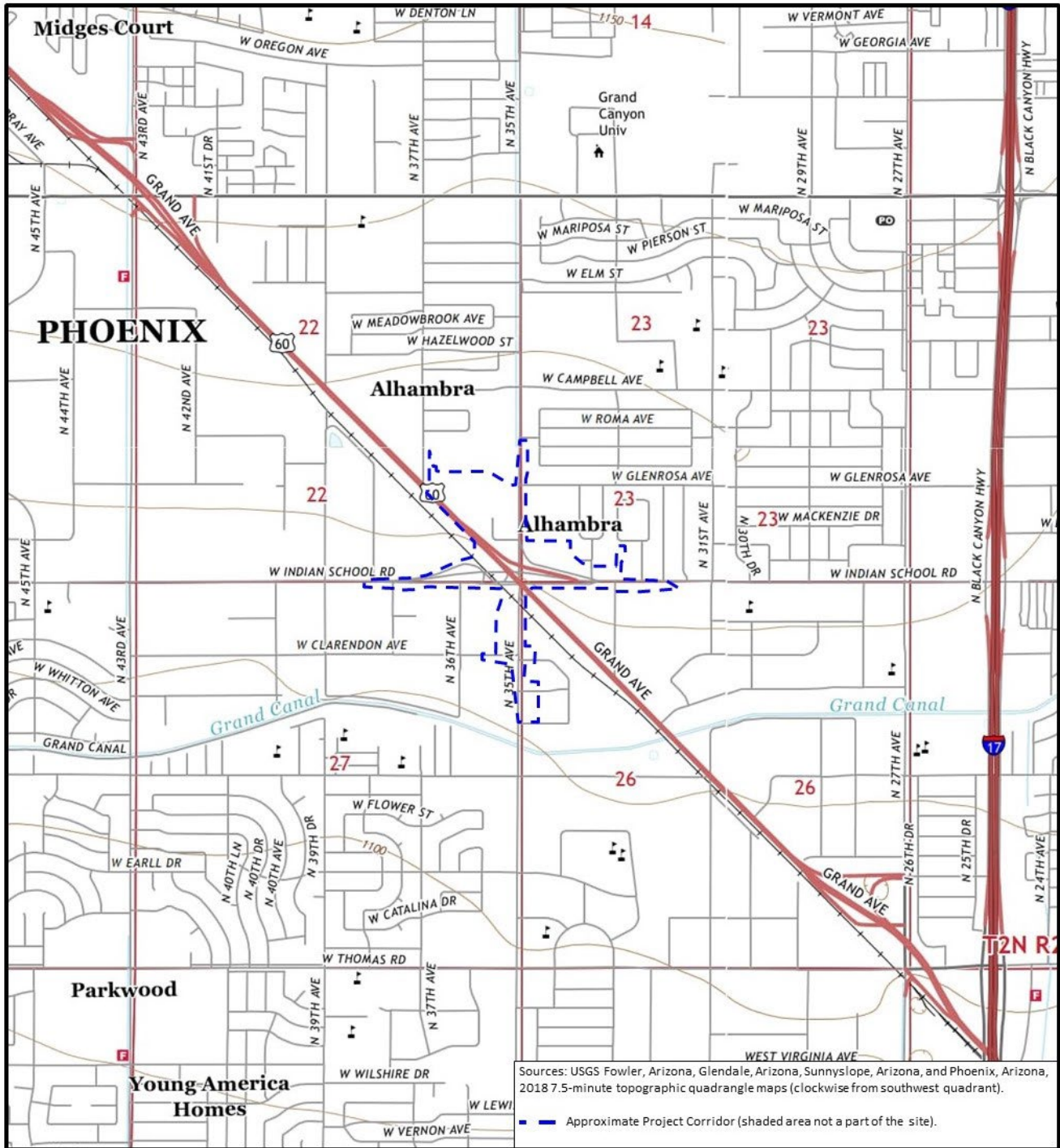
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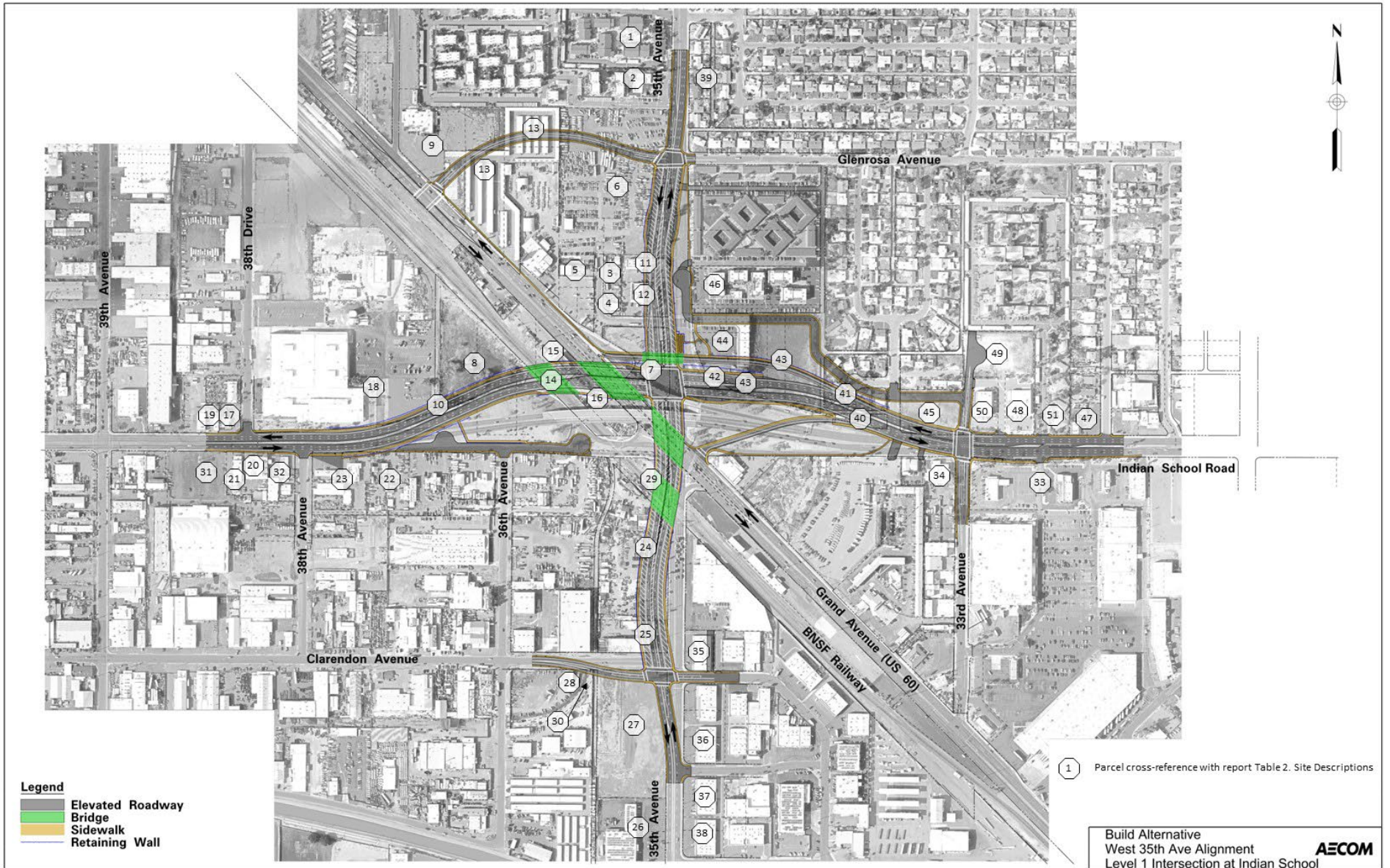
Appendix A Figures

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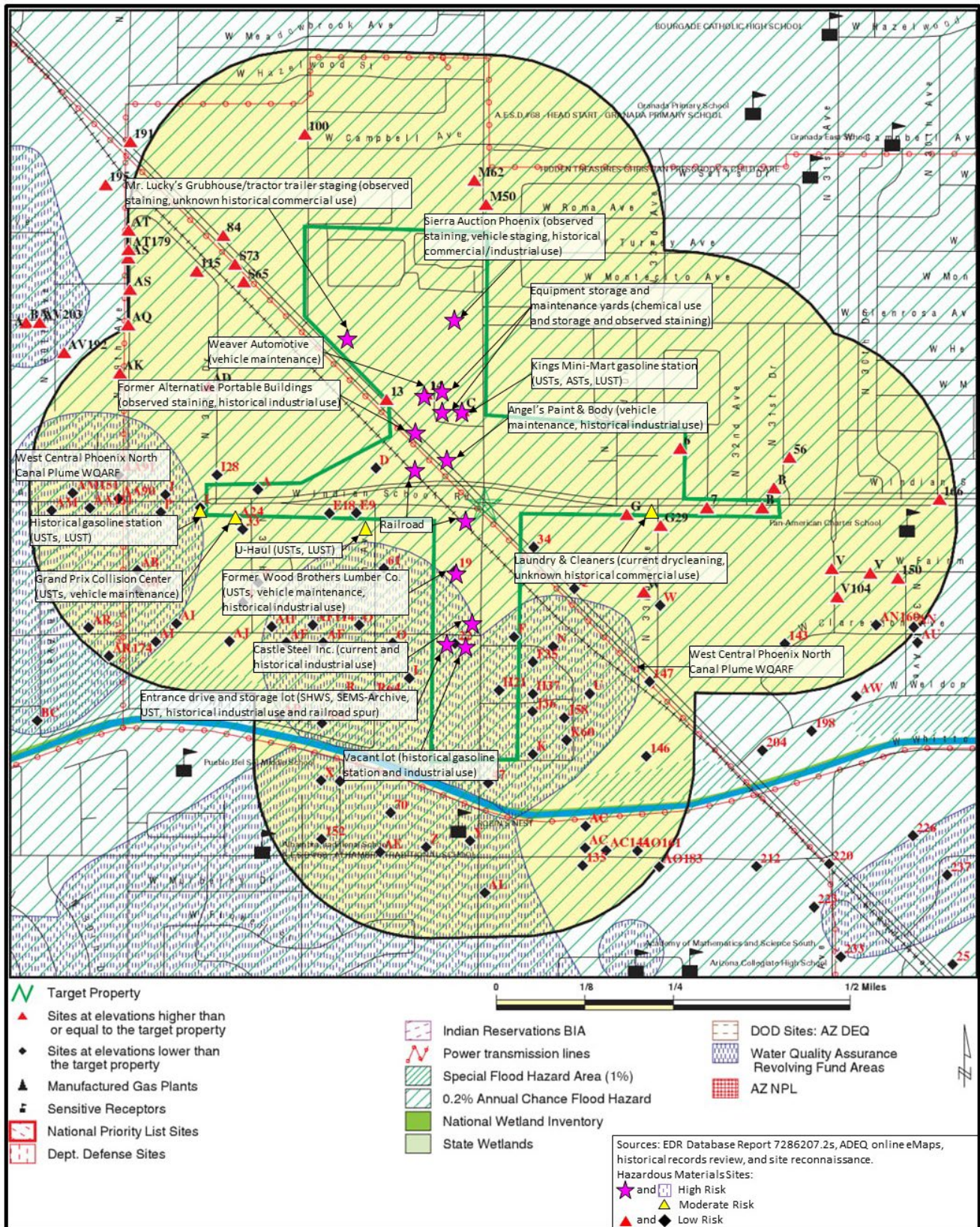
A.1 Project Location Map



A.2 Site Plan



A.3 Hazardous Materials Sites



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Appendix F.2 Hazardous Materials Assessment Memorandum Addendum (July 2023)

Appendices for this report are on file at ADOT Environmental Planning and available upon request at 602.712.7767.

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AECOM
7720 North 16th Street
Phoenix, AZ 85020
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Project name:
Grand Avenue, 35th Avenue and Indian School
Road Interchange

Project ref:
60628402

From:
Elizabeth Parker, Environmental Scientist

Date:
July 14, 2023

DRAFT

To:
Mr. Ed Green
Arizona Department of Transportation

CC:
Ms. Jessica Rietz, AECOM

Memo

Subject: Hazardous Materials Assessment Addendum

1. Introduction

AECOM Technical Services, Inc. (AECOM) conducted a Hazardous Materials Assessment of existing rights-of-way (ROW) and proposed acquisition and easement areas located at the intersection of Grand Avenue (US 60), 35th Avenue, and Indian School Road in Phoenix, Maricopa County, Arizona (“subject property” or “project corridor”). This Hazardous Materials Assessment was conducted in support of an Arizona Department of Transportation (ADOT) road improvement project (TRACS No. 060 MA 159 F0272 01L). AECOM previously prepared a Hazardous Materials Assessment for this project, presented in the Technical Memorandum dated April 28, 2023 (AECOM, 2023). Revisions to the proposed road alignments resulted in additional proposed property acquisition and easement areas. Therefore, this Hazardous Materials Assessment Addendum was performed on these additional areas.

US 60 runs at a diagonal to the grid network that comprises the regional arterial street system in the Phoenix metropolitan area. This results in an intricate intersection configuration where the three roadways come together. This is made more complex by the BNSF Railway corridor paralleling US 60 to the south. The purpose of this project is to improve traffic operations, congestion, and safety at the intersection of US 60, 35th Avenue, and Indian School Road while maintaining regional mobility and access.

This report has been prepared for the exclusive use of ADOT. Results are based solely on the methodology stated in this report and the report should be relied upon in its entirety. Any reliance a third party makes of this report is the responsibility of such third party.

2. Purpose

The objective of this assessment was to identify potential environmental concerns associated with the subject property. Potential environmental concerns are defined by ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) as “the possible presence of any hazardous substances or petroleum products on a property under conditions that indicate the possibility of an existing release, a past release, or a threat of a future release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.”

The tasks comprising this assessment were conducted in accordance with the scope and limitations of ASTM E 1528-14 (ASTM, 2014). This assessment was also performed in accordance with the ADOT Preliminary Initial Site Assessment (PISA) procedures (ADOT, 2022). The Hazardous Materials Assessment is a limited initial screening, and therefore does not include exhaustive record searches or the level of inquiry that a Phase I

Environmental Site Assessment (ESA) would encompass. As stated in ASTM E 1528-14, the user is advised that this practice does not satisfy the practices that encompass all appropriate inquiry into the previous ownership and uses of the property, but rather is a limited environmental due diligence practice.

Hazardous waste is defined by the Resource Conservation and Recovery Act (RCRA) and includes lists of specific wastes, as well as waste that exhibits a specific characteristic (e.g., it is ignitable, corrosive, reactive, or toxic in accordance with RCRA-specific definitions). For the purpose of this Hazardous Materials Assessment, however, hazardous wastes and substances are defined herein as wastes or substances from production or operation activities that pose a substantial present or potential hazard to human health and the environment if improperly treated, stored, or disposed. The U.S. Environmental Protection Agency (USEPA) uses the term “hazardous substance” for chemicals that, if released into the environment above a certain amount, must be reported. Depending on the threat to the environment, federal involvement in handling the incident can be authorized under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The Arizona Department of Environmental Quality (ADEQ) implements both RCRA and CERCLA, as it has been granted primacy by the USEPA for both programs. Relevant laws and regulations that apply to this Hazardous Materials Assessment include the following.

- National Environmental Policy Act of 1969, as amended,
- Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, and
- Resource Conservation and Recovery Act of 1986.

3. Physical Setting

Physical characteristics including topography, geology, and hydrogeology were evaluated based on site observations, published literature, and maps.

3.1 Site Location

The project corridor is centered on the intersection of Indian School Road, US 60/Grand Avenue, and 35th Avenue in Phoenix, Arizona. The additional areas included in this assessment are located along 33rd Avenue between Indian School Road and Grand Avenue, and along 37th Avenue between Turney Avenue and Grand Avenue. In addition to existing unassessed road rights-of-way, the subject property includes adjacent parcels that would potentially be acquired for new right-of-way or easements within commercial, industrial, and residential properties along the project corridor, as summarized in Table 1.

Table 1. Site Location

APN	Address	Owner	PLSS T/R/S	Full or Partial Acquisition*
107-09-002J	4358 North 37 th Avenue	David E. Evans	2 North / 2 East / 22	Partial
107-09-003A	3722 Grand Avenue	Wilbur and Ella Evans	2 North / 2 East / 22	Partial
107-11-026G	No address	3660 W Grand Ave LLC	2 North / 2 East / 22	Partial
108-01-166K	3223 West Indian School Road	Plaza Del Sol Owner LLC	2 North / 2 East / 26	Partial
108-01-166R	4029 North 33 rd Avenue	Plaza Del Sol 557 LLC	2 North / 2 East / 26	Partial
108-01-166S	3801 North 33 rd Avenue	Plaza Del Sol 557 LLC	2 North / 2 East / 26	Partial

APN = County Assessor’s parcel number

PLSS T/R/S = Public Land Survey System Township, Range and Section

* Potential property acquisitions are undergoing further evaluation at the time of this report’s preparation and are subject to change.

A project location map is presented as **Figure A.1** in **Appendix A**.

3.2 Topography and Surface Soils

According to the United States Geological Survey (USGS) Fowler, Arizona and Glendale, Arizona 2018 7.5-minute topographic quadrangle maps (USGS, 2018a and 2018b), the elevation of the project area ranges between approximately 1,110 feet to 1,130 feet above mean sea level. Although portions of the subject property consist of vacant lots and gravel-covered areas, the area of the subject property is mostly developed with buildings and paved areas; therefore, surface water likely drains to municipal stormwater drains. In addition, stormwater retention basins are located within the project corridor. Topography of the surrounding area is relatively flat with slight topographic relief to the south.

According to the Environmental Data Resources, Inc. (EDR) database search reports, surficial soils in the area of the project corridor are mapped as Gilman loam, Mariposa sandy loam, Brios sandy loam, Gilman fine sandy loam, and Avondale clay loam (EDR, 2023a and b). Soils are described as moderately well and well drained soils with moderately coarse textures and moderate infiltration rates.

3.3 Geology and Hydrogeology

According to the Arizona Department of Water Resources (ADWR) Arizona Water Atlas, the subject property is located within the West Salt River Valley subbasin of the Phoenix Active Management Area (AMA). The Phoenix AMA is also known as the Salt River Valley. The Salt River Valley is a broad alluvial basin within the Basin and Range physiographic province. The basin is almost surrounded by mountains composed primarily of volcanic, granitic, metamorphic, and sedimentary rocks. The valley floor is underlain by unconsolidated to semi-consolidated basin-fill sediments, which consist mainly of clay, silt, sand, and gravel. The primary source of groundwater in the Salt River Valley is the basin-fill sediments, which are divided into three distinct water bearing units: the upper alluvial unit, the middle fine-grained unit, and the lower conglomerate unit. In the West Salt River Valley subbasin, groundwater is generally obtained evenly between the upper, middle, and lower basin fill. The main water-bearing unit ranges in thickness from a few tens of feet near the mountains to more than 1,200 feet in the central part of the area. (Cooley, 1973 and ADWR, 2010)

According to the ADWR *Maps Showing Groundwater Conditions in the Phoenix Active Management Area, Maricopa, Pinal, and Yavapai Counties, Arizona - Nov. 2002 - Feb. 2003*, and well records provided in the EDR report, the depth to groundwater in the project area is between approximately 65 feet below ground surface (bgs) and 200 feet bgs (Rascona, 2005 and EDR, 2023a). The general direction of groundwater flow in the vicinity of the subject property appears to be west to west-northwest (Rascona, 2005).

4. Current Land Use

Ms. Jessica Rietz and Mr. William Turner with AECOM's Phoenix, Arizona office performed a reconnaissance of the subject property on July 6, 2023 to identify properties potentially associated with the use or storage of hazardous materials. AECOM personnel were unaccompanied during the site reconnaissance. The site visit methodology consisted of driving and/or walking over accessible areas of the subject property and observations of the surrounding area from the subject property boundaries and/or adjacent ROW. Proposed partial acquisition areas were observed from publicly accessible portions of the parcels or adjacent public ROW. Private properties and building interiors were not entered during the site reconnaissance. The following sections summarize the results of the site visit. A site plan is presented as **Figure A.2** in **Appendix A**. Photographs of the subject property and adjoining properties are included in **Appendix B**.

4.1 Subject Property

The subject property includes areas of public ROW, and privately owned vacant and commercial properties. Areas of the subject property within parcels proposed for partial acquisition are described in Table 2. It should be noted the map cross-reference numbers are a continuation from the April 2023 PISA; therefore, the current site reference numbers start at 52. Unless otherwise noted in the table, the property is considered low risk, based on site observations.

Table 2. Site Description

Map Cross-Reference (Figure A.2)	APN/ Address	Description
52	107-09-002J/ 4358 North 37 th Avenue	<p>Partial acquisition area consists of dirt and gravel-covered frontage areas along the eastern portion of a vacant lot. Scattered trash, including metal cans, paper, plastic and concrete debris, was observed on and adjacent to the proposed acquisition areas on this parcel. No chemicals, chemical containers, or surficial staining were observed in the area of the trash. A shallow swale on the northeastern portion of the parcel appeared to collect stormwater drainage from the adjacent residential area to the north. A large concrete wash-out and pile of construction debris were observed approximately 50 feet west and southwest of the proposed partial acquisition areas on and adjacent to this parcel. Based on a review of historical aerial photographs, the subject property appeared to be portions of a residence and yard areas prior to approximately 2000, when the building was no longer visible. The lot was cleared by 2006, and the parcel has remained vacant land since that time.</p>
53	107-09-003A/ 3722 Grand Avenue	<p>Partial acquisition area consists of dirt and gravel-covered frontage areas along the eastern portion of a vacant lot. Scattered trash, including metal cans, paper, plastic and concrete debris, was observed on and adjacent to the proposed acquisition areas on this parcel. No chemicals, chemical containers, or surficial staining were observed in the area of the trash. A large concrete wash-out and pile of construction debris were observed approximately 50 feet west of the proposed partial acquisition areas on and adjacent to this parcel. Based on a review of historical aerial photographs, the subject property appeared to be portions of a vacant lot or a residence and yard areas prior to approximately 2000, when the building was no longer visible. The lot was cleared by 2006, and the parcel has remained vacant land since that time.</p>
54	107-11-026G/ No address	<p>Partial acquisition area consists of gravel-covered frontage areas along the western portion of a fenced lot used for tractor trailer parking. Scattered trash, including metal cans, paper, plastic and wooden pallets, was observed on and adjacent to the proposed acquisition areas on this parcel. No chemicals, chemical containers, or surficial staining were observed in the area of the trash. Based on a review of historical aerial photographs, the subject property appeared to be portions of several residences and yard areas prior to clearing of the parcel in the late 1960s. The lot appeared to have been paved by 1982.</p>
55	108-01-166K/ 3223 West Indian School Road	<p>Partial acquisition area consists of a small portion of asphalt-paved entrance drive in the northwestern corner of a multi-tenant retail center. The nearest tenant was El Potrillo restaurant. Based on a review of historical aerial photographs, this area of the subject property appeared to be developed as agricultural farm fields and residential properties prior to redeveloped as frontage areas for a large parking lot in approximately 1964. The end of a possible runway for the Airhaven Airport was visible approximately 30 feet east of the partial acquisition area beginning in 1949. This portion of the airport (a cross runway) was no longer visible and this area was tilled farm fields by 1951. The current adjacent multi-tenant retail building was constructed in the late 1980s.</p>

Map Cross-Reference (Figure A.2)

Map Cross-Reference (Figure A.2)	APN/ Address	Description
56	108-01-166R/ 3241 West Indian School Road, 4029 North 33 rd Avenue	<p>Additional partial acquisition areas along the western portion of this parcel, along 33rd Avenue. Partial acquisition areas along the northern portion of this parcel and Indian School Road were identified as map cross-reference number 33 in the April 2023 PISA. Additional partial acquisition areas consist of narrow strips of gravel-covered landscaped frontage areas, concrete walkways and an asphalt-paved drive area along the western frontage of Chase Bank. The access driveway on this parcel also provide access to additional retail businesses further to the south and east. Based on a review of historical aerial photographs, this area of the subject property appeared to be developed as agricultural farm fields and several residential properties prior to redeveloped as frontage areas for the current bank building in 1964. The end of a possible runway for the Airhaven Airport was visible approximately 30 feet east of the partial acquisition area beginning in 1949. This portion of the airport (a cross runway) was no longer visible and this area was tilled farm fields by 1951.</p>
57	108-01-166S/ 3801 North 33 rd Avenue	<p>Partial acquisition areas consist of areas of gravel-covered and landscaped frontage areas, concrete walkway and asphalt-paved drive areas on the western portion of a Costco Business Center with gasoline station. The underground storage tank (UST) basin and dispenser islands are located approximately 80 feet east of the proposed acquisition areas on this parcel. A propane-powered forklift was observed within the Costco parking lot approximately 10 feet east of the southern portion of the subject property, and a Republic Services roll-off dumpster was observed within the parking area approximately 80 feet southeast of the subject property. A stormwater retention basin with a drywell was located approximately 60 feet north of the proposed acquisition area on this parcel.</p> <p>Based on a review of historical topographic maps and aerial photographs, a church was located adjacent to the northeast portion of the partial acquisition area on this parcel as early as 1912. An irrigation or drainage ditch was depicted in the approximate 33rd Avenue alignment. The subject property appeared to be portions of several residential properties and yard areas by 1937, and Airhaven Airport was visible approximately 260 feet east of the partial acquisition areas by 1949; airport buildings were located over 380 feet east-southeast of the partial acquisition areas. The church and the majority of the residences were no longer visible by 1959 and the subject property appeared to be vacant land. The airport was no longer visible and the current Costco retail building was visible by 1964. A gasoline station was visible on and adjacent to the southern portion of the partial acquisition areas, including a possible dispenser canopy within the subject property, beginning in 1969. The remainder of the subject property appeared to be paved parking and drive areas for a large multi-tenant retail center. The gasoline station was no longer visible and a possible small retail or restaurant building was visible in this area by 1986. Landscaped areas were visible along the subject property by 1991. The current Costco gasoline station was visible approximately 80 feet east of the subject property beginning in 2008. The small retail or restaurant building on and adjacent to the southern portion of the subject property was no longer visible by 2022, and this area appeared to be vacant land. The current and former gasoline stations are further discussed in Section 6.1, and the former gasoline station is considered to be high risk.</p>

APN = County Assessor's parcel number

Overhead electrical transmission lines and utility vaults and electrical equipment for underground electrical transmission lines were observed throughout the project area. Two pole-mounted electrical transformers (on one pole) were observed across 33rd Avenue to the west of the subject property on APN 108-01-166R, and additional pole-mounted electrical transformers were observed in the surrounding area. In addition, indications of additional underground utilities, including water valve covers, water backflow preventers, sanitary sewer manholes, natural gas pipeline markers, and communications equipment, were observed throughout the project area. Scattered

trash and debris, typical of windblown trash in urban areas and minor amounts of dumped household trash, were also observed throughout the project area.

The project area is developed, and vegetation observed included landscaped areas with trees and shrubs, and native desert grasses and weeds. The vegetation in several areas appeared to be in poor condition due to climate stress.

According to the *Abandoned & Little-Known Airfields: Western Arizona* (Freeman, 2022), Airhaven Airport operated as a commercial or municipal airfield between approximately 1946 and 1961. The crosswind taxiway that extended adjacent to the subject property was abandoned between 1949 and 1952 and this area was redeveloped. Operations at the airport reportedly included a flight school, commercial sightseeing trips, plane rentals, and service for private planes. No indications the airfield was used for crop dusting were identified. In addition, service activities likely occurred in the area of the hangars and other airport buildings, over 380 feet southeast of the subject property. Based on reviewed information, this former airfield is considered low risk to the subject property.

The project area appeared to be developed for agricultural use prior to 1936 until the 1970s. Although pesticides and herbicides may have been used on the agricultural farm fields on and adjacent to the subject property in the past, no indications of excessive chemical use (i.e., impoundments, storage areas, crop dusting air strips) were observed on or adjacent to the subject property. In addition, redevelopment of the subject property and surrounding area with the current facilities and structures would likely have disturbed residual chemicals in soils, if any. Therefore, the former agricultural use of the surrounding area is considered to be low risk.

4.2 Adjacent Properties

Adjacent properties along the project corridor include residential, commercial, and industrial properties, and vacant lots. Businesses adjacent to the subject property but within partial acquisition parcels are discussed in **Section 4.1**. Chemical use and storage or other indications of potential environmental concerns on adjacent parcels included the following:

- Mary's Auto Sales at 3304 Grand Avenue, Cobian Machine Shop at 3940 North 33rd Avenue, D&D Enterprises at 3948 North 33rd Avenue, BSG Auto Sales/Repair at 4002 North 33rd Avenue, ESP Dentist at 4008 North 33rd Avenue, and Regent Auto Repair and Tire (possibly vacant) at 4012 North 33rd Avenue were observed adjacent across 33rd Avenue from the subject property. Various vehicles, tires, metals, and other outside stored materials were observed on these properties; however, no indications of storage tanks or other chemical storage were observed. In addition, the facility was not listed on a database indicative of a release (see **Section 6.2**). Therefore, these facilities are considered to be low risk.
- A laundry mat at 3301 West Indian School Road was observed adjacent across 33rd Avenue from the subject property. This facility was identified as map cross-reference 34 in the April 2023 PISA. **As discussed in the April 2023 PISA, this property is considered moderate risk.**

No chemical storage, ASTs, USTs, or possible maintenance activities were observed on remaining adjacent properties. Adjacent properties identified on the environmental database search report are further discussed in **Section 6.2.1** through **6.2.3**.

Numerous registered wells were identified by EDR in the project area (EDR, 2023a and b). No wells were observed adjacent to the project corridor.

According to the U.S. Department of Transportation (USDOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) National Pipeline Mapping System (NPMS) public map viewer, no gas transmission pipelines, hazardous liquid pipelines, accidents or incidents, liquid natural gas plants, or breakout tanks were depicted on or adjacent to the subject property on the public map viewer (USDOT, 2023).

5. Historical Land Use

AECOM has reviewed readily available historical records sources in an attempt to identify historical uses of the subject property that may indicate potential environmental concerns. AECOM reviewed the following historical records for the subject property and adjacent properties.

- Historical aerial photographs dated 1930, 1937, 1949, 1951, 1953, 1959, 1964, 1969, 1976, 1979, 1982, 1986, 1991, 1993, 1996 to 1997, 1998 to 1999, 2000, 2000 to 2001, 2001 to 2002, 2002, 2003, 2003 to 2004, 2004, 2005, 2006, 2007 to 2008, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, and 2021, available on the Maricopa County Geographic Information System (GIS) website,
- Historical aerial photographs dated 1936, 1942, 1949, 1954, 1958, 1961, 1976, 1979, 1981, 1986, 1997, 2007, 2010, 2015, and 2019, as provided by EDR, and
- USGS historical topographic maps dated 1912, 1914, 1952, 1967, 1973, 2014, and 2018, available through the USGS website.

Results of the historical records review are summarized in the following subsections. Copies of the EDR historical records reports and selected historical maps and aerial photographs are included in **Appendix C**.

5.1 Subject Property and Surrounding Areas

Historical land use of the subject property and an evaluation of historical land use for specific parcels within the project area are summarized in Table 2, **Section 4.1**. Historical use of the remaining properties on and in the area of the surrounding property are considered to be low risk.

6. Environmental Database Review

AECOM reviewed information gathered from the USEPA and the State of Arizona through EDR to evaluate if activities on or near the subject property would potentially threaten its environmental integrity. EDR reviews databases compiled by Federal and state governmental agencies. The complete list of databases reviewed by EDR is provided in EDR's report, which is included in **Appendix D**. It should be noted that this information is reported as AECOM received it from EDR, which in turn reports information as it is provided in various governmental databases. It is not possible for either AECOM or EDR to verify the accuracy or completeness of information contained in these databases. However, the use of and reliance on this information is a generally accepted practice in the conduct of environmental due diligence. USEPA and ADEQ documents and lists were reviewed in accordance with the minimum search distances specified in the ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (Standard Designation E1527-13), as follows.

Table 3. Standard Regulatory Databases

Regulatory Database	Search Distance
Federal National Priorities List (NPL) site list	1.0 mile
Federal Delisted NPL site list	½ mile
Federal Superfund Enterprise Management System (SEMS) and SEMS Archive site list *	½ mile
Federal RCRA Corrective Action Report (CORRACTS) facilities list	1.0 mile
Federal RCRA non-CORRACTS Treatment, Storage and Disposal (TSD) facilities list	½ mile
Federal RCRA generators list	Target and adjoining properties
Federal institutional/engineering control registries	Target property only
Federal Emergency Response Notification System (ERNS) list	Target property only
Water Quality Assurance Revolving Fund (WQARF), state-equivalent NPL	1.0 mile
State list of hazardous waste sites (SHWS), state-equivalent CERCLIS	½ mile
State landfill and/or solid waste disposal site (SWLF) lists	½ mile
State and tribal leaking underground storage tank (LUST) lists	½ mile
State and tribal registered underground storage tank (UST) lists	Target and adjoining properties
State institutional/engineering control registries	Target property only
State voluntary cleanup sites (VCP)	½ mile
State Brownfield sites	½ mile

* SEMS has replaced the Comprehensive Environmental Response, Compensation and Liability Index System (CERCLIS), and SEMS Archive site list has replaced the CERCLIS – No Further Remedial Action Planned (CERC-NFRAP) list

AECOM reviewed the Orphan List Sites, which are sites that have not been geocoded based upon lack of sufficient data regarding their exact location within the general area. Unless otherwise discussed in the following subsections, the Orphan List Sites were not located within the applicable ASTM search radii of the subject property and are not considered to be potential environmental concerns.

In addition, AECOM reviewed the ADEQ online map for the project corridor (ADEQ, 2023a and b). All sites identified on the databases reviewed are depicted on the figures included in the EDR reports (**Appendix D**). Sites identified by AECOM in the risk ranking system are shown on **Figure A.3** and summarized in the following subsections by type of risk.

6.1 Subject Property

Full or partial acquisition properties identified in the environmental databases reviewed by EDR or in a review of the ADEQ online map are summarized in Table 5.

Table 4. Environmental Database Sites Identified on the Subject Property

Map Cross-Reference (Figure A.2)	Listing/ Address	Description
57	Costco #827 / 3801 North 33 rd Avenue	<p>According to EDR, this facility was listed on the RCRA-SQG, Manifest, UST, EMap, Enforcement and Financial Assurance databases. This facility was listed as a NonGen/NLR in 1998, a VSQG of ignitable, reactive and corrosive wastes, metals, benzene, methyl ethyl ketone, pharmaceutical wastes, and waste solvents between 2011 and 2020, and a SQG between 2020 and 2022. No hazardous waste evaluations or violations were identified and the facility was not listed on a database indicative of a release.</p> <p>Three 30,000-gallon gasoline USTs were installed on this property in 2008 and one 1,500-gallon solvent UST was installed on this property in 2012. As discussed in Section 4.1, these USTs are located over 80 feet east of the subject property areas on this parcel. No release was reported.</p> <p>Based on reviewed information, these listings are considered to be low risk.</p>
55 and 56	Value Valet Cleaning & Shirt L / 4041 North 33 rd Avenue	<p>A possible drycleaner was identified in 1968. Based on addressing and a review of historical aerial photographs, this business likely operated within the large retail building located on APN 108-01-166K, over 500 feet east of the subject property areas (see Section 4.1). Therefore, this listing is considered to be low risk.</p>
57	James Hanks Chevron Service Station / 3240 Grand Avenue	<p>According to EDR, a gasoline station was identified at this address under various names between 1977 and 1982. Based on addressing and historical aerial photographs, this likely corresponds to the historical gasoline station identified on the subject property between 1969 and 1982 (see Section 4.1). However, additional historical gasoline stations were identified along Grand Avenue in the area of the subject property, and the potential exists for historical addresses to have changed in the past. The gasoline station was no longer present prior to current regulatory requirements, and no registered USTs were identified associated with this former gasoline station. No records of removal of the gasoline station and associated USTs was identified. Therefore, this property is considered to be high risk.</p>

EMap = Arizona electronic mapping system

NonGen/NLR = verified not a generator or no longer a generator of hazardous waste

VSQG = very small quantity generator of hazardous waste (formerly conditionally exempt small quantity generator [CESQG])

SQG = small quantity generator of hazardous waste

6.2 Surrounding Sites

AECOM reviewed the EDR database report to identify off-site facilities that have suspected or documented potential environmental concerns that may negatively impact the subject property. AECOM's criteria for further evaluating the potential impact of a listed off-site facility are summarized below:

- A likely pathway exists for environmentally mobile contaminants to reach the subject property (i.e., groundwater or surface runoff); and,
- The offsite facility is listed on one or more of the reviewed databases, and is not listed in the database as "closed" or "no further action" (including NFRAP); or,
- The facility is a known or suspected concern based upon AECOM's experience or observations made during the site reconnaissance (i.e., dry-cleaning operations that may or may not be listed as hazardous waste generators or a non-adjacent UST site that appears to have a remediation system in place).

In addition, AECOM employed a risk ranking system (low / moderate / high / indeterminate) that includes several investigation elements. Each element of the investigation process uses a different set of criteria to assess the risk of hazardous materials being present in association with a specific site or location. These criteria are

primarily based on the project-specific planned area of disturbance. For a typical scope of work, AECOM uses the following investigation elements in arriving at the risk ranking for a given site.

- High-risk sites are those that have a high potential for releasing hazardous materials to the soil or groundwater, or have a recorded release issue.
- Moderate-risk sites are those that have a moderate potential for releasing hazardous materials to the soil or groundwater.
- Low-risk and no-risk sites are those that have little or no potential for releasing hazardous materials to the soil or groundwater.

6.2.1 High-Risk Sites

High-risk sites are those that have a high potential for releasing hazardous materials to the soil or groundwater, or have a recorded release issue. These primarily include:

- Facility located within the planned area of disturbance with reported USTs that have not been removed.
- Property adjacent to the planned area of disturbance that is identified as having a known release of hazardous materials (including LUSTs) that has not been remediated to the satisfaction of the regulatory agency.

The following high-risk site was identified in the review of the environmental database search report:

Table 5. High-Risk Site

Database(s)	Listing / Address	Description
WQARF, SPL	West Central Phoenix (WCP) North Canal Plume	According to EDR and information available on ADEQ's website, the WCP North Canal Plume was added to the WQARF registry in 1987. The WQARF site is an area of groundwater contamination and chemicals of concern were identified as trichloroethene (TCE), tetrachloroethene (PCE), 1,1-dichloroethene (1,1-DCE), and chromium, due to industrial processes in the area. The current boundaries of the groundwater plume are mapped beneath the area of the subject property along Grand Avenue and 35 th Avenue, south of the intersection with Indian School Road (Central and East Plumes), and along Indian School Road, west of the intersection with 35 th Avenue (West Plume). In addition, several facilities within the area of the subject property have been assessed as potential sources for contamination, and the possibility exists that chemicals of concern may remain in soils in the surrounding area. Groundwater monitoring wells associated with the WQARF investigation are mapped along 33 rd Drive, 36 th Avenue, 38 th Avenue, Clarendon Avenue, Whitton Avenue in the area of the subject property.

SPL = Superfund Priority List (state-equivalent CERCLIS)

Although additional WQARF and NPL sites were identified in the surrounding area, the boundaries of these additional sites are well defined and monitoring by ADEQ. These additional areas of groundwater contamination are not mapped within or adjacent to the subject property. Therefore, these additional sites are considered to be low-risk.

6.2.2 Moderate-Risk Sites

Moderate-risk sites are those that have a moderate potential for releasing hazardous materials to the soil or groundwater. These primarily include:

- Facility located adjacent to the alignment with registered USTs, with or without LUST incidents.
- Facility located adjacent to the alignment listed as generators of hazardous wastes (with recorded open violations).
- Facility located within the immediate area of the alignment with open hazardous materials incidents (including LUSTs) with reported impacts to groundwater.

No moderate-risk sites were identified for the current subject property in the review of the environmental database search reports.

6.2.3 Low-Risk or No-Risk Sites

Low-risk or no-risk sites are those that have little or no potential for releasing hazardous materials to the soil or groundwater. Numerous low-risk or no-risk sites were identified in the review of the environmental database search report. The low-risk and no-risk sites are described in the environmental database search reports included in **Appendix D**.

7. Revisions to Proposed Alignment Areas

It should be noted as part of the revisions to the ROW alignment, several areas identified as full or partial-take areas in the April 2023 PISA are no longer included as partial-take areas. These areas included: the south side of Indian School Road, west of the intersection with 38th Avenue; properties along 35th Avenue south of the intersection with Weldon Avenue; and the east side of 35th Avenue, north of the intersection with Glenrosa Avenue. The current proposed alignment is depicted on **Figure A.2**, **Figure A.3** and the ADOT Draft PISA Form depict moderate and high risk sites identified during the April 2023 PISA, and the ADOT Draft PISA Form includes an updated list of property acquisition parcels. **Figure A.4** depicts high risk sites identified during the current assessment. A copy of the ADOT Draft PISA Form, including the results of the April 2023 PISA and current PISA Addendum, is included in **Appendix E**.

8. Conclusions

AECOM has completed a Hazardous Materials Assessment of existing ROW and proposed acquisition and easement areas located along 33rd Avenue between Grand Avenue and Indian School Road and along 37th Avenue between Grand Avenue and Turney Avenue in Phoenix, Maricopa County, Arizona. AECOM's Hazardous Materials Assessment was completed in accordance with the scope and limitations of ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (ASTM E 1528-14) and in accordance with ADOT PISA procedures (ADOT, 2022).

Based on AECOM's assessment, the following property within the partial acquisition areas are considered to be high risk:

- APN 108-01-166S, 3801 North 33rd Avenue (map ID 57). A historical gasoline station operated in the southwestern portion of this parcel, on and adjacent to the partial acquisition area, between approximately 1969 and 1982. According to the environmental database search report, this historical gasoline station appeared to be the James Hanks Chevron Service Station addressed at 3240 Grand Avenue. However, additional historical gasoline stations were identified along Grand Avenue in the area of the subject property, and the potential exists for historical addresses to have changed in the past. The gasoline station was no longer present prior to current regulatory requirements, and no registered USTs were identified associated with this former gasoline station. No records of removal of the gasoline station and associated USTs was identified. Therefore, this property is considered to be high risk.
- The southern and western portions of the subject property are located within the WCP North Canal Plume WQARF area of groundwater contamination. In addition, several facilities within the area of the subject property have been assessed as potential sources for contamination, and the possibility exists that chemicals of concern may remain in soils in the surrounding area, including current and former industrial properties on the subject property. Groundwater monitoring wells associated with the WQARF investigation are mapped along 33rd Drive, 36th Avenue, 38th Avenue, Clarendon Avenue, and Whitton Avenue in the area of the subject property.

Based on AECOM's assessment, no moderate risk sites were identified for the current assessment.

9. Recommendations

Based on AECOM's assessment, Phase I ESAs conducted in accordance with ASTM Standard 1527-21 are recommended for proposed full and partial acquisition parcels, prior to property acquisition. Based on environmental concerns summarized in **Section 7**, the recommended Phase I ESAs are considered high priority.

Additional assessment, including local and state agency file reviews and/or Phase II ESAs are recommended for properties identified as high risk, except that no further assessment of the WCP North Canal Plume WQARF groundwater contamination is recommended, unless groundwater will be encountered (such as for dewatering activities) during construction.

The following is recommended to minimize the potential for encountering hazardous materials during construction:

- Stormwater features, such as retention basins and stormwater drains, should be protected during construction activities in accordance with City of Phoenix and ADEQ requirements.
- Groundwater monitoring wells should be protected during construction activities or abandoned in accordance with ADWR requirements.
- Results and applicability of a lead-based paint and asbestos-containing materials survey will be reviewed by the ADOT Environmental Planning Group hazardous materials coordinator 30 (thirty) days prior to the start of construction activities.
- No pavement marking obliteration will occur until the Lead-Based Paint Removal and Abatement Plan, if required, is approved by the ADOT Environmental Planning hazardous materials coordinator.
- No demolition of load-bearing concrete will be allowed to occur until the Asbestos Removal and Disposal Plan, if required, is approved by the ADOT Environmental Planning hazardous materials coordinator.
- If suspected hazardous materials are encountered, an odor is identified, or significantly stained soil is visible during construction, work shall cease at that location and the ADOT Environmental Planning hazardous materials coordinator should be notified immediately. Subsequently arrangements for assessment, treatment and disposal of those materials should be made.

10. Limitations

This Hazardous Materials Assessment was prepared as a result of a contractual agreement that defined the approach, limits of inquiry, and scope of services to be employed during the course of the investigation. The opinions and conclusions expressed in this study have been based strictly on the results of these contracted services. The services provided by AECOM should not be construed to be a warranty or guarantee that no environmental impairments exist at this site or that all environmental impairments have been uncovered. No conclusions are stated or implied concerning the suitability of the subject property for its eventual use. Third-party reliance is strictly prohibited.

Changes in the condition of the subject property may occur with time due to either natural processes or human activities. The findings presented in this report are based on site conditions existing at the time of the investigation. In addition, AECOM has relied, in part, on representations made to AECOM regarding the conditions at the subject property or adjoining properties. AECOM cannot be responsible for any errors or omissions in this investigation resulting from incomplete or inaccurate disclosures by the client or contacts.

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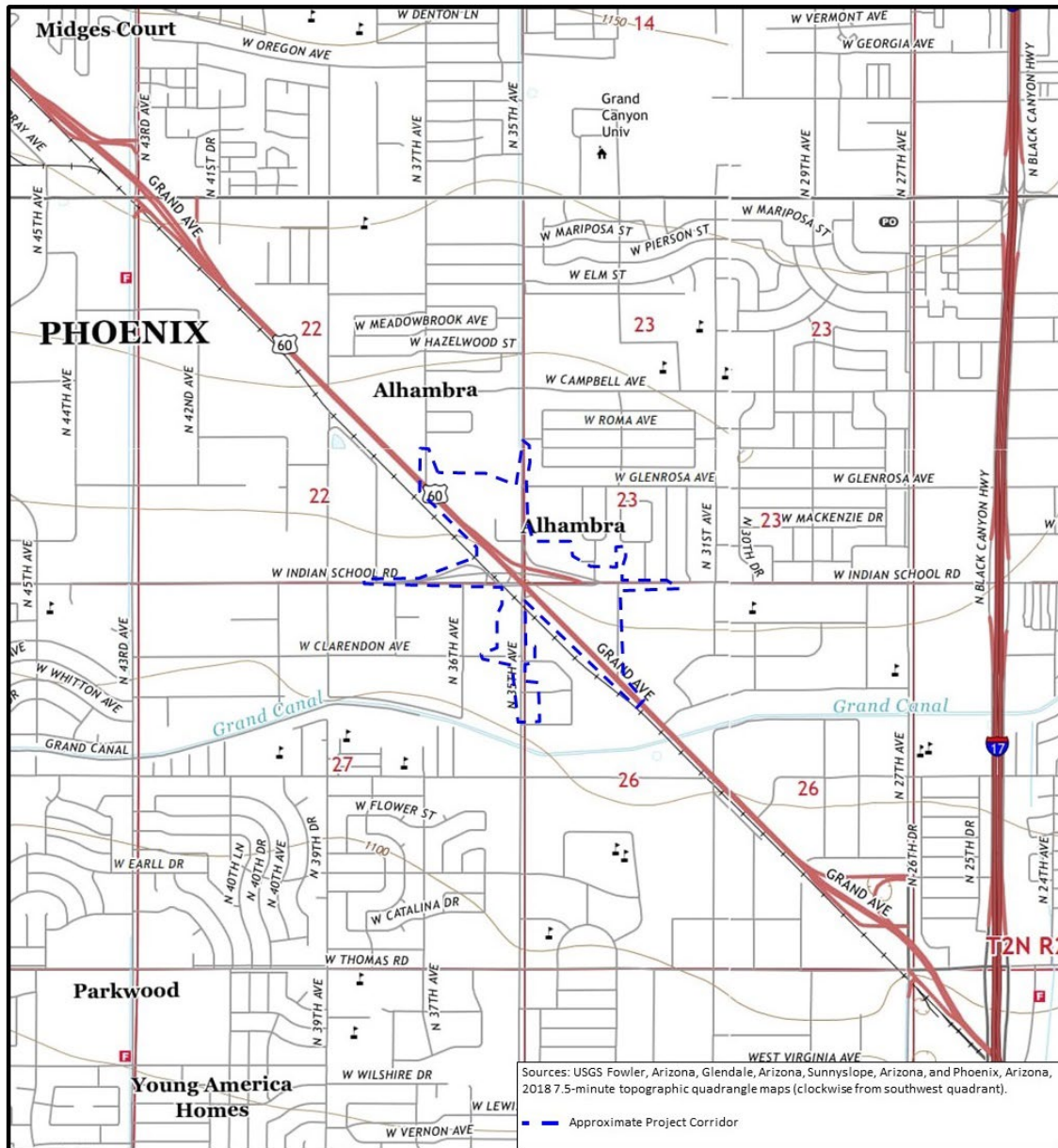
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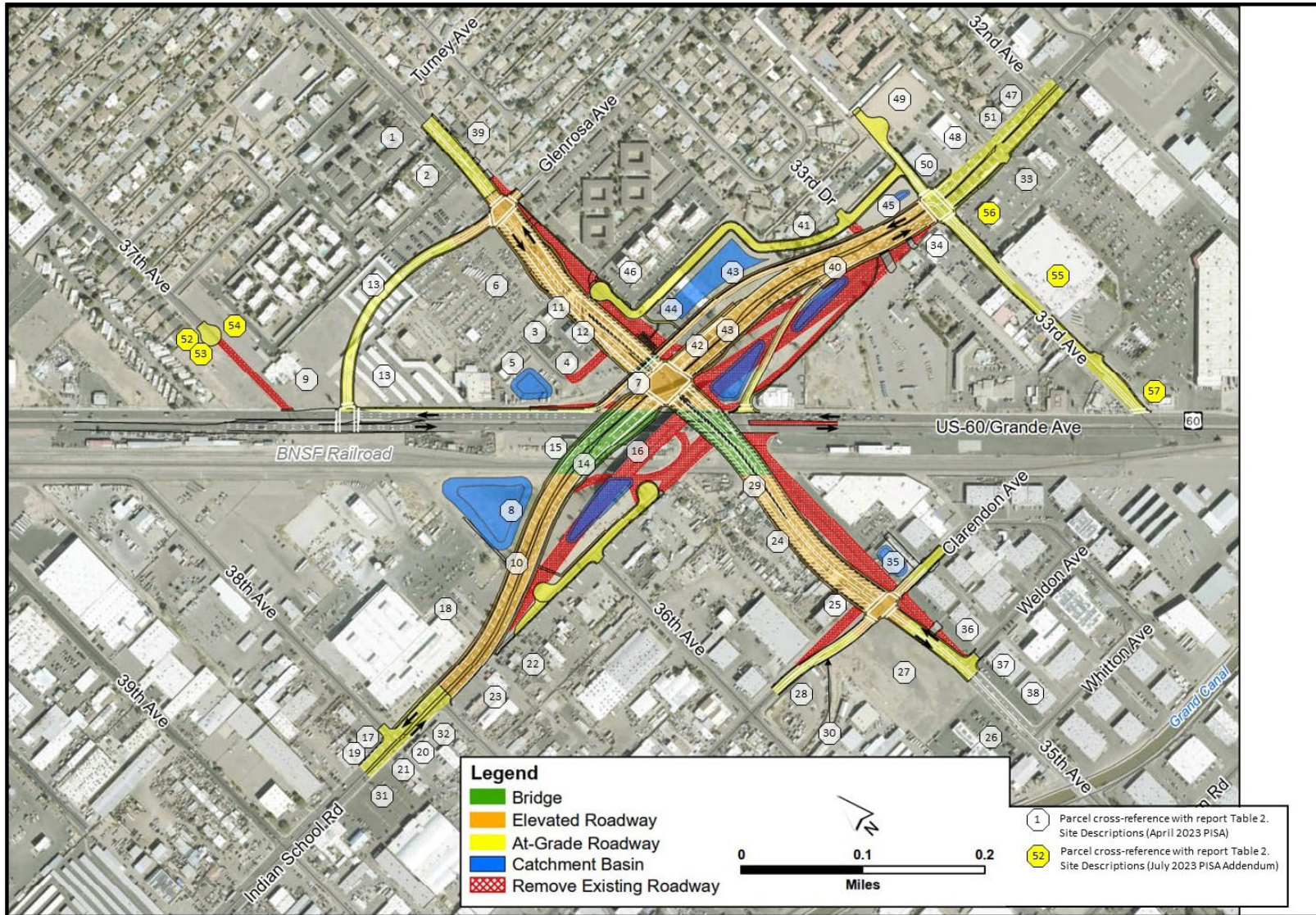
Appendix A Figures

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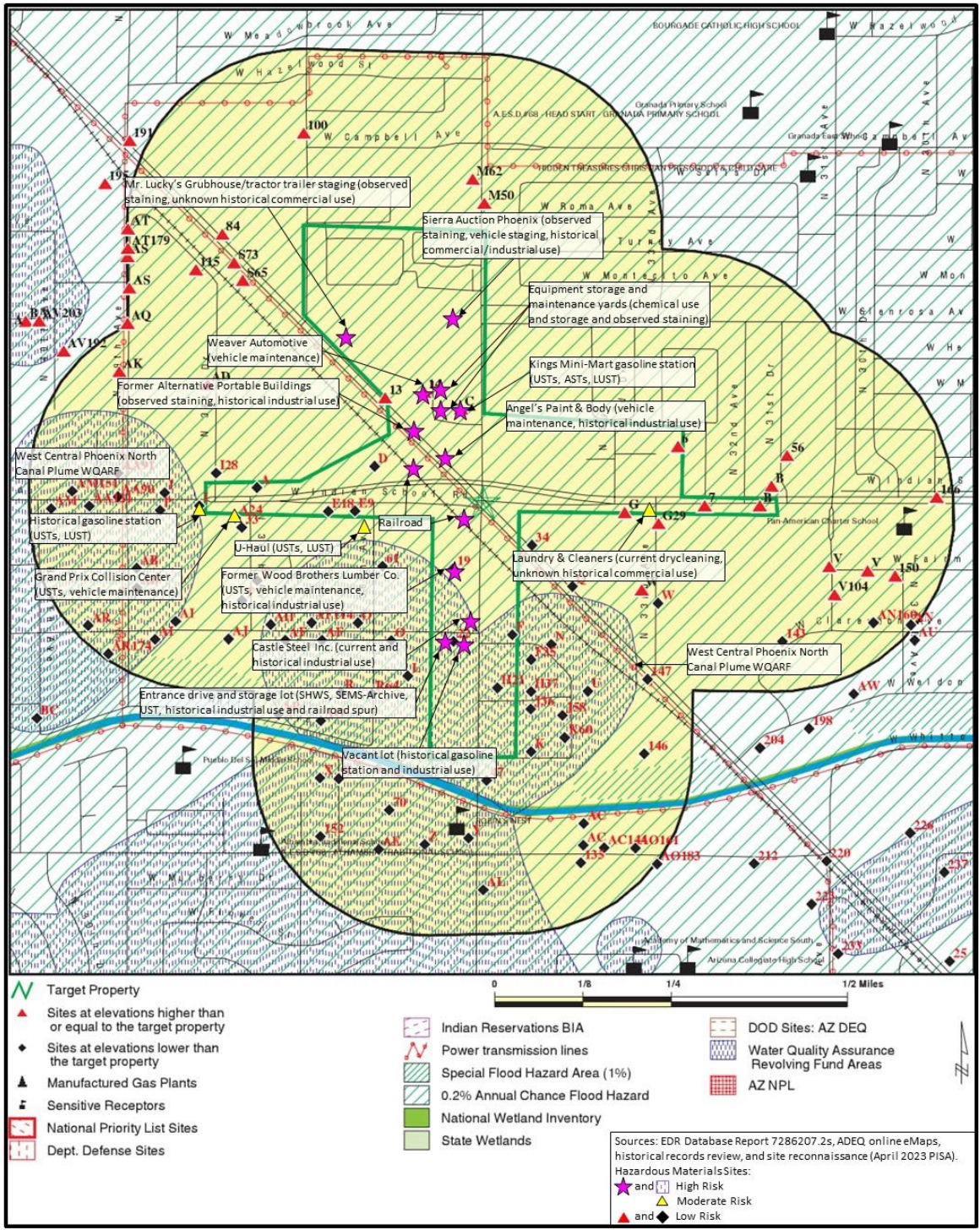
A.1 Project Location Map



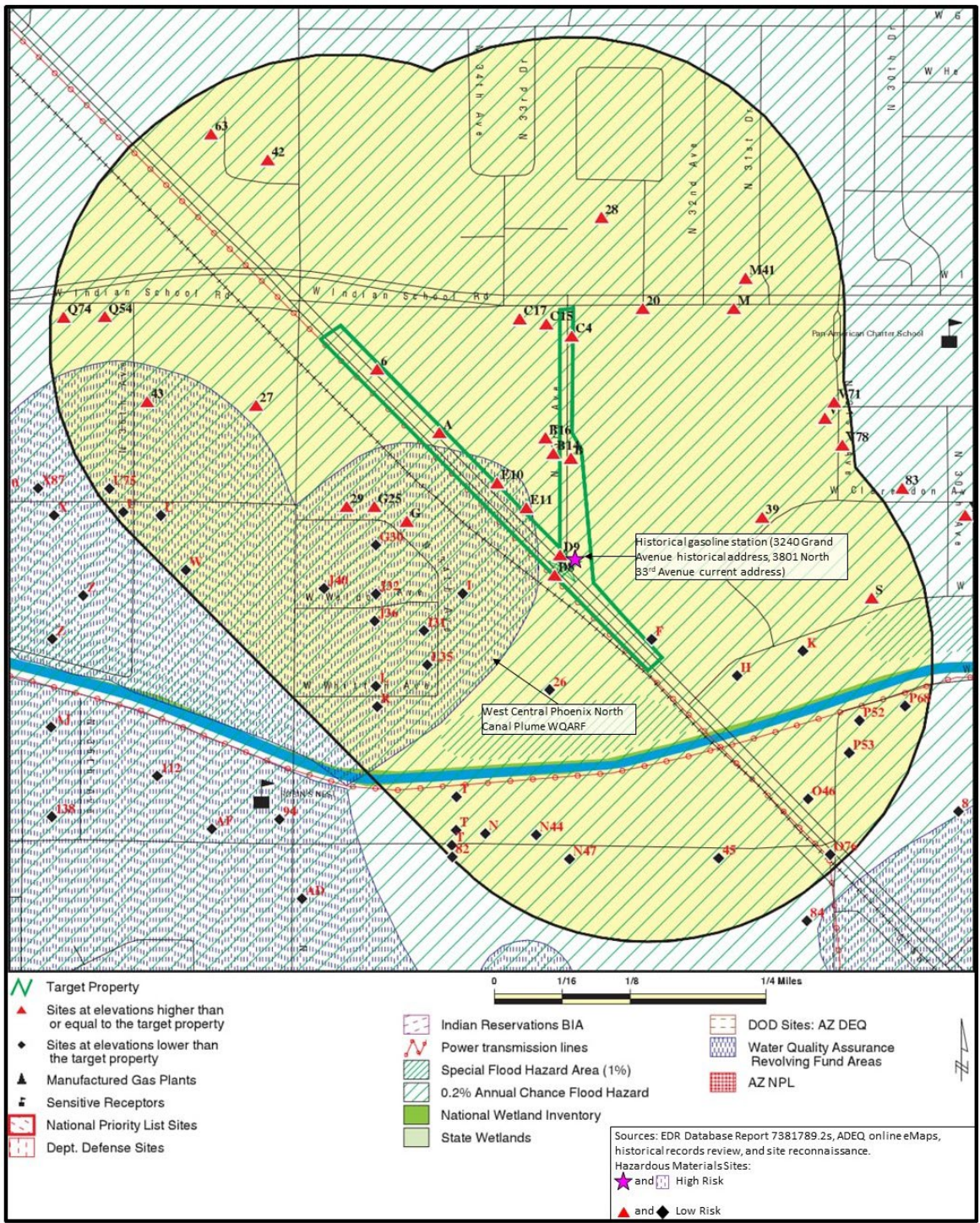
A.2 Site Plan



A.3 Hazardous Materials Sites – Northwest Area and April 2023 PISA



A.4 Hazardous Materials Sites – Southeast Area



Appendix F.3 Asbestos and Lead-Based Paint Survey Memorandum (May 2023)

Appendices for this report are on file at ADOT Environmental Planning and available upon request at 602.712.7767.

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AECOM
7720 North 16th Street
Phoenix, AZ 85020
aecom.com

Project name:
Grand Avenue, 35th Avenue and Indian School
Road Interchange

Project ref:
60628402

From:
William Turner, Environmental Planner

Date:
May 2023

To:
Mr. Ed Green
Arizona Department of Transportation

CC:
Jessica Rietz
AECOM Technical Services, Inc.

Approved
Ed Green
19 May 23

Memo

No ACM >1%
No ACM MM's recommended.

No Lead detected >HUD/EPA action
levels. No LBP MM's recommended

1. Introduction

An asbestos and lead-based paint survey was conducted on existing rights-of-way (ROW) located at the intersection of Grand Avenue 35th Avenue, and Indian School Road in Phoenix, Maricopa County, Arizona. The survey was conducted in support of an Arizona Department of Transportation (ADOT) road improvement project (TRACS No. 060 MA 159 F0272 01L).

US 60 runs at a diagonal to the grid network that comprises the regional arterial street system in the Phoenix metropolitan area. This results in an intricate intersection configuration where the three roadways come together. This is made more complex by the BNSF Railway corridor paralleling US 60 to the south. The purpose of this project is to improve traffic operations, congestion, and safety at the intersection of US 60, 35th Avenue, and Indian School Road while maintaining regional mobility and access.

The survey was conducted by collecting painted and unpainted concrete and paint chips of yellow and white road striping within the areas to be disturbed by road improvement activities. Samples were collected of gray concrete, red concrete and brown concrete from the Indian School Road bridge structure. The concrete samples were analyzed for asbestos-containing material (ACM). Paint samples were collected from accessible road striping and the bridge structure. The underside of the bridge structure is painted red. The paint samples were analyzed for ACM and lead-based paint (LBP). Due to heavy traffic conditions, samples of bridge join compounds was not obtained.

The surveys were performed by Mr. William Turner on March 24, 2023. Mr. Turner is an Asbestos Hazard Emergency Response Act (AHERA) accredited building inspector (Certification ON-4644-5174-020422). A copy of Mr. Turner's certification is included as Attachment A.

This report has been prepared for the exclusive use of ADOT. Results are based solely on the methodology stated in this report and the report should be relied upon in its entirety. Any reliance a third party makes of this report is the responsibility of such third party.

2. Methodology

2.1 Lead-Based Paint Survey

The inspector performed a careful visual inspection and assessment of the road paint striping. Paints were differentiated according to color, texture, general appearance, and apparent age. The lead survey was conducted by collecting white and yellow road striping paint from one location and red concrete paint from the bridge structure. **Figure 1** shows the location of samples.

The samples were sealed in a zip lock bag, labeled with the sample number, and dated. The sample identification numbers were recorded on the chain-of-custody, which was placed in a plastic bag with the samples. The samples and laboratory chain-of-custody submittal sheet were delivered to EMC Labs, Inc. (EMC) located in Phoenix, Arizona. The samples were analyzed by EMC, which is accredited by the AIHA Laboratory Accreditation Programs, LLC (AIHA-LAP, LLC) under laboratory identification number 101586. The samples were analyzed for lead-based paint using EPA SW-846 Method 7420.

2.2 Asbestos Survey

This assessment included an AHERA asbestos survey and was conducted to identify the existence, extent, and condition of ACM that may be impacted by road improvement activities. Suspect ACM was identified and assessed in homogeneous areas along the proposed road improvement project area. A homogeneous area is defined as a single material, uniform in texture and appearance, installed at one time, and unlikely to consist of more than one type, or formulation, of material. In addition, a physical hand pressure test was used to determine the friability of selected suspect materials.

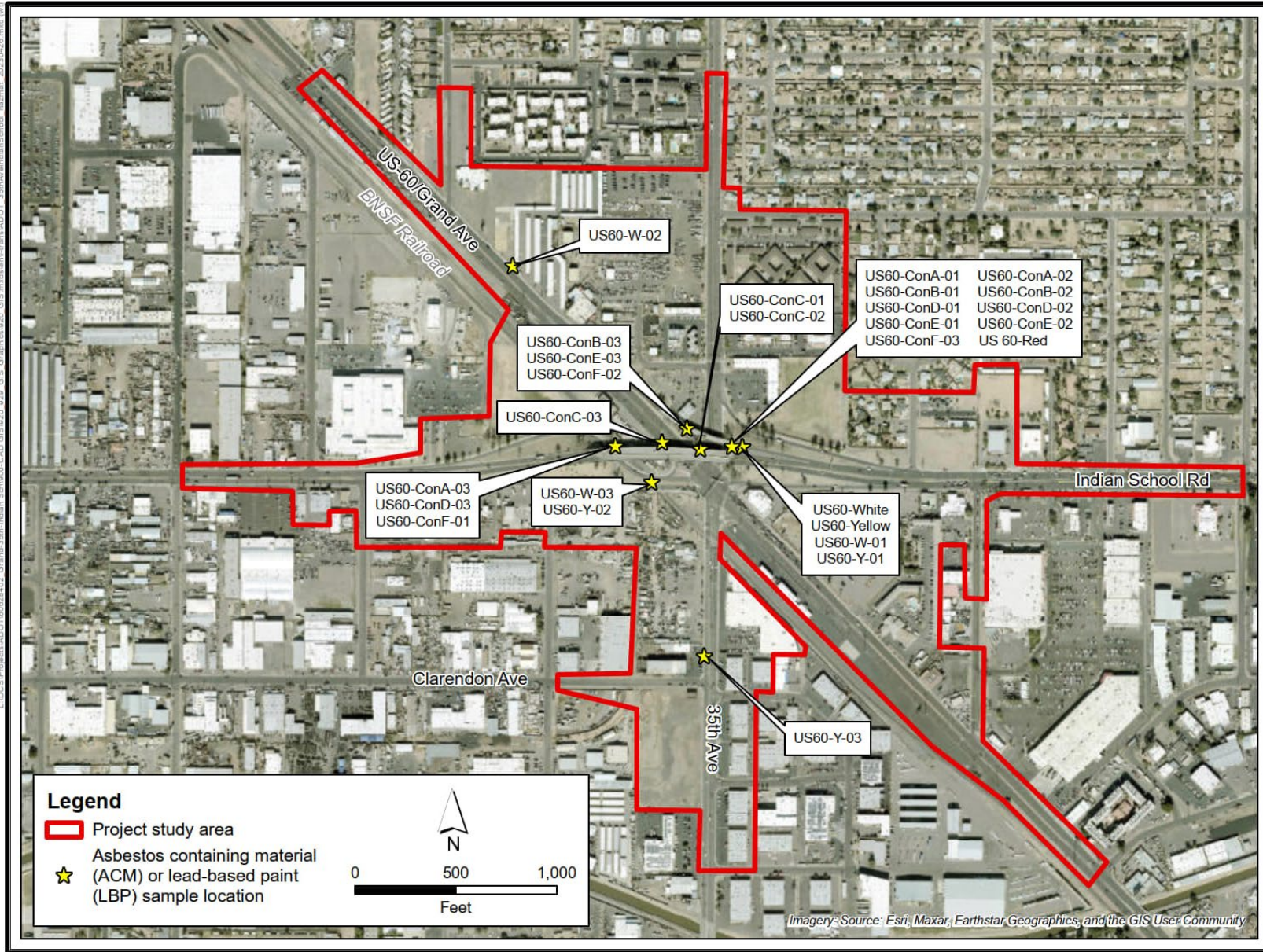
The survey involved identifying representative materials in each space and collecting bulk samples of suspect materials. Documentation included recording the location of suspect materials and describing the current condition of suspect materials sampled. Once a suspect material was located, a sample point was selected. A utility knife and/or hammer was used to extract a bulk sample of suspect material. The sample was placed in a pre-labeled sample bag. The sampling equipment was subsequently wiped using a damp cloth to decontaminate the tool and prevent the release of fibers.

A total of three white road striping samples, three yellow road striping samples, and a total of 18 concretes samples were collected for analysis from the locations shown on Figure 1. The underside of the bridge structure is painted red, which was sampled with the underlying concrete in some locations.

Upon completion of the day's sampling activity, samples were sealed in a zip lock bag, labeled with the sample number, and dated. The sample identification number was recorded on the chain-of-custody, which was placed in the plastic bag with the samples. Samples and laboratory chain-of-custody submittal sheets were delivered to EMC. All bulk samples were analyzed by EMC, which is a National Voluntary Laboratory Accreditation Program (NVLAP)-accredited laboratory (#101926-0).

The analysis was performed using polarized light microscopy (PLM) by a trained asbestos analyst following EPA Bulk Asbestos Proficiency Guidelines (EPA Method 600/R-93/116).

Figure 1. Sample Location Map



3. Findings and Observations

3.1 Lead Paint Survey

The Housing and Urban Development (HUD) guidelines establish an abatement threshold of 0.5% lead by weight or 5,000 milligrams per kilogram (mg/kg). Road striping paint within the areas sampled appeared to have typical wear due to traffic and weather conditions (i.e. cracking, fading etc.). The results are summarized in the following table.

Table 1. Lead-Based Paint Analytical Results

Sample Number	Paint Color	Sample Location	Reporting Limit (% weight)	Lead (% Weight)	Concentration (mg/kg)
US60-White	White	White Paint: Indian School Road/35 th Avenue intersection	0.011	<0.011	Not reported
US60-Yellow	Yellow	Indian School Road	0.049	<0.049	Not reported
US60-Red	Red	Indian School Road South Bridge Structure	0.053	<0.053	Not reported

Source: EMC Labs, Inc. Laboratory Report L96925

Laboratory results indicate the samples do not contain lead above the HUD abatement threshold of 0.5% lead by weight or 5,000 mg/kg. The lead paint analytical results are included in Attachment B. Field sampling forms are included in Attachment C.

3.2 Asbestos Survey

According to the EPA, all materials containing greater than one percent asbestos are considered to be ACM. None of the material sampled was found to contain asbestos. The results are summarized in the following table.

Table 2. Asbestos Containing Material Analytical Results

Sample Number	Material Description	Sample Location	Percent and Type of Asbestos	Quantity of ACM
US60-W-01	White road striping	Indian School Road bridge	None detected	Not applicable
US60-W-02	White road striping	US60 northwest of intersection	None detected	Not applicable
US60-W-03	White road striping	Indian School Road/35 th Avenue intersection	None detected	Not applicable
US60-Y-01	Yellow road striping	Indian School Road bridge	None detected	Not applicable
US60-Y-02	Yellow road striping	Indian School Road/35 th Avenue intersection	None detected	Not applicable
US60-Y-03	Yellow road striping	35 th Avenue south of intersection	None detected	Not applicable
US60-ConA-01	Grey concrete	Underside of south bridge structure (east)	None detected	Not applicable
US60-ConA-02	Grey concrete	Underside of south bridge structure (east 2)	None detected	Not applicable
US60-ConA-03	Grey concrete	Underside of south bridge structure (west)	None detected	Not applicable
US60-ConB-01	Grey concrete	Underside of north bridge structure (east)	None detected	Not applicable
US60-ConB-02	Grey concrete	Underside of north bridge structure (east 2)	None detected	Not applicable
US60-ConB-03	Grey concrete	Underside of north bridge structure (west)	None detected	Not applicable
US60-ConC-01	Red/Grey concrete	Red Pillar south bridge structure	None detected	Not applicable
US60-ConC-02	Red/Grey concrete	Red Pillar north bridge structure	None detected	Not applicable

Sample Number	Material Description	Sample Location	Percent and Type of Asbestos	Quantity of ACM
US60-ConC-03	Red/Grey concrete	Red Pillar south bridge structure (middle)	None detected	Not applicable
US60-ConD-01	Grey concrete	Top of south bridge structure (east)	None detected	Not applicable
US60-ConD-02	Grey concrete	Top of south bridge structure (east 2)	None detected	Not applicable
US60-ConD-03	Grey concrete	Top of south bridge structure (west)	None detected	Not applicable
US60-ConE-01	Grey concrete	Top of north bridge structure (east)	None detected	Not applicable
US60-ConE-02	Grey concrete	Top of north bridge structure (east 2)	None detected	Not applicable
US60-ConE-03	Grey concrete	Top of north bridge structure (west)	None detected	Not applicable
US60-ConF-01	Brown rock skirt	Rock skirt, south bridge structure (west)	None detected	Not applicable
US60-ConF-02	Brown rock skirt	Rock skirt, north bridge structure (west)	None detected	Not applicable
US60-ConF-03	Brown rock skirt	Rock skirt, combined bridge structure (east)	None detected	Not applicable

Source: EMC Labs, Inc. Laboratory Report 0289424

The 2023 asbestos laboratory analytical results are located in Attachment B. Field sampling forms are included in Attachment C.

4. Recommendations

No LBP or ACM were identified at concentrations above regulatory guidelines during this survey. Therefore, no LBP or ACM remediation is required.

5. Limitations

AECOM performs its work in a professional manner, exercising the customary thoroughness and competence of environmental and engineering consulting professionals, in accordance with the standard for professional services at the time and location those services were rendered. It is important to recognize that this assessment is not intended to be a definitive investigation of contamination at the site and the conclusions provided by this assessment are not necessarily inclusive of all the possible conditions and cannot necessarily apply to site changes of which AECOM is not aware and has not had the opportunity to evaluate. Thus, this assessment may fail to detect environmental liability on a particular site. Therefore, AECOM cannot act as insurers and cannot “certify or underwrite” that a site is free of environmental contamination. No expressed or implied representation or warranty is included or intended in our reports except that our investigation is performed, within limits prescribed by our client, with the customary thoroughness and competence of our profession.

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Appendix F.4
Asbestos and Lead-Based Paint Survey Memorandum Addendum (July 2023)

Appendices for this report are on file at ADOT Environmental Planning and available upon request at 602.712.7767.

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AECOM
7720 North 16th Street
Phoenix, AZ 85020
aecom.com

Project name:
Grand Avenue, 35th Avenue and Indian School
Road Interchange

Project ref:
60628402

From:
William Turner, Environmental Planner

Date:
July 14, 2023

To:
Mr. Ed Green
Arizona Department of Transportation

CC:
Jessica Rietz
AECOM Technical Services, Inc.

Memo

Subject: Lead-based Paint and Asbestos Assessment Addendum

1. Introduction

An asbestos and lead-based paint survey was conducted on existing rights-of-way (ROW) located at the intersection of Grand Avenue, 35th Avenue, and Indian School Road in Phoenix, Maricopa County, Arizona. The survey was conducted in support of an Arizona Department of Transportation (ADOT) road improvement project (TRACS No. 060 MA 159 F0272 01L). AECOM previously prepared a Lead-based Paint and Asbestos Assessment for this project, presented in the Technical Memorandum dated May 2023 (AECOM, 2023). Revisions to the proposed road alignments resulted in additional proposed property acquisition and easement areas. Therefore, this Lead-based Paint and Asbestos Assessment Addendum was performed on these additional areas, including areas along 33rd Avenue and 37th Avenue.

The survey was conducted by collecting paint chips of yellow and white road striping within the areas to be disturbed by road improvement activities. No structural concrete (i.e., bridges) were identified within the additional areas; therefore, no concrete samples were collected or analyzed for asbestos-containing material (ACM). The paint samples were analyzed for ACM and lead-based paint (LBP). No samples were collected from 37th Avenue as there were no painted surfaces in the disturbance area.

The surveys were performed by Mr. William Turner on July 6, 2023. Mr. Turner is an Asbestos Hazard Emergency Response Act (AHERA) accredited building inspector (Certification ON-4644-13353-061423). A copy of Mr. Turner's certification is included as Attachment A.

This report has been prepared for the exclusive use of ADOT. Results are based solely on the methodology stated in this report and the report should be relied upon in its entirety. Any reliance a third party makes of this report is the responsibility of such third party.

2. Methodology

2.1 Lead-Based Paint Survey

The inspector performed a careful visual inspection and assessment of the road paint striping. Paints were differentiated according to color, texture, general appearance, and apparent age. The LBP survey was conducted by collecting one sample

each of white and yellow road striping paint from within 33rd Avenue, north of the intersection with Grand Avenue. **Figure 1** shows the location of samples collected.

The samples were sealed in a zip lock bag, labeled with the sample number, and dated. The sample identification numbers were recorded on the chain-of-custody, which was placed in a plastic bag with the samples. The samples and laboratory chain-of-custody submittal sheet were delivered to EMC Labs, Inc. (EMC) located in Phoenix, Arizona. The samples were analyzed by EMC, which is accredited by the AIHA Laboratory Accreditation Programs, LLC (AIHA-LAP, LLC) under laboratory identification number 101586. The samples were analyzed for lead-based paint using EPA SW-846 Method 7420.

2.2 Asbestos Survey

This assessment included an AHERA asbestos survey and was conducted to identify the existence, extent, and condition of ACM that may be impacted by road improvement activities. Suspect ACM was identified and assessed in homogeneous areas along the proposed road improvement project area. A homogeneous area is defined as a single material, uniform in texture and appearance, installed at one time, and unlikely to consist of more than one type, or formulation, of material. In addition, a physical hand pressure test was used to determine the friability of selected suspect materials.

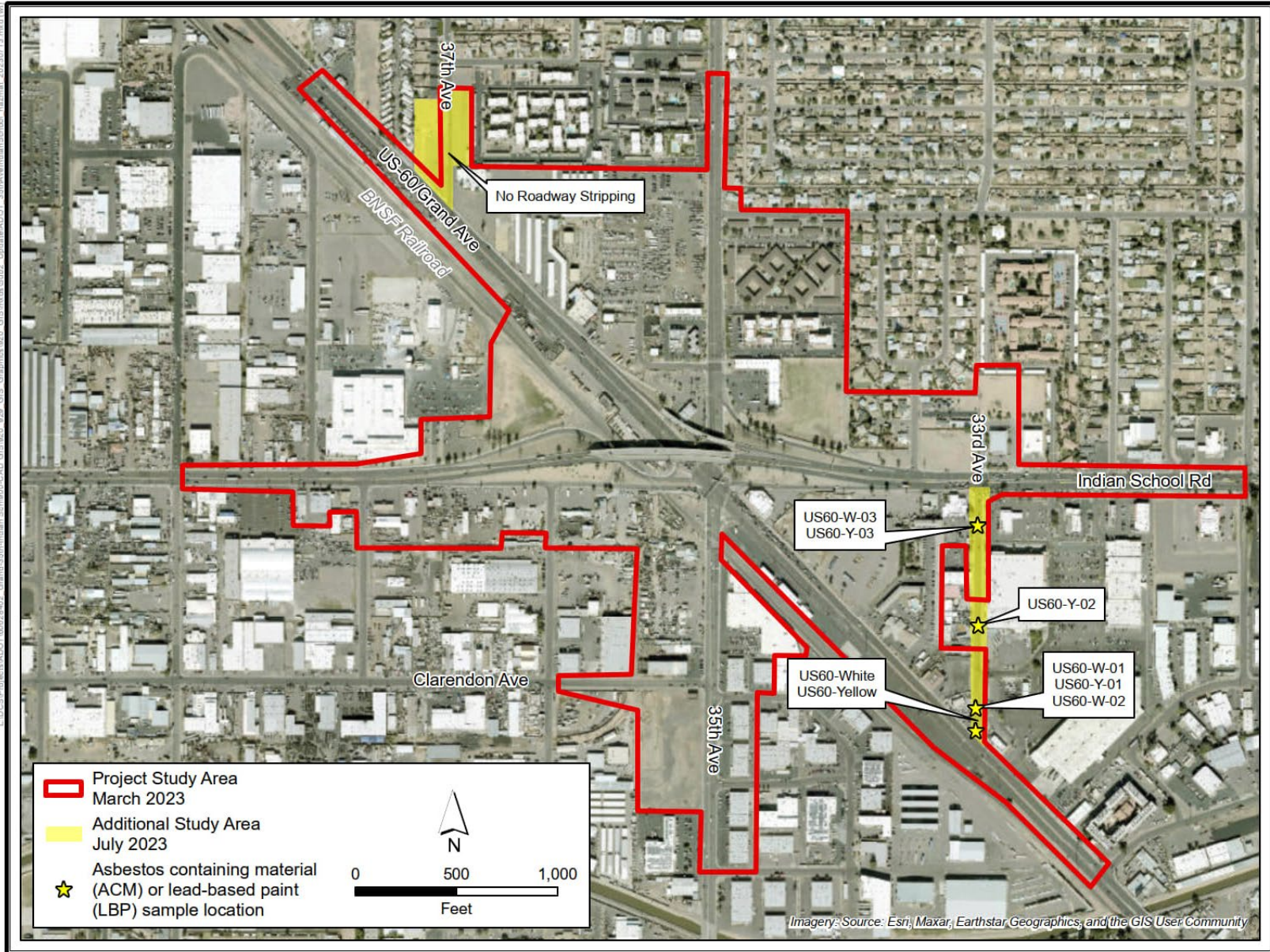
The survey involved identifying representative materials in each space and collecting bulk samples of suspect materials. Documentation included recording the location of suspect materials and describing the current condition of suspect materials sampled. Once a suspect material was located, a sample point was selected. A utility knife and/or hammer was used to extract a bulk sample of suspect material. The sample was placed in a pre-labeled sample bag. The sampling equipment was subsequently wiped using a damp cloth to decontaminate the tool and prevent the release of fibers.

A total of three white road striping samples and three yellow road striping samples were collected for analysis of ACM. The samples were collected from within 33rd Avenue, near the intersections with Grand Avenue and Indian School Road, and from the approximate center of the alignment, as depicted on **Figure 1**.

Upon completion of the day's sampling activity, samples were sealed in a zip lock bag, labeled with the sample number, and dated. The sample identification number was recorded on the chain-of-custody, which was placed in the plastic bag with the samples. Samples and laboratory chain-of-custody submittal sheets were delivered to EMC. All bulk samples were analyzed by EMC, which is a National Voluntary Laboratory Accreditation Program (NVLAP)-accredited laboratory (#101926-0).

The analysis was performed using polarized light microscopy (PLM) by a trained asbestos analyst following EPA Bulk Asbestos Proficiency Guidelines (EPA Method 600/R-93/116).

Figure 1. Sample Location Map



3. Findings and Observations

3.1 Lead Paint Survey

The Housing and Urban Development (HUD) guidelines establish an abatement threshold of 0.5% lead by weight or 5,000 milligrams per kilogram (mg/kg). Road striping paint within the areas sampled appeared to have typical wear due to traffic and weather conditions (i.e. cracking, fading etc.). The results are summarized in the following table.

Table 1. Lead-Based Paint Analytical Results

Sample Number	Paint Color	Sample Location	Reporting Limit (% weight)	Lead (% Weight)	Concentration (mg/kg)
US60-White	White	33 rd Avenue at the intersection with Grand Avenue	0.018	<0.018	Not reported
US60-Yellow	Yellow	33 rd Avenue at the intersection with Grand Avenue	0.016	<0.016	Not reported

Source: EMC Labs, Inc. Laboratory Report L98387

Laboratory results indicate the samples do not contain lead above the HUD abatement threshold of 0.5% lead by weight or 5,000 mg/kg. The lead paint analytical results are included in **Attachment B**. Field sampling forms are included in **Attachment C**.

3.2 Asbestos Survey

According to the EPA, all materials containing greater than one percent asbestos are considered to be ACM. None of the material sampled was found to contain asbestos. The results are summarized in the following table.

Table 2. Asbestos Containing Material Analytical Results

Sample Number	Material Description	Sample Location	Percent and Type of Asbestos	Quantity of ACM
US60-W-01	White road striping	33 rd Avenue, at the intersection with Grand Avenue	None detected	Not applicable
US60-W-02	White road striping	33 rd Avenue, north of Grand Avenue	None detected	Not applicable
US60-W-03	White road striping	33 rd Avenue, south of Indian School Road	None detected	Not applicable
US60-Y-01	Yellow road striping	33 rd Avenue, at the intersection with Grand Avenue	None detected	Not applicable
US60-Y-02	Yellow road striping	33 rd Avenue, near the center of the project area	None detected	Not applicable
US60-Y-03	Yellow road striping	33 rd Avenue, south of Indian School Road	None detected	Not applicable

Source: EMC Labs, Inc. Laboratory Report 0294313

The asbestos laboratory analytical results are located in **Attachment B**. Field sampling forms are included in **Attachment C**.

4. Recommendations

No LBP or ACM were identified at concentrations above regulatory guidelines during this survey. Therefore, no LBP or ACM remediation is required.

5. Limitations

AECOM performs its work in a professional manner, exercising the customary thoroughness and competence of environmental and engineering consulting professionals, in accordance with the standard for professional services at the time and location those services were rendered. It is important to recognize that this assessment is not intended to be a definitive investigation of contamination at the site and the conclusions provided by this assessment are not necessarily inclusive of all the possible conditions and cannot necessarily apply to site changes of which AECOM is not aware and has not had the opportunity to evaluate. Thus, this assessment may fail to detect environmental liability on a particular site. Therefore, AECOM cannot act as insurers and cannot “certify or underwrite” that a site is free of environmental contamination. No expressed or implied representation or warranty is included or intended in our reports except that our investigation is performed, within limits prescribed by our client, with the customary thoroughness and competence of our profession.

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